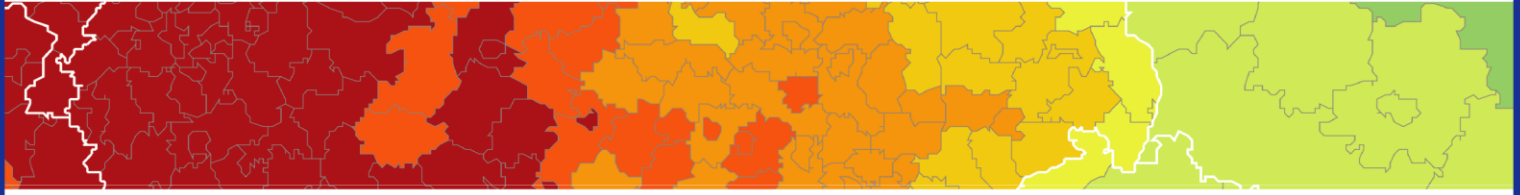


Inspire policy making by territorial evidence



Small and Medium-Sized Enterprises in European Regions and Cities

Applied Research

Case Study Book

Version 23/11/2017

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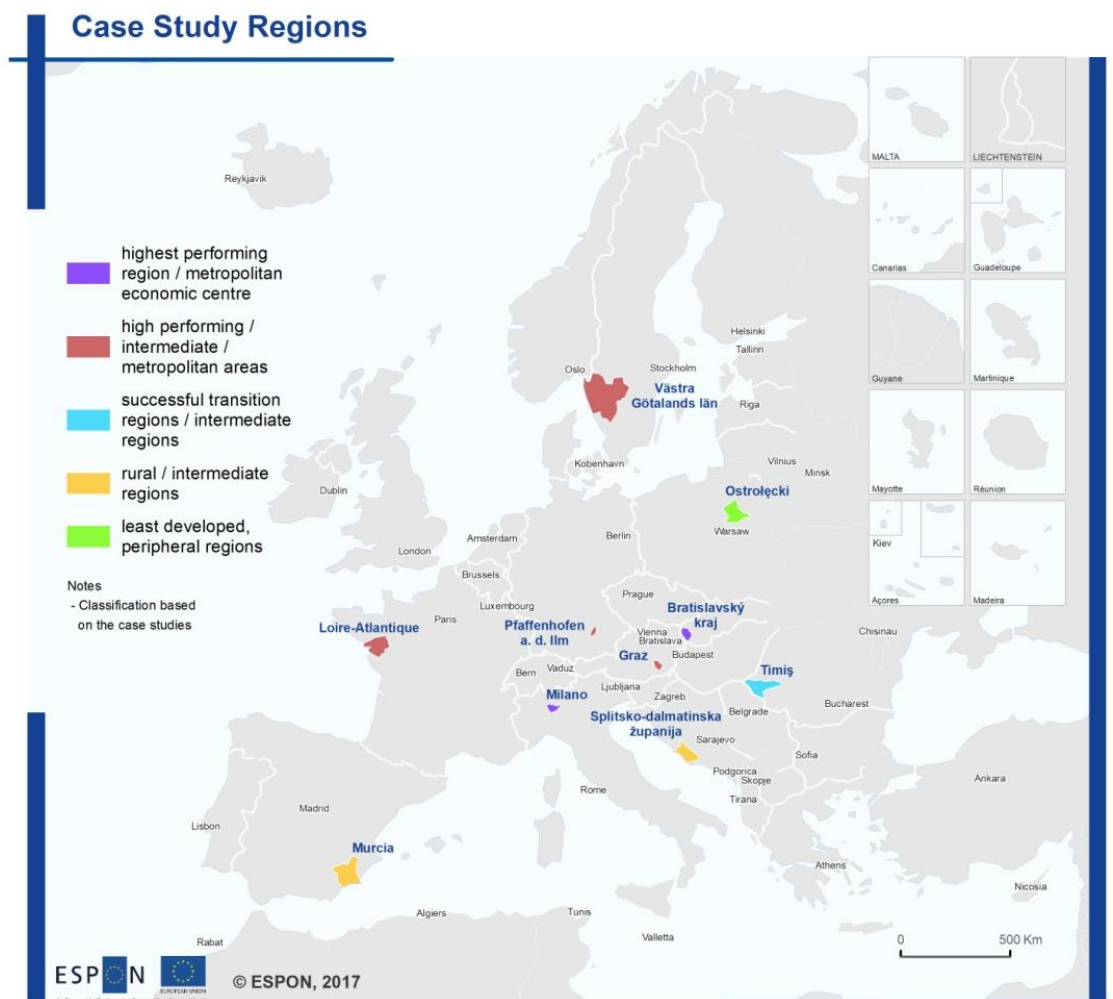
Small and Medium-Sized
Enterprises
in European Regions and Cities

Preface

This Case Study Book of the ESPON project “Small and Medium-Sized Enterprises in European Regions and Cities” provides the detailed case studies for the 10 case study regions.

The regions have originally been analyzed in pairs – two regions as 1 case study of a certain type. However, according to the case studies’ results the regions vary significantly.

The map below shows the 10 case study regions after additional, detailed information from the regional case studies allowed for a deeper analysis of the regional contexts, governance and economic structures in a refined typology.



Regional level: NUTS 3 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
Origin of data: DG Regio
CC - UMS RIATE for administrative boundaries

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Case Study Handbook

1 Introduction

The purpose of this handbook is to enable the National Experts to efficiently, effectively and accurately complete the data collection and the case study.

1.1 Main goal of the overall study

The main objective of the entire research project is to **map and analyse the territorial patterns and performance of SME** in Europe, and to **propose territorial development strategies** that can be considered in different regions and cities to further strengthen the development and sustainability of SME.

1.2 Work plan of the entire study

The work of the study is organised in five tasks. The case studies are main parts of Task 3 and 4 (see also Figure 1.1):

Task 1: literature review and data collection and processing. The milestones of Task 1 resulted in the inception report and a full database of European SME structural, performance and context data.

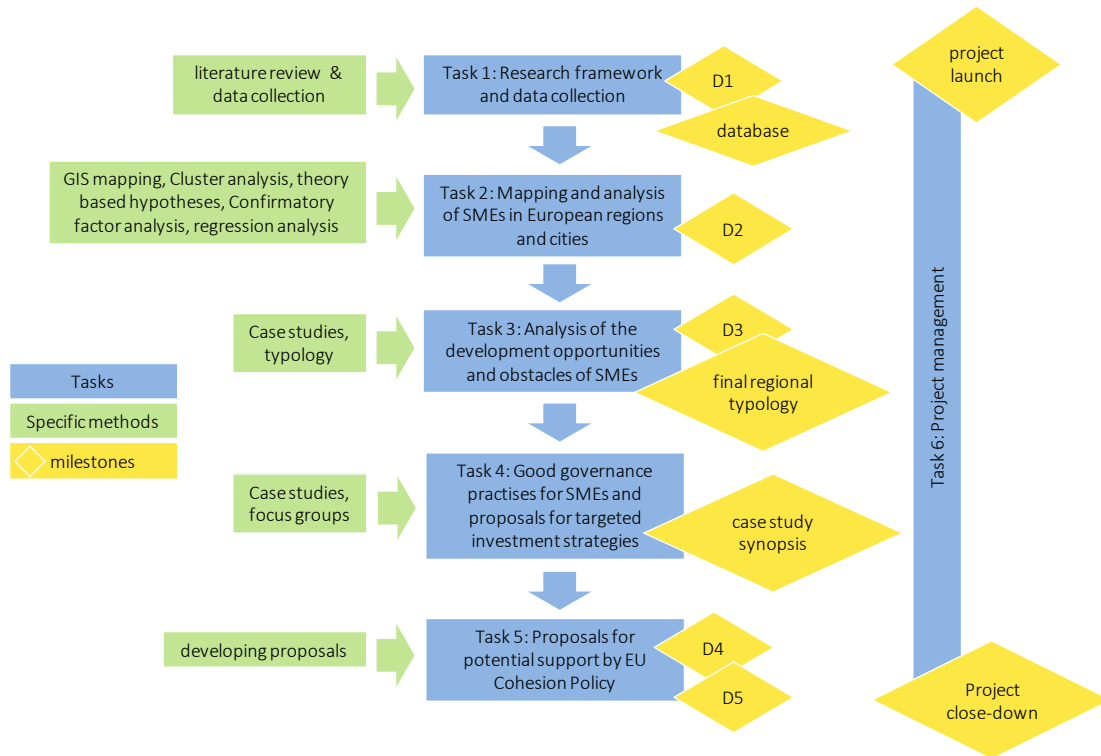
Task 2: data analysis: mapping and quantitatively analysing the data collected to provide an insight on the structure, the performance and the development opportunities and obstacles of SME by different types of regions.

Task 3: conduct the **case studies**; five case studies providing an in-depth look on structure and performance are carried out. To get more robust answers, each case study has analysed 2 distinct kinds of regions (i.e. 2 regions per case study = 10 regions have been investigated in total).

Task 4: **case study work continued**. Examination of good governance practices using more qualitative methods such as focus groups and a FOG-test.

Task 5: Proposals for potential support by EU Cohesion Policy.

Figure 1.1: Overview on tasks, methods and milestones



Source: Consortium, 2016.

1.3 Objectives of the case studies

The case studies are part of and relate to Task 3 and Task 4. The objectives of these tasks are:

Objectives Task 3 – Analysis of the development opportunities and obstacles of SME

- Identify opportunities (drivers) and obstacles for the development and growth of SME and their contribution to business development, job creation and innovation in different territorial settings
- Additionally, locate specific factors with focus on 3 sectors (creative/knowledge economy, ICT, and low-carbon economy)
- Identify key dynamics and drivers for SME growth
- Set up a typology of regions to picture different SME territorial patterns

By applying a cluster analysis, a draft regional typology related to SME structure and performance has already been developed. **10 case studies** (2 regions from each of the five regional clusters) **are to be conducted to provide an in-depth look on structure and performance as well as on the development opportunities and obstacles of SME.**

Objectives: Task 4 – Good governance practices for SME and proposals for targeted investment strategies

- Identify the role of governance in generating growth opportunities
- Possibilities to tailor SME development based on territorial differences
- Contribution of public authorities in creating supportive environment for SME

- Specific SME support measures resulting in an increase in SME development
- Contribution of the bottom-up and collaborative vision of policy development to the adoption of smart specialization strategies

The case study work also covers Task 4 and shall provide an insight into good governance practices using more qualitative methods such as focus groups, SWOT analysis and a FOG-test. By using these methods, we gather information on development conditions and elements of an attractive and supportive environment for SME. The milestones of Task 4 has been a case study synopsis that forms the basis of recommendations for targeted territorial investment strategies.

1.3.1 Definition of SME

Small and medium sized enterprises are in this study defined as enterprises with 0 to 249 employees, i.e. they include enterprises of self-employed (without further employees). The main classes to present SME are:

- micro enterprises: with less than 10 persons employed;
- small enterprises: with 10-49 persons employed;
- medium-sized enterprises: with 50-249 persons employed
- small and medium sized enterprises (SME): with 1-249 (or 0-249) persons employed;
- large enterprises: with 250 or more persons employed.

1.3.2 Definition of three sectors with a special focus in the case studies

(1) ICT sector

For the quantitative, descriptive analysis, we can adopt the Eurostat definition of the ICT sector: it consists of all enterprises/units (including both natural and legal persons) whose principal activity (which contributes 50% or more to the value added) belongs to the ICT manufacturing industries, ICT trade industries, and the ICT services industries. But because of data restrictions at disaggregated levels, we apply only the following, narrower definition of the ICT sector for this study:

NACE 26: Manufacture of computer, electronic and optical products
 NACE 61: Telecommunications
 NACE 62: Computer programming, consultancy and related activities
 NACE 63: Information service activities

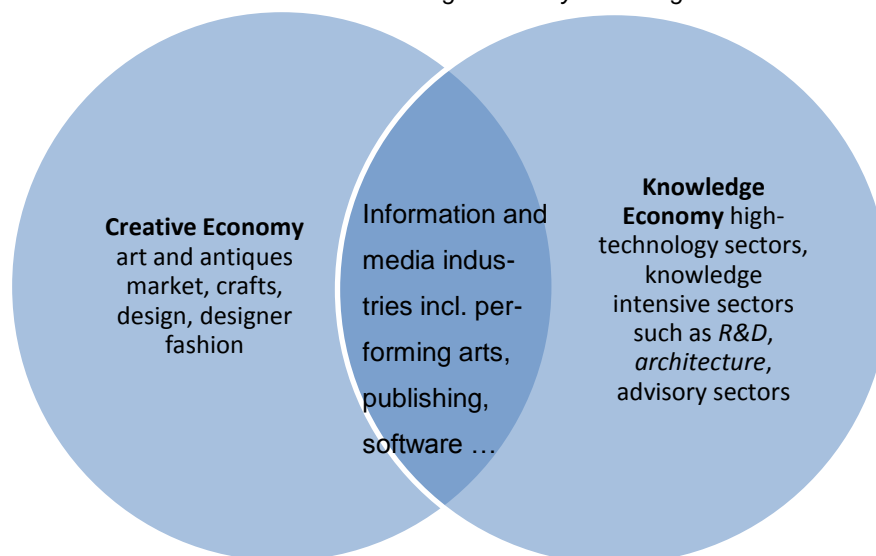
There are very different patterns and performance of the ICT sector across Europe, fitting into the overall diversity in development pathways and trajectories of innovation across European regions. This indicates that important location factors are at work in the ICT sector, which can be explored qualitatively at regional levels in the case studies.

(2) Creative/knowledge economy

There is no universally valid definition for the creative/knowledge economy and it is even discussed whether it can be defined and distinguished as a certain part of the economy. For assessing the role of the creative/knowledge economy in this study it is however necessary to identify relevant sectors.

The different definitions in the literature have in common that they discuss the creation and exploitation of knowledge, R&D, and innovation and testify a shift towards changed competitiveness patterns and dynamics. In this context the OECD definition may be most useful: The knowledge economy describes “*trends in advanced economies towards greater dependence on knowledge, information and high skill levels, and the increasing need for ready access to all of these by the business and public sectors.*” Building on this, we define the creative/knowledge economy as follows.

Figure 1.2: Definition of creative and knowledge economy according to sectors



Italics: ambivalent categorization depending on source. Source: own elaboration

What is also clear from the above, that businesses in certain sub-sectors (below) are only included if they have a high RTDI-intensity.

Table 1.1: NACE Codes defining creative and knowledge economy in the context of the study

NACE Rev.2	Division
B 09	Mining support service activities
C 18	Printing and reproduction of recorded media
C 19	Manufacture of coke and refined petroleum products
C 20	Manufacture of chemicals and chemical products
C 21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
C 26	Manufacture of computer, electronic and optical products
C 27	Manufacture of electrical equipment
C 28	Manufacture of machinery and equipment n.e.c.

NACE Rev.2	Division
C 29	Manufacture of motor vehicles, trailers and semi-trailers
C 30	Manufacture of other transport equipment
H 50	Water transport
H 51	Air transport
J – Information and Communication (total section)	
J 58	Publishing activities
J 59	Motion picture, video and television programme production, sound recording and music publishing activities
J 60	Programming and broadcasting activities
J 61	Telecommunications
J 62	Computer programming, consultancy and related activities
J 63	Information service activities
K – Financial and insurance activities (total section)	
K 64	Financial service activities, except insurance and pension funding
K 65	Insurance, reinsurance and pension funding, except compulsory social security
K 66	Activities auxiliary to financial services and insurance activities
M – Professional, scientific and technical activities (total section)	
M 69	Legal and accounting activities
M 70	Activities of head offices; management consultancy activities
M 71	Architectural and engineering activities; technical testing and analysis
M 72	Scientific research and development
M 73	Advertising and market research
M 74	Other professional, scientific and technical activities
M 75	Veterinary activities
N 78	Employment activities
N 79	Travel agency, tour operator and other reservation service and related activities
N 80	Security and investigation activities
R – Arts, entertainment and recreation (total section)	
R 90	Creative, arts and entertainment activities
R 91	Libraries, archives, museums and other cultural activities
R 92	Gambling and betting activities
R 93	Sports activities and amusement and recreation activities

(3) Low carbon economy

The term low-carbon economy is usually associated with an economy that is based on reducing greenhouse gas (GHG) emissions into the air by using low-carbon power sources. Such sources include renewable energy (sunlight, wind, rain, tides, geothermal heat etc.), sustainable biofuels etc. The transition to a low-carbon economy entails a shift to more climate-friendly and less-energy consuming living patterns and, reportedly holds the key to staying within planetary boundaries.

The problem with analysing the “low carbon economy” is that it is not well represented by sectors, but instead is of cross sectoral nature. This means the lists of NACE sections/divisions do not adequately cover the concept of the low-carbon economy because every sector needs to contribute to this. Though, there are individual businesses within nearly

every sector which specialise into decarbonisation, saving energy, reducing environmental impact more general, etc. and implement such measures into their normal business activities.

International studies have so far often defined five sectors based on their relevance for the green economy as a whole: the bio-economy (sub-divided in agriculture, forestry and fishery), manufacturing, renewable energy, tourism and transport. Four additional sectors, which cross-cut the above sectors and possess clear territorial dimensions have also been considered. These include water management, waste management, building and construction and green research activities encompassing the implementation of clean technologies.

The following NACE Rev. 2 sections and underlying divisions (2-digit level) can be used as an approximation to measure SME activity in the market-oriented “low-carbon economy” (excluding agriculture) or in industries that will be affected by the low-carbon economy (i.e. carbon-intensive branches):

Manufacturing: under section C:

C 16: Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials

C 17: Manufacture of paper and paper products

C 19: Manufacture of coke and refined petroleum products

Electricity, gas, steam and air conditioning supply: Section D:

D 35: Electricity, gas, steam and air conditioning supply

Water management: under section E:

E 36: Water collection, treatment and supply

E 37: Sewerage

Waste management: under section E:

E 38: Waste collection, treatment and disposal activities; materials recovery;

E 39: Remediation activities and other waste management services

Building and construction: section F:

F 41: Construction of buildings

F 42: Civil engineering

F 43: Specialised construction activities

Transport: under section H:

H 49: Land transport and transport via pipelines

H 50: Water transport

H 51: Air transport

Renewable energy, power generation: under section M:

M 71: Architectural and engineering activities; technical testing and analysis

M 72: Scientific research and development

Bio-economy, green research activities: under section M:

M 72: Scientific research and development

As mentioned above, due to its cross-cutting nature, this list of NACE sections/divisions does not adequately cover the concept of the low-carbon economy. Therefore, statistical analyses based on these selected economic activities may not be suitable to deliver statements on “low

carbon SME”. So how can we go about analyzing the influencing factors on the development of a “low carbon economy”?

We suggest that you look into a potential cross-sectoral strategy and its implementation, and also into some statistics if they are available on a regional level or in specific reports. But more importantly, there are also distinct regional factors (e.g. social, cultural, physical assets, place-specific factors, governance) that either drive or hinder a systematic transition to a low-carbon economy. (http://www.espon.eu/main/Menu_Projects/Menu_AppliedResearch/greeco.html)

Within your case study, it is of interest which constellation of regional factors (with their interaction with supra-regional factors) drives, hinders or enables green economic transformations. *This has been primarily a qualitative analysis.*

1.4 Overview of your role and activities to be conducted

A shared methodological framework has ensured the comparability of results for each region, while being open to new or unexpected findings. Our proposed approach is based on desk research and interactive elements such as expert interviews and focus groups.

Accordingly, to complete the case study, you are asked to conduct the following activities:

Activities	Reference section in this handbook
A1. Analysis of literature, documents and statistics for the region	2.4 Analyses of available statistics for the region and accompanying literature (A1)
A.2 Perform telephone interviews based on an interview guideline	2.5 Interviews (A2)
A.3. Perform a SWOT analysis of the region	2.6 SWOT analysis (A3)
A.4. Perform a focus group in the region	2.7 The focus group (A4)
A.5 Write up the case study report based on the template (one report per region)	2.8 Structure of the case study report (A5)
A.6 Attend a synopsis workshop	2.9 Synopsis workshop in Vienna for cross-cases analysis (A6)

Please note the delivery of your draft case study report is **Wednesday, June 21st, 2017**.

2 Case studies

The two main general foci of the case studies are:

1. What are the development opportunities, drivers and the obstacles for SME in the case study region?
2. What are the good governance practices for SME (at different levels) and proposals for targeted investment strategies (policies), drawing on the lessons from this region?

2.1 Selection of case study regions and its rationale

The case study regions selected (see below) represent **successful regions per type of region** according to the indicators and the typology defined through statistical analyses. The selection framework followed these criteria:

- Best performer according to the performance indicators
- Geographical division throughout the studied area
- Balance between rural and urban areas
- Coverage of the focus sectors (knowledge and creative industry; ICT; low carbon economy)
- The case studies are spread over the types of regions resulting from the cluster exercise

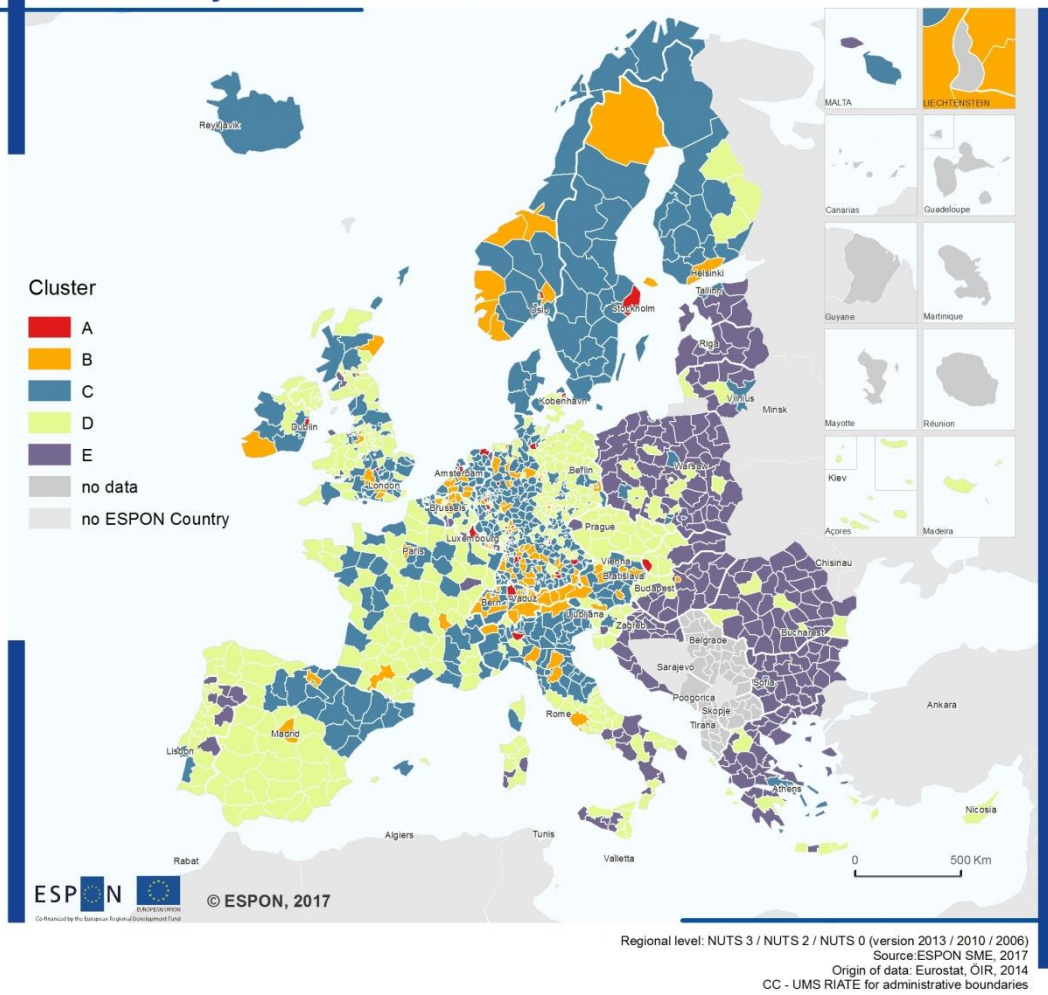
The final decision on the case study regions was agreed with ESPON EGTC as follows:

Table 2.1: The selected case study regions

Type of region (cluster)	Description of region type	Member State	Name of the 10 selected regions	Who conducts the case study
Urban Region (cluster A)	High density, highly accessible regions	IT	Milano	VVA
		SK	Bratislavský kraj	Regiopartner
Intermediate Region (cluster B)	Cities and agglomerations performing above average	DE	Pfaffenhofen a. d. Ilm	S4S
		AT	Graz	KMFA
Urban region (cluster C)	Economically successful cities and regions	FR	Loire-Atlantique	ÖIR
		SE	Västra Götalands län	Oxford Group Sweden
Urban region in cluster D	Rural and intermediate regions with lower accessibility and economic performance	ES	Murcia	IKEI Research and Consultancy
Intermediate region in cluster D		RO	Timiș	VVA
Rural region (cluster E)	Rural or peripheral regions with disadvantages regarding accessibility and economy	HR	Splitsko-dalmatinska županija	CEPOR – SME's and Entrepreneurship Policy Center
		PL	Ostrołęcki	Euroreg

Note: Please note that the slight variation of regions in cluster D (urban and intermediate region) is done intentionally in agreement with ESPON EGTC.

Cluster analysis of SME related context indicators



2.2 Coordination of the case studies

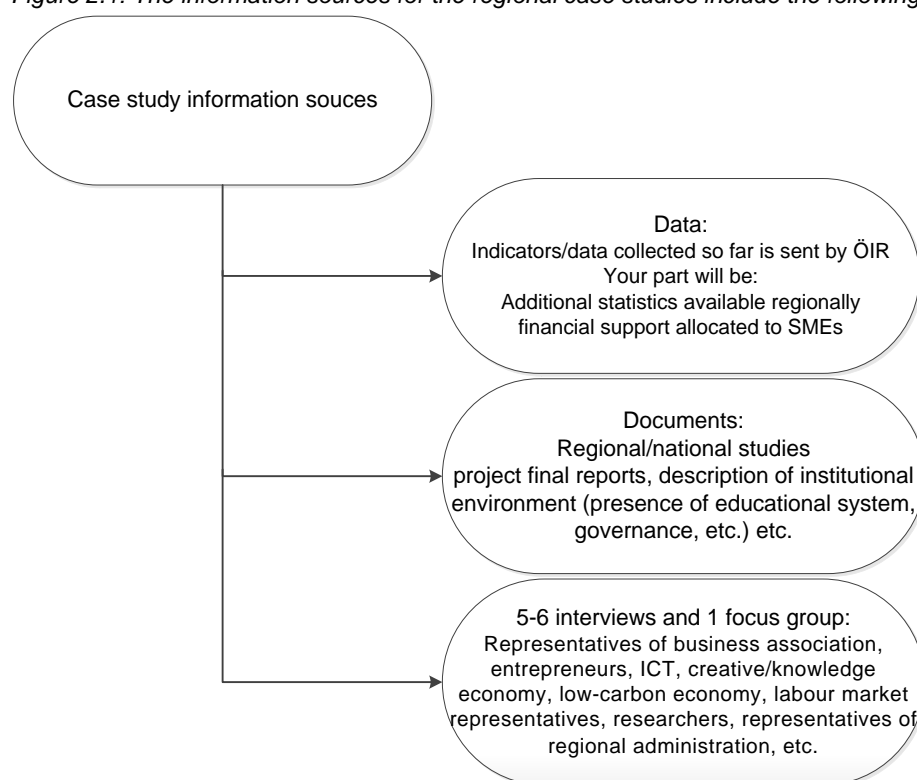
Each national expert has been assigned to one region. Please stay in regular contact during the case study period with the Task Manager (as indicated at the individual steps throughout the handbook) so that we can help you in case it is needed.

Table 2.2: Main steps & timeline for each regional case study report

Main step	Completion/delivery date
Reception of the case study handbook, including the relevant data from central data sources to support the case study from ÖIR/KMFA	4/5/2017
Skype meeting with the Task Manager to clarify questions	Please contact Peter Kaufmann (Proposal: May 9th, 11-12 am)
Desk research (data and literature)	By the end of May
Identify interview partners and agree with Task Manager	By the end of May
Contact interview partners (by e-mail and/or phone) and conduct interviews, agree interview protocols with interviewees	By the beginning of June
Prepare focus group (date, participants, etc.)	Second half of May

Enter interview protocols into the LimeSurvey online questionnaire. https://onlinefb.kmuforschung.ac.at/ls/index.php/survey/index/sid/587263/	As soon as possible after the interviews (can be in the working language if it is too much effort otherwise)
Produce a draft SWOT analysis as a basis for the focus group (feel free to discuss it with the task manager to reflect on it)	Before the focus group
Hold focus group	By mid of June 2017 at the latest
Agree results with focus group participants	ASAP after the focus group
Submission of draft case study to Task Manager	Wednesday, 21/6/2017
Revise draft case study according to feedback by Task 3 and 4 Manager	Wednesday, 28/6/2017
Take part in the synopsis workshop for cross-case analyses in Vienna	Thursday, 29/6/2017

Figure 2.1: The information sources for the regional case studies include the following



2.3 Data on the regions collected in previous project steps

As a background and starting point, the relevant statistical data collected in the previous steps of the project have been distributed. This included:

- The data related to SME/enterprises
- The data on regional context indicators

2.4 Analysis of available statistics and literature for the region (A1)

Statistics

We forwarded to you, together with the Handbook, the indicators and data analysed in Task 2, to provide you with a statistical profile of the region as far as we could collect so far. It is now your role to enrich this statistical profile with further statistics which are available at the regional level. The indicators we are interested in are defined in the case study template.

Review of literature and documents

Please look for literature and documents which provide information on the following aspects/questions:

- Strengths/drivers and weaknesses/obstacles of the region (for SME as well as the focus sectors); e.g. studies of the region
- Literature describing and assessing the regional eco-system for SME
- Overview of the governance levels and institutions and their roles in shaping the region's SME and economic policy
- What are the regional policy strategies for SME? (strategy documents)
- Overview of SME support instruments and initiatives in the region
- Evaluation studies of interventions and policies which have pointed to good policy practices
- Analysis of the region's OPs of the 2007-2013 and the 2014-2020 programming periods: What expenditures are used to support SME over time? Have they selected Thematic Objective 3 "Enhancing the competitiveness of small and medium-sized enterprises (SME)" within their priority axes? What justifications were made, what kind of actions were supported and how much money was allocated? Have other thematic objectives been used for SME support?

Any information related to the specific focus sectors, namely, ICT, creative/knowledge and low-carbon economy is also of particular interest.

2.5 Interviews (A2)

The qualitative interviews aim at enriching the picture by uncovering views of experts from various fields dealing with SME development. Likewise, the interviews enabled the collection of suggestions and recommendations on potential policy needs for each type of region.

These soft facts have been investigated by carrying out telephone interviews (or interviews in person) for each case study region. The interviewees were selected among a variety of professionals representing a multitude of perspectives on the issue. Interviewees may include:

- representatives of a business association
- a researcher who has done a study on a particular topic of interest in the region
- representatives of regional administrations (responsible for SME, economy, regional development etc.)
- a labour market representative (e.g. PES service for employers)
- experts/representatives on the creative/knowledge economy, the ICT sector, and the low-carbon economy
- possibly also entrepreneurs in one of the above sectors who stand out particularly due to their activities for the region and their performance

The number of interviews has been 5-6 per region, or perhaps one more depending on the quality and level of information/details provided in each interview.

The interviews have been semi-structured, i.e. based on an **interview guideline** initially drawn up by the core team, yet allowing for a degree of flexibility and responsiveness to follow up on interesting points which may arise from the interview. You can find the interview guideline **in the Annex**.

Box 1: Procedure for conducting interviews

1. Set up a list of potential interviewees and [seek agreement with the Task Manager](#)
2. Agree the date of the interview via telephone or e-mail with the interviewee
3. Conduct the interview and write up the draft minutes
4. Agree on the final minutes with the interviewee via e-mail
5. Transfer the final protocols of the interviews to the Task Manager by entering it into the LimeSurvey questionnaire: <https://onlinefb.kmuforschung.ac.at/ls/index.php/survey/index/sid/587263/>

Source: Consortium, 2016

2.6 SWOT analysis (A3)

Based on the information collected through data, literature and the interviews you are asked to conduct a SWOT analysis for the region. The SWOT analysis has depicted factors supporting SME development (drivers) and factors hindering SME development. As a reference and starting point, a list of possible factors for SME performance is provided in the Annex. This list has been developed in the inception phase of the project. The SWOT analysis distinguishes between internal factors (strengths/weaknesses) and external factors (opportunities/threats). Internal refers to the region and external refers to outside the region. Therefore, different types of policy needs and recommendations can be identified: policy options at the regional level and policy options at the national or even European level.

The guiding questions for the SWOT analysis are:

What are the most relevant regional factors (strengths and weaknesses) supporting/hindering

- SME development in general
- The creative/knowledge economy
- The ICT sector
- The low carbon economy

Which overall trends and conditions (opportunities and threats) support/hinder

- SME development in general
- The creative/knowledge economy
- The ICT sector
- The low carbon economy

This draft SWOT analysis has been cross-checked and fine-tuned by investigating and adding aspects on the basis of the focus group.

The results of the SWOT analysis can initially be captured along the lines of the structure presented below. But please see the case studies template for how to present the results after the focus group exactly. There is an example structure of the SWOT analysis presented.

Strengths	• ...
Weaknesses	• ...
Opportunities	•
Threats	•

2.7 The focus group (A4)

As part of the case study approach, a focus group shall help to get further insights and conclusions on the situation of each region. The topics of the focus groups were:

- to reflect on, **deepen and refine the SWOT analysis**, which provides a preliminary identification of development opportunities and obstacles
- to **identify successful investment and policy strategies** for SME development, taking into account the potential roles of various regional, national and EU-level policies and measures
- to deepen the analysis of governance within the case study region by using the so-called **FOG test to assess good governance practices**
- to identify **future policy needs** to further improve the support of SME development, amongst others through cohesion policy and the ERDF

The format entails a group of **around six to eight experts** discussing a predefined set of questions during a **timeframe of 3.5 hours**. The **participants shall partly** (or largely, if enough people with expertise are available) **differ from the interviewees** to get additional opinions and perspectives. For instance, inter alia, collecting the opinions and expertise of the following representatives would be of utmost value:

- Representatives of business associations
- Researchers dealing with SME or regional economic development
- representatives of regional administration (responsible for SME, economy, regional development etc.)
- experts/representatives on the creative/knowledge economy, the ICT sector, and the low-carbon economy
- representatives of organisations aiming at steering business development (e.g. business incubators)
- possibly also entrepreneurs in one of the above sectors who stand out particularly due to their activities for the region and their performance

Box 2: Steps to organise a focus group

1. Agreement of the list of experts with the Task Manager
2. Invitation of the experts
3. Facilitation of the event and stimulating the discussions with guiding questions and based on the draft SWOT analysis
4. Taking minutes, and agree them afterwards with the participants per email
5. Feeding the results into the overall design of the study

The focus group can be conducted along the following agenda.

Suggested agenda for the focus group

09:00	Welcome, introduction and explanation of the context
09:10	Presentation of the SWOT analysis so far (handout) + poster
09:30	Discussion on SWOT analysis, identification of the main internal and external drivers and obstacles for SME development in the case study region (strengths, weaknesses, threats, opportunities)
10:15	Discussing successful strategies and governance practices
10:45	Coffee break
11:00	FOG Test
11:45	Future policy needs to further improve the support of SME development
12:20	Conclusions and outlook
12:30	End of the workshop

Source: Consortium, 2016

The following sub-sections outline the various phases of the focus group discussion.

2.7.1 Reflection of the SWOT analysis

As a first step, the draft SWOT analysis based on desk research and interviews conducted was presented. A handout can be sent to the participants in advance. A poster was visibly displayed the main results of the SWOT analysis. The participants shall comment on the draft SWOT and their feedback is collected for further examination.

Additionally, the point of interest was put on governance aspects. This was initiated and fostered by the facilitator who raised a set of questions hence partially leading or re-orienting the discussion. As the case study region is a high performer in SME development, the questions concentrated on finding good practice examples that support SME development. These questions were:

What are the offers to support SME (funding, consulting, etc.) that make a difference?	(+ working well/- not working well)
What are the administrative structures influencing SME development?	(+ working well/- not working well)
Which parts of the legislative framework influences SME development and why?	(+ support/- hinder)
Which informal structures are there which support/hinder SME development?	(+ support/- hinder)
Were special measures taken to overcome the crisis? Which ones?	(+ working well/- not working well)
Which policy needs can be identified or which existing public measures are/should be adapted? How?	

Each question can be put on a separate poster, which you can develop further during the discussion – for instance by inviting people to get up and add their arguments directly by writ-

ing on all the posters – after that, you can go through each poster one by one and discuss – which has the advantage that it is quicker and motivates people.

In a second step, the participants are asked to weight the identified strengths and opportunities as well as to the weaknesses and threats of the region to identify the most relevant drivers and obstacles.

Each participant can give weights using a scale of ++, +, -, --

2.7.2 FOG test: assessing governance structures

The next step is the FOG (Forms of Governance) test, which is based on a questionnaire asking for the most important actors in the region, their engagement and competences and responsibilities towards SME and entrepreneurial support, the actions and strategies implemented in the region and important interactions between the actors.

The questionnaire of the FOG test shall allow the identification of behavioural patterns and the ecosystem that are relevant for the development of SME in each case study region. Good practise examples for governance or actions multiplying the effects of (ESIF) investment strategies shall be identified.

A set of 20 statements (four statements for each of 5 questions block) were presented to the participants. As a result they should select per question block **one statement** that suits to the actual situation at present, **and one statement** on how they wish the situation to be (in order to promote SME development best in their region) = 2 statements per block. The jointly discussed answers have been put into the questionnaire by the national expert facilitating the focus group.

We suggest providing the set of statements to the participants before the focus group meeting, so that they are prepared for them and can discuss an answer that reaches consensus. Further, there are some closed questions asking for certain aspects of SME support for each block. If these questions can already be answered by the interview findings or the discussion of the focus group, please skip them here.

The results of the FOG-Tests of all ten case study reports were discussed during the **synopsis workshop in Vienna (29th of June)** and a consolidated version was elaborated that is presented in the project report. This result has been an important component to formulate policy proposals on the key elements that can contribute to improve the implementation of investment strategies in the current programmes for SME development in different types of European regions and cities.

2.7.3 Future policy needs for improving the support of SME development

During **the final step** in the focus group, the participants discuss the future policy needs for further improving the support of SME development within their region. The relevant questions are:

- What is needed to increase the potential of SME development?

- What are successful SME-support structures that should be further strengthened?
- What role could European Cohesion Policy and European funding play, especially through the ERDF?
- What should be organised at national or regional levels? How could the interaction of different governance levels be improved?

This discussion shall contribute to identify proposals for targeted investment strategies and give input to Task 5 of the overall project: Proposals for potential support by EU Cohesion Policy from the ground.

Main results of the focus groups

the picture of the SWOT analyses was refined and sharpened,

the main relevant drivers and obstacles for SME development were identified,

good governance examples were collected,

policy needs and suggestions were highlighted.

2.8 Structure of the case study report (A5)

Please use the separate **Case Study template** provided.

The case study report shall be written in plain text and you should limit as much as possible the use of bullet points. Unless well-defined and explained, avoid the use of jargon. **Do not write acronyms without previously providing their exact meaning.** Also, do not use the first person singular or plural in the report (“I” or “we”). Finally, please pay attention to spelling and typos.

Please make sure you properly reference the in-text citations when directly quoting or paraphrasing a source, e.g. (Last Name, year). Likewise, please make sure your in-text references are fully displayed at the end of the case study report (see the case study report template).

2.9 Synopsis workshop in Vienna for cross-cases analysis (A6)

To refine the final results of the SWOT analyses within each type of region and to develop proposals for targeted investment strategies, a **one day synopsis workshop with all authors of the field work** (i.e. one per SME region) was organised

on 29th of June in Vienna.

Based on the regional case studies strategies to exploit existing potentials and to overcome barriers of SME development will be developed. This will be done through an interactive discussion mixing parallel sessions split by types of region with plenary sessions.

9:00 Welcome, introduction

- 9:30 5 parallel discussions on the final SWOT analysis: Each group of case study authors discuss the measures taken within each SME region – preparation of a big poster
- 10:20 Market place: Presentation of the results of each type of region
(10 minutes for each case study)
- 11:20 Coffee break
- 11:40 Success stories: Exchange between the different types of regions – identifying good practices
- 12:30 Lunch Break
- 13:30 Learning from theory: theory-based generalising strategies to exploit existing potentials and to overcome barriers based on the experiences in the SME regions
- 14:30 Identifying proposals for targeted investment strategies including the level of intervention (regional, national, European)
- 15:30 Coffee break
- 15:45 5 parallel discussions on the usability of the proposed investment strategies in each special type of region
- 16:45 Discussion and agreement on the recommendations
- 17:30 End of the synopsis workshop

3 Annex

3.1 Working rules

Each national expert should carry out the case studies by himself/herself.

Reimbursement: EUR 8,400 per case study region

Travel and accommodation expenses: travel costs to the workshop and costs for accommodation in Vienna are covered by EUR 1,000 per case study region.

Costs for travel accommodation and subsistence for implementing interviews and cases in the own country will be borne by the lump sum stated above.

3.2 Interview guideline

The interview guideline is semi-structured, i.e. the following questions need to be covered in the interviews, yet it allows for a degree of flexibility to follow up on interesting points which may arise. Please agree with the coordinator of Tasks 3 & 4 the list of interviewees ahead of conducting the interviews.

1. How do you assess the situation and development of SME in the region over the last few years? Which size categories, sectors and segments of SME are developing well, which size categories, sectors and segments are shrinking or face most difficulties?
 - a. What about the primary/secondary/tertiary sector in general?
 - b. What about the ICT sector in particular?
 - c. What about the creative and knowledge sector in particular?
 - d. What about the low carbon economy in particular?
2. Which regional factors (framework conditions) constitute strengths of the region and help to drive SME development? (Please use the list of factors and determinants in the Annex as a reference)
 - a. What about the primary/secondary/tertiary sector in general?
 - b. What about the ICT sector in particular?
 - c. What about the creative and knowledge sector in particular?
 - d. What about the low carbon economy in particular?
3. Which regional factors (framework conditions) constitute weaknesses of the region and hamper SME development? (Please use the list of factors and determinants in the Annex as a reference)
 - a. What about the primary/secondary/tertiary sector in general?
 - b. What about the ICT sector in particular?
 - c. What about the creative and knowledge sector in particular?
 - d. What about the low carbon economy in particular?

4. What factors constitute opportunities and threats from outside the region for the development of SME in the region? What are the influences of national and international connectedness and globalisation on the SME in the region?
 - a. What about the primary/secondary/tertiary sector in general?
 - b. What about the ICT sector in particular?
 - c. What about the creative and knowledge sector in particular?
 - d. What about the low carbon economy in particular?
5. How have SME in the region handled the effects of the crisis?
6. How do you assess the role of governance and policies and strategies in the region in supporting the development of SME?
 - a. What influence do they have? Consider different levels and institutions.
 - b. What is the role of regulations?
 - c. What was done in the past that worked well? Which initiatives and programmes were effective?
 - d. How do different governance levels and institutions interact here? How effective is the interaction?
 - e. Is there anything that public policy does different here from other regions that are doing less well?
7. What would still be needed to foster SME development in the region?
 - a. Which framework conditions and regional factors need to be improved and how?
 - b. What are successful SME support structures that should be further strengthened?
 - c. How could the interaction of different governance levels and institutions be improved?
 - d. What role could European Cohesion Policy and European funding play, especially through the ERDF? Which programmes are relevant for SME support in your region? What should be organised at national vs regional level?
8. To which extent does the bottom-up and collaborative vision of policy development contribute to the adoption of smart specialisation strategies?¹

Please enter the results of each interview online into the Lime Survey link <https://onlinefb.kmuforschung.ac.at/lis/index.php/survey/index/sid/587263/>

You can use your working language. The purpose of registering the interviews this way is to build up an interview repository.

¹ https://ec.europa.eu/research/regions/index.cfm?pg=smart_specialisation

3.3 FOG Test questionnaire

For the statements in the blocks, please tick one statement on how the situation is and one statement on how the situation should be according to your opinion.

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities steer decisions made over matters related to SME and entrepreneurship support structures and mechanisms in the region in a unilateral manner.		
	Regional authorities exercise their powers mainly providing services and resources, in turn monitoring the achievement of specified objectives with respect to SME development (performance and results oriented)		
	Regional authorities collaboratively develop and foster, with key stakeholders, SME and entrepreneurship support structures and mechanisms in the region.		
	Regional authorities have delegated powers to other entities or relevant stakeholders as a way to proactively develop and foster SME and entrepreneurship support structures and mechanisms in the region.		
	Practices and actions undertaken		
A1.0	Is the development of an entrepreneurship culture in the region rather organically driven (grassroots movements) or rather stemming from a top down approach (institutionally driven)?		
A1.1	Bottom up driven/Top down driven		
A2.0	Which main actor/s is/are informally driving the promotion and shaping the development of an entrepreneurship culture in the region?		
A2.1	Communities of innovators/artists		
A2.2	Civil society, NGOs intending to use entrepreneurship as a mean to solve social issues		
A2.3	Groups/associations of young entrepreneurs		
A2.4	Schools		
A2.5	Universities and research institutions		
A2.6	Chamber of commerce		
A3.0	Which main actor/s is/are formally driving the promotion and shaping the development of an entrepreneurship culture in the region?		
A3.1	National authorities		
A3.2	Regional authority		
A3.3	Local authority (city)		

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
A3.4	Intermediate bodies (partly) owned by one of the authorities named above (please tick the level of authority, too.)		

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities, along with other actors create partnerships to foster an entrepreneurship culture in the region, going beyond the national or European framework/requirements.		
	Activities intended to promote an entrepreneurship culture are financially supported and closely monitored to optimise the efficiency, effectiveness and transparency of the actions undertaken by stakeholders receiving support from the regional authorities.		
	A top down approach is adopted by regional authorities when promoting the development of an entrepreneurial culture (e.g. initiatives on the organisations of start-up conferences stem from local authorities)		
	Regional authorities are enabling all actors to take on the initiative to promote the development of an entrepreneurship culture in the region (e.g. via advisory services, education, training, establishment of regional councils/clusters)		
	Practices and actions undertaken		
B1.0	Which actions are undertaken in the region to develop an entrepreneurial climate and culture?		
B1.1	Entrepreneurship courses offered at schools		
B1.2	Entrepreneurship courses offered at University level		
B1.3	Entrepreneurship courses for unemployed persons		
B1.4	Entrepreneurs competitions and awards (E.g. the winner of a pitching session would receive funding to help develop his/her business idea)		
B1.5	Regional or local "trade-fairs" for start-ups and scale-ups, events for certain branches/clusters		
B1.6	Measures and initiatives to allow failed entrepreneurs to have a 2nd chance. (Reduced times in case of insolvency, etc.)		

	Bloc Perception: Skills (Please tick one option ofor reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities facilitate the creation of business start-up support structures by engaging with a large array of stakeholders themselves.		
	Regional authorities directly contribute to increase the business start-up rate by intiating and managing business start-up support structures.		
	Networks, incubators, portals and gateways are being developed hand in hand by local authorities and citizens, proactively stepping in to create a start-up friendly environment in the region.		
	Regional autorities support the development of start-up support structures by providing the necessary resources to (intermediate) working to boost entrepreneurial skills in the region.		
	Practices and actions undertaken		
C1.0	According to you, which support structure or practice for start-ups and SME is the most effective and should be further emphasised to ensure the development of entrepreneurial skills in the region?		
C1.1	Incubators		
C1.2	Mentoring and coaching on how to find investors, marketing and development strategies for project holders and SME		
C1.3	Mentoring and coaching on financial and legal background of different branches		
C1.5	Online platforms where entrepreneurs can crowdsource solutions to their problems and receive go-to advices		

	Bloc Perception: Opportunities (Please tick one option ofor reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities have developed strategies and implement schemes intending to reduce barriers to entry, eliminate obtacles and foster an environment conducive to the development of start-ups and SME.		
	Off-the-self financing practices as well as the provision of a venture capital environment provide innovative and inclusive sources of financing, which are tailor-made to the needs of the actors in the region .		
	The provision of financing support by the region is provided and can be conditional on the achievement of set objectives and result-oriented approaches are favored by authorities, which encourage a greater ownership of the projects to ensure the success of the action and a return on investment.		

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities use the synergies developed in networks of stakeholders supporting entrepreneurship. They accordingly facilitate the development of conventional financing bodies as well as participative financing schemes targeting start-ups, SME and project holders from under-represented groups.		
	Practices and actions undertaken		
D1.0	Is there a financial gap or a suboptimal investment situation for SME financing in the region?		
D1.1	yes		
D1.2	no		
D1.3	I am not sure		
D2.0	What are the most commonly used financial support schemes or means of financing for entrepreneurs and SME?		
D2.1	Financial instruments (loans, guarantees..etc.) from financial intermediaries		
D2.2	National or Regional direct financing (E.g. hiring subsidy for SME only)		
D2.3	National or Regional indirect financing, i.e. a set of provisions covering reduction of financial charges measures: tax allowances, tax credits, reduction of scouting costs for export purposes, facilitated access to incubators, guarantees to ease access to credit...etc.		
D2.4	EU grants or Fis from EU institutions.		
D3.0	How do governance mechanisms contribute to start-up/SME development while making up for the reduced availability of public funding?		
D3.1	Creation of public private partnerships in favor of SME (E.g. public procurement rules taking into consideration the specificities of SME)		
D3.2	Facilitation of communication between key actors, i.e. organisation or sponsoring of conference to increase SME visibility and marketing		
D4.0	Are regional authorities prompt to take economic risks when providing financial support to SME?		
D4.1	Please rate on a scale from 0 to 5 the authorities's propensity for risk-taking (0=No risks taken; 5=high risk taken)		
D5.0	Who supports and fosters higher accessibility of the region (physical infrastructure)? How (grants/PPP, etc.)		
D5.1	EU institutions		
D5.2	National institutions		

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
D5.3	Regional institutions		
D5.4	Private companies in Public-Private-Partnerships		
D6.0	What is done to improve the governance standards at national/regional/local level?		
D6.1	Tax allowances for start-ups and SME		
D6.2	Reduction of procurement requirements for SME		
D6.3	Initiatives do ease the legal requirements to start and run a business and speed up business starts		
D6.4	Strong connection of all regional institutions in order to speed up administrative services for SME		
D6.5	Establishment of joint bodies representing regional institutions, entrepreneurs and research organisations		

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities ensure the development of an entrepreneurial culture in the region looking at other regions' governance structures and mechanisms to improve their own entrepreneurship and SME policies and create partnerships with other regional authorities to foster innovation as well as the development of synergies.		
	Regional authorities are integrated into a multi-level governance system and actively collaborate to identify best practices and challenges solving options beyond regional and national borders.		
	Co-funded projects are driving the need for further collaboration between regional authorities and between regions.		
	Developing contacts and partnerships is the spearhead of regional authorities and key actors to make up for potentially limited public intervention (e.g public funding) and autonomously find solutions to local issues (without recurring to external support).		
	Practices and actions undertaken		
E1.0	Have regional clusters developed ties and are collaborating with other clusters at the national/EU level?		
E1.1	Yes		
E1.2	No		

	Bloc Perception: Connectedness (Please tick one option ofor reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
E1.3	I am not sure		
E2.0	Which are the regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment?		
E2.1	Attending cross-regional meetings and SME fairs		
E2.2	Project cooperations with various other EU regions		
E2.3	Emphasis on the development of competitive clusters		
E2.4	None		

3.4 Explanatory factors & determinants for SME performance

According to the literature review and data analysis so far, the following factors may be relevant to explain SME patterns and performance to a certain extent (see table).

Table 3.1: Relevant determinants/explanatory factors for SME patterns and performance

Regional income Regional purchasing power
Investment and capital stock
Accessibility of the region (international) by road and other means
Regional (public) physical infrastructure Transportation ICT
Landscape and natural endowment
Education and skills of the regional workforce Levels/quality Degree of matching Quantitative availability Education and training institutions in the region
Sectoral specialisation versus sectoral diversity of the region
Knowledge and innovation production R&D expenditures & output R&D personnel Patents, scientific projects Firms' innovation activity Knowledge & research institutions (universities etc.) Creative milieus or capital Entrepreneurial culture/capital
Availability of financing Loans Venture capital, business angels Crowd funding Public funding
Regulation, e.g. For business start-up Labour regulations
Support services and institutions, and incentives for enterprises
Governance quality including e.g. development strategies in place
Economies of agglomeration and related factors
Population density and mass (urbanisation)
Workforce density and mass
Existence of large lead companies (including multinationals)
Density of inter-firm linkages (within or across industries)
Business clusters (formal or informal)
Quality of business networks and associations

Source: Consortium, 2016.

Case Study Summaries

1 Milano Region (Italy)

The Metropolitan City of Milan (MCM) is located at the heart of northern Italy, within the wealthiest region of Italy, the Lombardy region. The area has a population of 3.2 Million. The authority replaced the Province of Milan and includes the city of Milan (its capital) and other 133 municipalities. The MCM is at the centre of a bigger urban agglomeration home to seven million inhabitants. The area is the driver of the regional economy and one of the main economic hubs in Europe. The Metropolitan city's strong economic sectors include financial, commercial and juridical services, marketing, manufacturing of machineries and bio-tech. Furthermore, Milan is famous for its fashion and design businesses, which are strongly linked to the textile and furniture clusters in the municipalities in the northwest and northern part of the region, outside to boundaries of the Metropolitan city. The MCM is home to 36% of all the active firms in Lombardy and to 52% of all the people employed in the region, and recovered from the crisis already by 2011 (measures by value added) and developed well over the last years.

Italian regions are highly autonomous and have strong competencies on spatial planning, transport planning, health and education. The new MCM takes upon the same competences of the Provincia di Milan, plus: the need to create and adopt a three-year territorial plan; territorial planning in general; coordinating the management of public services; mobility; promotion and coordination of socio-economic development; promotion and coordination of IT and digital networks. The competences have been taken and partially overlaps with the municipal level. Apart from Milan, the municipalities are small in size and large in numbers, which creates a patchwork of relative autonomous areas. The recently established MCM with the aim to improve coordination has little competences to enforce cooperation between the municipalities. Although the Lombardy Region has defined an overarching spatial strategy which is a guidance for lower tiers of government, it does not have the competences to implement this strategy. Furthermore, the coordinating role of the MCM is heavily undermined due to the dominance of the city of Milan and limited competences. At the moment, regionally coordinating efforts are pursued by more informal means of municipal cooperation. The introduction of the new MCM goes in the right direction to improve coordination, but at the moment lacks the means and the weight to do so. Following this, there are measures to support incubators and accelerators, a guarantee fund to ease access to finance from SME, etc. but other important initiatives (national support of innovative SME and of Industry 4.0) have not yet been implemented.

Of the three focus sectors, the creative/knowledge economy is by far the largest sector with 33.5% of all firms and 37% of the total number of employees, and is very much driven by the private sector. The low carbon economy includes 16.3% of all firms and 11% of employed persons. The ICT sector accounts to 3.5% of all active firms in the MCM area and to 5.5% of its employees.

2 Bratislavský kraj (Slovakia)

The Bratislava region is the smallest region in Slovakia with around two thousand square kilometres and ranks sixth within eight NUTS 3 regions in Slovakia with 641 892 inhabitants in 2016. The region is the most developed in the country with constantly growing economic indicators, mostly also during the economic crisis due to the strong developments in the tertiary sector. The success of the Bratislava region is determined by the capital city of Slovakia – Bratislava, its geographical location, concentration of the majority of national institutions, universities and higher education institutions and foreign direct investments (in 2014 the share of FDI in the Bratislava region represented more than 65% of total FDI in Slovakia), as well as enterprises (share of SME in the Bratislava region in 2015 was more than 25% of total number of SME in Slovakia, the rest of them is divided among seven other regions). Almost 64% of all SME are self-employed entrepreneurs. SME provided jobs to close to 74% of the active labour force and contributed by 52.8% to the creation of added value. SME show growth in almost all relevant indicators – employment, added value, profits, and exports of goods.

The current SME support system is relatively complicated and fragmented, it includes a number of actors who deal with related support issues and are characterized by complex links. Even though the operational programmes 2007-13 were not directly aimed at supporting businesses, their focus helped to stimulate the internal resources of the regions by the development of downstream entrepreneurial activities (SME) while at the same time increase the attractiveness of regions for foreign investment. The programming period 2014 -2020 is more focused to direct help to SME. Alongside the European Union's operational programs during the last two programming periods, there have been various initiatives for regional and SME development made over time. Some of them are national with spatial impact for the Bratislava region, some of them were linked with the activities of the regional authority.

The number of enterprises in the ICT sector has been constantly on the rise during the last eight years, and interview partners and the focus group within this case study see the highest potential for the ICT sector also for the future. The advantage of the Bratislava region in comparison with the rest of the country is the presence of relatively high number of medium-sized and also large transnational ICT companies. The ICT sector is closely interconnected with the creative economy. It is considered the base for the creative economy sector and thus makes it difficult to draw a clear division line between them. The creative milieu is considered to be strong in the Bratislava region although the public support for SME development is relatively fragmented. Here the presence of education and training institutions specialising on ICT skills and large lead companies helps significantly.

The low-carbon economy has not developed much over the last 8-10 years according to the statistics. According to the interview partners, it has some potential in the Bratislava region, although local actors are cautious. The transition to low-carbon economy is one of the priority areas of the region aiming at energy efficiency, use of renewable energy, and development of smart distribution systems. Though, local actors emphasise the need for a cost-benefit ra-

tional when thinking about options. And the low-carbon economy, as well as the primary and secondary sectors struggle with a lack of qualified workforce. The vocational secondary schools are blamed for not being able to reflect the labour market needs, they are not preparing students to enter the labour market or to start their own business. And existing businesses do not innovate, mainly because the stimuli from the public or the private sector are not there and/or financial constraints.

3 Graz Region (Austria)

The NUTS 3 Region Graz comprises of two political districts, the City of Graz and Graz Umgebung (“Graz Hinterland”) and is located at the centre of Styria (NUTS 2). The City of Graz is the regional capital, economic, cultural, academic and administrative centre of Styria as well as the second largest city in Austria, with several universities that are actually quite big in relation to the size of the city. The area has a population of approx. 430.000, accounting for 34.8% of Styria’s population. Neighbouring agglomerations at close range (within a radius of 200 km) are Vienna, Klagenfurt (Austria), Maribor, Ljubljana (Slovenia) and Zagreb (Croatia). Historically, the region is characterized by a partial concentration of the Styrian industrial production and complementary industry-related services. The larger part of manufacturing was concentrated in automotive engineering and machinery. Since 2000 the industrial structure of the region diversified noticeably towards technology and knowledge-intensive activities. Thereby, the diversification intensified within the tertiary sector, leading to a region-specific specialisation in complex and industry-related services (engineering services, research & development). Consequently, the regional R&D quota underwent a dynamic development and ads up to 4.87% by now. R&D activities are thereby largely concentrated in Graz, in the meantime one of the most innovative regions in Europe, whereby the local university has played a pivotal role..

Regional stakeholders are closely interlinked via structured processes. Linked to the strengths of the region, smart regional specialisation is at the core of the Economic Strategy for Styria 2025. Also local strategies are developed in close coordination with the Styrian economic strategy, because aspired advancement is supposed to take place interdependently. Consensus strategy planning is expressed, for example, in the reinforcement of the regional strengths addressed (mobility, green tech and health tech as well as creative industries). Furthermore, synergetic effects ought to be internalised by involving relevant stakeholders, special interest groups, enterprises or research facilities. This close cooperation has also resulted in a rather differentiated start-up ecosystem..

The diversification of industries and the growth of the service sector was notably driven by the creative industries, ICT and low carbon industries as well and have been institutionalised in sector-specific clusters and networks. Thus, the dynamics and potential capability of these sectors are considered in the Styrian smart regional specialisation and therefore the strategical economic alignment of the region. Mobility, Green-Tech and Health Tech are the guiding themes and interlink traditional (automotive, machinery, electronics) and young industries (green energy and resources, digital technologies). Potential for further development and future growth is evident along global trends like smart production, digitalisation or renewable energies. Local highly advanced enterprises with state-of-the-art structures do not only adapt these topics, but are actively involved in their development or provide enabling technologies. The creative industries thereby act as a complementary innovation supporter.

4 Pfaffenhofen an der Ilm (Germany)

The district of Pfaffenhofen an der Ilm is located in the middle of the Free State of Bavaria with around 122,000 inhabitants (2015). This implies a population density of 158 inh/km². Despite its rather rural character, the district is strategically well located between the metropolitan areas of Munich and Nuremberg and shows high values with regard to potential accessibility by road, rail and air.

The region has a strong focus on innovative activities. Total intramural R&D expenditures both per inhabitant and in relation to GDP exceed by far average values for Bavaria and Germany. Also with regard to unemployment, GDP growth, value-added and the disposable net income per inhabitant, the district is performing very well.

One main reason for the region's economic viability is the strong SME sector. In 2013, 99.6% of all enterprises were enterprises with 1-249 employees. Around 91% were micro enterprises and 8.6% had 10-249 employees. These shares remained stable during the crisis. The share of enterprises with 10-49 employees even increased from 7.6% in 2008 to 8.6% in 2013. Although large enterprises only account for a small share of 0.4% of all enterprises, they employ about one third of all employees in the region. These large enterprises also show the highest relative increase in employees between 2008 and 2013 (+37%). Yet, still three out of four workers are employed by a SME with 1-249 employees.

Other important indicators to understand the dynamics of SME development in the region are birth and closure rates. Each year, around 1,400 new enterprises are created in the district which corresponds to an annual birth rate of 16-18%. The closure rate, on the other side, is below this value. Between 14-16% of all enterprises close per year. Over the past years, this value was decreasing, yet sometimes swinging.

The ESPON SME project focuses on three specific sectors: Knowledge & creative economy; ICT; low-carbon economy. Although no specific values are available for the district at NUTS3 level, it can be concluded from the available figures at NUTS2 level that the three sectors play an important role. Around 46% of all employees in Upper Bavaria work in these three sectors with the knowledge & creative economy being most important (19.6%), followed by the low-carbon economy (14.5%) and the ICT sector (11.7%).

The district of Pfaffenhofen an der Ilm benefits from its good accessibility, the sectoral diversity and a smart way of attracting new enterprises that create synergies with existing enterprises and, at the same time, providing support services for existing enterprises, e.g. to diversify their portfolio. A main challenge of the district refer to a lack of skilled labour force which entails problems with regard to business succession. Other important issues are the limited availability of land for business development and high living costs, especially for housing. Furthermore, administrative processes take a lot of time and broadband access is partly perceived as insufficient.

5 Västra Götaland (Sweden)

Västra Götaland is a coastal region located in the south-west of Sweden. The region has 49 municipalities and a total of 1.6 million inhabitants. The city Gothenburg is the regional capital and also the second largest city in Sweden. The urban environment of Gothenburg and the region's attractive geographical location between Oslo and Norway in the north and the Öresund region in the south attracts both people and business to Västra Götaland. Traditionally, the business structure of Västra Götaland has been characterised by the manufacturing industries. The vehicle and transport industry is the largest sector in Västra Götaland and has historically been an important driver for economic and business growth. The economy is highly trade and export dependent, which is also characteristic for Sweden as a whole. Overall, Västra Götaland has had a positive economic development over the last years and differences between the region's municipalities continue to decrease. During the spring of 2017, the high business activity has been even strengthened and the economic index is at its highest level since 2005. Small and medium-sized enterprises stand for most of the employment growth in Västra Götaland. Unemployment level is at low 2,8% (below the national average). The service sector, which stands for almost three quarters of all employed, has still a dynamic development and is expected to continue to stay strong.

The region is strong on infrastructure for innovation and knowledge sharing. There is a well-developed cooperation and interaction between universities, research institutes and regional development centres, science parks and business incubators. The entrepreneurship culture is being developed, starting by offering entrepreneurial courses at the school level, publicly monitoring the entrepreneurial friendliness of local politicians, etc.

Västra Götaland municipalities are covered by four associations of local authorities. The task of each association is to promote co-operation over municipal borders and provide a forum for the exchange of ideas and experience within the region, and assist municipalities in their interaction with other regional institutions. All in all, there is a very nuanced and balanced interaction of local and regional stakeholders. The policy strategies build on a common vision for the region as a whole, and are broken down to the subregional level. The four Regional Associations of Local Authorities each have their own strategy documents dictating each district's action plan regarding overall regional development, and specific business development strategies. The Region Västra Götaland (VGR) has a policy strategy for SME development alongside others like a Climate Strategy (goal: reaching a fossil free energy system in 2030). The SME action plan is very customized to the needs of SME and is very inclusive (principle of equality) to create a diverse pool of enterprises. The new action plan (2017-2020) for entrepreneurship and start-up companies emphasises young people in rural areas, integration through enterprising and women's enterprising and isolation of young people on the labour market. Recently, also regional export centres were established across the country to support SME with their internationalisation strategies. A new public procurement framework aims to give authorities more flexibility in public procurement process and increase the focus on inno-

vation in SME. The region has a smart specialisation strategy for a long time, well before the EC started with the initiative.

The ICT sector is the third largest business sector in the region. There is a high demand for ICT services, which to some part can be explained by the digitalisation process of the public sector that has been going on over the last years. During the economic setback of 2008-2009, ICT enterprises managed very well and have continued to stay strong. A lack of worker supply and difficulties in finding workers with right skills and competences is considered a major threat and hinders further business expansion. Problems of finding and recruiting right competences are not just an issue within the ICT sector, but rather a problem for most sectors in the region. The low carbon economy is a fast growing sector in Västra Götaland and numbers of employed within green-tech enterprises have increased with almost 20% over the last decade. Exports from green-tech enterprises have also increased significantly. Västra Götaland has a large production of biogas and is at the forefront from both a national and international perspective. The cultural and creative sector stands for nearly 12% of all enterprises in the region, and the share of workers within cultural and creative enterprises is about 7%. Regional support instruments for SME and business development target all three focus sectors. The support eco-system is built on cooperation among public authorities, private businesses and academia. Although support instruments are found to work well, support programmes need to be better customised towards the needs of SME, such as easier application processes and shorter programme periods.

6 Loire-Atlantique (France)

Loire-Atlantique is one of the five departments of the western region of Pays de la Loire. The department, one of the 10 most dynamic departments in France, is characterised by its attractiveness in terms of quality of life and economic opportunities. Two main cities, Nantes and Saint-Nazaire form together the Nantes Saint-Nazaire Metropolis, which is the main driver for dynamism, growth and prosperity. The two cities, singularly opposed by their respective territorial dynamics and notably, economic specialisation, have turned their differences into opportunities, thereby creating synergies between sectors having strong development perspectives as well as prospects for the creation of employment in the long term. The exposure of the metropolis is marked by the economic and technological intelligence of cultural and creative industries, joining force with a myriad of local actors to carry out nationally and increasingly globally-renowned projects. Such endeavours have metamorphosed the department from an historical industrial centre to a vital, forward-looking territory nurturing the development locally-anchored, well-connected and innovative economic actors.

Along those lines, four main factors can be identified that demonstrate the resilience and dynamism of Loire-Atlantique: Economic diversification, collaboration, innovation-oriented approach and local anchoring. Loire-Atlantique preserved a vibrant industrial sector, particularly in the more “traditional” agri-food sector, shipyard industries, leather industries and automotive industries which are propelled by smart technologies and innovation. Alongside, since the mid-2000s, advanced manufacturing, which has gained a significant momentum throughout the region especially in and around the Nantes Saint-Nazaire area, contributed to strengthen the aforementioned sectors by upgrading their productive systems. Following a cross-sectoral approach, industries in the pharmaceutical, plastic, building material industry, aerospace, marine, rail, transport and renewable energies are applying cutting-edge knowledge as well as non-technological innovation leading to the improvement of existing products, processes and business models. Numerous clusters supported by specialised universities and research centres likewise help position Loire-Atlantique at the forefront of the innovation scene. Last but certainly not least, the shift affecting the industrial sectors also resulted in a real springboard for the development of creative industries, notably but inter alia, in architecture, design, fashion, video games, performing arts and digital media creation.

Such development relies on a highly intertwined network of actors cultivating team spirit as a quintessential component of the territory’s economy. Dovetailing the diversity of the department’s economic fabric, the types of enterprises are very heterogeneous. Nonetheless, medium-sized enterprises hold a key position, to a large extent driving innovation, being an indispensable pool of expertise for the larger groups. This collaboration, also shaped by local public authorities and semi-public entities, is a keystone element of the department’s strategy for achieving successful scale-ups. Start-ups are also well supported, local authorities as well as development agencies providing entrepreneurs with “welcome packages” along a wide range of services/infrastructures (co-working spaces, incubators, business centres, and flexi-

ble renting spaces). Despite of the economic recovery, access to conventional sources of financing for SME remains a thorny issue. Nevertheless, the numerous regional and national schemes, to some extent, counterbalanced the situation by providing direct financing (e.g. subsidy for vor hiring employees for SME only) or indirect financing (i.e. a set of provisions covering reductions of financial charges: tax allowances, tax credits, reduction of scouting costs for export purposes, facilitated access to incubators, guarantees to ease access to credit). However, the financing situation is improving thanks to the presence of cooperative banks having a strong territorial culture as well as alternative support mechanisms tailored to address the needs of SME at different stages of their development.

By exploring new opportunities in cooperation with other regional and European actors to increase the department's outreach initiatives' may be a good strategy to overcome the department's structural weakness in R&D spending.

7 Murcia (Spain)

The Region of Murcia is an autonomous community that consists of only one province, located in the southeast of the Iberian Peninsula. Its capital is the city of Murcia where the headquarters of the regional institutional bodies are located. The region's logistical hub is a harbour, which is the fifth in Spain in terms of freight traffic. The region of Murcia is one of the agricultural power houses of Spain (13% of employment), with a very high export rate. The sector's employment share is even bigger than the industry sector share. The service sector takes up more than two thirds of all employment, which is still well below the national average. Murcia experienced a very positive development up to the economic crises, but was then hit considerably, even more than Spain as a whole. The weaknesses of the previous growth model and the severity of the subsequent crisis are related to structural deficiencies for the adaptation of the regional economy to the new global circumstances. The crisis resulted then in a somewhat changing structure of the economy. There is a clear tendency towards the service sector strengthening, but also the relative weight of agriculture has grown because industry and construction have decreased so much due to the crises. In Murcia, the weight of agriculture in employment has increased around 30% (way above Spain) and, on the other hand, construction has been reduced by around 230%. Also the already low R&D intensity of the economy has further decreased; the relatively low productivity in the Murcia's economy, and the levels of qualification and labour demand became even more unbalanced. Overall, the case study uncovered an insufficient coordination of the regional system of research, technology and innovation, as there is not a clear, ambitious and updated strategy to align all the resources the region has on the subject. The recently elaborated Smart Specialisation Strategy for Murcia has been an important step to rectify this situation.

The ICT sector is the smallest one in comparison to other Spanish regions, but it has experienced an increase of 33% in the number of enterprises from 2008 to 2016. The number of active businesses in the knowledge/creative economy has increased as well in the same period, though somewhat variably because the businesses related to service sectors increased, while services close to the construction industry decreased (e.g. architectural services). The low carbon sector experienced a considerable decrease overall because the ailing construction industry is included in this statistics. Subsectors dealing with water and energy supply have actually increased all the way through the economic crisis. In some aspects of the low carbon industry the region has huge potential (solar energy, biomass, energy efficiency (construction sector, etc.), waste collection and treatment, carbon sequestration), although at the same time it faces numerous challenges (mainly an updated policy framework to create demand for the mentioned services, also to tackle dependency on fossil fuels, erosion, desertification, biodiversity loss, etc.).

8 Timiș Region (Romania)

Timiș County is located in western Romania on the border with Hungary and Serbia, and is part of The Danube–Criș–Mureș–Tisa Euroregion. The West Region in Romania (NUTS 2 level) has experienced rapid economic growth in the last 20 years and significant entrepreneurial activity. The West Region has the highest concentration of enterprises and exporters in Romania. Out of the total population of around 450.000, 61% lived in 2016 in urban areas. Timiș is also the county with the largest surface and agricultural production in Romania. The industry focuses mainly on high-tech, machine building, chemical, and light industry and services. Nonetheless, almost all industrial segments including ICT, automotive, wood processing, textiles, pharmaceutical, etc. are covered, making the region highly attractive for various investors. The economic evolution of Timiș County is directly linked to the evolution of the national economy. From 2003 onwards, the national economy has undergone two separate phases of development: (i) economic growth between 2003 and 2008 and (ii) slow economic recovery after the economic crisis of 2008. Although quite severely affected by the economic crisis, the West Region slowly reconsolidated its economic position and, as of 2017, is the second most performing region in Romania (after Bucharest).

The main programme at national level is the Operational Programme for SME from the Ministry of Regional Development and Public Administration. In addition, the Ministry for Business environment also develops programmes for SME support at national level. As emphasised by the stakeholders, there are no specific programmes tailored at regional level. There is no relation between the region's specificity and the financing provided. Generally, public administration has only an administrative function, as they do not devise programmes for the entrepreneurial environment in Timiș County. Strategies are rarely implemented, or coordinated between them. Implementation and coordination usually occurs at national level, which creates a discrepancy with the local needs.

The ICT sector represents one of the few successful knowledge-intensive sectors in the West Region of Romania due to high presence of qualified workforce generated by the major universities in the area, as well as the ease to initiate a business in this sector, compared to creative knowledge economy or low carbon economy. There is a tendency among IT students in the region to remain and enter the workforce in Timiș. Nonetheless, the region remains a marginal player compared to the North West Region of Romania, where the ICT sector represents a third of the overall exports. It is more difficult to initiate a business in sectors such as low carbon economy or creative knowledge economy. The transfer from the business idea stage to actual implementation is much more difficult to achieve in the low carbon economy sector or some areas of the creative knowledge sector, where the financial and other needs are higher in the entry stage. For example, there is a need for materials and technicians, thus a consistent need for capital at an early stage. Local actors were so far unable to develop the low carbon sector. Stakeholders stated that they have tried to incentivise the construction sector to promote low carbon practices, but they did not succeed. The same is true with the

Regional Operational Programme, which finances energy efficiency, but it does not lead to the emergence of a low-carbon sector, but rather a more efficient resource use. For example, the low level of recyclability in Timiș County represents a current weakness, but also an opportunity for SME to further develop and innovate in this area.

9 Split-Dalmatia County (Croatia)

Split-Dalmatia County, the largest county by area in Croatia, is geographically located in the central part of the Adriatic Coast, which includes three different areas: islands, coastal area and the Dalmatian Hinterland. The geographical location, natural beauty and favourable Mediterranean climate are the main strengths of the Split-Dalmatia County. There are relatively good transport links within and outside the County (roads, ports, railways and an airport). Tourism complemented by related trade represent the most important economic activity. Manufacturing, construction and shipbuilding are the most significant industrial activities, which were hit considerably by the recent economic crisis. Outdated and uncompetitive manufacturing processes and equipment, as well as slow adaptation to market needs and trends in industrial production have been identified as the biggest weaknesses of the secondary sector. The primary sector is constituted by a highly heterogeneous agricultural structure, basically with favourable natural conditions, but people rarely decide to engage in it, because it is unfavourable compared to alternative opportunities for income generation (esp. tourism). The University of Split is the second largest university in the Republic of Croatia and, with its scientific infrastructure (scientific and research institutions), research and teaching staff, and the number of students, it represents an important source for the labour market. Though, the case study indicates also a structural mismatch between educational programmes and the needs of the economy to a certain extent. The business support infrastructure made efforts to launch entrepreneurial zones and incubators in the County area, but these are mostly related to a freezing of public funds in uncompleted and unused business zones. This mismatch between supply and demand of forms of support institutions contributes to an uneven development of certain parts of the County. Population in rural areas often lack knowledge and skills to engage in entrepreneurship. Unfavourable conditions for financing the economy and entrepreneurial ventures have been identified as one of the biggest weaknesses.

It is expected that the ICT sector will develop further in the future by building on a good base due to a good milieu between the university and the start-up scene (including FDI in the past). The ICT community enjoys the support of local and regional authorities, and thanks to the climate and natural conditions, the Split-Dalmatia County provides good living conditions in a situation when business does not depend on the local market and environment. The weaknesses include the university studies, which are lagging behind in relevant and needed knowledge for the labor market, so that graduated professionals do not have all the necessary knowledge, mobility of ICT professionals, and their departure to other EU countries where they can earn a higher income, and the existence of numerous administrative barriers at the national level, which generally limits entrepreneurial activity.

The creative/knowledge economy is still hampered by a lack of support by the governance regime: no significant joint efforts have yet been made by the national, county and local authorities to develop the creative/knowledge economy. The key potential of development of

creative/knowledge economy is in its complementarity with tourism and the synergistic effect that can be achieved by combining these two sectors in order to create new enriched tourism products.

The main strengths for the development of entrepreneurial initiative in the low carbon economy are natural resources in the Split-Dalmatia County that favor its implementation. The greatest weaknesses are the over-regulation of this field, lack of transparency in previous cases of granting concessions for the use of alternative energy sources, low level of co-financing and promotion at the national level, unclear long-term strategy in the application of this technology that would stimulate users to invest in adaptation to new energy sources, and entrepreneurs' poor awareness of the benefits and possibilities of using alternative energy sources in business.

10 Ostroleka (Poland)

The Ostroleka subregion is part of the biggest, most populated and fastest developing Polish NUTS 2 region – Mazowieckie (north-east) of which Warsaw is the main hub. Yet, the subregion itself faces serious developmental challenges, which are strictly related to its geographical (inner periphery) and socio-economic peripherality. In comparison with the more advanced subregions, Ostroleka has limited road and train connections as well as low accessibility from the capital Warsaw and other parts of the region. The business sector in the case study region is relatively weak since 2008. Although the number of entities increased by 6,7% in the 2007-2016 period, this growth was definitely much lower than the one observed in the region as a whole. Low levels of entrepreneurship and untapped human capital potential in the region remain the main problems hampering SME development.

The sectoral structure of the case study region is quite stable. The primary sector dominates with 37% of enterprises operating within agriculture. A distinct specialisation can be pointed out in some specific parts of the region, for instance, agro-food processing in the field of dairying and wood processing. Due to the dominance of the agricultural character of the region, economic activity in the creative economy, ICT and low-carbon enterprises are close to negligible. The educational sector struggles with the high competitiveness pressure from other educational centres located in the close distance and general negative demographic trends. The ICT sector consists of dispersed small-scale enterprises dealing with services related to ICT infrastructure only. The sector also suffers from a lack of internal demand. In official strategies (RIS3) the regional government declares that there are no evidence-based reasons to support the creative sector development outside of Warsaw. The low-carbon sector has not been developed yet, although it possesses potential (e.g. biomass), which is actually true for the whole of Poland. On a more general level, the case study points towards available EU funding, being used in the NUTS 3 subregion without clear alignment to a strategic vision and objectives. More advanced support targets mainly the Warsaw business sector and already well-performing SME have easier access to various support instruments.

Local Authority Units must elaborate 22 obligatory documents and local communes must elaborate 15 documents, none of which focuses on entrepreneurship development. Analyses of sub-regional strategies demonstrate difficulties of local authorities with formulating accurate diagnoses and creating adequate solutions, in particular more complex, non-financial, but rather organizational solutions (e.g. how to use non-investment tools to strengthen entrepreneurship, how to increase the networking and collaboration among local entrepreneurs, or large companies potential for spurring SME sector). Experts agreed that some of the tools used to support entrepreneurship are not effective and their value is minimal, e.g. small subsidies for unemployed to start entrepreneurship activity. The tool was popular among unemployed citizens of Ostroleka Subregion, but there is an agreement that it did not contribute to SME development in the region as the majority of established companies were by no means innovative. All in all, the region suffers from the common drawbacks of disadvantaged regions

on the periphery including low levels of governance, although it is not too distant from the capital. It probably came out at the top in the cluster of least successful regions in Europe, because some context indicators were only available at NUTS 2 level, which favours a region which includes a capital.

Case Studies

Case study report:

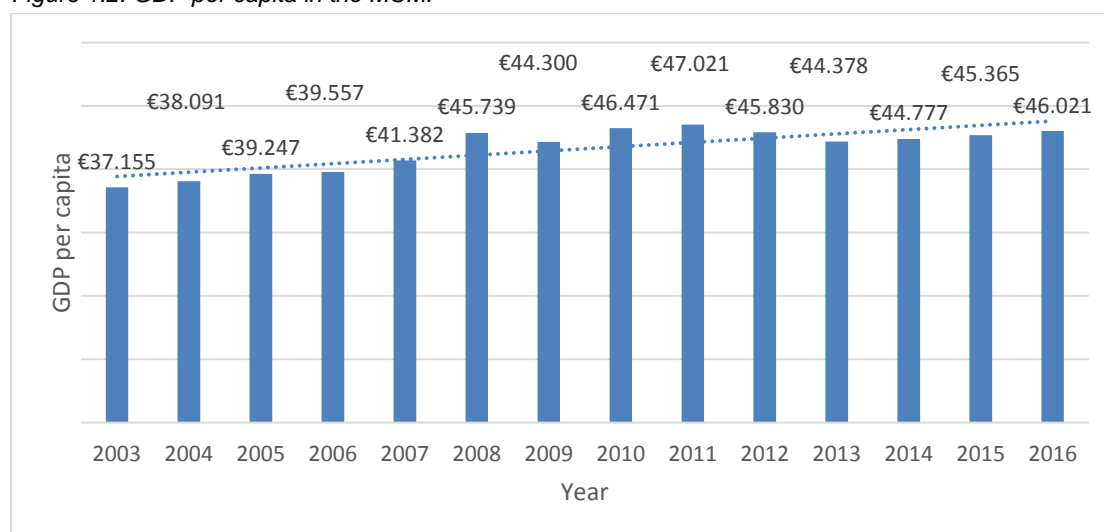
Milan

Simone Vitiello
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As of the last quarter of 2016, there are 296,404 active firms in the Milan metropolitan area, and they overall employ 1,795,777 people⁸. 40% of the active firms at the end of 2016 are limited companies, 15% are private companies, 42% are individual companies (self-employed workers), while the remaining 3% falls into other legal forms⁹. In comparison, in Lombardy, the region in which the MCM is situated, there are 815,246 active firms, that employ 3,776,923 people¹⁰. The MCM is therefore home to 36% of all the active firms in Lombardy and to 52% of all the people employed in the region.

As shown in the figure below, GDP per capita in the area is €46,021. The trend since 2003 is overall positive, but yearly growth was negative in 2009, 2012 and 2013.

Figure 1.2: GDP per capita in the MCM.



Source: Elaborazioni Istituto Guglielmo Tagliacarne

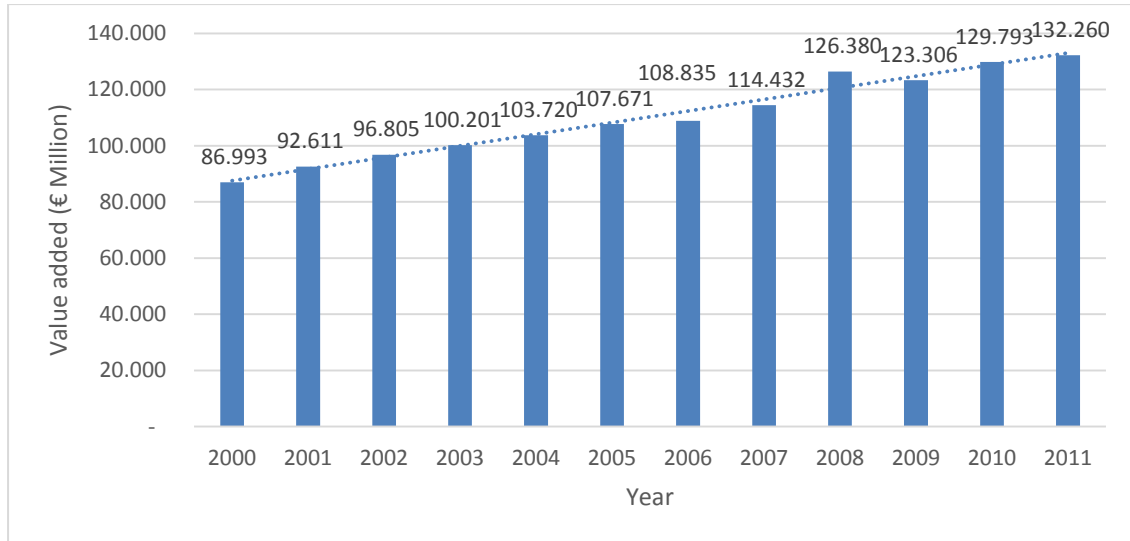
As of 2011, the value added at current prices of the economic activity based in the MCM account to € 132 billion. Unfortunately, the Italian national statistical institute (ISTAT) does not provide the same level of geographical accuracy for data collected after 2011. The trend has been overall positive since 2000, but yearly growth was negative in 2009.

⁸ Camera di Commercio di Milano, IV trimestre 2016: <http://www.mi.camcom.it/documents/10157/30635088/comunicato-impres-2016-4trim.pdf/4e93a05d-abb2-4ccf-8b6e-417e51a29c92>

⁹ Ibid.

¹⁰ Ibid.

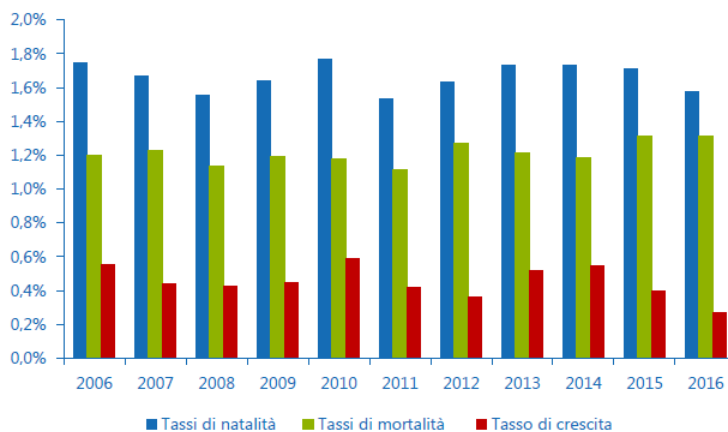
Figure 1.3: Value added at current prices (millions of euro)



Source: Istat

As shown in the figure below, the difference between the birth rate and the failure/closure rate has been positive since 2006, regardless of the 2009 drop in value added. In 2016 the number of firms increased by 0.3% compared to 2015. The growth rate has slowed down a bit compared to the 0.4% the previous year. Since 2006 the yearly growth rate of firms fluctuated between 0.6% and 0.3%. According to ISTAT¹¹, in 2014 the survival rate after 3 years was 55.03% for all enterprises and 65.06% for micro enterprises.

Figure 1.4: birth rate, failure/closure rate and growth rate in the Milan metropolitan area.



Source: Servizio Studi e Statistica Camera di Commercio di Milano su dati Registro Imprese

Of the 296,404 active firms in the MCM in 2016, 49.3% operates in the service sector, 25.1% in the commerce sector, 13.6% in the construction sector, 10.6% in the industrial sector and

¹¹ <https://www.istat.it/>

1.3% in the agricultural sector¹². The service sector is therefore the main component of the local economy. Over the last 30 years, the industrial sector lost 18 percentage points, this highlights the regional transformation from an industry-based to a service-based economy.

ISTAT data from 2014 provide a province level breakdown by NACE 2¹³. Using the definition of sectors agreed for the case studies¹⁴, the table below summarise the number of firms and employees in the MCM for the following sectors: ICT sector; Creative/knowledge; Low carbon economy.

Table 1.1: Number of active enterprises and of people employed by Size class of persons employed (2014)

Year	2014									
	number of active enterprises					number of persons employed of active enterprises (annual average values)				
Size class of persons employed	0-9	10-49	50-249	250+	total	0-9	10-49	50-249	250 and over	total
Total	282,024	14,809	2,744	625	300,202	472,073	279,949	275,807	767,948	1,795,777
ICT sector	9,496	785	178	45	10,504	17,088	14,884	18,305	49,163	99,440
Creative/knowledge economy	95,261	4,179	1,016	258	100,714	138,859	82,473	104,244	337,225	662,800
Low carbon economy	46,422	2,136	285	57	48,900	71,083	39,045	26,939	60,723	197,791

Source: ISTAT

Overall, 93.94% of firms in the MCM are micro enterprises (0-9 persons employed), but they only employ 26.29% of the employed population. Small-Medium enterprises (SME- 0-250 persons employed) make up 99.79% of all firms and employ 57.24% of the employed population. The remaining 42.76% of the employed population is employed by 625 (0.21%) large firms (250+ persons employed).

The ICT sector accounts to 3.5% of all active firms in the MCM area and to 5.45% of its employees. The Creative/knowledge economy is the largest sector with 33.55% of all firms and 36.91% of the total number of employees employed in the sector. The low carbon economy includes 16.29% of all firms and 11.01% of employed persons. By looking at the size of firms in the three sectors, it reflects the overall average, with more than 90% of firms being micro enterprises and less than 0.5% being large firms.

¹² Camera di Commercio di Milano, IV trimestre 2016: <http://www.mi.camcom.it/documents/10157/30635088/comunicato-impres-2016-4trim.pdf/4e93a05d-abb2-4ccf-8b6e-417e51a29c92>

¹³ ISTAT: <http://dati.istat.it/Index.aspx?lang=en&SubSessionId=ab3e3042-5ceb-45a2-bb90-e93928a2f5f4&themetreeid=91#>

¹⁴ See main deliverable.

2 Factors influencing the dynamics of the region (strengths, weaknesses, opportunities and threats)

Internal factors – factors of competitiveness

Major strengths

The MCM is located at the heart of the Lombardy region, which is a highly populated, rich European region, with a GDP which is more than 25% higher than the European Union (EU) average¹⁵. The MCM benefits from a favourable geographic position being at the centre of northern Italy, its rail and highway network and at close distance from the neighbouring countries. The city was founded as a Roman fort because of its central and dominant position, the same name “*Milan*” comes from the Latin name *Mediolanum*, which means “in the middle of the land”.

The region has a diversified economy specialised in many different sectors. The area is characterised by a strong service sector, that includes the financial sector, media/communication and the creative/knowledge economy, with urban creative clusters vertically specialised in design and fashion. These clusters are characterised by a high concentration of creative firms within specific areas of the city that enable contamination and increase competitiveness. Several industrial clusters specialised in textile, furniture, ICT, industrial machineries, health and biotech can be found in less urbanised areas within the MCM limits or at close proximity. No major clusters are linked specifically to low carbon economy. If the eastern, northern and western part of the region are characterised by high urbanisation and industrialisation, the southern part of the region is more rural and linked to the agricultural sector.

In the Commune of Milan, 75% of the surfaced is urbanised. In the MCM the percentage is much lower, even if vast un-urbanised areas can only be found in the southern part of the region¹⁶. Most of those open spaces are used for agriculture, with the limited exception of the regional parks found in proximity of rivers.

Table 2.1: Economic clusters in the surroundings of Milan

North of Milan “Brianza region”	Furniture
North-East of Milan “Vimercate”	Communication, media, ICT
North-West of Milan “Legnano”	Textile, mechanical industries
South of Milan	Agro-food business

¹⁵ Eurostat: http://ec.europa.eu/eurostat/statistics-explained/index.php/GDP_at_regional_level

¹⁶ PON METRO: http://www.ponmetro.it/wp-content/uploads/2016/10/Allegato_3_Strategie_UrbanePON.pdf.p7m.pdf

Figure 2.1: Metropolitan City of Milan: Urbanised areas

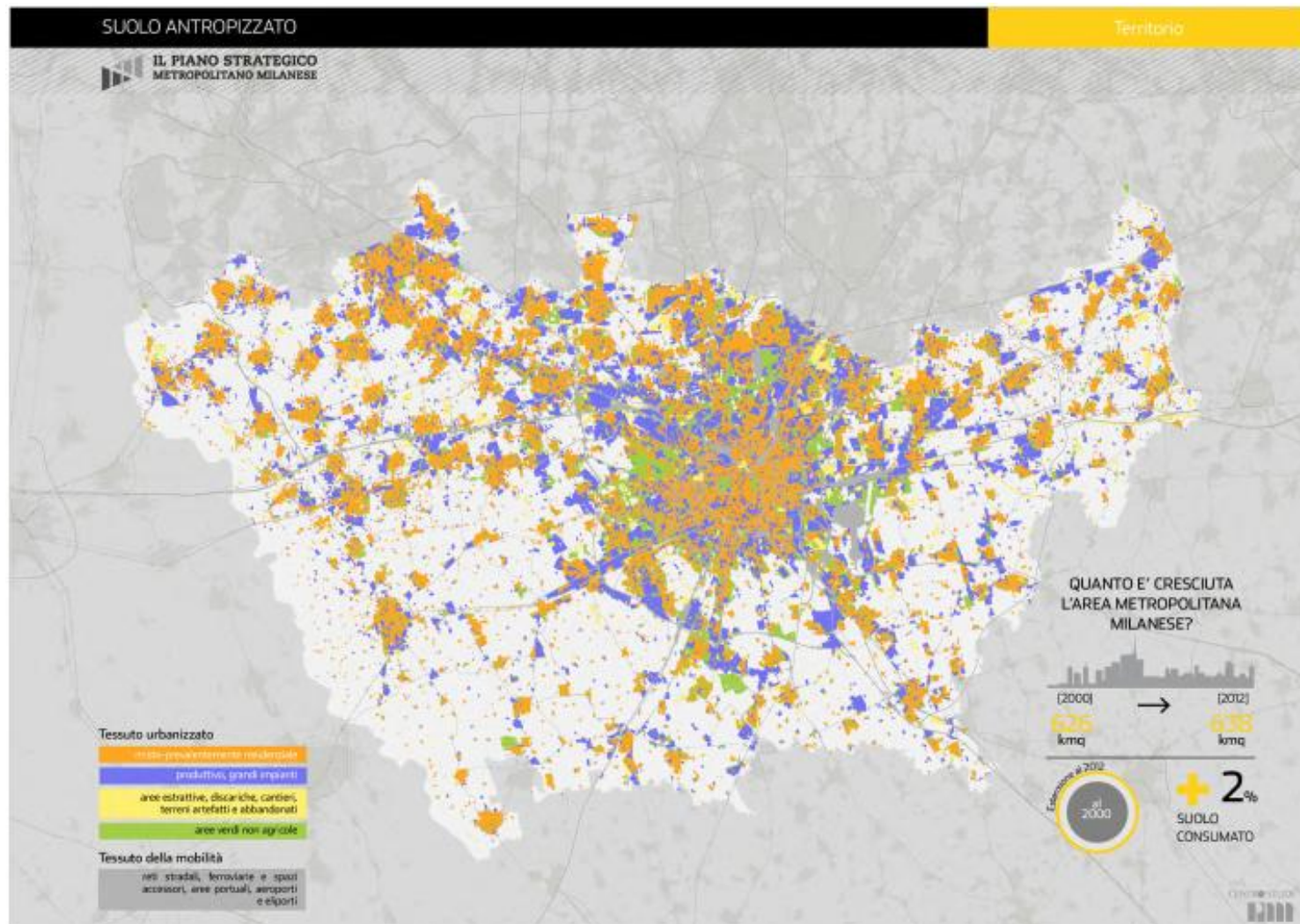


Figure 2.2: Green spaces and agriculture.



Another strength of the region is the concentration of high human capital and the presence of universities and research centres, as well as an extended network of vocational training institutions. The MCM hosts 186,000 university students across 8 universities and 5 academies¹⁷.

The MCM also benefits from hosting big international events. Milan hosts FieraMilano, one of the biggest fairground in the world¹⁸. The city is also home to four fashion weeks and a design week a year. In 2015 the city also hosted the universal exposition. The Expo 2015's theme was "Feeding the Planet, Energy for Life", encompassing technology, innovation, culture, traditions and creativity and how they relate to food and diet. The event attracted 20 million visitors, of which 5 million from abroad, and helped to boost the image of the city.¹⁹

Another strength is linked to the presence of several incubators and accelerators focused on different sectors. *Plihub* is linked to tech, web and ICT sector, *Base* focuses on design and creative sector, *Speed me up* is linked to the fin-tech space, *Fabric* includes welfare and social innovation, *Parco tecnologico pagano* focuses on food and food-tech, and a new incubator will soon open for start-ups linked to industry 4.0²⁰.

Other strengths – less pronounced

The R&D in the MCM is led by the private sector, that covers 66% of all R&D spending. Another 23% is covered by universities, while public administration and non-profit cover the remaining²¹. Even if the overall R&D spending is high for national levels, the region ranks average among the 13 biggest European metropolitan areas²².

In terms of infrastructure, the MCM is at the centre of the northern Italian highway and railway systems. The networks are congested and additional investments are needed to fully exploit the ideal geographical position. The area is also served by 3 airports:

- 2 international airports
- Linate
- Orio al Serio Airports
- 1 intercontinental airport
- Malpensa

¹⁷ Metropolitan City of Milan: Piano strategico della città (<http://www.cittametropolitana.mi.it/export/sites/default/PSM/doc/Piano-strategico-della-Citta-metropolitana-di-Milano.pdf>)

¹⁸ <http://www.fieramilano.it/chi-siamo-0>

¹⁹ Euler Hermes study: Expo Milan 2015 – the end or a fresh start? (2015), available at: <http://www.eulerhermes.com/mediacenter/news/Lists/NewsDocuments/press-release-Expo-Milano-271015.pdf>

²⁰ Applying new technologies to traditional industries.

²¹ Metropolitan City of Milan: Pianificazione territoriale: (http://www.cittametropolitana.mi.it/export/sites/default/pianificazione_territoriale/pubblicazioni/Scenari_economici.pdf)

²² Ibid.

Only Linate airport is set within the administrative boundaries of the metropolitan city. Malpensa airport became the main hub of Alitalia, the national flag carrier, in 1998, but ceded to have this role in 2008. This caused the airport to lose relevance at the international level.

The ICT structure includes 2500 km of optic fibre cables²³. The network is advanced for national levels but average compared to competing cities. The new *smart city agenda*, included in the strategic plan for the MCM is set to improve the network further over the next years²⁴.

The MCM has no direct access to a port. Genoa is the closest and main port of access. The port is the 12th busiest port in Europe²⁵.

Major weaknesses

The major weaknesses encountered in the region are linked to the national regulation and access to finance.

Regulation for starting businesses and opening innovative start-up is very burdensome. Following the world bank data, the MCM scores poorly on Burden of government regulation and Government Effectiveness²⁶.

Another issue linked to national regulation is labour market regulation. Recent reforms have improved the situation, but stakeholders still feel the needs for more flexibility.

Milan is the main financial hub in Italy. The city is home to some of the biggest banks in Europe (Unicredit and Intesa Sanpaolo), most of the Italian Venture Capital (VC) firms, and Business Angels association. The city also hosts most of the Crowdfunding platforms operating in Italy. Nevertheless, the proximity of the financial sector to companies does not result in better access to financing opportunities. Start-ups in Italy received only 200 million in investments in 2016²⁷. Access to finance is a major issue for most SME and guarantee funds set out by the Lombardy region were not effective in easing the credit crunch that affects Italy since 2012²⁸. According to the world bank²⁹, the region of Milan scores poorly in terms of Ease of access to loans, 1.6 between 1(worst) and 7(best).

²³ Metropolitan City of Milan: Piano strategico della città
(<http://www.cittametropolitana.mi.it/export/sites/default/PSM/doc/Piano-strategico-della-Citta-metropolitana-di-Milano.pdf>)

²⁴ Ibid.

²⁵ Eurostat: http://ec.europa.eu/eurostat/statistics-explained/index.php/Maritime_ports_freight_and_passenger_statistics

²⁶ World Bank; <http://data.worldbank.org/>

²⁷ Startupitalia: <http://startupitalia.eu/67594-20170113-ruggero-frezza-m31-intervista-incubatori>

²⁸ Repubblica: http://www.repubblica.it/economia/affari-e-finanza/2016/05/09/news/piccole_imprese_il_credit_crunch_stato_di_11_miliardi_in_4_anni-139471281/

²⁹ World Bank; <http://data.worldbank.org/>

Other weaknesses – less pronounced

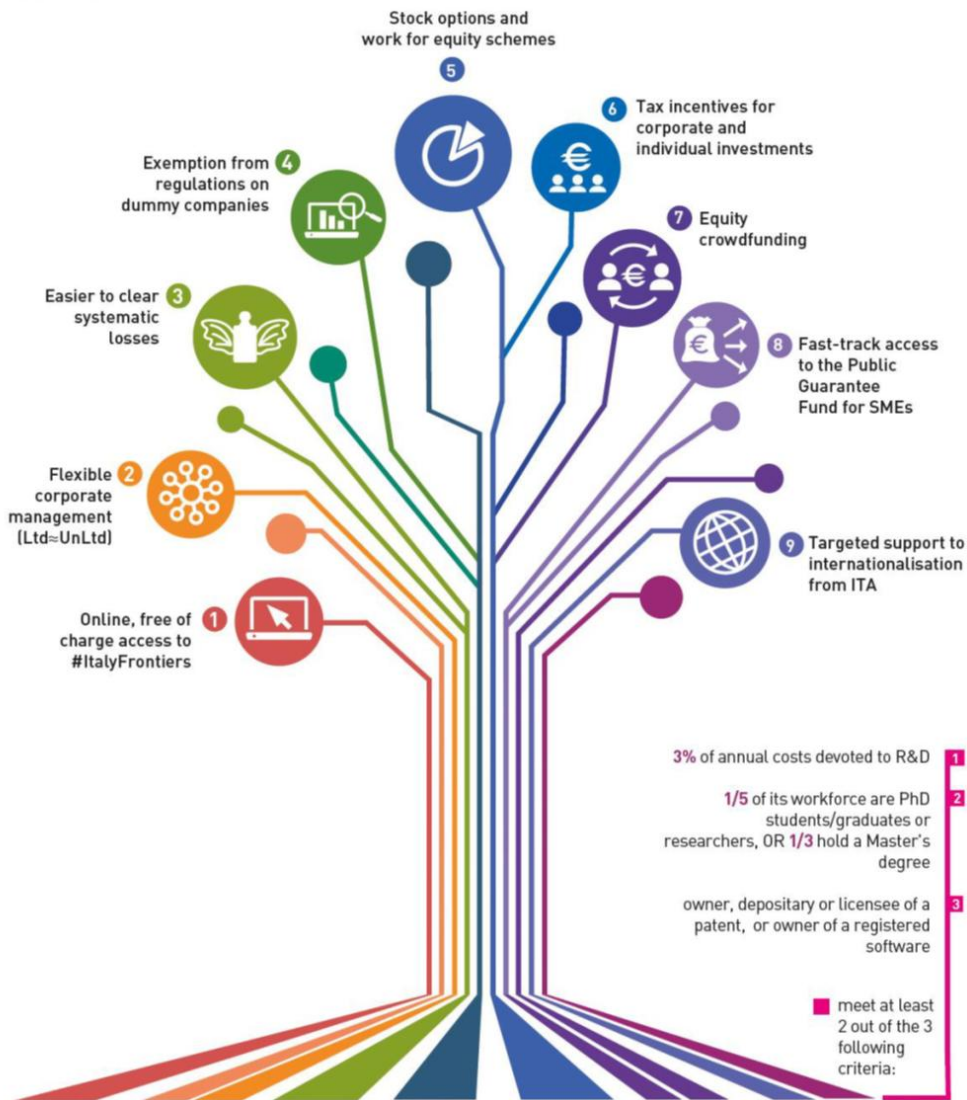
Another less pronounced weakness is the level of governance quality. According to World Bank data, the MCM scores average in terms of *Government Effectiveness* and poorly in terms of *Quality of government services*. The MCM is characterised a high level of fragmentation and by a lack of coordination of the numerous actors and stakeholders.

External factors – framework conditions

Major opportunities/drivers

A new national regulation in support of Innovative SME represents one of the main opportunities for the region to overcome regulatory weaknesses for innovative start-ups. As highlighted in the figure below, the regulation includes a series of measures to reduce barriers to access and finance and allow new forms of remuneration.

Figure 2.3: New Italian regulation in support of Innovative SME



The European Union commitment in fighting climate change and in setting targets for the future has been, and continue to be a major driver in the development of the low carbon economy, creating economic incentives and opportunities in this sector. Bocconi professor Stefano Pogruz, expert in green economy, highlighted how the EU was pivotal in coordinating a common effort from all Member States and in pushing green agenda at national and local level.

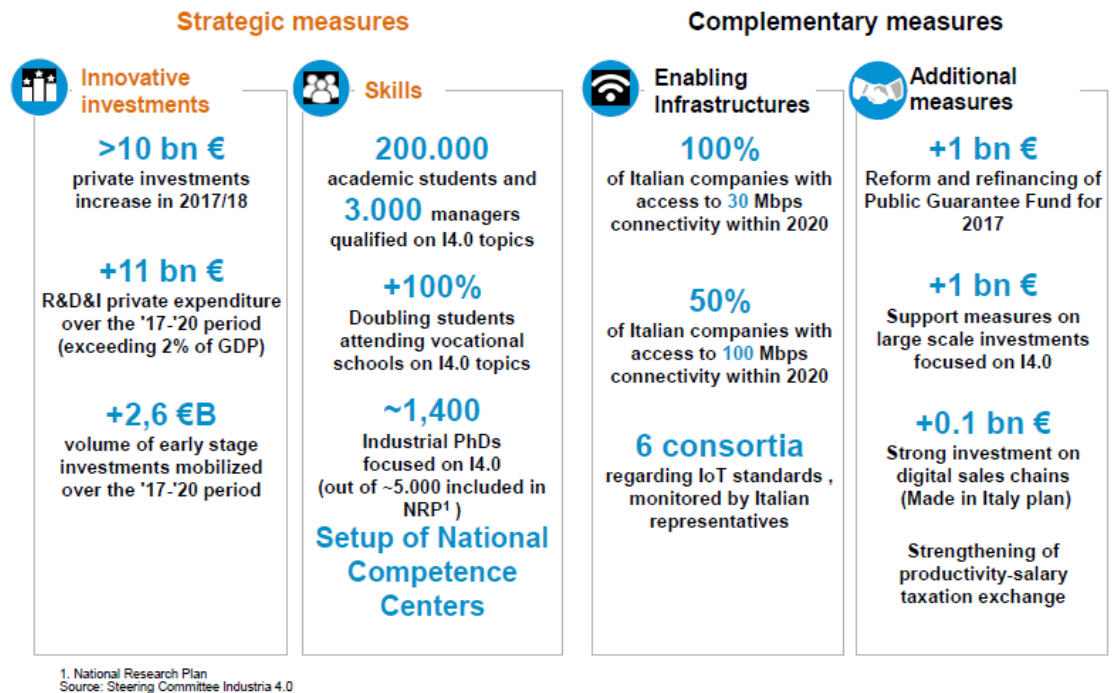
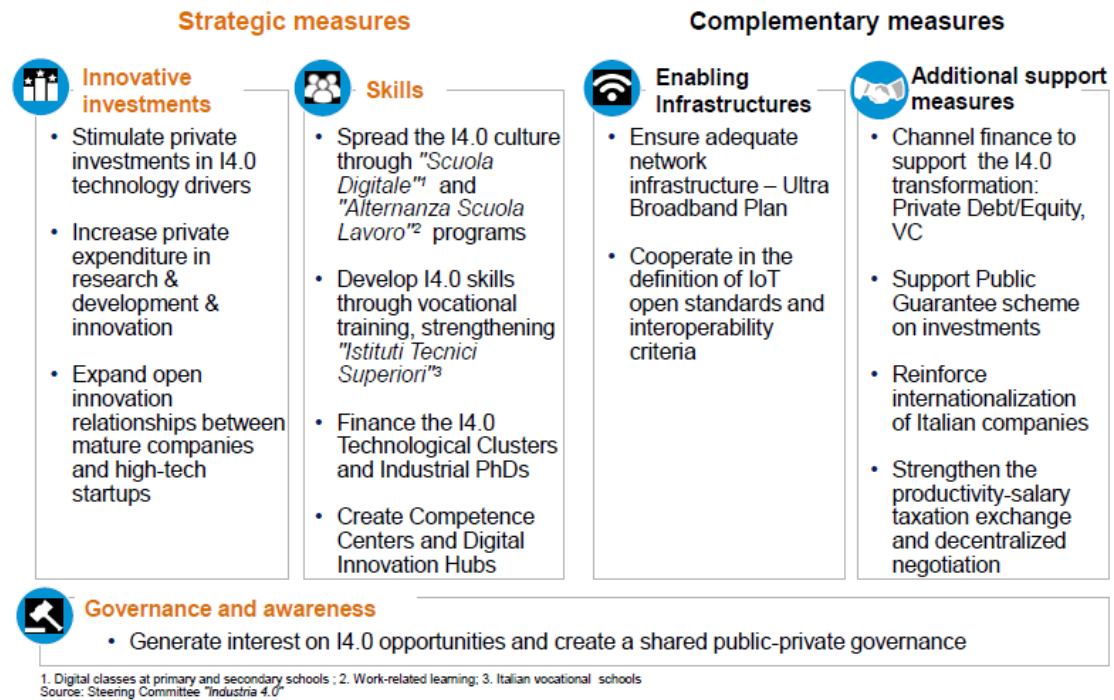
Demographic and consumer behaviour changes are an external opportunity that might push the ICT sector and the low carbon economy in the future. The MCM has seen a surge in young professionals and students moving into the area. Younger people follow different consumer behaviour patterns compared to older generations. They are more digital savvy, more environmental conscious and more prone to use public transportation and urban sharing means of transportation (bike-sharing and car-sharing). As this demographic trend continues, demand for ICT services and low carbon economy products will increase.

The MCM creative/knowledge economy relies heavily on family-run SME, especially in the fashion and design sector. In recent years, a wave of foreign direct investments (FDIs) from big multinationals, directed at acquiring small high-quality/high-end firms in those sectors, have resulted in those firms performing better in the subsequent years thanks to new capital, improved managerial skills and eased access to foreign markets. If the trend persists, FDIs represent an opportunity for small firms in the creative/knowledge economy to scale up.

Other opportunities/drivers – less pronounced

A new national regulation in support of industry 4.0 (adoption of new technologies by traditional businesses) is under discussion at governmental level. If implemented as planned, the new regulation will provide a set of measures (summarised in the figure below) to boost industry innovation and transformation by 2020.

Figure 2.4: Strategic and complementary measures to be implemented with the new national regulation in support of industry 4.0



The exit of the United Kingdom (UK) from the European Union (Brexit) represent an opportunity for the city to attract firms operating in the financial sector and European agencies located in the UK. The level of companies that will relocate to Milan will depend from the agreement that the UK will bargain with the EU. It is also possible, that due to Brexit the European Medicines Agency (EMA) will relocate from London to Milan. The new agency

would bring many highly paid officials and will help consolidate Milan's position as a main hub for medicines, health and biotech sector.

To conclude, another potential opportunity for the region is the creation of a technology hub in the area that hosted the 2015 International Exposition. The plan is to create a big tech cluster by moving universities, research centres (private and public), incubators, accelerators and companies R&D departments. The development of the project is still under consideration.

Major threats/challenges/barriers

The major threats highlighted by stakeholders are: the persistence of a heavy bureaucratic apparatus; the persistency of a heavy fiscal system and the slow recovery of the national economy.

The persistency of heavy bureaucracy and fiscal system would hinder growth, create barriers to further development and reduce national and foreign investments.

The slow recovery of the national economy could depress the demand for local products and services.

Other threats/challenges/barriers – less pronounced

A less pronounced barrier to growth is labour market regulation, that still needs to improve to reach an adequate level. The new regulation on innovative SME might go in the right direction, by offering stock options and work for equity schemes as forms of remuneration.

Other threats also come from competition from other cities. Milan is lagging a little bit behind in terms of international attractiveness, even if it still represents a main attraction for migration within Italy.

Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others

Globalisation has represented both an opportunity and a threat for the MCM economy. Companies that have innovated usually managed to thrive thanks to greater access to new market. Less innovative companies, found themselves harmed by aggressive competition from new international actors. As a result, over the last 30 years the region lost a big share of its industrial capacity, especially in those areas with lower technological and human capital. Most of the loss in industrial capacity was absorbed by the expanded service sector and partially by new high tech industries such as bio-tech and medical equipment.

2.1 Institutions and governance levels

The Region of Lombardy (NUTS 2) defines the (spatial) strategy for the entire region which consists of 11 Provinces, MCM and 1546 municipalities. Italian regions are highly autonomous and have strong competencies on spatial planning, transport planning, health and education.

The MCM replaced the Province of Milan and includes the city of Milan (its capital) and other 133 municipalities³⁰. It was first created by the reform of local authorities (Law 142/1990³¹) and then established by the Law 56/2014³². It has been operative since January 1, 2015.

The Province of Milan had competences over coordinating territorial strategy; planning province-level transport system; planning the province school network and infrastructure; gather data; monitoring and promoting equal opportunities in the workplace.

The new MCM takes upon the same competences of the Provincia di Milan, plus: the need to create and adopt a three-year territorial plan; territorial planning in general; coordinating the management of public services; mobility; promotion and coordination of socio-economic development; promotion and coordination of IT and digital networks. The competences have been taken and partially overlaps with the municipal level.

The municipalities are small in size and large in numbers, which creates a patchwork of relative autonomous areas. The MCM has little competences to enforce cooperation between the municipalities. The municipalities are relatively autonomous to define their own plans and policies. In practice, this often means that each municipality plans its own industrial area at the outskirts of the centre, which results in negative spill over effects (e.g. noise, pollution) for neighbouring municipalities. There is coordination between municipalities in the field of social welfare and labour markets. For example, the *Piani di Zona* which is a zoning plan that each municipality should make to coordinate welfare delivery, overlooked by the province. This form of coordination is obliged by law, and hence does not reflect pro-active initiatives for inter-municipal cooperation. The *Accordo di Programma* is another tool that is frequently being used to implement public-private projects in a coordinated way. This administrative procedure allows municipalities to bypass differing policies or regulations and coordinate public and private activities in complex decision-making processes. The frequent use of the *Accordo di Programma* reflects a tendency for pro-active cooperation between public and private actors. It is, however, not a proof of more coordination between different municipalities.

Although the Lombardy Region has defined an overarching spatial strategy which is a guidance for lower tiers of government, it does not have the competences to implement this strategy. Furthermore, the coordinating role of the MCM is heavily undermined due to the dominance of the city of Milan and limited competences. At the moment, regionally coordinating efforts are pursued by more informal means of municipal cooperation. The Milano Metropoli agency is a platform for cooperation and handles the interests of the municipalities around Milan. At the moment, its focus is on small, acupunctural projects within the Province of Milan.

³⁰ Ibid.

³¹ Gazzetta ufficiale:
http://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=1990-06-12&atto.codiceRedazionale=090G0189&elenco30giorni=false

³² Gazzetta ufficiale: <http://www.gazzettaufficiale.it/eli/id/2014/4/7/14G00069/sg>

Centro Studi PIM is an organisation erected in the 1960s with a similar objective. They deliver scientific-technical and operational support towards the associated municipalities as well as the MCM and other public entities. The introduction of the new MCM goes in the right direction to improve coordination, but at the moment lacks the means and the weight to do so.

2.2 Policy strategies in place

The local administration actively supported the creation of a registry for incubators and accelerators. The MCM also directly sponsored the creation of sector specific start-up hubs. The initiatives were positively received and helped create a fertile ecosystem whose potential is still unexploited due to lack of funding and access to finance.

Following the economic crisis of 2008 the Lombardy region created a guarantee fund to ease access to finance from SME. Many stakeholders complained that the traditional financial system did not respond well to the initiative as the requirements to access finance from banks were not eased.

Supra-regional policy strategies such as the national support of innovative SME and of Industry 4.0 have not been implemented yet. No other relevant initiatives have been found.

2.3 Support instruments for SME and the three focus sectors

The multi-fund National Operational Programme Metropolitan Cities 2014-2020 (PON METRO) implements one part of the initiatives conceived in the framework of European Urban Agenda for cohesion policies, born with the aim of strengthening the role of the big cities and their territories.

The program, dedicated to sustainable urban development, aims to improve the quality of services and to promote social inclusion in 14 metropolitan areas in Italy, including the MCM.

To act in response to the territorial and organizational challenges, related to the dynamics of the development taking place in the 14 metropolitan cities, and to the solicitations towards the innovation of development policies arising from the Europe 2020 objectives, the Partnership agreement has identified several targets and instruments for the national urban agenda.

In this context, an important role is played by the PON METRO, which is intended to quickly affect some still unresolved issues which obstruct the development in major urban areas of the Country, interpreting two driver of planning development of the three constituent the Urban National Agenda defined by the Partnership Agreement.

PRIORITY AXES To enable the operational translation of the outlined strategic elements, the program is focused on four priority axes in addition to a fifth axis for the Technical Assistance	DRIVER URBAN AGENDA The PON METRO operates on the 14 metropolitan cities to strengthen and improve the services offered to residents and city users and is focuses on two strategic drivers
AXIS 1 (OT2) Digital metropolitan Agenda (FESR)	SMART CITY for the redesign and modernization of public services through the digital agenda and a more efficient and sustainable mobility
AXIS 2 (OT 4) Sustainability of services and of urban mobility (ERDF)	
AXIS 3 (OT9) for social inclusion services (FSE)	SOCIAL INNOVATION for the inclusion of the most fragile population segments and areas and

AXIS 4 (OT9) Services for social inclusion (FESR)	for disadvantaged neighbourhoods through services (FSE) and infrastructure (FESR); part of the interventions will be triggered also through an active participation of associations and citizens
AXIS 5 technical assistance (FESR)	

On those axes, the MCM developed 27 projects with a total budget of € 37,770,000.00. The table below reports the budget allocated to each axis.

Table 2.2: Allocation of ESIF funding to SME support in the region in thousand EUR (000)

	Period 2007-2013			Period 2014-2020		
	EU expenditure	National expenditure	Private expenditure	EU expenditure	National expenditure	Private expenditure
ERDF						
PON METRO Milan/Axis 2				5,029	5,029	
EFRD						
PON METRO Milan/Axis 1				3,213	3,213	
PON METRO Milan/Axis 4				5,203	5,203	
PON METRO Milan/Axis 5				525	525	
ESIF						
PON METRO Milan/Axis 3				4,915	4,915	

The 5 projects developed as part of the Digital Metropolitan Agenda (Axis 1) are:

- Connected Neighbourhoods – New Technologies and New Space for neighbours' Participation and managerial transparency. Digital supporting platform
- Enhancement of Extreme Margin Reduction Services – Georeferenced digital platform for apartments blocs and territorial services
- Support to the development of sharing economy practices – Digital platform for home-based services and housing-related services
- Inclusive Innovation Hubs – Platform for the provision of work and training services.
- Realization of platforms for the provision of digital services to promote the economic and social development of the communes of the Metropolitan City of Milan

The 4 projects developed as part of PON METRO axis 2 (Sustainability of services and of urban mobility) are mostly linked to improve the urban bike lane network:

- Completion of the Duomo-Sempione-Molino Dorino-Fiera-Rho bicycle route
- Piazza Napoli-Giambellino bicycle route
- Area for electric shared mobility
- Area for cycling mobility

The 9 projects developed to improve social inclusion (axis 3) are mainly linked to social housing and support for not autonomous people. Two projects relevant to this research are:

- Support for the development of new services in socio-economic critical neighbourhoods and urban areas
- Creation of hubs for inclusive innovation

The 7 projects funded under axis 4 are linked to restructuring of building and spaces in support of the activities developed in axis 3.

2.4 Results of the FOG Test

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities steer decisions made over matters related to SME and entrepreneurship support structures and mechanisms in the region in a unilateral manner.		
	Regional authorities exercise their powers mainly providing services and resources, in turn monitoring the achievement of specified objectives with respect to SME development (performance and results oriented)	1	1
	Regional authorities collaboratively develop and foster, with key stakeholders, SME and entrepreneurship support structures and mechanisms in the region.	3	2
	Regional authorities have delegated powers to other entities or relevant stakeholders as a way to proactively develop and foster SME and entrepreneurship support structures and mechanisms in the region.		1
	Practices and actions undertaken	Promotion of incubators. Guarantee funds to facilitate access to credit during financial crisis. In the future one stop-shop for SME.	
A1.0	Is the development of an entrepreneurship culture in the region rather organically driven (grassroots movements) or rather stemming from a top down approach (institutionally driven)?	Entrepreneurship culture is rather in the region rather organically driven. The network of incubators (sometimes also sponsored from a top down approach) helped fostering these grassroots movements.	
A2.0	Which main actor/s is/are informally driving the promotion and shaping the development of an entrepreneurship culture in the region?	Start-up ecosystem; main start-up actors; meet-up; new medias focused on start-up world (i.e. start-up Italia)	
A3.0	Which main actor/s is/are formally driving the promotion and shaping the development of an entrepreneurship culture in the region?	Business associations, chamber of commerce, incubators and accelerators.	

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities, along with other actors create partnerships to foster an entrepreneurship culture in the region, going beyond the national or European framework/requirements.		3
	Activities intended to promote an entrepreneurship culture are financially supported and closely monitored to optimise the efficiency, effectiveness and transparency of the actions undertaken by stakeholders receiving support from the regional authorities.	2	

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	A top down approach is adopted by regional authorities when promoting the development of an entrepreneurial culture (e.g. initiatives on the organisations of start-up conferences stem from local authorities)		
	Regional authorities are enabling all actors to take on the initiative to promote the development of an entrepreneurship culture in the region (e.g. via advisory services, training)	2	1
B1.0	Which actions are undertaken in the region to develop an entrepreneurial climate and culture?	Support to cooperation initiatives with other cities.	

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities facilitate the creation of business start-up support structures by engaging with a large array of stakeholders themselves.	1	1
	Regional authorities directly contribute to increase the business start-up rate by initiating and managing business start-up support structures.	2	1
	Networks, incubators, portals and gateways are being developed hand in hand by local authorities and citizens, proactively stepping in to create a start-up friendly environment in the region.	1	1
	Regional authorities support the development of start-up support structures by providing the necessary resources to (intermediate) working to boost entrepreneurial skills in the region.		1
C1.0	According to you, which support structure or practice for start-ups and SME is the most effective and should be further emphasised to ensure the development of entrepreneurial skills in the region?	Support Incubators and accelerators	

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities have developed strategies and implement schemes intending to reduce barriers to entry, eliminate obstacles and foster an environment conducive to the development of start-ups and SME.	2	
	Off-the-shelf financing practices as well as the provision of a venture capital environment provide innovative and inclusive sources of financing, which are tailor-made to the needs of the actors in the region.		2
	The provision of financing support by the region is provided and can be conditional on the achievement of set objectives and result-oriented approaches are favoured by authorities, which encourage a greater	2	

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	ownership of the projects to ensure the success of the action and a return on investment.		
	Regional authorities use the synergies developed in networks of stakeholders supporting entrepreneurship. They accordingly facilitate the development of conventional financing bodies as well as participative financing schemes targeting start-ups, SME and project holders from under-represented groups.		2
	Practices and actions undertaken	Guarantee fund for SME, to ease access to finance.	
D1.0	Is there a financial gap or a suboptimal investment situation for SME financing in the region?	Yes, access to finance in Italy is not easy and investors tend to be more risk adverse than in other parts of Europe.	
D2.0	What are the most commonly used financial support schemes or means of financing for entrepreneurs and SME?	Banks	
D3.0	How do governance mechanisms contribute to start-up/SME development while making up for the reduced availability of public funding?	Strengthening cooperation public-private sector.	
D4.0	Are regional authorities prompt to take economic risks when providing financial support to SME?	No	
D5.0	Who supports and fosters higher accessibility of the region (physical infrastructure)? How (grants/PPP, etc.)	There is private involvement.	
D6.0	What is done to improve the governance standards at national/regional/local level?		

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities ensure the development of an entrepreneurial culture in the region looking at other regions' governance structures and mechanisms to improve their own entrepreneurship and SME policies and create partnerships with other regional authorities to foster innovation as well as the development of synergies.	1	3
	Regional authorities are integrated into a multi-level governance system and actively collaborate to identify best practices and challenges solving options beyond regional and national borders.		
	Co-funded projects are driving the need for further collaboration between regional authorities and between regions.	1	
	Developing contacts and partnerships is the spearhead of regional authorities and key actors to make up for potentially limited public intervention (e.g. public funding) and autonomously find solutions to local issues (without recurring to external support).	2	1

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Practices and actions undertaken	Cooperation with Amsterdam and New York.	
E1.0	Have regional clusters developed ties and are collaborating with other clusters at the national/EU level?		
E2.0	Which are the regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment?	There are no such initiatives at the moment. Promos (from chamber of commerce) focuses on promoting internationalisation of existing SME.	

3 Results of the SWOT analysis

Internal factors – factors of competitiveness

Major strengths
Regional income & Regional purchasing power
Landscape and natural endowment
Education and skills of the regional workforce
Sectoral specialisation versus sectoral diversity of the region
Economies of agglomeration and related factors
Density of inter-firm linkages (within or across industries)
Big international events (fashion weeks, design week, exposition area).
Business clusters (formal or informal)
Other strengths – less pronounced
Accessibility of the region (international) by road and other means → requires better infrastructure
Knowledge and innovation production
Major weaknesses
Regulation, e.g. – For business start-up – Labour regulations
Other weaknesses – less pronounced
Governance quality including e.g. development strategies in place
Ambiguous factors – represent a strength in some of the businesses/industries, but a weakness in others
Investment and capital stock
Availability of financing – Loans – Venture capital, business angels – Crowd funding – Public funding
Quality of business networks and associations
Neutral factors – represent neither a strength nor a weakness
Regional (public) physical infrastructure – Transportation – ICT
Support services and institutions, and incentives for enterprises
Existence of large lead companies (including multinationals)

External factors – framework conditions

Major opportunities/drivers
New national regulation in support of Innovative SME.
European Union commitment and push (more in general international trend regardless of new US attitude) in terms of climate change policies (low carbon economy).
Change in consumer behaviour (ICT and low carbon economy).
Foreign Direct Investments (creative/knowledge sector)
Other opportunities/drivers – less pronounced
New national regulation in support of industry 4.0 (adoption of new technologies by traditional businesses). (under discussion)
Brexit (financial sector). It is a great opportunity, but Milan is starting late compared to other cities (Frankfurt).
Post-Expo 2015 area. Creation of a technology hub.
Major threats/challenges/barriers
Heavy bureaucracy. (higher level competence)
Heavy fiscal system. (higher level competence)
Slow recovery of national economy
Other threats/challenges/barriers – less pronounced
Labour market regulation (improved but still not flexible enough for new realities)
Competition from other cities. Milan is lagging a little bit behind in terms of international attractiveness. It still represents a main attraction for migration within Italy.
Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others
Globalisation (good for those companies that are able to innovate, bad for the others).
Neutral factors – represent neither an opportunity/driver nor a threat/barrier

4 Future policy needs

To tackle the challenges of tomorrow, the MCM will have to overcome two main issues that do not depend solely from the local administration, but involve the national and European levels of administration. One is the lack of coordination of all the different initiatives available in the region. There is duplication between different levels of administration (municipalities/metropolitan area/region) and private initiatives (chambers of commerce, business associations). The different actors and stakeholder lack a long-term strategy and a clear division of competences. The Metropolitan city is a newly formed institution that is still squeezed between the region and Milan's city authorities. The institution is underfunded and unlikely to cover a main role without an administrative reform. Nevertheless, the creation of the MCM represent a step in the right direction to improve coordination at the metropolitan level.

The other main issue that represents today the main obstacle to SME development together with heavy bureaucracy is access to finance. Future policies should consider how to ease access to credit.

To remain competitive with the other main start-up centres in Europe, the MCM will have to better brand its ecosystems with a city start-up marketing strategy as other competing cities have done already (I.E. Lisbon, Dublin, Amsterdam). Increasing international cooperation with other cities could also help maintain a central role as a leading start-up centre. Milan already participate to Start-up City Alliance Europe, an organisation born from the experience of Start-up Amsterdam. Develop this alliance could be of strategic importance for the future of the area.

5 Annex

5.1 Interview partners

Name	Organisation	Position	Special expertise/years of experience ³³	Interview Date	Tel/f2f
Renato Galliano	Municipality of Milan	Director Urban Economy and Labour	Urban Economy	9/6/2017	Tel
Lucia Scopelliti	Municipality of Milan	Head of Economic Planning Unit	Economic planning	9/6/2017	Tel
Severino Salvemini	Bocconi University	Professor	Professor of Innovation Management	15/6/2017	Tel
Marco Percoco	Bocconi University	Professor	Professor of spatial economics	13/6/2017	Tel
Armando Cirrincione	Bocconi University	Professor	creative/knowledge economy	12/6/2017	Tel
Carlo Bettonica	Unioncamere (Chamber of commerce)	Head of research	Planning and strategic consulting	8/6/2017	Tel
Angelo Fasano	Promos (Chamber of commerce)	Internationalisation team	Internationalisation of SME	15/6/2017	Tel
Stefano Pogruz	Bocconi University	Professor	Green economy	15/6/2017	Tel

5.2 Focus Group participants

Name	Organisation	Position	Special expertise/years of experience ³⁴	Date of workshop	Tel/f2f
Marco Percoco	Bocconi University	Professor	Professor of spatial economics	19/6/2017	f2f
Adam Joseph Bregu	Municipality of Milan	Economic Planning Unit	Economic planning	19/6/2017	f2f
Angelo Fasano	Promos (Chamber of commerce)	Internationalisation team	Internationalisation of SME	19/6/2017	f2f
Isabella Botto	Metropolitan city of Milan	Territorial planning unit	Territorial planning	19/6/2017	f2f
Loredana Martin	Metropolitan city of Milan	Economic planning unit	Economic planning	19/6/2017	f2f
David Casalini	Startup Italia!	CEO/Founder	Startup Ecosystem	19/6/2017	f2f

³³ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

³⁴ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

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Case study report: Bratislavský kraj

Andrea Miškovičová, Jan Helbich

ERUDIO

1 Mapping the SME sector in the region

The Bratislava region is the smallest region in Slovakia with total area surface of 2 052,5 km². Regarding the number of inhabitants, the Bratislava region is on the sixth place within 8 NUTS 3 regions in Slovakia with 641 892 inhabitants in 2016 (the most populated is the Prešov region with 822 310 inhabitants in 2016 and total area surface 8 973,9 km²). However, the region is rather specific for this indicator, as well. The majority of region's inhabitants live in the capital city of Bratislava. In 2016, this share of inhabitants living in the capital city on total number of inhabitants in the region was more than 66%. Total area surface of the capital city is almost 18% of the region one.

Despite its size, the region is the most developed one in the country with constantly growing economic indicators. The following table shows the development of the gross domestic product in the Bratislava region and other parts of Slovakia over the past years.

Table 1.1: Gross Domestic Product (GDP) in current market prices (Purchasing Power Standard per inhabitant)

Region	2008	2009	2010	2011	2012	2013	2014	2015
Slovakia	18 600	17 400	19 000	19 500	20 100	20 500	21 300	22 300
Bratislavský kraj	43 100	42 800	46 200	48 400	48 800	50 500	51 700	54 400
Trnavský kraj	21 300	19 200	20 900	21 700	22 500	22 500	23 900	23 900
Trenčiansky kraj	16 900	15 500	17 000	17 100	17 800	17 800	18 500	19 400
Nitriansky kraj	15 700	14 700	15 600	17 300	18 000	18 000	18 500	18 900
Žilinský kraj	16 200	15 100	16 500	16 800	17 400	17 500	18 400	19 400
Banskobystrický kraj	14 100	12 800	13 900	13 700	14 300	14 800	15 200	16 200
Prešovský kraj	10 900	10 100	10 900	11 400	11 900	12 000	12 600	13 300
Košický kraj	15 400	13 700	15 000	15 100	15 700	16 000	16 800	17 900

Source: Eurostat, 2016.

The success of the Bratislava region is determined by the capital city of Slovakia – Bratislava, its geographical location, concentration of the majority of national institutions, foreign direct investments (in 2014 the share of FDI in the Bratislava region represented more than 65% of total FDI in Slovakia), as well as enterprises (share of SME in the Bratislava region in 2015 was more than 25% of total number of SME in Slovakia, the rest of them is divided among 7 other regions).

In 2015, the small- and medium-sized enterprises (SME) represented 99.9% of all enterprises (business entities) in Slovakia. This share comprises 96.9% of micro, 2.4% of small and 0,5 of medium enterprises. Almost 64% of total SME is represented by the self-employed entrepreneurs. SME provided jobs to 73.6% of the active labour force and contributed by 52.8% to the creation of added value. This sector shows growing tendencies in almost all relevant indicators – employment, added value, profits, exports of goods (Slovak Business Agency, 2016a).

In 2016, there have been 59 475 SME situated in the Bratislava region, including self-employed persons (tradesmen). The following figure shows the development of the number of enterprises (micro, small, medium, large enterprises, as well as those with non-identified size)

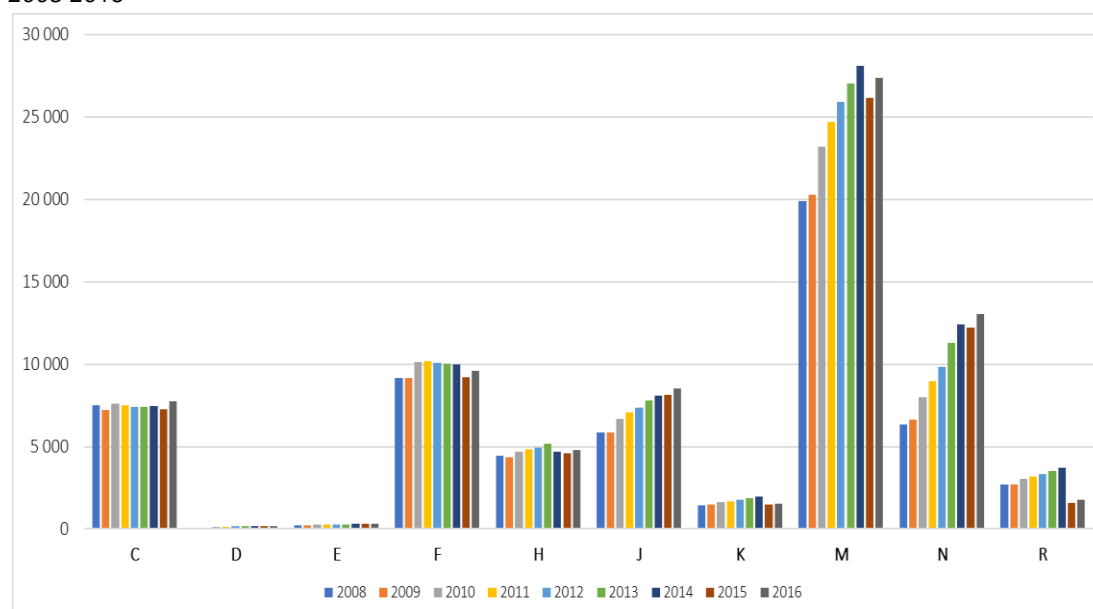
in the Bratislava region within the selected NACE sections. In Slovakia, there are only statistics by NACE sections available, not by NACE divisions. Keeping in mind the purpose of this case study, the table shows statistics in the following sections: (C) – Manufacturing; (D) Electricity, gas, steam and air conditioning supply; (E) Water supply; sewerage, waste management and remediation activities; (F) Construction; (H) Transportation and storage; (J) Information and communication; (K) Financial and insurance activities; (M) Professional, scientific and technical activities; (N) Administrative and support service activities; (R) Arts, entertainment and recreation.

The section C interferes with all of the three focus sectors (ICT, creative economy, low-carbon economy), the section J interferes with the ICT and creative economy sectors, and the section M interferes with the creative and low-carbon economy ones. Since there are no statistics according to NACE divisions available in the Slovak Republic, in order to avoid data distortion, the three focus sectors will comprise following NACE sections:

- the ICT sector is represented by the enterprises in the section J only,
- the creative economy and knowledge sector comprises sections K, M, N and R,
- the low-carbon economy sector comprises sections C, D, E, F, and H.

The following chart shows the number of enterprises of all size categories in the Bratislava region within the selected NACE sections.

Figure 1.1: Number of all enterprises in the Bratislava region according to the selected NACE sections, 2008-2016



Source: own processing according to the data from the Statistical Office of the Slovak Republic

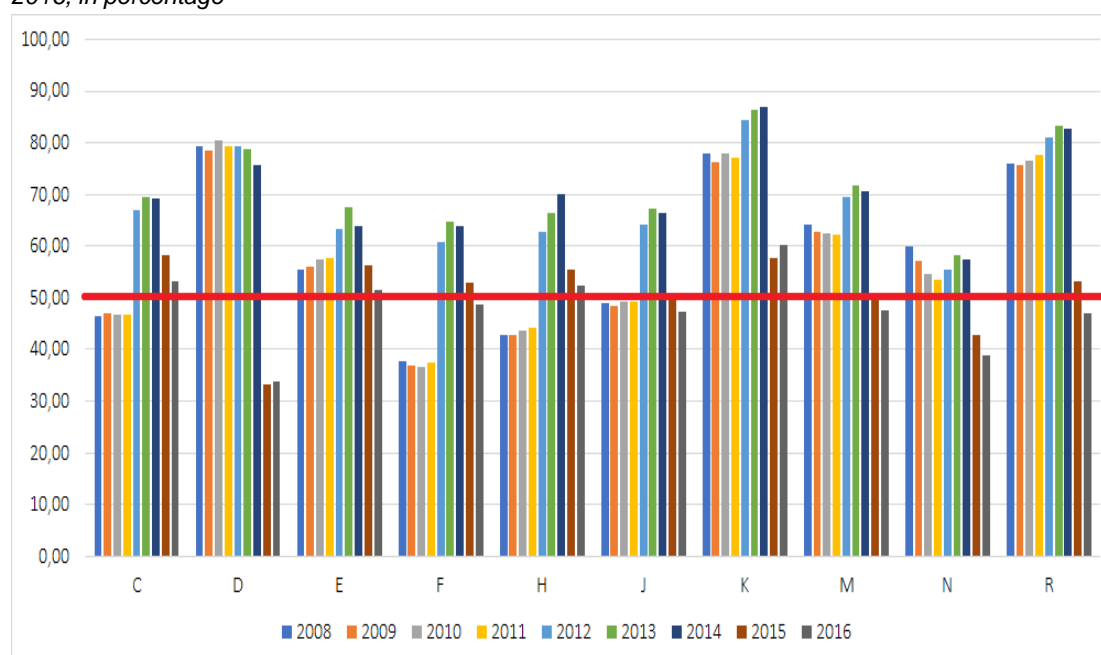
As the figure shows, the majority of legal entities in the Bratislava region represent the Professional, scientific and technical activities (the M section), which shows a growing tendency for almost the entire referenced period. This section contains the Scientific research and development division, too. The statistics displayed in the Figure 1.1 corresponds with the inter-

viewees' and the focus group participants' opinion that there is a rich R&D base in the Bratislava region.

The growth in the number of enterprises was reported within the Information and communication and Administrative and support service activities sectors, as well. As the figure shows, the number of enterprises within the sector of Arts, entertainment and recreation reported growing tendency over the majority of referenced period with a significant drop in 2015.

The following Figure 1.2 shows the share of SME (0 – 249 employees) within the selected NACE sector during the 2008-2016 period.

Figure 1.2: The share of SME in the Bratislava region according to the selected NACE sections, 2008-2016, in percentage



Source: own processing according to the data from the Statistical Office of the Slovak Republic

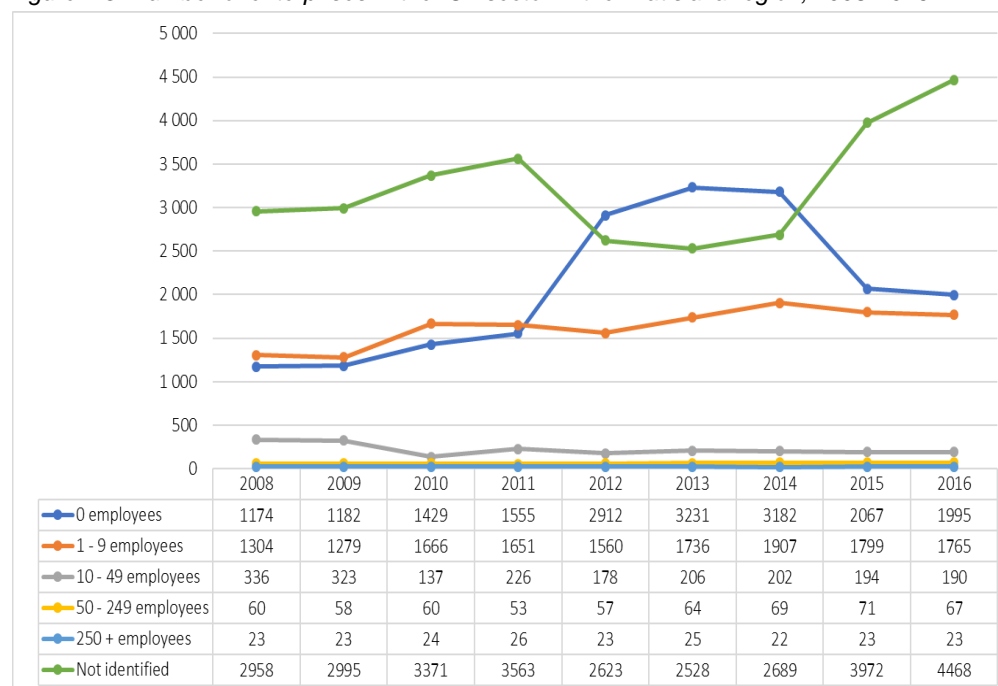
The share of SME on a total number of enterprises within the Bratislava region is rather high. Only in a few cases, SME represent less than 50% of enterprises in a given NACE section. However, during the past two referenced years – 2015 and 2016 was reported a significant decrease of SME share on a total number of enterprises. It is probably caused by a change in the methodology of reporting/collecting statistical data since the number of enterprises with non-identified size was increasing in all selected NACE sections over the 2015-2016 period. As well, the changes in tax legislation contributed to the closing of non-active SME.

By 2015, the figure for the number of employees changed only if the Statistical Office found a new figure. As of 2015, if the Statistical Office does not detect the number of employees for a specific entity for the given period, this figure is “null”, i.e. the entity has an unidentified number of employees. This might partially explain the changes in the figures for years 2011-2012 and from the year 2015.

According to Figure 1.2, the highest number of SME belongs to the sections K – Financial and insurance activities, D – Electricity, gas, steam and air conditioning supply, and R – Arts, entertainment, and recreation. The section J – Information and communication reached the highest number of SME in 2013, with more than 67% share of a total number of enterprises.

The following Figure 1.3 shows the number of enterprises according to their class size within the ICT sector.

Figure 1.3: Number of enterprises in the ICT sector in the Bratislava region, 2008-2016



Source: own processing according to the data from the Statistical Office of the Slovak Republic

The Figure 1.3 shows, that almost during the whole referenced period the highest number of the enterprises in the Bratislava region comprised the ones with not identified class size. The second most numerous group comprises enterprises with zero employees. These are enterprises tradesmen/self-employed persons without any employees. The third most numerous group represents enterprises of 1 to 9 employees class size. According to conducted interviews and the focus group, the ICT sector has the best potential for further development. The advantage of the Bratislava region in comparison with the rest of the country is in the presence of relatively high number of medium-sized and large transnational ICT companies.

Another success factor of the ICT sector's development is the household's internet access. Currently, majority of households in the Bratislava region (as well as other ones) have internet access which confirms the following table.

Table 1.2: Households with internet access at home in the Bratislava region, 2008-2016, in percentage

2008	2009	2010	2011	2012	2013	2014	2015	2016
63	59	76	77	95	87	97	96	99

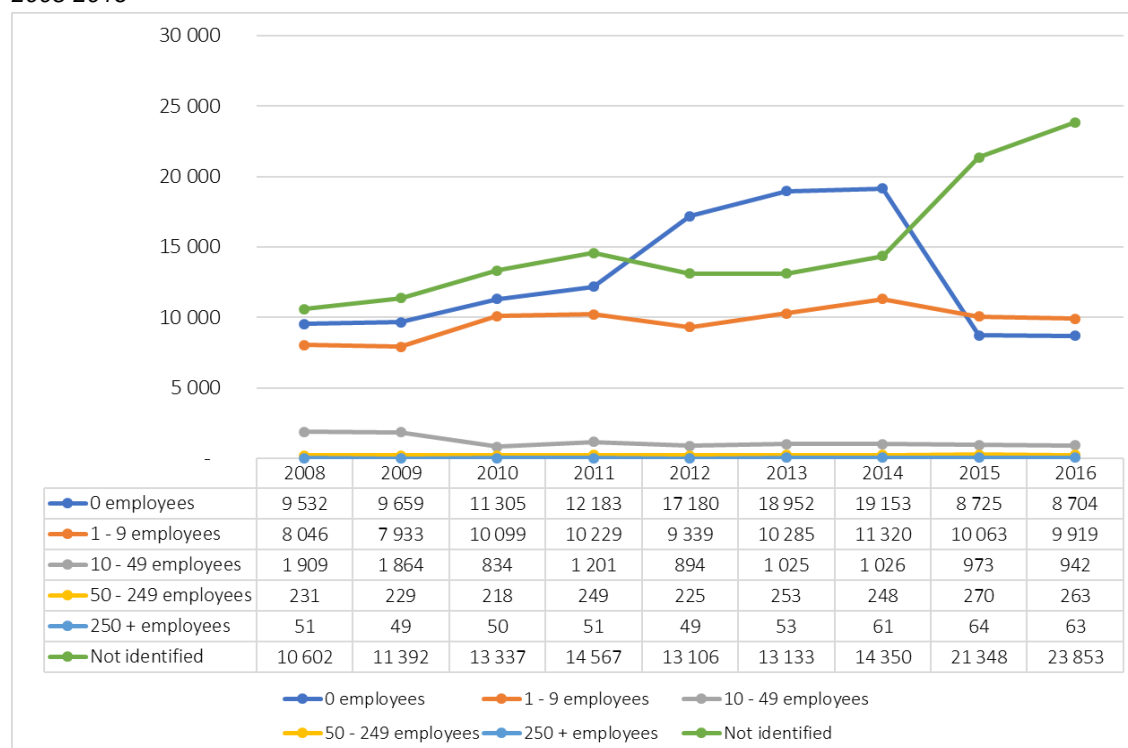
Source: Ec.europa.eu, 2017a

The country average is 97% of households with internet access in 2016, caused by relatively low share of these households (93%) in the NUTS 2 region Stredné Slovensko.

The ICT sector is closely interconnected with the creative economy. It is considered the base for creation the creative economy sector. To some extent their activities interfere and it is difficult to draw a clear division line between them.

In a relatively short period of time, the creative economy has become a global phenomenon that has gradually been building its position in the Slovak Republic since 2011, too. The creative economy is embodied in the creative and cultural industry represented by individual enterprises, institutions, and organisations. In the case study context, as well as according to availability of the statistical data in the Slovak Republic, **the creative and knowledge economy** comprises the following NACE sections: (C) – Manufacturing; (J) Information and communication; (K) Financial and insurance activities; (M) Professional, scientific and technical activities; (N) Administrative and support service activities; (R) Arts, entertainment and recreation. Since there are no data available regarding the NACE divisions, this overview has its limitations.

Figure 1.4: Number of enterprises in the creative and knowledge economy in the Bratislava region, 2008-2016



Source: own processing according to the data from the Statistical Office of the Slovak Republic

The structure and representation of individual enterprises by size categories are comparable with the ICT sector. The only difference is visible in the number of enterprises within the 1 – 9 and 0 employees categories. During the whole referenced period, the share of enterprises within the section M (Professional, scientific and technical activities) represented more than

62% of a total number of enterprises within the creative and knowledge economy. The section M comprises a variety of economic activities, including research and development ones.

The important indicator of technological performance, competitiveness, and quality of life is the R&D expenditure. The following table shows the total intramural R&D expenditure by sectors of performance in the Bratislava region. The referenced years are 2008-2014, the latest data are not available.

Table 1.3: Total intramural R&D expenditure by sectors of performance in the Bratislava region, 2008-2014, purchasing power standard per inhabitant at current 2005 prices

Sector	2008	2009	2010	2011	2012	2013	2014
Business enterprise sector	86,9	77,9	146,9	163,4	295,2	376,4	215,9
Government sector	180,1	188,2	207,8	209,2	222,2	212,5	284,4
Higher education sector	100,4	100,3	127,8	180	188,8	171,9	176,9
Private non-profit sector	0,1	0,1	1,6	1,1	0,4	0,6	0,5
All sectors	367,4	366,5	484,2	553,7	706,6	761,3	677,8

Source: *Ec.europa.eu, 2017b*

For the first three referenced years, the highest amount of R&D expenditure went to the Government sector, however, during the rest of the period the R&D expenditures gone to other sectors, as well. In 2012 and 2013, the flow to the business sector was the highest among other ones. Another statistics on R&D expenditures is shown in the following table where it is expressed as a percentage of the GDP.

Table 1.4: Total intramural R&D expenditure by sectors of performance in the Bratislava region, 2008-2014, percentage of GDP

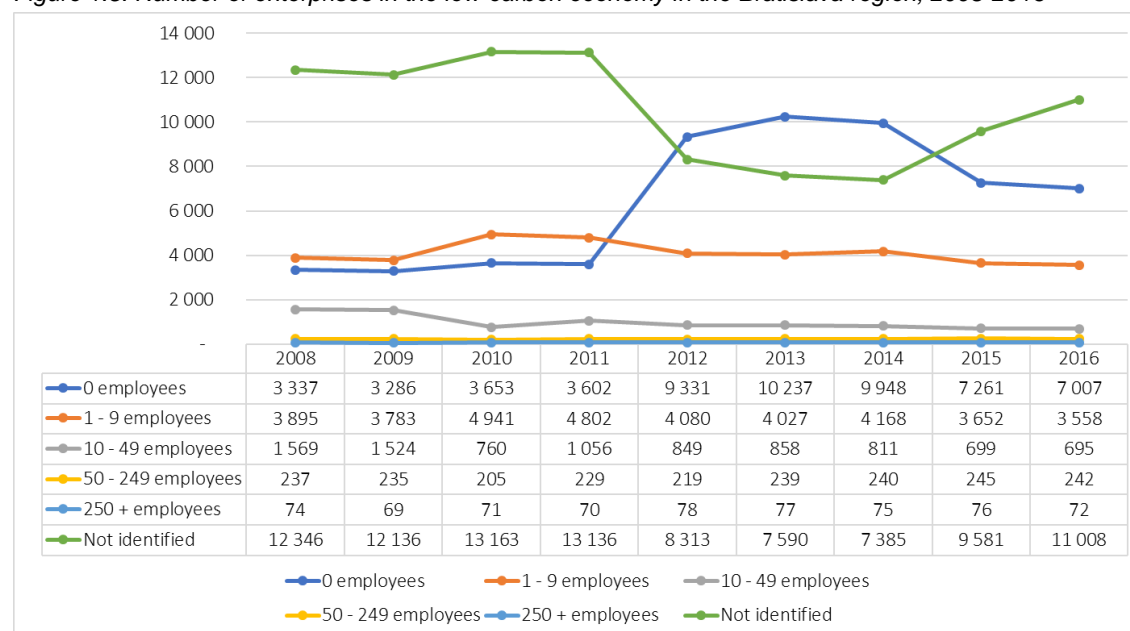
Sector	2008	2009	2010	2011	2012	2013	2014
Business enterprise sector	0,21	0,19	0,33	0,37	0,67	0,83	0,47
Government sector	0,43	0,45	0,47	0,47	0,5	0,47	0,62
Higher education sector	0,24	0,24	0,29	0,4	0,43	0,38	0,39
Private non-profit sector	0	0	0	0	0	0	0
All sectors	0,88	0,87	1,1	1,24	1,6	1,67	1,48

Source: *Ec.europa.eu, 2017b*

Compared to other developed EU regions, the R&D expenditure in the Bratislava region is rather low. The highest share of investments flows to the government sector, followed by the business and higher education ones. The R&D expenditure is important development factor since it (directly or indirectly) affects other socio-economic areas, not to mention the overall country development. The total R&D expenditure as a percentage of the GDP in the EU as well as within the Euro area is more than 2% since 2012. As mentioned in the previous text, the section M – more specifically the M 72 division (Scientific research and development) – interferes the creative and knowledge economy sector and the low-carbon economy, too. The low R&D expenditures influence all economic sectors in the Slovak Republic, including the development of the low-carbon economy.

The following figure shows the number of enterprises in the Bratislava region within the **low-carbon economy**.

Figure 1.5: Number of enterprises in the low-carbon economy in the Bratislava region, 2008-2016



Source: own processing according to the data from the Statistical Office of the Slovak Republic

The distribution of enterprises according to their size is similar as in the ICT sector. The figure shows that the number of enterprises with non-identified size has grown significantly during the last two referenced years which affected the overall analysis. Interesting finding is that even in the low-carbon economy the majority of enterprises represent the micro, small and medium-sized enterprises.

Other indicators, such as value added, the birth, closure, and survival rate of SME according to the NACE sections and size categories are not available in Slovak Republic. However, some of the business demography statistics are processed by Eurostat. They only cover the *Industry, construction and services except insurance activities of holding companies* sectors within enterprises with zero, 1-9, and more than 10 employees. The following table summarizes the main findings in the area of business demography within the Bratislava region according to the available size categories. The indicator Birth rate represents a number of enterprise births in the reference period divided by the number of enterprises active in the reference period, the Death rate is calculated as a number of enterprise deaths in the reference period divided by the number of active enterprises in the period, and the Survival rate is calculated as a number of enterprises in the reference period (t) newly born in t-3 having survived to (t) divided by the number of enterprise births in (t-3). Missing data is indicated by the symbol “:”.

Table 1.5: Business demography of SME in the Bratislava region, 2008-2014

0 EMPLOYEES	2008	2009	2010	2011	2012	2013	2014
Number of births of enterprises	4 305	4 858	3 682	4 318	3 818	2 964	16 401
Birth rate	:	:	:	11,21	9,93	7,89	24,79
Number of deaths of enterprises	5 276	6 092	:	4 460	3 194	8 417	:
Death rate	:	:	:	11,58	8,31	22,41	:
Survival rate	:	:	:	:	:	:	48,24
1-9 EMPLOYEES	2008	2009	2010	2011	2012	2013	2014
Number of births of enterprises	6 380	7 646	8 961	9 377	6 589	6 564	1 970
Birth rate	:	:	:	19,91	13,92	13,46	7,10
Number of deaths of enterprises	2 407	2 341	:	7 137	3 553	5 037	:
Death rate	:	:	:	15,15	7,50	10,33	:
Survival rate	:	:	:	:	:	:	54,91
10 + EMPLOYEES	2008	2009	2010	2011	2012	2013	2014
Number of births of enterprises	411	117	146	96	101	141	95
Birth rate	:	:	:	2,02	2,11	3,10	2,31
Number of deaths of enterprises	285	169	:	55	91	235	:
Death rate	:	:	:	1,16	1,90	5,16	:
Survival rate	:	:	:	:	:	:	54,17

Source: Ec.europa.eu, 2017b

As the table shows, the growth in the number of enterprises' birth occurred within the enterprises with 0 employees in 2014. The other size categories referenced significant drop in the number of enterprises' birth and the birth rate in the past years. However, the survival rate is the highest within the enterprises with 1 to 9 employees in 2014.

2 Factors influencing the dynamics of the region (strengths, weaknesses, opportunities and threats)

The key strategic document of each region in Slovakia is the **Economic and Social Development Program**. The document maps the overall situation in the region, including spatial structure, demography, environment, infrastructure, and business environment. One of the results of the as-is analysis is the SWOT analysis of the Bratislava region covering all above-mentioned areas. The following table summarizes the Economic and Social Development Program of the Bratislava Region for the Period 2014-2020 main findings regarding internal and external factors of the region's development dynamics, more or less influencing the SME development and creation of new business entities.

Table 2.1: SWOT analysis of the Bratislava region

Strengths	<ul style="list-style-type: none"> • favourable geographical location of the region, proximity to Vienna, Brno, Győr; • the presence of the capital city of the Slovak Republic; • the presence of the Danube river as an international waterway of European significance; • the position of the Bratislava region at the intersection of the Europe's top transport systems network; • the high density of road and rail networks; • the presence of international bike trails; • the favorable natural endowment supporting tourism development; • the favorable trend in population growth; • the favorable educational structure of the population; • the high rate of the economically active population; • significant number of job opportunities; • large base of relevant public institutions and organisations (national and transnational); • large base of universities and higher education institutions (especially in Bratislava); • high concentration of R&D and innovation base (especially in Bratislava); • high concentration of scientific and research infrastructure (especially in Bratislava); • the positive trend in macroeconomic indicators; • the high concentration of foreign direct investments and foreign companies; • a large number of business entities – both SME and large enterprises; • intense development of the tertiary sector;
Weaknesses	<ul style="list-style-type: none"> • negative effects of suburbanization, especially in the regional development poles of Bratislava; • high degree of built-up area in relation to the natural landscape; • uneven distribution of jobs in the region – high degree of commuting to the city of Bratislava; • the outflow of the highly-skilled workforce to abroad (mostly researchers); • weakly linking of the education system with labour market needs; • low economic literacy of pupils and students; • insufficient investments in rental housing; • degradation and demise of historical, architectural, and urban values, and technical monuments; • the insufficient technical condition of road infrastructure; • overloaded sections of roads at the entrance to Bratislava; • insufficient parking capacity; • poorly developed services in the field of agritourism;

	<ul style="list-style-type: none"> • low support for regional food/products; • poor quality of services provided in tourism; • air pollution from transport and construction activities; • growing urbanisation rate;
Opportunities	<ul style="list-style-type: none"> • development of innovative, progressive forms of employment services; • development of tertiary (services) and quaternary (science, research, education, healthcare) sectors; • development of lifelong learning oriented on business skills; • development of the creative economy; • human resource development – rise in the educational level of the population; • development of agritourism; • informatization of public administration; • development of sustainable traffic system; • attracting foreign direct investments; • cross-border cooperation within the tourism sector;
Threats	<ul style="list-style-type: none"> • unfavourable demographic development – population aging; • low interest of citizens in community activities engaging; • the outflow of the highly-skilled workforce from various sectors to abroad; • enhancing the isolation of the education system from labour market needs; • increasing share of individual transport; • insufficient support to the R&D sector; • negative consequences of climate change; • soil degradation and reducing quality agricultural land.

Source: AUREX, 2013

The high concentration of R&D community, sectoral diversity, attractive location alongside with the changing demand focused on quality and diversity creates strong comparative advantages of the Bratislava region. The focus of the regional economy moves from industrial and agricultural production to the sphere of services and informatization. These factors represent the basis for the tertiary and quaternary sectors development.

The tertiary sector in the Bratislava region is represented by a diversified variety of services. Thanks to good geographic location, natural and cultural potential, and presence of the Slovak Republic's capital city, the Bratislava region has favourable conditions for further development of tertiary, as well as quaternary sector. Based on the results of regional SWOT analysis, the most perspective sectors are ICT, tourism, and R&D.

Alongside above mentioned, the Bratislava region has favourable conditions for creative economy development, as well. It has rich natural endowment supplemented by quality cultural infrastructure, particularly in the city of Bratislava. The Bratislava region is home of 37 theatres (for comparison, the second highest number of theatres has the Banská Bystrica Region with 11 ones), including the Slovak National Theatre, 19 cinemas, 32 museums, and 3 galleries. Besides the physical infrastructure, Bratislava hosts variety of events which are relevant element of creative milieu, too. However, according to experts asked, the creative potential of the Bratislava region is not exploited enough, mostly due to lack of financial resources and insufficient cooperation among public and private sector.

The secondary sector has a strong position in the Bratislava region as well. In 2016, the employment in the sector represented almost 14% of overall employment in the Bratislava region. Even though the sector is not dominant in this indicator, it creates favourable conditions for SME development in the region.

The development of the low-carbon economy has its potential in the Bratislava region, as well. The transition to low-carbon economy is one of the priority areas of the region aiming at energy efficiency, use of renewable energy, and development of smart distribution systems (AUREX, 2013). However, the cost-benefit analysis should be taken into consideration when it comes to building renewable energy facilities. The necessary infrastructure could significantly affect the natural environment, and reduce and degrade the area of fertile lands. The negative externalities could affect the SME development, as well, mostly those in tourism sector and small farmers.

In 2016, the share of employment in the primary sector on total regional employment has represented only 1.12%. However, the Bratislava region has favourable conditions for agriculture, especially wine-growing. Supporting the viticulture tradition has strong multiplier effect for tourism and agritourism development, as well, represented mostly by SME and family business. The leading role in this tradition has the Little Carpathian Wine Route associating stakeholders from public and private sectors. The Little Carpathian Wine Route organises various events during the whole year, such as local wine tours, wine tasting, vintage (Mvc.sk, 2017).

3 Governance issues

Based on literature, documents, the interviews, and the Focus Groups please describe:

3.1 Institutions and governance levels

The current SME support system is relatively complicated and fragmented, it includes a number of actors who deal with related support issues and are characterized by complex links. They are divided into few categories – central government authorities and their agencies, funds and bank institutions, regional authority, advisory bodies, and associations.

Central government authorities represented by the following Ministries and their agencies:

- The Ministry of Economy is the most important institution in SME support since it is a guarantor and coordinator of the following activities in the area: (i) strategy and development of SME by designing financial instruments and programs to support SME; (ii) creation of an institutional environment to support SME by coordinating and guiding the activities of the Slovak Business Agency, including the development of a network of regional advisory and information centers and business innovation centers for SME; (iii) cooperation with international institutions such as OECD, OSN; (iv) legislation and regulatory measures to support the business environment; (v) providing financial resources from state budget for SME; (vi) support and development of SME at the regional level; (vii) managing relevant agencies including:
- the Slovak Business Agency is a specialized non-profit organization for the support of SME established in 1993. It is a common initiative of the EU and the Government of the Slovak Republic. The Agency supports SME at national, regional and local level and it aims at improvement of their competitiveness. It provides variety of services for SME including consultancy, workshops, monitoring, analyses development, as well as financial assistance in a form of providing micro-loans to maximum of 50 000 € and venture capital funds. There is no data on how much support has been provided to SME in the Bratislava region.
- the Slovak Innovation and Energy Agency which gather and process information on the activities of enterprises in the energy sector, on the management of energy and the rational use of energy sources. The Agency also performs the function of the Implementing Agency for the Structural Funds of the European Union) supporting the SME development.
- The Slovak Investment and Trade Development Agency (SARIO) is a governmental agency promoting (i) export activities of Slovak companies and (ii) investment projects of domestic and foreign investors.
- The Ministry of Interior is in charge of trade licencing. Any trade on the territory of the Slovak Republic can be carried on by a natural person or a legal person who notifies the Trade Licensing Office (Point of Single Contact) and acquires Certificate of Trade Authorisation. Thus, a foundation of any business entity starts by application for a Certificate of Trade Authorisation at the Ministry of Interior.
- The Ministry of Justice, through its registry courts, administers the Slovak Business Register where all business entities (legal persons such as the joint stock company, limited liability company) must be registered.
- The Ministry of Education, Science, Research and Sport of the Slovak Republic is the central body of the state administration for elementary, secondary and higher education, educational facilities, lifelong learning, research and science.

- Research Agency established by the Ministry of Education, Science, Research and Sport of the Slovak Republic is a state budgetary organization ensuring the implementation of the European Structural and Investment Funds in the field of research and science.
- Slovak Research and Development Agency has been established to support research and development (basic and applied research and experimental development) by providing other than ESIF funds.
- The Ministry of Agriculture and Rural Development has competencies in regional development including the SME policy in the field of agriculture. The Ministry designs strategies, concepts and programs for agriculture and regional development, coordinates other state institutions in this field, coordinates the use of ESIF, cooperates with development agencies, provides grants and subsidies for relevant projects, supports the activities of the Regional Development Agencies;
- The Ministry of Transport and Construction alongside other competences supports SME in the area of tourism. The Ministry develops, implements and monitors state tourism development policy, a national concept of tourism development, provides investment aid for tourism, ensures the fulfilment of the tasks of cross-border cooperation in tourism;
- The Ministry of Finance has competencies in providing certain reliefs and exemptions and implementing other financial and economic tools in the field of business, such as tax reliefs;
- The Ministry of Labour, Social Affairs and Family is responsible for employment legislation and policy. SME can benefit from active labour market interventions – various employment incentives provided by local labour offices. At the same time, the Ministry is a Managing Authority for the OP Human Resources 2014-2020 (ESF);
- The Ministry of Environment can provide financial aid and consultancy services in the area of environmental protection.

Regional authority:

- **Bratislava Self-Governing Region** is the only regional authority in Bratislava region. In the process of decentralization of the state administration, all Slovak self-governing regions were established as independent local authorities, which are not ruled by the central government but by the regional assembly and president of the region. Key delegated competences include (i) ground communications, (ii) social care, (iii) health care, (iv) education and (v) tourism. With regard to SME, the competencies of regional authorities in Slovakia are limited to implementation of infrastructural ESIF projects supporting SME (e.g. industrial parks, creative centres) and to small grants to local SME financed from the regional budget (see Bratislava Regional Subsidy Scheme described below).

Funds and bank institutions in Bratislava region:

- Slovak Guarantee and Development Bank is a specialised financial institution owned by the Ministry of Finance of the Slovak Republic aiming to support and develop small and medium-sized businesses on the basis of partnership and cooperation with commercial banks and other institutions supporting this segment. The Bank supports the needs of SME particularly when the commercial banks are reluctant to finance their projects due to short business history or insufficient collateral (Nefi.edu, n.d.).
- Export-Import bank of the Slovak Republic was established under Act No. 80/1997 Coll. on the Export-Import bank Slovak Republic. The main objective of the institution is to support the maximum export volume of sophisticated production to the numerous countries, while ensuring the return on investment through the minimization of the risks arising from insurance, credit, guarantee, and financial activities. EXIMBANKA SR assist

both large and small (SME) companies and is prepared to provide solutions tailored to companies' specific needs. It is the only institution in the Slovak Republic authorized to provide export financing and pure cover backed by the Government (Eximbanka.sk, 2017).

SME advisory bodies in Bratislava region

- Slovak Chamber of Commerce and Industry (SCCI) is a public institution established by law, funded from membership fees and commercial services. SCCI participates in drafting and commenting generally binding regulations and measures in the field of business, supports international activities of its members, provides consular verification of commercial documents, operates Arbitration Court, and provides training and consultancy services. SCCI membership is voluntary. Headquarters of SCCI is located in Bratislava, as well as the Bratislava Regional Chamber of Commerce and Industry.
- Regional Development Agency Senec-Pezinok provides variety of services, such as consultancy, translations, education, project management, networking, promotion, for municipalities, public institutions, NGOs, SME and wide public from the Bratislava region. During its existence, the Agency has implemented several projects dedicated to SME development – either directly or through the regional infrastructure development projects including education and skills training project for secondary schools.
- The Business Innovation Center (BIC) is a private consulting company located in Bratislava focusing on supporting innovation, technology transfer and business development. Service portfolio includes business and innovation advice, support to international cooperation, consultation regarding access to finance, as well as support for the EU framework programmes for research, development and innovation and protecting intellectual property. BIC is coordinator of the Slovak representation of the world's largest support network for SME with international ambitions, the Enterprise Europe Network.

3.2 Policy strategies in place

Key regional strategic policy document is the **Economic and Social Development Program of the Bratislava Region for 2014-2020**, adopted in 2013. The document outlines several strategic objectives relevant to SME development:

- Development of knowledge-based economy (including support to R&D and innovations, enhanced access to ICT, enhanced competitiveness of SME);
- Reducing energy intensity (including low carbon economy);
- Tourism development;
- Investment into education, skills and lifelong learning;
- Enhancing capacities of public administration.

This rather general document is translated into more concrete regional **sectoral policy documents**:

- Tourism Development Strategy of the Bratislava Region till 2020;
- Regional Strategy for Education at Secondary schools in Bratislava Region 2013-2018;
- Innovation Strategy of the Bratislava Self-governing Region 2014-2020;
- Strategy for the Reduction of Energy Intensity of Buildings Owned by the Bratislava Self-governing Region;
- Rural Development Strategy of the Bratislava Self-governing Region 2016 -2020;
- Regional Integrated Territorial Strategy of the Bratislava Region 2014 -2020.

Economic and Social Development Programs are obligatory planning documents at regional level, as stipulated by the Law on Support to the Regional Development 539/2008 Coll. The development of sectoral policy documents is driven either by (i) the wide competences or high priority of the regional authority in the given sector (e.g. Tourism Strategy, Education Strategy) or by (ii) the requirements of ESIF operational programmes (e.g. the Regional Integrated Territorial Strategy, Rural Development Strategy). Generally, the latter strategies have rather indirect impact on SME development – through the projects co-financed by ESIF, while the first-mentioned policy documents directly influence and form the given sector.

The most relevant **national policy documents** include:

- Research and Innovation Strategy for Smart Specialisation of the Slovak Republic;
- Action Plan for the Implementation of the Research and Innovation Strategy for Smart Specialisation of the Slovak Republic 2014-2016;
- National Reform Programme of the Slovak Republic – published annually;
- Action Plan of the National Reform Programme of the Slovak Republic – published annually.

The Bratislava region is covered also by the **EU Strategy for the Danube Region** that stretches from the Black Forest (Germany) to the Black Sea (Romania-Ukraine-Moldova) and is home to 115 million inhabitants. Priority areas of the strategy include transportation, energy, environment and economic development of the regions.

3.3 Support instruments for SME and the three focus sectors

In the 2007-2013 programming period Slovakia benefitted from the EU funds based on the document National Strategic Reference Framework (NSRF) 2007-2013. Cohesion Policy of the EU was implemented through three main goals: (i) Convergence, (ii) Regional Competitiveness and Employment, and (iii) European Territorial Cooperation. The strategy, priorities and objectives of the NSRF have been implemented through 11 operational programs. The Bratislava region was eligible within 6 of them:

- 2 operational programs within the goal Convergence co-financed by ERDF and CF – **OP Transport** and **OP Environment**;
- 1 operational program within the goal Regional Competitiveness and Employment co-financed by ERDF – **OP Bratislavský kraj**;
- 3 operational programs within the goals Convergence and Regional Competitiveness and Employment – **OP Research and Development** (co-financed by ERDF), **OP Employment and social inclusion** (co-financed by ESF), and **OP Education** (co-financed by ESF) (Nsrr.sk, 2008).

Even though the operational programs were not directly aimed at supporting the business sphere, their focus helped to stimulate the internal resources of the regions by the development of downstream entrepreneurial activities (SME) while at the same time increase the attractiveness of regions for foreign investment.

The programming period 2014 -2020 is more focused to direct help to SME. Its priority areas are:

- Entrepreneurial environment conducive to innovation

- Infrastructure for growth and employment
- Developing human capital and improving participation in the labour market
- Sustainable and efficient use of natural resources
- Modern and Professional public administration

These objectives will be met through 9 operational programs within the goal Investing in Growth and Employment, and 3 operational programs within the goal European Territorial Cooperation. The Bratislava region is eligible to draw funds within 5 operational programs:

- OP Research and Innovation funded by ERDF,
- Integrated Regional Programme funded by ERDF,
- The Human Resources Operational Programme funded by ESF,
- Operational Programme Quality of Environment funded by ERDF,
- Operational Programme Effective Public Administration funded by ESF.

The Thematic Objective 3: “Enhancing the competitiveness of small and medium-sized enterprises” has been set in the following operational programmes (the list comprises operational programmes relevant for the Bratislava region only):

- **OP Research and Innovation** – the fulfillment of Thematic Objective 3 will be ensured by the implementation of activities within the priority axis 3 “Strengthening the Competitiveness and Growth of SME” and Priority Axis 4 “Development of Competitive SME in the Bratislava Region” (The Ministry of Education, Science, Research and Sport of the Slovak Republic, n.d.);
- **The Human Resources OP** – the fulfillment of the Thematic Objective 3 is focused at supporting lifelong learning and supporting skills adaptation of current and future workforce. Enterprises need workforce with the relevant skills to carry out certain activities, and the role of lifelong learning is to increase and upgrade those competencies. An equally important part of the preparation of the future workforce for enterprises is the cooperation of employers/enterprises with secondary and HE institutions (The Ministry of Labour, Social Affairs and Family of the Slovak Republic, n.d.);
- **Operational Programme Effective Public Administration** – the fulfillment of the Thematic Objective 3 will be supported by measures that will lead to the optimization and enhancement of the quality of public administration services for business entities (e.g. the Ministry of Interior, the Ministry of Justice).

The following table shows the allocation of ESIF funds within the Bratislava region in two programming periods. The Bratislava region is the only urban and more developed region according to the European Union classification therefore it is not eligible to draw funds from the EAFRD. The more specific data regarding allocation of the ESIF to SME support in the Bratislava region are not available.

Table 3.1: Allocation of ESI funding to SME support in the Bratislava region in thousand EUR (000)

	Period 2007-2013			Period 2014-2020		
	EU expenditure	National expenditure	Private expenditure	EU expenditure	National expenditure	Private expenditure
ERDF						
OP Informatization of Society (2007-2013)	127 162	34 318	N/A	N/A	N/A	N/A
OP Integrated Infrastructure (2014-2020)						

	Period 2007-2013			Period 2014-2020		
	EU expenditure	National expenditure	Private expenditure	EU expenditure	National expenditure	Private expenditure
OP Competitiveness and Economic Growth (2007-2013)	38 227	6 746	N/A	-	-	-
OP Research and Development (2007-2013) OP Research and Innovation (2014-2020)	386 465	60 665	N/A	171 343	182 939	N/A
OP Bratislava Region (2007-2013)	111 609	16 427	N/A	-	-	-
OP Health (2007-2013)	7 825	1 381	N/A	-	-	-
Regional Operational Programme (2007-2013) Integrated Regional Operational Programme (2014-2020)	18 602	3 283	N/A	86 668	86 334	N/A
OP Environment (2007-2013) OP Quality of Environment (2014-2020)	153 395	23 591	N/A	3 985	3 985	N/A
EAFRD	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply

Source: Nsrr.sk, 2016; European Commission, 2017

Table 3.2: ESI funding relevant for SME support in the region in thousand EUR (000)

	Period 2007-2013	Period 2014-2020
a) EU FP: Cooperative Research	N/A	N/A
b) EU FP: Research for SME	N/A	N/A
COSME	N/A	N/A
Horizon 2020	N/A	N/A
Please indicate the themes of the FP research projects below	N/A	N/A
InnovFin SME Guarantee. http://www.eif.org/what_we_do/guarantees/single_eu_debt_instrument/innovfin-guarantee-facility/	N/A	N/A
InnovFin SME Venture Capital http://www.eif.org/what_we_do/equity/single_eu_equity_instrument/innovfin-sme-vc/index.htm	N/A	N/A
d) National/regional funding	N/A	See text below
e) Private funds/investments	N/A	See text below

Alongside the European Union's operational programs during the last two programming periods, there have been various initiatives for regional and SME development made over time. Some of them are national with the spatial impact for the Bratislava region, some of them were linked with the activities of the regional authority (Bratislava Self-Governing Region). The following list represents the examples of good practices identified by the focus group participants, interviewees, and own survey.

Initiatives at national level:

State Aid Scheme to support research and development finances the projects aimed at strengthening the scientific and technological base of the business sphere, improving the R & D infrastructure, promoting the transfer of knowledge from theory into practice and thus supporting the development of its competitiveness at national and international level. The Scheme is based on the Research and Development Act No. 185/2009. From 2009 to 2015, the total amount of finance support to SME in the Bratislava region represents almost 26 million €. Supported projects represent mostly applied and industrial research.

Junior Achievement Slovakia is the NGO providing entrepreneurial education for elementary and secondary schools' pupils and teachers around Slovakia. The initiative offers workshops, competitions, seminars usually on free basis. The data on provided support within the Bratislava region is not available.

Project of Cultural and Educational Grant Agency of the Ministry of Education, Science, Research, and Sport of the Slovak Republic implemented by the Economic University of Bratislava aimed at creation of textbook "**Basic Business for Secondary Schools**". The goal of the project is to provide a basic knowledge for secondary school students to decide whether to start own business and how to manage the concept of setting up a company after graduation. The total amount for the project is 4 594 € during the 2016-2017 period.

Initiatives at the regional level:

Bratislava Regional Subsidy Scheme was established in 2015 and it is the scheme providing subsidies from regional budget to SME, municipalities, and non-profit organizations with residence in the Bratislava region. The Scheme is dedicated to provide subsidies to support strategic sectoral policies for individual areas of support for public life in the Bratislava region. The following table shows the funds allocated for grant schemes to support sectoral policies in the region:

Table 3.3: The funds allocated for grant schemes in the Bratislava region

Year	Subsidy Scheme	Funds
2015	Culture	400 000,00 €
2016	Culture; Tourism; Rural Development	970 000,00 €
2017	Culture; Tourism; Rural Development, Sport, and Youth	1 996 800,00 €

Source: Brds.sk, 2016

Annual allocation is based on tax revenues. Support is distributed through the calls for applications for individual projects. Each call for application sets individual requirements for eligible applicants and their projects. The Scheme provides individual subsidies to applicants from public and private sectors up to 5 000 €, as well. For 2017, the total allocation for individual subsidies amounts to 499 283,36 € (Brds.sk, 2016).

The Memorandum of Cooperation is an initiative of the Bratislava Self-Governing Region to provide new premises to artists from the creative cluster Cvernovka Foundation. The cluster

was situated in an abandoned spinning mill in Bratislava for seven years, planning to rebuild the premises to the creative center for various artists and entrepreneurs. After the premises were repurchased by a developer, the Foundation had to find another place for their activities. The signed Memorandum represents the concrete steps that will ensure the owners of the studios in Bratislava's Cvernovka new spaces in the premises of the former chemical industrial school. The entire campus will be used by artists as well as by public including creative SME (Region-bsk.sk, 2016).

Business incubators are a popular platform for start-ups all around the world. They usually provide the similar set of services including consulting and cheaper rents. The Bratislava region is the home of several of them, the worth-mention are the universities' incubators – Talent Way of the Economic University of Bratislava and the InQb, the technology incubator of the Slovak University of Technology in Bratislava. The incubator *Talent Way* helps University's students to realize their own ideas in short-term projects, through various challenges and competitions, organizing events, start-up teams, or setting up their own companies. The incubator InQb was created thanks to the financial support of European funds under the Grant scheme for innovation and technology development – INTEG (PHARE CBC Slovakia – Austria) in 2005. The Incubator's mission is to support the transfer of technology and innovation in the region by supporting the creation of new technology companies. The Incubator offers its services to the University students, graduates, and individuals who want to establish own enterprise, or already run one, with a focus on providing products and services in technology (Inqb.sk, 2010).

Technology and Science Parks provide infrastructure for research and support its commercialisation through industry partnerships. Currently there are 3 Technology and Science Parks at universities in Bratislava: (i) University Science Park at the Slovak University of Technology in Bratislava, (ii) University Science Park at the Comenius University and (iii) the University Science Park for Biomedicine at the Slovak Academy of Sciences. All three science parks have been co-financed from the OP Research and Development 2007-2013 (ERDF).

Vocational Education and Training Center and the dual education represent the crucial activity of the Bratislava Self-Governing Region aimed at the concentration of vocational education and training in the various sectors of industry which will be able to respond flexibly to labour market needs in the context of lifelong learning. The Bratislava region has currently 10 centers for Vocational Education and Training – 8 are regional, 1 based on public-private agreement and 1 private. The Centers are responsible for the preparation of experts based on enterprises' requirements and new trends in technologies of the relevant economy areas (Region-bsk.sk, 2017). Another project of the Bratislava Self-Governing region supporting skills development of young people is **The Duke of Edinburgh's Program**. It is an international educational program developing students' purposefulness, endurance, and independence under the guidance of the teacher. Within the Bratislava region, 12 secondary schools, 50 trained teachers, and 115 students have been involved in the Program. The Bratislava

Self-Governing Region supports the dual education, as well. One good example is the establishment of the Dual Academy, which is an association of legal entities – Bratislava Self-Governing Region, Volkswagen Slovakia, and Matador Holding. The Dual Academy will provide students with better material and technical equipment and more time spent directly at their future employer in practice (Region-bsk.sk, 2016b).

The Impact Hub is an international platform of experts, organizations, teams and individuals. The first Impact Hub (previously called THE HUB) was founded in 2005 in London, currently is located in more than 80 cities around the world, including Bratislava since 2014. The Impact Hub is an incubator which helps individuals and groups to start their business and to become more competitive (Impacthub.sk, 2017).

3.4 Results of the FOG Test

As mentioned in previous part of the Case Study (see Chapter 3.1), the regional authorities in Slovakia play only marginal role in the SME support. As suggested by the interviewed expert, the “regional authorities” within the FOG test have been replaced by “public authorities”. Where possible/relevant, the Focus Group participants have identified the specific public administration level.

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for “how it should be”)	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities steer decisions made over matters related to SME and entrepreneurship support structures and mechanisms in the region in a unilateral manner.	X	
	Regional authorities exercise their powers mainly providing services and resources, in turn monitoring the achievement of specified objectives with respect to SME development (performance and results oriented)		
	Regional authorities collaboratively develop and foster, with key stakeholders, SME and entrepreneurship support structures and mechanisms in the region.		X
	Regional authorities have delegated powers to other entities or relevant stakeholders as a way to proactively develop and foster SME and entrepreneurship support structures and mechanisms in the region.		
	Practices and actions undertaken		
A1.0	Is the development of an entrepreneurship culture in the region rather organically driven (grassroots movements) or rather stemming from a top down approach (institutionally driven)?	Top down	
A2.0	Which main actor/s is/are informally driving the promotion and shaping the development of an entrepreneurship culture in the region?	<ul style="list-style-type: none"> • Groups/associations of young entrepreneurs • Universities and research institutions • Chamber of commerce 	
A3.0	Which main actor/s is/are formally driving the promotion and shaping the development of an entrepreneurship culture in the region?	<ul style="list-style-type: none"> • National authorities (Slovak Business Agency; Slovak Innovation and Energy Agency) • Regional authority (Bratislava Self-Governing Region) • Intermediate bodies (partly) owned by one of the authorities named above (Intermediate Body of the Ministry of Economy under the Operational Program Research and Innovation; Intermediate Body of the Ministry of Culture under the Integrated Regional Operational Program) 	

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities, along with other actors create partnerships to foster an entrepreneurship culture in the region, going beyond the national or European framework/requirements.		
	Activities intended to promote an entrepreneurship culture are financially supported and closely monitored to optimise the efficiency, effectiveness and transparency of the actions undertaken by stakeholders receiving support from the regional authorities.		
	A top down approach is adopted by regional authorities when promoting the development of an entrepreneurial culture (e.g. initiatives on the organisations of start-up conferences stem from local authorities)	X	
	Regional authorities are enabling all actors to take on the initiative to promote the development of an entrepreneurship culture in the region (e.g. via advisory services, training)		X
B1.0	Which actions are undertaken in the region to develop an entrepreneurial climate and culture?	<ul style="list-style-type: none"> • Entrepreneurship courses offered at University level • Regional or local "trade-fairs" for start-ups and scale-ups, events for certain branches/clusters 	

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities facilitate the creation of business start-up support structures by engaging with a large array of stakeholders themselves.		X
	Regional authorities directly contribute to increase the business start-up rate by initiating and managing business start-up support structures.		
	Networks, incubators, portals and gateways are being developed hand in hand by local authorities and citizens, proactively stepping in to create a start-up friendly environment in the region.	X	
	Regional authorities support the development of start-up support structures by providing the necessary resources to (intermediate) working to boost entrepreneurial skills in the region.		
C1.0	According to you, which support structure or practice for start-ups and SME is the most effective and should be further emphasised to ensure the development of entrepreneurial skills in the region?	<ul style="list-style-type: none"> • Online platforms where entrepreneurs can crowdsource solutions to their problems and receive go-to advices • Incubators (which should offer all kinds of support services including online platforms) 	

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities have developed strategies and implement schemes intending to reduce barriers to entry, eliminate obstacles and foster an environment conducive to the development of start-ups and SME.		
	Off-the-shelf financing practices as well as the provision of a venture capital environment provide innovative and inclusive sources of financing, which are tailor-made to the needs of the actors in the region.		
	The provision of financing support by the region is provided and can be conditional on the achievement of set objectives and result-oriented approaches are favoured by authorities, which encourage a greater ownership of the projects to ensure the success of the action and a return on investment.	X	
	Regional authorities use the synergies developed in networks of stakeholders supporting entrepreneurship. They accordingly facilitate the development of conventional financing bodies as well as participative financing schemes targeting start-ups, SME and project holders from under-represented groups.		X
	Practices and actions undertaken		
D1.0	Is there a financial gap or a suboptimal investment situation for SME financing in the region?	Respondents were not sure – resources are available from operational programs, however the issue of market distortion caused by grants or subsidies remains. In case of national support schemes, the lack of clarity, unclear conditions, and very low capacity represent serious problems.	
D2.0	What are the most commonly used financial support schemes or means of financing for entrepreneurs and SME?	<ul style="list-style-type: none"> • Financial instruments from financial intermediaries • National or Regional direct financing – the Bratislava Regional Subsidy Scheme • EU grants or FIS from EU institutions – operational programs 	
D3.0	How do governance mechanisms contribute to start-up/SME development while making up for the reduced availability of public funding?	Facilitation of communication between key actors	
D4.0	Are regional authorities prompt to take economic risks when providing financial support to SME?	The majority of experts rate the risk-taking propensity with 1, however, in case of the Bratislava Regional Subsidy Scheme it could be on the level 3.	
D5.0	Who supports and fosters higher accessibility of the region (physical infrastructure)? How (grants/PPP, etc.)	National institutions	
D6.0	What is done to improve the governance standards at national/regional/local level?	<ul style="list-style-type: none"> • Tax allowances for start-ups and SME • Initiatives to ease the legal requirements to start and run a business and speed up business starts 	

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities ensure the development of an entrepreneurial culture in the region looking at other regions' governance structures and mechanisms to improve their own entrepreneurship and SME policies and create partnerships with other regional authorities to foster innovation as well as the development of synergies.	X	
	Regional authorities are integrated into a multi-level governance system and actively collaborate to identify best practices and challenges solving options beyond regional and national borders.		
	Co-funded projects are driving the need for further collaboration between regional authorities and between regions.		
	Developing contacts and partnerships is the spearhead of regional authorities and key actors to make up for potentially limited public intervention (e.g. public funding) and autonomously find solutions to local issues (without recurring to external support).		X
	Practices and actions undertaken		
E1.0	Have regional clusters developed ties and are collaborating with other clusters at the national/EU level?	Experts were not sure about it.	
E2.0	Which are the regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment?	Attending cross-regional meetings and SME fairs	

4 Results of the SWOT analysis

Internal factors – factors of competitiveness

Major strengths	
Major strengths	<p>The concentration of the majority of relevant institutions and organizations</p> <p>Location of all relevant national, international public and private institutions and organizations in the Bratislava region is determined by the capital city location in the region and it represents the major strength in comparison with other Slovak regions. These institutions comprise the HEIs and R&D institutions, as well. The presence of all of these institutions and organizations simplifies the availability and distribution of information and assistance for SME (as well as other stakeholders in the region) and can also help them to find relevant partners for their activities, including R&D. Presence of these institutions is connected with the concentration of public expenditure to SME through procurement and various grants, as well.</p>
Educated workforce	<p>The Bratislava region is the home of a significant amount of higher education and R&D institutions providing education and training in a wide range of areas. Students and young researchers are coming to study in the Bratislava region (mostly to the capital city of Bratislava) from other parts of Slovakia and they usually stay there after graduation to start own business or find a job.</p>
The existence of large lead companies (including multinationals)	<p>This factor represents an advantage for job-seekers as well as SME. These companies create a positive business environment and increase attractiveness of the region, especially of the capital city. Their presence in the region stimulates competitiveness among SME which represent possible suppliers for them. This factor influences the capital flows, including foreign direct investments which are on the highest level in the Bratislava region (the latest data available are from 2015).</p>
Regional infrastructure (ICT and transportation)	<p>Regional infrastructure is highly developed in the Bratislava region. There is good road, water, air and railway transport accessibility in the region which is important for the business environment and tourism development.</p>
Economic factors	<p>The Bratislava region is the most developed region in Slovakia regarding the economic indicators such as GDP, employment, foreign direct investments, regional income and regional purchasing power.</p>
Other strengths – less pronounced	
Population density	<p>The number of inhabitants and their diversity can be considered the stimulating factor for SME development. The different needs and interests provide opportunities for finding and developing new markets. The indicator also ensures a sufficient number of the workforce for entrepreneurs.</p>
Creative milieu	<p>Creative milieu comprises both production (creative economy represented by the creative and cultural industries) and consumption (soft infrastructure and natural environment) ones. Both components of the creative milieu are strong in the Bratislava region and support the SME development. In combination with the public infrastructure, it provides opportunities for the creation of new business models and enterprises (for more specific example see chapter 3.3.)</p>
Education and training institutions in the region	<p>As mentioned above, the Bratislava region is the home of the majority of public institutions. The regional governments have several competencies, one of them is to establish (and cancellation, as well) of secondary schools. This sector has high potential in shaping young people to enable them either find a relevant job or start own business. They often cooperate with HEIs in providing their students business education. The vocational education and training centers and dual education as a cooperation between secondary schools and entrepreneurs play significant role in shaping young people and preparing them to enter the labour market.</p>
Major weaknesses	
Corruption, administrative difficulty, and law enforcement	<p>These are rather national weaknesses than regional ones, however, with a concentration of the majority of SME, this is a really problematic area in the Bratislava region. Especially start-ups face difficulties when establishing their companies, they are often discouraged or unable to continue in their effort.</p>
R&D expenditures	<p>The lack of R&D expenditures is also rather national problem, however it is highly connected with</p>

<p>other factors, such as weak innovation capacity of enterprises, low accessibility of the quality R&D staff, low wages of R&D staff, low number of scientific projects, which are directly influencing the situation in the Bratislava region. The lower the R&D budget is the less cooperation initiatives with SME are present in the region.</p>
<p>Brain-drain</p> <p>Even though the Bratislava region has educated and quality workforce it also struggles with the availability of new brains. Young, well-educated people are often leaving the Bratislava region to the neighboring countries where their work is better financially valued.</p>
<p>Eligibility to ESIF projects</p> <p>Since the Bratislava region has the highest GDP in purchasing power standard it is among the few European regions not eligible for majority of the European Union's funding schemes. This hinders the development of the SME in two ways: (i) without the financial aid from the EU the public regional infrastructure cannot be improved which directly affects creation of the new SME or contracting existing ones, (ii) without funds directly given to SME they are not able to renew their technological and material equipment and improve their production. To consider eligibility of a certain region to ESIF the different indicators, such as quality of life or competitiveness ones, should be taken into account. To assess situation in a certain region the quantitative indicators are not enough and they should be supplemented with qualitative ones.</p>
<p>Other weaknesses – less pronounced</p>
<p>Networking</p> <p>Networking among various stakeholders from private and public sectors is less developed in the Bratislava region. Public and private sector usually do not cooperate when it comes to development and implementation of regional (or local) strategies and initiatives. The mutual communication and information sharing is weak, too.</p>
<p>Labour regulations</p> <p>The provision of work permission for foreign workers/employees is administratively demanding and lengthy which often results in undeclared work.</p>
<p>Wages vs. living costs</p> <p>The living costs, especially housing ones, are the highest in the Bratislava region, however, the wages in few sectors are really low for the regional standards which causes the imbalance.</p>
<p>Ambiguous factors – represent a strength in some of the businesses/industries, but a weakness in others</p>
<p>Population density</p> <p>As mentioned above, the factor is important for the creation of the new customers as well as employees or employers. Its impact is the most significant in the tertiary sector.</p> <p>However, it can be considered weakness for SME in primary sector which loses fertile soil at the expense of building the necessary infrastructure for increasing number of inhabitants.</p>
<p>Quality educated workforce</p> <p>This is the most relevant factor in the ICT sector. The concentration of well-educated people in this sector is high in the Bratislava region. It is linked with a concentration of multinational IT companies in the capital city as well as general development trends in the sector within the SME.</p> <p>The low-carbon economy, primary and secondary sector, on the other hand, struggles with lack of the quality workforce. The vocational secondary schools are not able to reflect the labour market needs, they are not preparing students to enter the labour market or to start their own business.</p>
<p>Innovation activities</p> <p>This factor is the most developed in the ICT and creative and knowledge economy, as well as in secondary sector. Since there is a high concentration of SME in these sectors in the Bratislava region they have to invest in innovation activities to maintain their competitive advantage.</p> <p>SME in the primary and low-carbon economy sectors do not carry out innovation activities, usually because of lack of financial resources.</p>
<p>Neutral factors – represent neither a strength nor a weakness</p>
<p>Landscape and natural endowment</p> <p>The Bratislava region, as the other ones in Slovakia, has rich natural and cultural endowment.</p>
<p>Accessibility of financial resources</p> <p>The accessibility of variety financial resources, such as venture capital, business angels, crowdfunding or loans varies from SME to SME. It depends on the economic situation of the SME, their activities, and interest in various forms of financing in terms of gaining information and consultancy. Therefore, it is not suitable to assign this factor to strengths or weaknesses of the Bratislava region.</p>

External factors – framework conditions

Major opportunities/drivers
Attracting new foreign investments
Completion of the road infrastructure
Increased eligibility to ESIF
Reducing administrative burdens
Other opportunities/drivers – less pronounced
Increased demand for SME' products
Scientific and technological progress
Major threats/challenges/barriers
Decline in foreign direct investments
Reduced availability of ESIF
Growing administrative burdens
Other threats/challenges/barriers – less pronounced
Market slack
Reduced purchasing power of the population
Worsening of the global political and economic situation
Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others
Investments in renewable energy technologies could be opportunity for low-carbon economy and R&D development, however, building the necessary physical infrastructure would represent the tremendous intervention on the natural environment and degradation of fertile land. When comes to renewable energy, the competent stakeholders should take into consideration the cost-benefit analysis and the overall potential of the country.
Neutral factors – represent neither an opportunity/driver nor a threat/barrier

Further comments and remarks:

- The Bratislava region has one crucial advantage in comparison with other Slovak regions – the presence of the capital city. This factor influences every indicator of socio-economic development of the region. The capital city is the home of the biggest foreign companies, the relevant public institutions, and private organizations, and provides employment opportunities for people from all over Slovakia. However, it also struggles with overpopulation – the road infrastructure and traffic is overloaded every day. Another problem is that even though Bratislava is full of people who work and live there, only few of them pay local taxes here. The significant group of people living there has their permanent address in other cities and regions of Slovakia. They pay taxes somewhere else but use infrastructure in Bratislava.
- The Bratislava self-governing region has prepared a document for SME which is mapping all available public funding schemes for the 2014-2020 programming period. This document is available on their webpage. Even though SME are aware of various financial opportunities and public schemes available, according to experts asked, they are not interested in them. This is usually caused by their distrust in public administration, as well as administrative costs associated with the preparation of applications for funds.
- Regarding skills-matching of graduates, there is no social order (clearly formulated demand) from SME. They are usually not interested in communication with public authorities which was described in the previous comment.

5 Future policy needs

In Slovakia, vast majority of interventions supporting SME (as outlined below) should be organised at national level. Bratislava Self-Governing region, which is in fact the only regional authority, should support local initiatives by tailor made local solutions (such as provision of premises, building attractive public infrastructure, regional small project grant schemes, cross-regional and cross-border projects).

There are several important sectors that directly influence SME development:

1. EDUCATION:

- Vocational education and training needs to grow into an attractive destination for youth and adults as an instrument for reduction of the skills gap.
- Universities in Bratislava are still far from being ranked among top universities worldwide. However, they need to become more competitive in the Central Europe region, in the strong competition with Vienna, Brno, Prague and Budapest.

2. EMPLOYMENT:

- Social security and health insurance contributions are considered too high and seen as a serious burden for start-ups and SME.
- Unemployment rate in Bratislava region is less than 4% (April 2017) which results in limited availability of the qualified work force. At the same time, highly qualified professionals expect wages that are not affordable to start-ups and SME.

3. RESEARCH, DEVELOPMENT AND INNOVATIONS:

- R&D expenditures from the State Budget shall be increased to 2% of GDP.
- Regulation of R&D tax incentives should be made more clear and motivating to SME.
- Existing division of competencies between the two ministries (Ministry of Education, Science, Research and Sport is responsible for science and research, while Ministry of Economy is responsible for innovations, intellectual property protection and commercialization) is considered a limitation to efficient support of R&D and innovations.

4. GOVERNANCE:

- Government should make efforts to reduce administrative burdens to SME by increasing effectiveness of governmental structures and services through e-government (e.g. central information database).
- Law enforcement should be significantly enhanced.

5. TOURISM:

- Low quality of tourism services hinders development of other business sectors through its multiplication effects.
- Low governmental support to tourism industry.

6. SUPPORT TO DEVELOPMENT OF SME:

- The rules on state aid should be made more clear.
- Non-bank financing of SME needs to be supported.
- Tax incentives for start-ups should be considered.

Existing successful SME-support structures that should be further strengthened include:

- Further promotion of TVET and German-style dual education is the key to future labour market relevance of graduates.

- Science parks and incubators associated to universities in Bratislava are the hubs for high-level R&D.
- Bratislava regional authority should further promote the development of creative economy (and eventually of other clusters) by provision of redundant real estates that can be reconstructed and transformed into creative and cultural centres.
- Small projects grant scheme (such as the existing Bratislava Regional Subsidy Scheme) is an effective and motivating instrument for start-ups and SME. Higher allocation for this scheme is desirable.

ERDF should further support mainly public investments into infrastructure in the Bratislava region including: (i) transportation infrastructure, (ii) environmental infrastructure, (iii) tourism infrastructure, (iv) R&D infrastructure, (v) entrepreneurship infrastructure and (iv) educational infrastructure. With regard to private sector, ERDF support should be channelled solely to high added-value sectors such as R&D, innovation and education.

6 Annex

6.1 Interview partners

Name	Organisation	Position	Special expertise/years of experience ³⁵	Interview Date	Tel/f2f
prof. Ing. Elena Žárska, CSc	University of Economics in Bratislava	the deputy of the head of the department of public administration and regional development	39	29/5/2017	F2F
Ing. Juraj Majtán	Slovak Chamber of Commerce and Industry	the head of the Bratislava Chamber of Commerce	24	29/5/2017	F2F
Ing. Ľuba Pavlovová MSc	Regional Development Agency Senec – Pezinok	the Head of the RDA	23	29/5/2017	F2F
Mgr. Vladimír Bačišin, PhD.	Freelancer; Pan-European College	Freelance economic journalist and pedagogue	26	29/5/2017	Telephone
Ing. Nikola Švejdvová	CORPORA, a.s, expert organisation	Board member, project manager	3	29/5/2017	Telephone

6.2 Focus Group participants

Name	Organisation	Position	Special expertise/years of experience ³⁶	Date of workshop	Tel/f2f
Dr.h.c., doc. Ing. Juraj Wagner, PhD.	Ministry of Education, Science, Research and Sport of the Slovak Republic	Expert analyst for R&D	49	8/6/2017	F2F
Ing. Monika Krošláková, PhD.	University of Economics in Bratislava	Pedagogue and researcher (SME and family business)	18	8/6/2017	F2F
Mgr. Boris Bilek	Regional Development Agency Senec – Pezinok	Consultant	10	8/6/2017	F2F
Mgr. Rudolf Pástor, PhD.	University of Economics in Bratislava	Pedagogue and researcher (regional development, regional economy and policy)	19	8/6/2017	F2F
Ľuboš Podolský	Alfacon, s.r.o.	Entrepreneur	28	8/6/2017	F2F
Mgr. Martin Hakel, BA	Bratislava Self-Governing Region	The head of the strategy and regional development department	13	8/6/2017	F2F
Dr. Miloslav Rosenberg, PhD.	University of Economics in Bratislava	Pedagogue and researcher (international trade)	52	8/6/2017	F2F

³⁵ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

³⁶ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

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Case study report: Graz

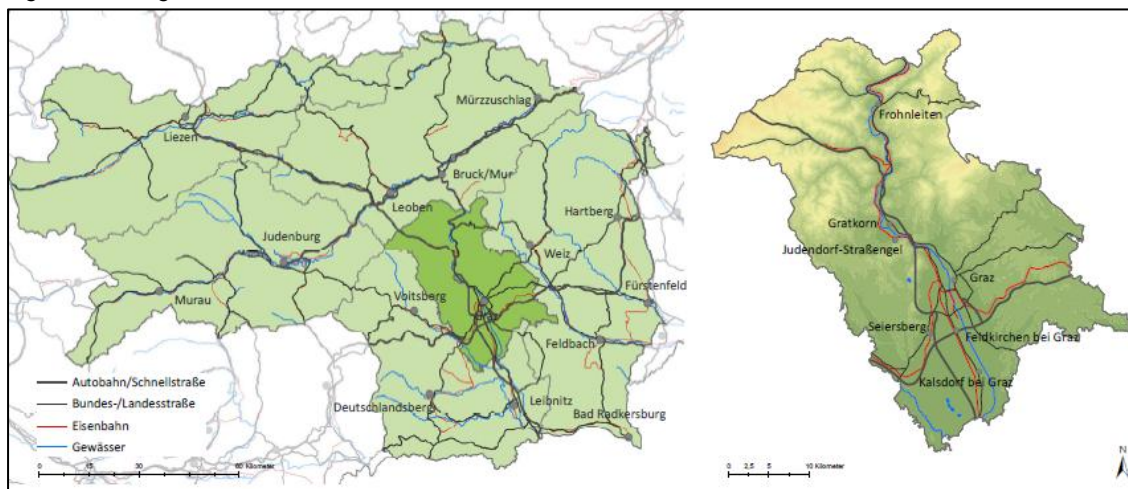
Laurenz Wolf

Austrian Institute for SME Research

1 Mapping the SME sector in the region

The NUTS 3 Region Graz (AT 221) is comprised of two political districts, the City of Graz and Graz Umgebung (“Graz Hinterland”) and is located at the centre of Styria (NUTS 2 level region). The City of Graz is the regional capital, economic, cultural, academic and administrative centre of Styria as well as the second largest city in Austria. The area has a population of approx. 430.000, accounting for 34.8% of Styria’s population. Spread over a territory of 1,214 km² the population density amounts to 354 inhabitants/km² (Gstinig et al. 2017). Neighbouring agglomerations at close range (within a radius of 200 km) are Vienna, Klagenfurt (Austria), Maribor, Ljubljana (Slovenia) and Zagreb (Croatia).

Figure 1.1: Region of Graz



Source: Gstinig, K. et al. (2017)

Historically the region is characterized by partial concentration of the Styrian industrial production in Graz and the surrounding areas (besides Graz, Upper Styria is home to larger parts of the industrial production). With the establishment of the technical university (TU Graz) in the late 19th century, the foundation for today’s industrial structure has been formed. The city of Graz evolved into a hub for industry-related services while the hinterland was and is home to the local industry (Gstinig et al. 2017). Furthermore, within the last 20-30 years the economic has undergone structural changes towards a more diversified industry and services landscape. Three decades ago the steel industry and automotive industry were the dominant economic branches in Styria but these sectors suffered from a decline during the 1990s from which only the automotive suppliers fully recovered and regained international visibility. Core sectors of the regional industry nowadays include the automotive industry, mechanical engineering, and electronics.³⁷ The largest industrial employers in the region are Magna Steyr Fahrzeugtechnik (automotive), Knapp AG (warehouse logistics), Andritz AG (machine engineering), Siemens AG (mobility), AMS AG (sensors). More than half of the employment (50.5%) is generated by large companies exceeding the Austrian average by 10.3 percentage

³⁷ <https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/styria>

points (Joanneum Research 2016). Nevertheless, the economy in Graz is changing and so are future visions for the region. There is still great interest in retaining industrial manufacturing as an economic carrier within the region, but knowledge-driven enterprises stimulate a diversification of economic activities and increase the share of complementary services provided.

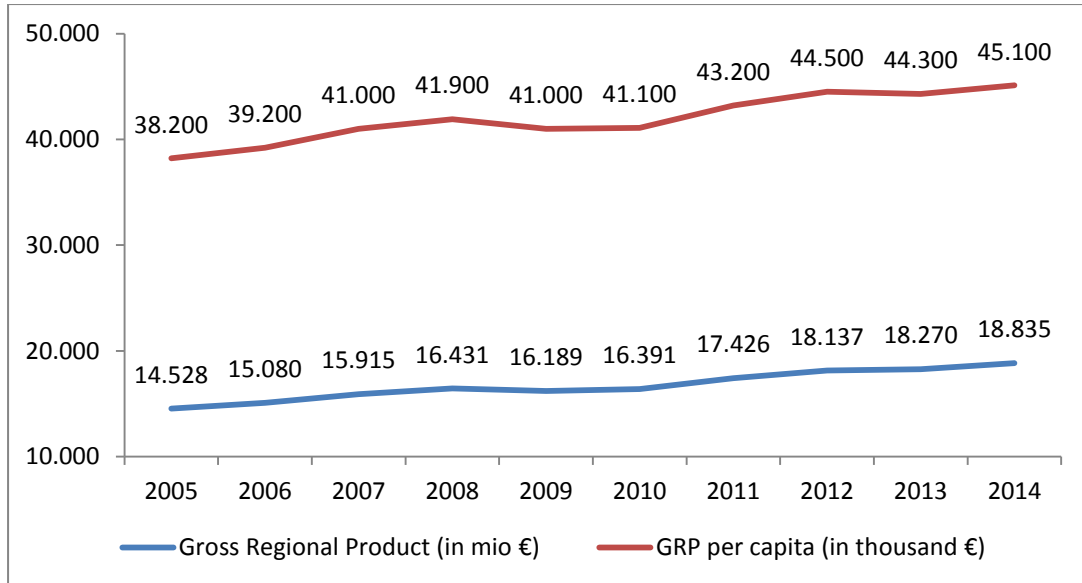
In general the region shows a favourable development of SME within the last years. Particularly service-oriented industries were mainly responsible for the positive trends and did benefit from a fruitful and dynamic industrial environment. While the global economy was struck by the economic crises after 2008, Austria was largely spared by an instant downturn. Hence the impacts of the financial crises in Graz have been quite modest as well, being mainly perceivable within the manufacturing industries (predominantly automotive manufacturing).

The figure below illustrates the development of the gross regional product (GRP) within the last decade. The overall positive development of the region was interrupted only in 2009 though pre-crisis level was roughly achieved in the following year followed by a leap in growth (6.3% in 2011 and 4.1% in 2012). Within the last 4-5 years Austria and its regions have been confronted with rather poor economic development and modest growth rates (Amt der Steiermärkischen Landesregierung 2017), visible also in the figure beneath. Overall the region's GRP expanded between 2005 and 2014 by approx. 29.6%. Equivalent the GRP per capita is characterised by an overall increase though even more stagnant since 2012, resulting in an overall growth rate of 18.1%. The letter displays varying speeds of economic and population growth within this period.

Being the economic centre of Styria, Graz is responsible for about 44% of the Styrian economic output. Furthermore the region is ranked 3rd in comparison with all Austrian regions (GRP 2014) and 5th when it comes to GRP per capita.

Of course the region's gross value added displays this development as well. Figure 1.2 outlines the performance over the last years and specifically with regard to the economic sectors. One can see that the capacity and importance of the secondary sector declined or stagnated over the past years. While in 2005 the manufacturing industries have been accountable for about one third (32.2%) of the value added, their share reduced over the years reaching 27.4% in 2014. As already mentioned the economic crises hit the secondary sector and globally active large enterprises (car manufacturing, machine engineering) more intensively than the tertiary sector, accelerating the diversification and concentration of the region towards service oriented industries.

Figure 1.2: Gross regional product Graz, absolute and per capita



Source: Statistics Austria

Within the tertiary sector the value added did not decline at all, though a delay of growth in 2009 is evident. The service industries developed virtually unperturbed from general stagnation tendencies of the Austrian economy after the crisis, thus exceeding the average growth of the Austrian tertiary sector in 2011, 2012 and 2013. Between 2005 and 2014 the tertiary sector increased by 39.6% and was accountable for about 72.2% of the value added in 2014.

The primary sector is of minor relevance, since only about 0.4% of the gross value added is generated within the specific industries.

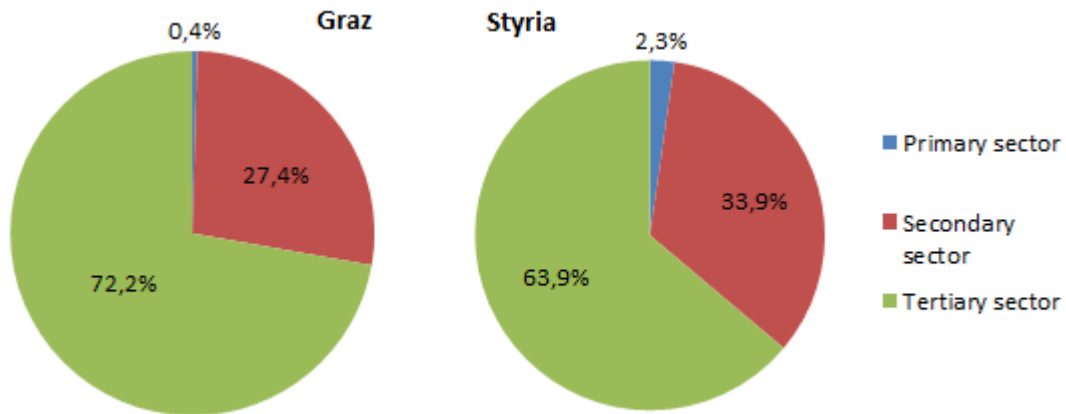
Table 1.1: Gross value added at basic prices (in Mio. €)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Graz	12.906	13.450	14.200	14.664	14.412	14.593	15.519	16.126	16.268	16.785
Primary sector	69	74	82	80	70	70	82	81	76	75
Secondary sector	4.156	4.287	4.517	4.627	4.329	4.098	4.492	4.670	4.326	4.591
Tertiary sector	8.682	9.089	9.601	9.956	10.012	10.424	10.945	11.375	11.866	12.119

Source: Statistics Austria

Taking a closer look at the economic structure of Graz and Styria one can see the relevance of the region as scientific, service-related and administrative centre. The gross value generated by the tertiary sector in Graz exceeds the share of the Styrian service industries by more than eight percentage points. Furthermore the shift from secondary towards the tertiary industries did not proceed in the same extent. The share of the Styrian tertiary sector in 2005 was 60.5% and increased to 63.9% in 2014, mainly driven by the Graz region. On the other hand, the relevance of the secondary sector in Styria is of course of greater extent.

Figure 1.3: Ratio of gross value added, Graz region and Styria 2014

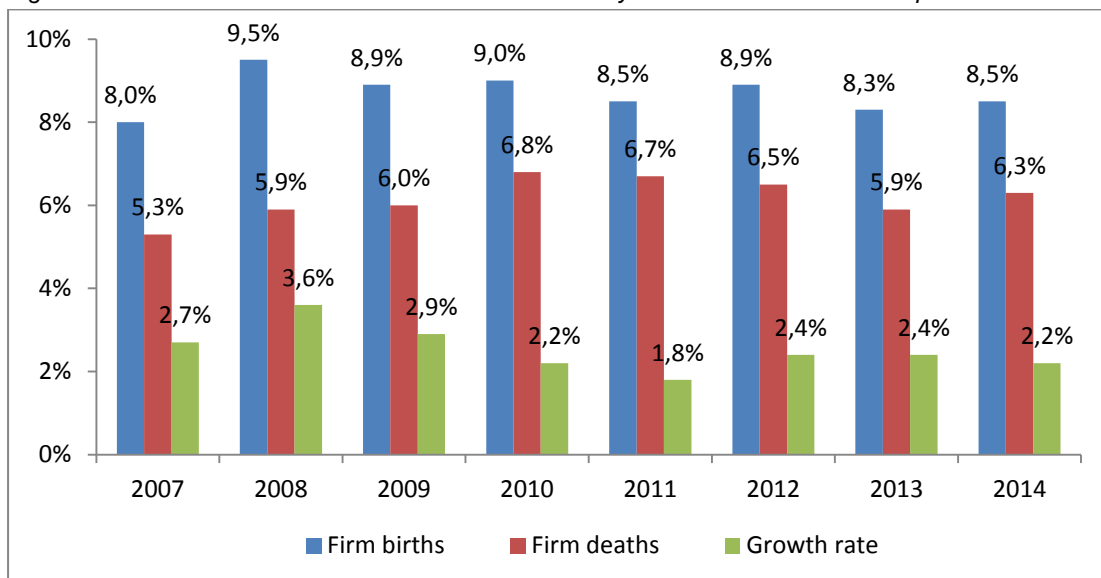


Source: Statistics Austria

Overall, 44.4% of the gross value added has been generated in Graz, thereof 8.8% of the primary sector, 35.9% of the secondary sector and 50.2% of the tertiary sector.

As Figure 1.4 illustrates the birth rate exceeded the failure rate in all of the years displayed. In 2015 the number of firms increased by 2.2% compared to 2014. While the growth rate has been rather constant for the last four years, the dynamics of the pre-crisis years has not been achieved anymore. The number of firm births rather declined over the years, while the failures increased overall. In 2008, firm births reached 9.5% and the closure rate 5.9% resulting in the highest growth over the past 9 years.

Figure 1.4: Firm birth/closure rate 2007-2014 measured by the number of active enterprises



Source: Statistics Austria

According to Statistics Austria, the most dynamic industries in 2015 have been information and communication (NACE section J) with a growth rate of 3.4%, followed by financial and insurance services (3.2%) and professional, scientific and technical activities (1.5%). The latter caused the highest growth in employment with 174 additional jobs. The three years

survival rate of businesses declined in the past three years but is still clearly positive. The survival rate for enterprises founded in 2010 was 65.3%, 62.9% for business founded in 2011 and finally dropped to 60.7% for firms founded in 2012.

To a large extent, SME in scientific and knowledge intensive services (NACE Division 69-75) have been responsible for the dynamic development of enterprises over the last years. According to the statistical data of the Styrian reporting and information system (WIBIS³⁸) the number of employees in scientific services (as an indicator for the industries growth) within the service industries grew by 31% between 2007 and 2015 exceeding analogous growth at the provincial level as well as nationwide. Also the creative industries performed well over the last years. Between 2010 and 2014, the number of creative enterprises in the city of Graz grew by 9% and the number of employees by 16%. Furthermore, the value added increased by 30.7% and sales by 17.8%. These numbers display a currently ongoing transformation within the creative industries from one-person enterprises to businesses that employ. In 2014 the creative industries have been accountable for about 2.150 enterprises and nearly half of all creative enterprises in Styria (49%) (Dörfliner, Gavac 2014).³⁹ Also the ratio of employees in technological branches within the traditional manufacturing sector in the region (NACE Division 20, 21, 26-30) increased (by 6.6%).

Table 1.2: Ratio of employees in different industries

	2007	2008	2009	2010	2011	2012	2013	2014	2015
Knowledge intensive business services	7,0	7,3	7,3	7,3	7,5	8,0	8,3	8,3	9,2
Technology sectors	59,0	57,5	57,0	57,6	59,4	60,4	61,5	63,4	62,9

Source: WIBIS (Wirtschaftspolitisches Berichts- und Informationssystem), 2017

In the period from 2000 to 2012, the number of people employed in the Graz region increased by 16.4% surpassing the Styrian growth rate by 4.6 percentage points (Firgo et al. 2015). Today Graz is accountable for about 47% of the Styrian employment (Gstinig, K. et al. 2017). The table below shows that the number of employees did not drop in the years of the economic crisis. Indeed, declines primarily affected the manufacturing sector (especially large enterprises) while the service sector was spared (see gross value added), but the overall development was still positive.

Table 1.3: Number of persons employed, 2008-2012

	One-person-enterprises	1-9 (micro)	10+	Total			
2008	13,097	7%	35,903	20%	134,857	73%	183,857
2009	13,623	7%	36,653	20%	136,813	73%	187,089
2010	14,037	7%	37,331	20%	140,024	73%	191,392

³⁸ <https://wibis-steiermark.at/>

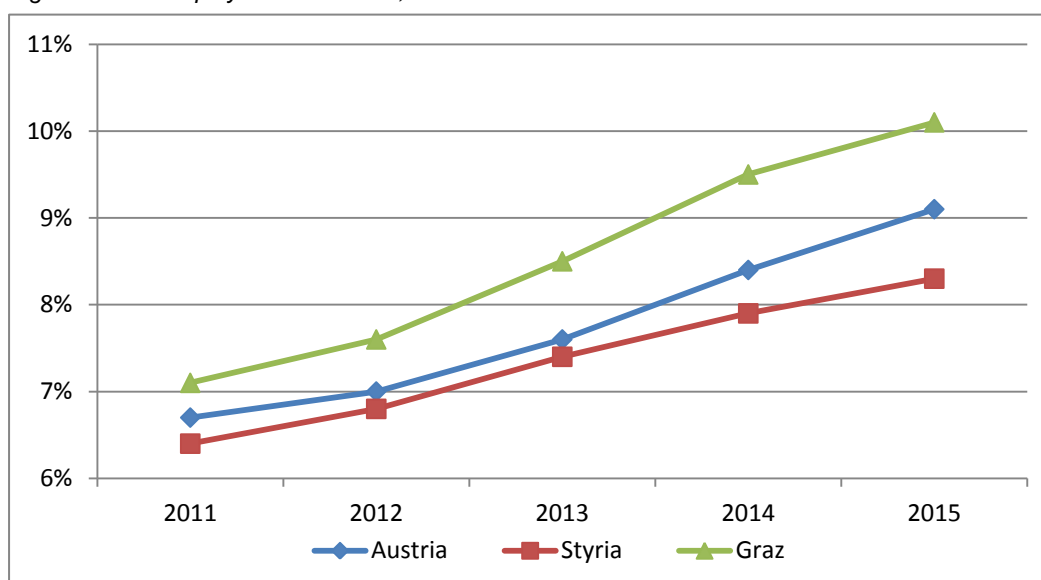
³⁹ There is a somewhat different sector definition applied in this study in comparison to the creative industry report.

	One-person-enterprises		1-9 (micro)		10+		Total
2011	14,422	7%	37,859	19%	145,453	74%	197,734
2012	14,861	7%	38,723	19%	148,451	73%	202,035

Source: Statistics Austria

Although the number of persons in employment grew, the unemployment rate increased as well and especially after 2011. Between 2000 and 2011, Graz' population grew at average by 1.1% and faster than Vienna (0.9%) and all other European metropolitan regions. In the same period, employment grew by 1.3% on average and fell beneath the dynamic development of the late 1990s (Firgo et al. 2015, p. 163). Due to the region's attractiveness, general tendencies of agglomerations to grow (urbanisation) and crisis-induced migration, Graz faced notable demographic growth within the last years. Since job creation and economic growth in the region did not cope with the pace of population growth, unemployment had to grow. Especially the City of Graz faces the challenging need of integrating an exceeding work force into the local job market (Gstinig et al. 2014).

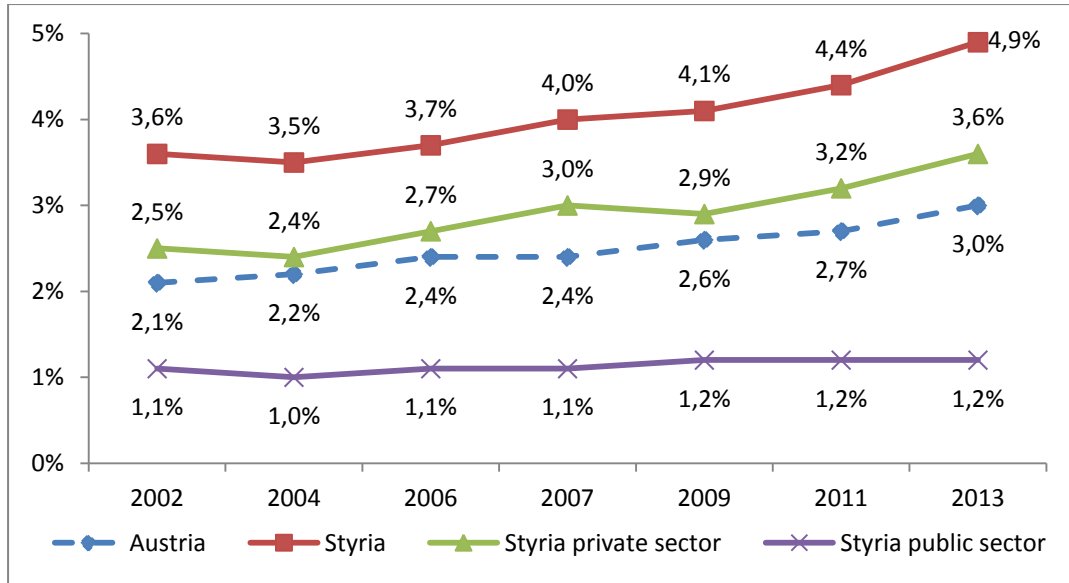
Figure 1.5: Unemployment rate Graz, 2011-2015



Source: Joanneum Research 2016

A special attribute of the region is its orientation towards research and development. Induced by export-oriented large and leading enterprises, the share of R&D-expenditure grew steadily and spread towards a range of industries and different enterprise sizes. Nowadays, Styria displays the highest R&D-quota of all Austrian provinces (there are nine provinces at NUTS2 level) and is one of the most innovative areas in the European Union. In 2013, the overall R&D-expenditures added up to an amount of approx. two billion Euros, corresponding to nearly 13.000 researchers (full-time equivalents). The greater part of research activities thereby takes place in the Graz region.

Figure 1.6: R&D-intensity in Austria and Styria



Source: Statistics Austria

2 Factors influencing the dynamics of the region (strengths, weaknesses, opportunities and threats)

The following section of the case study describes factors influencing the dynamics of the region based on descriptive research activities, interviews and the focus group held.

Strengths influencing the region

- Styria and Graz have evolved into a highly innovative region. The Styrian gross domestic expenditure on R&D adds up to 4.87%⁴⁰. This share of R&D spending does not only exceed the targets of Europe 2020 by far, but also results in the top position of all Austrian provinces. R&D-activities are thereby largely concentrated in Graz, one of the most innovative regions in Europe. The high intensity of research activities can thereby be attributed to both, the private and the public sector. Furthermore, excellent cooperation between industry and (academic) research institutions foster knowledge creation in the region. The importance of innovation resp. R&D activities is furthermore promoted via the alignment of the Styrian economic strategy towards growth through innovation.
- Styria is a pioneer in the establishment of networks and clusters. Over the last two decades several regional clusters have been incorporated (e.g. AutoCluster Styria, Green Tech Cluster, Human Technology Styria, Creative Industries Styria) alongside technological strengths and synergies.⁴¹ These clusters and networks are steered by the Styrian business promotion agency (as the operational branch of Styria's Department of economics) and are mainly located in the Graz area. In addition various interdisciplinary networks, incubators, accelerators and platforms provide support and interlink enterprises along the supply chain, with research facilities and political communities. More flexible cooperation forms (e.g. hotspots, events) are used if themes require less formal structures (e.g. IoT Graz, Fifteen Seconds Festival, Social business Club Styria). Particularly SME in technology-intensive industries, the creative industries and along the Styrian strengths benefit from a comprehensive supply of contact points, facilitating business growth, collaborations and internationalisation.
- Enterprises in the region are characterised by a high intensity of cross linkages and cooperation apart from institutionalized organisations (e.g. exchanges and collaborations with research facilities, enterprises) on national and international level.
- Apart from Vienna, Graz is the only region in Austria with a full scale university resulting in a broad range of academic disciplines. In total, the four local universities and four colleges are Alma Mater to 60,000 students and 10,000 graduates annually. Furthermore, a number of non-university research institutes and RTOs (e.g. Joanneum Research), Competence-Centres for Excellent Technologies ("COMET") as well as research-active enterprises provide the basis for the region's competitiveness and export orientation. These (academic) research facilities maintain well established international networks with further research institutions and have an excellent reputation in various thematic areas (e.g. ICT – Cyber-Security). The high number of academic facilities and research institutions allows for SME to cooperate with the most suitable partners, selected from a variety of local knowledge institutions. Therefore the region has the convenience of having both, a well-developed knowledge-generation and diffusion system on the one hand and a well-developed knowledge application system on the other hand (Kah 2016).

⁴⁰ Eurostat regional yearbook 2016, Statistical Atlas <http://ec.europa.eu/eurostat/statistical-atlas/gis/viewer/>

⁴¹ <http://cor.europa.eu/rie/Pages/story-23.aspx>

- Furthermore, due to the historic significance of technical education, the region has outstanding educational and training facilities in the fields of engineering and technical sciences (in particular the TU Graz). More than half of technical university researchers in Austria work and teach in Styria (Graz and Leoben) and up to 75% in core competences like mechanical engineering, metallurgy and material sciences. The large number of technical research and training facilities and the diversity of scientific disciplines are a local advantage with “*scarcity value within Europe*” (Amt der Steiermärkischen Landesregierung 2016). Many of the local enterprises (large enterprises and SME) were spun-off from the TU Graz or founded by graduates, resulting in persistent ties between university and industry. Thematic research and educational priorities at the universities are beside technological trends also adapted along necessities of the Styrian smart specialisation strategy (taking up technological trends), in order to enable synergies for the region as a whole.
- The national programme Competence Centers for Excellent Technologies (COMET) facilitates research competences through cooperation between science (universities, FHs, research facilities) and industry (SME, large enterprises), meaning that these facilitate innovative capacities of companies, stimulate new ideas and encourage technology transfers between science and industry. Styria represents Austria’s region with the highest share of COMET participation. Currently, 25 of 44 Competence Centres are conducted with Styrian participation⁴² whereof 14 headquarters are located in Graz pursuing established leading themes and core competences. Funding of the competences centres is shared on federal and provincial level (via the Styrian business promotion agency).
- The expanding variety of industries, products and services facilitate the region’s ability to adapt alongside developments and trends. Within the last decade, a reduction of unilateral specialisation in traditional manufacturing sectors (e.g. automotive, machine engineering, metal production) due to the dynamic developments of knowledge intensive business services (e.g. Human-technologies, digitalisation and smart production), creative industries, automatization, mobility, and tourism took place. As shown, the service-related industries grew in importance while the manufacturing industry was confronted with unstable demand and stagnation.
- Nevertheless long-established and internationally active large companies still shape the economic and technological environment of the region. Some of these leading enterprises are innovative top performers in Austria and provide impulses, networks and role model functions for SME through cooperation and collaboration activities (e.g. as supplier or via export networks). Furthermore international enterprises are challenged in internal, corporate location competition or act as niche players in the global competition thereby facilitating the access to international markets for SME. Thus, capabilities for start-ups and SME to emerge and expand in the sphere of these leading enterprises open up.
- A European comparison of 83 cities and agglomerations suggests a high level of satisfaction alongside various liveability indicators (European Commission 2016). Location factors in favour of the region are among others the region’s natural landscape and local recreation areas, the cultural heritage and cultural institutions, the comprehensive availability of public amenities (schools and educational facilities, health care services), short distances (between living areas, workplaces, leisure activities, etc.) as well as a distinct sense of security (Tischler et al. 2014).

⁴²<https://www.sfg.at/cms/2589/Steirische-Kompetenzzentren/>

Weaknesses influencing the region

- Like many regions in Europe, Graz is confronted with an insufficient supply of skilled workers (e.g. welder, metal worker, mechatronic technicians) as well as highly qualified personnel (especially engineering staff). Due to the competitive setting, especially SME are facing adverse effects since they cannot compete financially with large enterprises. The insufficient access to human capital particularly hampers the growth of technology-based SME. Beyond that, the region is confronted with significant brain drain towards Vienna or abroad (e.g. Southern Germany). Also traditional gender-specific professional tendencies still persist and result in minor proportions of women engaging in engineering and technical sciences. Currently, the human potential of the region is not exploited sufficiently.
- The unfavourable geographic/topographic location of the region results in reduced accessibility. Furthermore inner-regional traffic connections and public transport are partially insufficient, also due to the lack of a uniform transport concept. Effective infrastructure along the main traffic axes are getting improved (e.g. Semmering-Tunnel, Koralm-Tunnel), but will be available only in the mid-term. Joint efforts in the planning and development of transport infrastructures and mobility on municipality level are mandatory, since Graz and the surrounding area are supposed to grow in population within the next years.
- The administrative processes (e.g. grant applications and processing), duration of proceedings and the abundance of legal regulations, companies in the region are confronted with, have to be critically reflected. The sum and complexity of these regulations can impede investments (e.g. plant permit proceedings) and hamper economic growth. A clear simplification of legal and administrative frameworks nationwide is urgently required, which should also result in lower associated administrative burdens for companies. Beyond that, the region (Austria) is confronted with high labour costs in comparison to other European and international regions.
- The administrative structures of the region aggravate inner-regional governance. While the city of Graz is a single entity, the surrounding area is fragmented into 36 municipalities with local competences and authorities. Therefore, the region suffers from insufficient harmonisation and a lack of joint development concepts (e.g. spatial planning, mobility). The advancement of governance requires principal structural reforms since districts and municipalities in Styria and the region are compartmentalized and partly undersized (e.g. mergers of communities).
- A rather small home market and insufficient sales potential in the domestic market induce orientation of SME towards international markets. Especially technology driven SME are forced to outgrow regional or national frontiers.
- Utilisation and exploitation of regional research results and know-how (R&D services) are occurring frequently outside of the region. Innovations and R&D-activities in international enterprises are transferred and implemented to production facilities abroad, reducing the value added in the region.
- Insufficient availability of funding and financing for enterprises along the various stages of business development. For example, the deficient availability of venture capital threatens the development of technology-intensive start-ups/enterprises in the region. Enterprises with unsatisfied capital needs migrate to Vienna or abroad (although government representatives stated small demand for public venture capital programmes as long as non-refundable grants are available to enterprises).

Opportunities

- Technologically, highly advanced enterprises with state-of-the-art structures located in the area do not only adapt to global trends (e.g. Smart Production, autonomous vehicles, individualized production, NFC technologies), but are actively involved in their development. Opportunities for the region are thereby not limited to few industries but enable wide and interdisciplinary integration of economic branches. The creation of a dynamic environment allows for technology intensive SME to jump on the bandwagon and serve for instance as a supplier or R&D-provider. Digitisation provides furthermore an opportunity to secure and further increase the future viability of the economic location, because of its first mover and innovation leader function in certain technological fields.
- Qualified manufacturer and industry-related service providers serve as suppliers for local and international large enterprises with crossover technologies and enabling technologies (e.g. microelectronics). Therefore, the region can be positioned as an innovation-based system supplier for complex components in transnational manufacturing networks. The dynamic development of knowledge-intensive enterprises further facilitates the region's potential to establish hybrid production structures (production and complementary service solutions).
- The broadband-infrastructures within the City of Graz are well-elaborated and comprehensive access in the hinterlands is at realisation. The Styrian broad-band strategy "Highway 2020" facilitates a near-term implementation of broadband connections in every single municipality in the region.
- Graz is not a traditional tourism region of Styria, but did benefit from the latest boom in urban tourism and increasing business tourism. According to the WIBIS database, overnight stays increased by approx. 72% between 2000 and 2016 (average growth rate of 3.4%), resulting in 1.67 million overnight stays in the region. Attributes in favour of the region are its spatial proximity to the metropolitan area of Vienna and source markets in Middle and East Europe. Nevertheless, further strategic developments and marketing investments are necessary to sustainably promote tourism in the region.
- The creative milieu and industry has developed dynamically over the past years, accelerated by a strong political commitment towards the development of the sector after 2003 (Graz was European Capital of Culture in 2003). Since 2011, Graz is a member of the UNESCO Cities of Design Network and has granted creative business access to 22 partner cities and markets with more than 100 million inhabitants. Hence, the Cities of Design network can function as a starting point for the internationalisation of creative enterprises since two thirds are only conducting business within their local or regional environment.
- The appreciation of, and the consumers' rising awareness for regional/local products and services can be beneficial for producers and other enterprises in the region. Development of a (Styrian) brand and product image can be further beneficial.

Threats

- The region faces the highest unemployment rate (2016: 10.1%) of all NUTS3 regions in Styria (average 2016: 8.2%) and exceeds the national average (9.1%) as well. Differences between the urban and rural areas (13.2% vs. 5.7%) display divergent burdens, especially affecting the urban area.⁴³ While demand for highly qualified employees is on the rise, labour-market opportunities for unskilled labour are drying up (Tischler et al. 2014). Hence, unemployment is primarily concentrated within the group of low-qualified

⁴³ WIBIS – <https://wibis-steiermark.at/>

(48% of unemployed completed compulsory school only). In addition, migration further increases calls for proactive and counteractive measures (e.g. training and qualification, recognition of professional qualifications).

- The importance of securing young talent (especially girls and young women) for technical/scientific professions must be communicated more clearly to create appropriate awareness. Availability of specialists in technical fields will further decline due to demographic processes if countermeasures are not implemented. Also the massive migration of academic graduates and well-trained people towards neighbouring metropolitan areas (Brain Drain) must be lessened (Vienna, Germany).
- The entrepreneurial mindset has not yet sufficiently established itself in Graz, Styria and Austria as well. This is equally due to a lack of conveyance of entrepreneurial competences and the widespread fear of failure. Good ideas and innovative research results are often not utilised and result in unexploited potential.
- Traditionally, Germany has been a starting point for international activities (exports) for most enterprises in the region, but over the last years, more heterogeneous export markets have evolved. When going international, growth markets aside from Europe located in SE-Asia and N-Amerika become more important and challenge internationalization activities of SME.
- Because of the topographic profile of the region (Grazer basin), high concentrations of fine dust reduce the air quality and affect the quality of living. Attempting to reduce the fine dust exposure, protected areas can and have been defined (fine dust remediation areas; "Feinstaubsanierungsgebiete"), resulting in restrictions concerning transport and spatial planning and development.
- The region is confronted with the need for more effective know-how marketing. Compared to competing areas, the visibility of the region and its technological abilities are less pronounced. Hence, technological developments achieved are often not linked to the region. Consistent internationalisation also requires stringent communication of the "Styrian brand" with its central messages and important location qualities such as innovation strength, R&D and technological competences as well as advanced educational institutions.

Ambiguous factors

- Population growth (surrounding regions, students) and migration recently have increased and are an opportunity and threat likewise. While Graz is growing, peripheral areas face declining and ageing populations. These developments are especially challenging for labour market policy, but also regarding mobility and housing. High migration and large-scale refugee movements also pose new challenges for Graz.

3 Governance issues

3.1 Institutions and governance levels

Which institutions and governance levels are shaping the framework conditions in the region?
(SME policy, regional policy, economic policy)

Governance levels

Austria's political system is organised at three levels: the federal level (NUTS 0), federal provinces (NUTS 2), and municipality level (LAU 2).⁴⁴ Furthermore there is an administrative level in between the provinces and the municipalities, the so called districts (which mostly do not match NUTS3 levels).

Municipalities

Within the state's organisation municipalities are the smallest entities. They do not have legislative powers, however they are entitled to administer general regulations and perform federal province's administrative tasks (e.g. business registration, application for business premises permits, collecting municipal taxes).⁴⁵ While the city of Graz is a political district comprising of one single municipality, Graz Hinterland consist of 36 municipalities.

Hence, the city of Graz is the largest and most substantial municipality with regard to economic, educational and administrative importance in the region. Because of its comparatively large scale, the city has more or less formulated plans and sophisticated initiatives at its disposal to shape the framework conditions for SME. Within the City of Graz' administrative structures, the Department for Economic and Tourism Development is the main actor provided with regional SME policy competences. The department is a focal point for existing and planned companies and furthermore functions as an interface between the business-sector and public authorities with the target of positioning Graz as a supportive and business-friendly location. Therefore, the city of Graz focuses on a number of measures, personal services and information to facilitate commercial development (e.g. regarding company foundation, business information, networking, and knowledge transfer).⁴⁶ Other relevant departments, in certain areas, are for example the Executive Board for Urban Planning, Development and Construction and the Department for Cultural Services (promotion and funding of research and science).⁴⁷

Surrounding the City of Graz, the administrative district Graz Hinterland consists of 36 municipalities with different sizes and local competences. The communities are mainly address-

⁴⁴ <https://www.parlament.gv.at/ENGL/PERK/BOE/PR/index.shtml>

⁴⁵ <https://www.wien.gv.at/english/administration/organisation/austria/structure/>

⁴⁶ Department for Economic and Tourism Development – <http://www.wirtschaft.graz.at/cms/ziel/5084389/EN/>

⁴⁷ Departments Graz – <http://www.graz.at/cms/beitrag/10207107/232752/>

ing the framework conditions for SME via spatial planning competences (local spatial planning), the provision of municipal infrastructures⁴⁸ and business premises permits. Beyond these activities, individually formulated initiatives or policies shaping the framework conditions for SME have not come to attention.

Determined by the Styrian Regional Development Program (Amt der Steiermärkischen Landesregierung 2011b) the “Regional Management for the Styrian Central Area”⁴⁹ is one of seven provincial entities, supporting the coordination of spatially relevant basic functions of existence (e.g. working, living, leisure, education, transport). The Styrian Central Area comprised of the NUTS 3 region Graz and the political district of Voitsberg bordering the region in the west. These spatial-functional regions are not additional administrative levels, but structures that support coordination, communication and cooperation between the communities within the defined areas. Therefore, they enable communities/districts to actively engage in regional development issues and strengthen the basis for economic competitiveness and liveability of regions along determined strategic targets.

Styria (federal province)

Since the nine Austrian provinces have extensive authority in legislative and administrative matters, the regional governments are the most important players adapting the region’s framework according to their specific needs. Hence the regional government of Styria is able to set priorities addressing SME policy, regional development and economic policy and implement measures accordingly. The main body within the province’s administration shaping the economic framework is the Department for Economy, Tourism and Sports, which is mainly involved in developing the economic strategy of the Styrian province (e.g. Economic Strategy for Styria 2025). Other relevant departments, in certain areas, are for example the Department for Science and Health (central unit responsible of RTDI policy), the Department for Culture, Europe, External Relations, and the Department for Regional and Local Development.⁵⁰ The departments are provided with major competences in terms of economic development, regional planning and transport, research and education, and vocational training.

Another major protagonist is the Styrian Business Promotion Agency (SFG). The SFG is 100% owned by the Styrian Government and is responsible for the realisation of its business support tasks, including “*the provision of monetary support with grants and financing programmes, various consultation activities for businesses and investors, raising and steering clusters and networks, technology parks and technology transfers*”.⁵¹ Since the SFG is owned by the Styrian government, policy makers can provide strong impetus to the economic system

⁴⁸ <http://www.raumplanung.steiermark.at/cms/ziel/61637529/DE/>

⁴⁹ Regionalmanagement Steirischer Zentralraum – <http://www.zentralraum-stmk.at/>

⁵⁰ Verwaltung State of Styria – <http://www.verwaltung.steiermark.at/cms/ziel/74837418/DE/>

⁵¹ <https://www.sfg.at/cms/3723/Agency/>

and innovation, hence the agency's activities are focused towards the key strategies of the economic strategy for Styria. Also with regard to cohesion policy the SFG is the most significant intermediate in the administration of funding.

Federal level

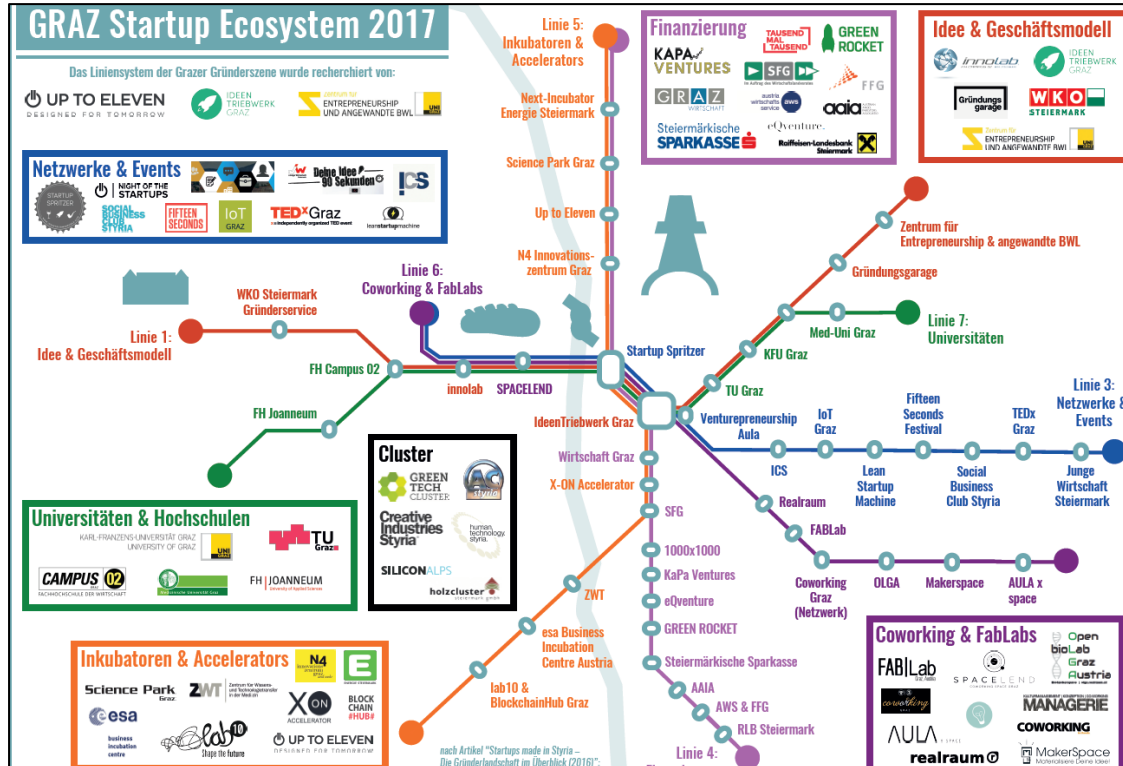
The federal level influences regional framework conditions via general strategic governance issues for example the legislative framework, taxation or funding. In the first instance, the targets of economic policies are defined by ministries (predominantly the Ministry of Science, Research and Economy and to a lesser extent the Ministry of Transport, Innovation and Technology) aiming at the provision of the *“best possible framework for enterprises of all sizes and sectors and fostering the potential capacity of business activities, which further improve Austria's competitiveness and economic growth”*.⁵² The implementation is mainly executed via dedicated public agencies, resulting in a number of institutions affecting the regional framework on the federal level. Relevant bodies are for example the Austrian Wirtschaftsservice GmbH (national funding institution for business investments and innovation), the Austrian Research Promotion Agency (national funding institution for applied industrial research and national equivalent to the SFG) or the Public Employment Service (leading provider of labour-market services) (Fink et al. 2012).

Institutions

Complementary to the governance levels mentioned, further non-government institutions are involved in shaping the framework conditions for SME in the region as well. Figure 3.1 illustrates relevant institutions (and public authorities as well) directly involved in supporting start-ups and SME in Graz. Moreover, some of these stakeholders are actively involved in processes of location development and the creation and enhancement of beneficial framework conditions for enterprises or act as special interest group for particular business sectors. Among others, the Styrian Chamber of Commerce, the Chamber of Industries, local clusters, local universities, colleges and the research community, incubators, accelerators and networks participate in the composition of the framework. Also the social partners are of substantial relevance in the region. The Social Partnership consists of organisations representing the trade unions and the employers and is involved in policy-making processes, *“although the degree of involvement depends on the particular issue”* (Kah 2016). To give an example, the social partnership has been deeply involved in the development of the Styrian economic strategy (Amt der Steiermärkischen Landesregierung 2016).

⁵² <https://www.en.bmwfw.gv.at/Enterprise/SME%20Policy/Seiten/default.aspx>

Figure 3.1: Graz Start-up Ecosystem



Source: Ideen Triebwerk Graz

How do different governance levels interact?

Interaction between different governance-levels and/or institutions in the region predominantly takes place in an institutionalized manner. Since the city of Graz, the SFG, the province of Styria, research facilities and the Chamber of Commerce are shareholders and/or stakeholders of several institutions and organisations forging the regional SME system (cluster, networks, incubators), continuous communication and interaction is ensured. Interaction between the municipalities can be assured via the regional management structures although the instrument is not used sufficiently right now (the large number of municipalities with different needs and challenges hamper interaction and collaborative developments).

Another key element of interaction is the so called “location dialogue” taking place twice a year. The location dialogue aims on “an exchange with economic and social partners with regard to the implementation of the economic strategy, economic developments and current strategic themes that are relevant for the location.” (Amt der Steiermärkischen Landesregierung 2016).

3.2 Policy strategies in place

What are the main regional policy strategies relevant for SME? Assessment of these strategies

Local strategies

No elaborated strategies or documents describing an overall strategy have come to attention at NUTS3 level for the Graz region. Policy responses and approaches in recent years have followed the main guidelines designed at Styrian level (NUTS2), for example via the Styrian economic strategy or in the context of regional development policies (“Landesentwicklungslleitbild”). Furthermore, initiatives for the development at the local level have been found for the City of Graz.

The **Economic Strategy Graz 2015** (Stadt Graz 2011) was developed in close coordination with the Styrian economic strategy, because aspired advancement is supposed to take place interdependently. Consensus strategy planning is expressed, for example, in the reinforcement of the regional strengths addressed (mobility, green tech and health tech as well as creative industries). Furthermore, synergetic effects ought to be internalised by involving relevant stakeholders like the SFG, special interest groups, enterprises or research facilities. Five thematic areas (so called “Cities within the City) are to be enhanced via three strategic approaches (basic services, location development, positioning of the city). The strategies’ thematic areas comprise:

- “City of knowledge”⁵³ – Graz’ favourable position regarding the local knowledge system (universities, colleges, non-university research, enterprises, COMET-centres, etc.) ought to be further strengthened. Defined objectives are awareness-raising towards R&D&I, development and support of knowledge transfer between science and economy, positioning as a congress location, adaption of educational needs to necessity of the location, development and support of interfaces between educational facilities and economy.
- “City of creativity” – Consideration and integration of the creative industry as a value-adding factor in the region. Defined objectives are awareness-raising and enhanced acceptance of creative industry in economy and the general public, establish creative processes in product and service innovation activities, development of an open climate for creative innovation. In order to serve the needs of the creative industries and facilitate the interaction with further industries, the so called “Creative City Management” has been implemented.⁵⁴
- “City of Entrepreneurship” – Shaping framework condition for the good of enterprises and a prosperous economy. Defined objectives are constant improvement of framework conditions for enterprises (infrastructures, administration, networks, and internationalisation), target-oriented portfolio servicing, supporting young innovative SME and start-ups (SME-package), CSR-Initiatives.

⁵³ City of Knowledge – <https://www.graztourismus.at/kongress/en/destination-graz/city-of-knowledge-graz>

⁵⁴ Creative City Management – <http://www.graz.at/cms/beitrag/10228876/367086/>

- “City of centres” – Focuses on the spatial development towards a valuable and international recognised hub for knowledge and development. Defined objectives are the implementation of needs-based strategic site development according to the goals and relevant target-groups, safeguarding of adequate infrastructures, development of Smart-City concepts, safeguarding the industry’s development potential in the region and promotion campus areas at research facilities.
- “City of life quality” – Focuses on the conservation and improvement of quality of life in the region, for example regarding cultural heritage, leisure and recreation areas, intelligent and sustainable spatial planning, economic development, accessibility, etc.

The intended vision of the strategy was to position Graz within the top 10 European, medium-sized cities with regard to economic, sustainability and ecologic indicators and has been adapted and amplified over the years.

The most important strategic paper is the “Economic Strategy for Styria 2025” determined by the regional Government of Styria (Amt der Steiermärkischen Landesregierung 2016). The strategy is a comprehensive approach targeting the economic future of Styria and seeks to induce economic growth through innovation. Regional needs, international developments and global trends (e.g. globalisation, digitalisation, demographic shifts, and urbanisation) are taken up by the strategy and aspired targets derived according to the region’s strengths. Linked to the strengths of the region, smart regional specialisation is at the core of the concept and takes up three leading themes:

- **Mobility** – concludes traditional strengths in the automotive sector and aims to further develop the area of clean mobility, high-value niche products and aviation/rail.
- **Health Tech** – focus on innovations related to health and food technologies.
- **Eco Tech** – efficient and sustainable usage of natural resources.

The strategic objectives are bundled into five core strategies and implemented along three performance functions (creating awareness, development, promotion and financing). Hence the objectives stated below form the fundamental structure for short and medium-term planning and the implementation of operative programmes. Also the core strategies function as guidance for external key performers and players involved in economic and location development. The five core strategies are (Amt der Steiermärkischen Landesregierung 2016):

- Business location development and management – Utilisation of comparative advantages and intelligent specialisation, development of a unique location-system.
- Supporting innovation and R&D – Further integration of enterprises in innovation processes, expanding the spectrum of services, and utilisation of know-how within Styria.
- Entrepreneurship & growth of young companies – Generation of favouring framework conditions and growth capabilities as well as increasing the number of start-ups.
- Qualification & human potential – Safeguarding the availability of a qualified workforce, strengthen human potential and counteract demographic change.
- Internationalisation of companies and business locations – Styria is already an export-oriented region. Nevertheless, further internationalisation of enterprises, products, goods and services is indispensable.

Because of the strategies’ comprehensive nature, enterprises in general are intended to be affected. Start-ups and SME are specifically targeted by the core strategy “Entrepreneurship

& growth of young companies” and thereby tend to especially addresses needs of young, innovative SME. The main objectives of the strategy is to strengthen innovation potentials, mobilise and develop young enterprises with an emphasis on knowledge driven SME, stimulate networking and cooperation, coordinate relevant stakeholder in the region, enhance the access to financing and equity capital and finally create promotional framework conditions. Success factors defined to achieve these objectives are:

- i) Strengthening young knowledge-intensive companies through growth potential – by focusing towards young and innovative companies with growth opportunities the internalisation of regional know-how and the creation of utmost value is aspired. Prior activities thereby are the expansion of incubators (within research facilities and via guiding companies) and accompaniment during the foundation phase, excellence of infrastructure (facilities, laboratories, technical equipment, broadband connection) plus need-based promotion and financing measure (improving access to capital, expanding province finance and investment instruments, mobilisation of private investment capital).
- ii) Holistic mind set for entrepreneurial promotion – Prior activities are encouraging the entrepreneurial mind set in Styria, foster networking activities primarily for young entrepreneurs and support for social businesses.
- iii) Business succession – accompanying business during transition phases.

The current economic strategy is the fourth edition and follows Styria’s previous strategic paper (Economic Strategy Styria 2020) towards recent developments and trends.

Furthermore, a separate research strategy has been developed comprising a holistic analysis of regional potentials and the development of joint fields of action between research and economy (interdisciplinary cooperation and networks). By “strengthening the strengths” the previous success of the Styrian research system is intended to be prolonged (Amt der Steiermärkischen Landesregierung (2013b).

With regard to spatial development and derived from the Styrian Landesentwicklungsprogramm (Amt der Steiermärkischen Landesregierung 2011b), a regional development guideline for the Styrian central area has been conceptualised tackling a spectrum of tasks regarding aspects of regional planning and development (Amt der Steiermärkischen Landesregierung 2013a). This guideline functions as the main strategy for sustainable spatial development along three pillars:

- Positioning of regional policy targets to the public (neighbouring regions, Austrian government and institutions, neighbouring countries and the EU).
- As an instrument for coordinated decision making with regard to spatial and regional policies, and especially with regard to funding measures.
- As a guideline for the Styrian regions conceptualising regional development guidelines.

The latter (conceptualisation of a regional development guideline) has been drawn for the Styrian central area in 2014 (Tischler et al. 2014), focusing on four strategic targets:

- collaboration on regional level (regional governance, inner-regional cooperation, transnational cooperation, spatial monitoring);

- strengthening of the economic and scientific location (location development research and innovation, transregional accessibility, sustainable urban development, regional education and employment policy);
- mobility and environment (regional mobility, management of natural environment, energy and climate);
- enhancement of the living quality (demographic change/diversity/migration, health and regional identity).

These targets are aligned towards the challenges and opportunities of the region connected with spatial aspects of planning and development. Therefore they provide the basis for the exploitation of future potentials from an economic, societal and ecological point of view.

Another regional strategy relevant for SME is the Styrian broadband initiative “Highway 2020”, facilitating the transformation and expansion of existing infrastructures towards high-performance broadband networks for enterprises and households (Amt der Steiermärkischen Landesregierung 2014).

National Strategies

The table below comprises national strategies and documents tending to target the development of the Austrian corporate sector directly or by creating correlating framework conditions.

Table 3.1: National policy strategies

Strategy/Plan	
Entrepreneurship Nation Strategy ⁵⁵ (2015)	Elaborated in a participatory stakeholder process the strategy defines five fields of action for national start-up policy (innovation, financing, awareness, networks, infrastructure and regulations) and 40 specific measures to increase Austria’s start-up attractiveness. Goal of the strategy is to make Austria the European top spot for business formation.
Creative Industries Strategy (2017) ⁵⁶	Objectives of the creative industries strategy are to strengthen the competitiveness of the creative industries and the Austrian innovation system, enhance the creative industries impact on other economic sectors and image development as a creative and innovative nation.
RTI Strategy of the Federal Government (2011) ⁵⁷	Strategic and operational objectives to build on strengths in research, technology and innovation, enter new fields of the future and niches, set up transparent funding and decision-making structures, and ensure efficient and sustainable use of public funds.
Digital Roadmap Austria (2016) ⁵⁸	The Roadmap provides an overview of the current challenges and of existing and planned measures and activities. These are based on twelve guiding principles for shaping the digitization process in Austria. SME ought to benefit via greater awareness of digital development opportunities, an optimal framework for innovation and funding as well as networking and collaboration.
Broadband Strategy 2020 (BMVIT 2012) ⁵⁹	National Broadband Strategy for Austria, stressing the main aims and methods of achieving a sustainable and suitable broadband infrastructure until 2020.

⁵⁵ <https://www.bmfwf.gv.at/Wirtschaftspolitik/Standortpolitik/Seiten/Oesterreich-soll-Gruenderland-Nr.-1-in-Europa-werden-.aspx>

⁵⁶ <https://www.en.bmfwf.gv.at/Innovation/Innovationandtechnologypolicies/Seiten/Creative-Industries-Strategy-for-Austria-.aspx>

⁵⁷ https://www.bmvit.gv.at/en/innovation/policy/rti_strategy.html

⁵⁸ <https://www.bmfwf.gv.at/Innovation/InnovationsUndTechnologiepolitik/Seiten/Digital-Roadmap.aspx>

⁵⁹ <https://www.bmvit.gv.at/telekommunikation/publikationen/bbs2020.html>

Strategy/Plan	
Open Innovation Strategy (2017) ⁶⁰	In order to increase Austria's innovative capabilities by means of open innovation, three areas are addressed: development of a culture of open innovation, formation of open innovation networks and partnerships and the creation of framework conditions for open innovation. SME are addressed via the provision of open innovation methods and open innovation instruments specifically for small and medium-sized enterprises (SME).
Austrian Strategy for Cyber Security (Bundeskanzleramt 2013) ⁶¹	Concept for the protection of cyber space and of people in virtual space. Among other fields of action, the cooperation between government, economy and society is aspired, i.e. strengthening support for SME.

Source: own elaboration

At **European level**, the Small Business Act and the strategy Europe 2020 are of substantial relevance for the region. The Styrian economic strategy supports central objectives of Europe 2020 and takes the principals of the Small Business Act into consideration.

The Europe 2020 strategy is mentioned as a "strategic context" for the Styrian economic strategy, being relevant in the following areas: implementation of guiding initiatives, implementation of the framework programme Horizon 2020, implementation of the important regional promotion for Styria, and the smart specialisation strategies. The Small Business Act for Europe (SBA) as the EU's flagship policy initiative to support SME was/is considered in Styria's economic alignment through the implementation of the SBA within the economic strategy. Different business-related areas, which pertain to the principles of the Small Business Act (SBA) are established at the federal level but also specifically find their implementation at the Styrian province level (e.g. promotion and development of a business-friendly environment, benefit from a European single market, transformation of environmental problems into business opportunities, development of the promotional and financing offers, promotion of human capital or the enlargement of the innovation base) (Amt der Steiermärkischen Landesregierung (2011a).

3.3 Support instruments for SME and the three focus sectors

Overview of support instruments, and their assessment

The local, regional and federal governments have implemented many different instruments and tools to support SME in the region (and of course in general), thereby addressing different business stages and entrepreneurial needs (start-up, growth, internationalisation, research and innovation activities, and qualification). Furthermore non-government institutions support SME as well, mainly by means of consultation activities.

Due to its limited budgetary possibilities, the city of Graz mainly focuses on business support for SME. The city acts as an initial point of contact for start-ups and SME, offering consulting and low-threshold funding (e.g. broadband or rent funding for enterprises), especially aiming

⁶⁰ <http://openinnovation.gv.at/>

⁶¹ <https://www.digital.austria.gv.at/austrian-strategy-for-cyber-security>

on businesses of the thematic core industries human-tech, bio-tech, low carbon industries, mobility and creative industries⁶². Furthermore, the City functions as an interface between industry and science, facilitating local knowledge transfer activities. The institutionalised “Innovation-Centre” provides co-working spaces, coaching and training, match-making with relevant stakeholders, information events as well as networking activities and knowledge transfer.⁶³ Special emphasis is directed towards the needs of the creative industry in Graz and the development of framework conditions to mutually interlink Styrian enterprises with the creative industries.

The SFG as the province’s business agency offers a broad portfolio of funding, financing, consulting and qualification measures for enterprises in the region. Thereby the SFG “acts as a service provider for business support on the basis of the Styrian economic strategy and provides a holistic support service that goes beyond financial contribution for example including awareness raising for innovative themes via events, awards and using different media” (Kah 2016). The SFG targets mainly firms, but also manages funding for network structures, impulse centres and the federally initiated centres of excellence (COMET) and AplusB centres (academic and business research). In 2016 700 projects in the Graz region with total costs of € 53.8 million have been supported by the SFG with € 16.1 million. More than 95% of the projects funded have been conducted by SME (about 52% of the money was allocated towards SME) (Amt der Steiermärkischen Landesregierung 2017). Among others, the table below holds a selection of relevant programmes for SME:

Table 3.2: Measures to support SME in the region

Support for the growth of SME ⁶⁴	The measure supports investments in premises (construction, business facilities) and equipment (machinery and plants) of SME.
Support for the growth of young and innovative SME ⁶⁵	The program offers grants for business equipment, digitalisation activities and advanced trainings in the early stage (within first five years) in order to facilitate corporate growth.
Support for the internationalisation of SME ⁶⁶	The measure supports exhibition appearances, international competitive processes, European technology transfer and market development activities.
Support for innovation in SME ⁶⁷	The initiative supports the development and implementation innovation projects in SME, particularly digital product, service or business model innovations.
Support for increasing knowledge in digitalisation and internationalisation ⁶⁸	The measure aims on the qualification of entrepreneurs and employees towards digitalized working environments, in order to introduce digital processes of change to the SME.

⁶² <http://www.graz.at/cms/beitrag/10024688/358477>

⁶³ Innovationszentrum Graz – <http://www.n-4.at/>

⁶⁴ <https://www.sfg.at/cms/4572/WachstumsSchritt/>

⁶⁵ <https://www.sfg.at/cms/75/StartKlar/>

⁶⁶ <https://www.sfg.at/cms/4132/WeltMarkt/>

⁶⁷ <https://www.sfg.at/cms/4465/IdeenReich/>

⁶⁸ <https://www.sfg.at/cms/4936/Erfolgskurs/>

Support for broadband infrastructures	The objective is to subsidise broadband infrastructure investments and upgrading costs.
Promotion of additional training for apprentices ⁶⁹	The goal of the program is to facilitate additional training of young employees according to the needs of SME. Focus on technical and scientific industries as well as digitalisation.
Financing instruments for SME ⁷⁰	Venture capital for young entrepreneurs (seed and start-up capital) and silent partnerships focusing on growth in SME.

Source: own elaboration

Federal level funding strongly emphasizes the financial aspects, innovation and R&D as well as target groups (Fink et al. 2012). As already mentioned, crucial actors at the national level are the Austrian Research Promotion Agency (FFG) and the Austria Wirtschaftsservice GmbH (aws).

The FFG is the national funding agency for industrial research and development in Austria. As a one-stop shop the agency offers a diversified and targeted programme portfolio, giving businesses and research facilities access to research funding.⁷¹ The FFG portfolio consists of programmes and instruments targeting specific thematic areas (energy, mobility, ICT, transnational initiatives, etc.) as well as bottom-up funding. Among other programmes, the “SME Package” specialises on the needs of SME. It comprises support from the first sketch to commercialisation of research/innovation activities via innovation and patent vouchers, support of preparatory work for concrete research projects, feasibility studies, support for market entrances, clinical trials as well as bottom-up funding for R&D-project via the general programme. Furthermore, the FFG co-finances (together with provinces) seven so called “AplusB centres” to support innovative, technology-oriented spin-offs from the academic sector (one in Graz) as well as the competence centres for excellence technologies. For the last three years Styrian enterprises received the highest amounts of FFG funding compared to all Austrian states, underpinning the region’s orientation towards research activities (Amt der Steiermärkischen Landesregierung 2017).

The aws is the Austrian federal promotional bank owned by the State of Austria.⁷² It is one of the most important institutions in the field of public business support and funding. The aws offers multifarious business financing schemes and support/consultancy programmes. Furthermore, a special programme for start-ups is offered. The funding instruments cover subsidised loans, guarantees, grants, and consulting services. Target-groups of the aws are foremost SME, start-ups, technology and innovation-intensive enterprises, industry-related service providers, enterprises with internationalisation needs and enterprises in need of equity capital.

⁶⁹ <https://www.sfg.at/cms/3863/ProfiLehre/>

⁷⁰ <https://www.sfg.at/cms/9/SFG-Finanzierungen/>

⁷¹ <https://www.ffg.at/en/content/about-ffg>

⁷² <https://www.aws.at/en/legal-basis-owners-clients/>

The regional Public Employment Service (AMS) focuses on support measures with regard to employee development and integration. Employee qualification (advanced training, trainees, upskilling) and the inclusion of employees (e.g. first recruitment in one-person-enterprises, integration of 50+ employees or long-term unemployed) is at the core of its support.⁷³

The Styrian Chamber of Commerce offers primarily consulting services regarding entrepreneurial themes and business development (e.g. regulative issues, qualification and internationalisation). It also provides information on currently available funding and support measures (“Zentrales Förderungsservice”).⁷⁴

Primarily focusing on investments within the tourism and leisure industry, the Austrian Hotel and Tourismusbank supports relevant businesses via funding and financing plus complementary consulting activities.

Good practice – Science Park Graz

The federal initiative AplusB centre gathers founders, start-ups, manager and investors with the aim to create and develop businesses in collaboration. In the region the Science Park Graz fulfils this function, financed by the FFG and the province of Styria as well as sponsored by the city of Graz, FH Joanneum and the Steiermärkische Sparkasse. Academic entrepreneurs (students, graduates, scientific personnel) are supported with coaching, funding, infrastructures and networking activities while investors (business angels, venture capitalists) and experienced manager (serving as cofounder) can contribute with financing and knowhow.

Since 2002, about 800 initial consulting contacts have been conducted, 300 start-up projects initiated, and 126 successfully completed. In total, more than 600 jobs have been created by 2016 and € 53 million of financing acquired.⁷⁵

Analysis of the region’s OPs of the 2007-2013 and the 2014-2020 programming periods: What expenditures are used to support SME over time?

The objective of the Styrian operational programme 2007-2013 was to strengthen the region’s economic competitiveness and innovation potential and had an even stronger innovation focus than the previous 2000-2006 programme (more than three thirds of funding was innovation-related) (Kha 2016). Foci were set on developing marketable products, processes and services, and fostering the innovative power of Styria’s sub-regions (via regional strengths). Therefore three priority axes have been defined⁷⁶: Strengthening the innovation- and knowledge-based economy, enhancing the attractiveness of regions and business locations, and governance and technical assistance (Amt der Steiermärkischen Landesregierung 2007).

⁷³ AMS Steiermark – <http://www.ams.at/stmk/service-unternehmen/foerderungen>

⁷⁴ Zentrales Förderungsservice – <http://www.foerderungsservice.at/>

⁷⁵ Science Park Graz – <http://sciencepark.at/unser-angebot/>

⁷⁶ <https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/policy-document/erdf-operational-programme-regional-competitiveness-styria-2007-2013>

The operational programme 2007-2013 had a total budget of € 310 million, of which € 155 million came from the EU. It was the largest Austrian ERDF programme corresponding to more than ten percent of all Austrian Cohesion policy funding. The cumulative value of generated investment was estimated at about €950 million.

Table 3.3: Allocation of ERDF funding to SME support in the Styrian region (NUTS 2) in thousand EUR

	Period 2007-2013		
	EU expenditure	National expenditure	Private expenditure
ERDF	€ 155,062	€ 155,062	
P1 – Inter-firm R&D	€ 6,590	€ 6,590	
P1 – Strengthening innovations system actors	€ 19,057	€ 19,057	
P1 – R&D in firms	€ 17,263	€ 17,263	
P1 – Promoting innovative firms	€ 75,235	€ 75,235	
P1 – Promoting entrepreneurial spirit	€ 5,253	€ 5,253	
P1 – Knowledge acquisition and management for innovation	€ 9,000	€ 9,000	
P2 – Strengthen the attractiveness of the regions and sites	€ 19,909	€ 19,909	
P3 – Governance and technical assistance	€ 2,754	€ 2,754	
EAFRD*	€ 199,000 (NUTS 3) ⁷⁷		

*European Agricultural Fund for Rural Development

Along the fields of action, 706 projects have been funded in the region of Graz (Amt der Steiermärkischen Landesregierung 2014b) within the period 2007-2013⁷⁸. The goals within the various fields of action were according to the innovation Styria platform⁷⁹:

FOA 1 External research and development (28 projects in the region) – Co-operation between private and public research institutions in order strengthen competitiveness. Contribution of basic research towards building up new areas of growth and technology.

FOA 2 strengthening the stakeholders of the innovation system including business-related infrastructure (34 projects in the region) – Support of sponsoring agencies from various areas of strength in their efforts to provide Styria's economy with further impulses and to facilitate access to their knowledge.

FOA 3 research and development in companies (46 projects in the region) – Promotion of research and development activities in companies. Upgrade of existing products and development of new products, processes and services.

FOA 4 promoting innovation in companies (166 projects in the region) – Reputation of the region should be further improved. Funding of innovative higher-quality products and services

⁷⁷ Prettenthaler, Winkler (2015)

⁷⁸ Zukunft Innovation – <http://www.innovation-steiermark.at/de/>

⁷⁹ Innovation Styria platform – <http://www.innovation-steiermark.at/en/>

as well as the development and application of new technologies and the renewal or streamlining of production processes and the creation of networks.

FOA 5 encouraging the entrepreneurial spirit (61 projects in the region) – Mobilise founders' potential in Styria and support measures at schools, information, and consultancy and training services as well as for coaching programmes and regional founder initiatives.

FOA 6 know-how acquisition and knowledge management for innovation (354 projects in the region) – Initial and in-service training of specialist, key staff and executive staff.

FOA 7 tourism in disadvantaged regions (no projects in the region).

FOA 8 integrated sustainable spatial development (3 projects in the region) – Basic activities, location analyses, feasibility studies, concepts and planning as well as assistance for and promotion of regional initiatives.

FOA 9 environmental investments (9 projects in the region) – Subsidies for projects which aim at reducing the consumption of resources and the emission of pollutants in production, at lowering the CO2 output and at increasing the share of renewable sources of energy.

FOA 10 Urban plus (5 projects in the regions) development of urban surroundings – Four urban districts and 16 municipalities in the south of Graz focus on mutually beneficial mobility measures, open-space planning and nearby recreational areas.

In the 2014-20 programme period, Austria manages a single ERDF OP for all federal provinces. The importance of innovation-related activities increased, as the European Commission asks for the preparation of so-called Smart Specialisation Strategies. Styria is provided with EU funding of approx.. € 130,650,000.⁸⁰

The Austrian operational programme will focus on five priorities and 22 measures: fostering the regional competitiveness through research, technological development and innovation (P1), enhancement of regional competitiveness of SMEs (P2), support for reducing CO2 emissions in all branches of the economy (P3), sustainable city development (P4) and city-hinterland development (P5) of which P4 is not relevant for the Styrian region (Operational programme 2014-2020). Regional coverage for Styria along the priority axes is represented in the table below (ÖROK 2015).

Table 3.4: Allocation of ERDF funding to SME support in the Styrian region (NUTS 2) in thousand EUR

	Period 2014-2020		
	EU expenditure	National expenditure	Private expenditure
ERDF	€ 130,650		
P1 – M01 Research and technology infrastructure	€ 4,000 ⁸¹		

⁸⁰ http://www.efre.gv.at/allgemeines/iwbefre_oesterreich/

⁸¹ Numbers according to the Amt der Steiermärkischen Landesregierung (2017)

	Period 2014-2020		
	EU expenditure	National expenditure	Private expenditure
P1 – M02 Cooperative and collaborative R&D projects	€ 3,300		
P1 – M03 Single company R&D projects and technology transfer projects	€ 15,000		
P1 – M04 Innovation consultancy and funding	€ 2,600		
P1 – M05 R&D and technology-oriented investments	€ 17,520		
P2 – M09 Support for business growth	€ 39,004		
P2 – M10 Consultancy services for SME			
P3 – M11 Company investments in renewable energy and energy efficiency	€ 34,900		
P3 – M14 Smart city Styria: Investment in renewable energies and energy efficiency			
P3 – M15 RTI projects in CO2 relevant fields			
P5 – M21 Initiation of endogenous growth impulses for employment in city regions	€ 10,280		

Within the priority axe enhancement of regional competitiveness of SMEs, Styrian SME are addressed via two measures (ÖROK 2015):

- M9 – Support for business growth tackles investment needs of SME regarding the uptake of new technologies, expansive projects and the development of premises.
- M10 – Consultancy services for SME is in its result directed towards SME, but the financial funding addresses relevant institutions offering consultancy services.

Table 3.5. ESI funding relevant for SME support in the region in thousand EUR (000)

	Period 2007-2013	Period 2014-2020
a) EU FP: Cooperative Research		
Project 1..		
Project 2..		
(Or all projects in total, if available).		
b) EU FP: Research for SME		
COSME		
Horizon 2020		
Please indicate the themes of the FP research projects below		
InnovFin SME Guarantee. http://www.eif.org/what_we_do/guarantees/single_eu_debt_instrument/innovfin-guarantee-facility/		
InnovFin SME Venture Capital http://www.eif.org/what_we_do/equity/single_eu_equity_instrument/innovfin-sme-vc/index.htm		
d) National/regional funding	€ 1,608,000 ⁸²	€ 485,000
e) Private funds/investments		

⁸² WIBIS

On national and regional level, funding granted to Styrian enterprises from the SFG, FFG and aws have been aggregated.

Which support instruments exist for SME in the three focus sectors ICT, creative/knowledge economy, low carbon economy? What is their leverage?

The programmes “ICT of the future”, “Ambient Assisted Living Joint Programme”, “AT:net” are programmes available for the promotion of challenging technology development and innovation in information and communication technology (some of which are interlinked with specific application fields or societal challenges). The aws “creative industries voucher” and “Impulse” (grant) are measures to foster the cooperation between various industries and the creative industries. Innovative activities in SME are promoted via the involvement of creative services or via grants for innovative projects in the thematic area or substantial contributions of the creative industries. The Styrian Green-Tech Cluster identified and mapped more than 80 funding and financing opportunities for its members in the thematic areas of environmental technologies and energy engineering (including general funding accessible for all SME). The comprehensive register depicts support measures along different activities and stages of business development (start-up phase, growth stage and qualification, R&D, internationalisation and investment needs).

3.4 Results of the FOG Test

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities steer decisions made over matters related to SME and entrepreneurship support structures and mechanisms in the region in a unilateral manner.		1
	Regional authorities exercise their powers mainly providing services and resources, in turn monitoring the achievement of specified objectives with respect to SME development (performance and results oriented)	1	
	Regional authorities collaboratively develop and foster, with key stakeholders, SME and entrepreneurship support structures and mechanisms in the region.	4	3
	Regional authorities have delegated powers to other entities or relevant stakeholders as a way to proactively develop and foster SME and entrepreneurship support structures and mechanisms in the region.		2
	Practices and actions undertaken		
A1.0	Is the development of an entrepreneurship culture in the region rather organically driven (grassroots movements) or rather stemming from a top down approach (institutionally driven)?		
A2.0	Which main actor/s is/are informally driving the promotion and shaping the development of an entrepreneurship culture in the region?		
A3.0	Which main actor/s is/are formally driving the promotion and shaping the development of an entrepreneurship culture in the region?		

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities, along with other actors create partnerships to foster an entrepreneurship culture in the region, going beyond the national or European framework/requirements.	1	1
	Activities intended to promote an entrepreneurship culture are financially supported and closely monitored to optimise the efficiency, effectiveness and transparency of the actions undertaken by stakeholders receiving support from the regional authorities.	1	2
	A top down approach is adopted by regional authorities when promoting the development of an entrepreneurial culture (e.g. initiatives on the organisations of start-up conferences stem from local authorities)	1	
	Regional authorities are enabling all actors to take on the initiative to promote the development of an	3	2

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	entrepreneurship culture in the region (e.g. via advisory services, training)		
B1.0	Which actions are undertaken in the region to develop an entrepreneurial climate and culture?		

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities facilitate the creation of business start-up support structures by engaging with a large array of stakeholders themselves.		1
	Regional authorities directly contribute to increase the business start-up rate by initiating and managing business start-up support structures.	3	1
	Networks, incubators, portals and gateways are being developed hand in hand by local authorities and citizens, proactively stepping in to create a start-up friendly environment in the region.	1	3
	Regional authorities support the development of start-up support structures by providing the necessary resources to (intermediate) working to boost entrepreneurial skills in the region.	3	1
C1.0	According to you, which support structure or practice for start-ups and SME is the most effective and should be further emphasised to ensure the development of entrepreneurial skills in the region?		

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities have developed strategies and implement schemes intending to reduce barriers to entry, eliminate obstacles and foster an environment conducive to the development of start-ups and SME.	4	1
	Off-the-shelf financing practices as well as the provision of a venture capital environment provide innovative and inclusive sources of financing, which are tailor-made to the needs of the actors in the region.		2
	The provision of financing support by the region is provided and can be conditional on the achievement of set objectives and result-oriented approaches are favoured by authorities, which encourage a greater ownership of the projects to ensure the success of the action and a return on investment.	2	1
	Regional authorities use the synergies developed in networks of stakeholders supporting entrepreneurship. They accordingly facilitate the development of conventional financing bodies as well as participative financing schemes targeting start-ups, SME and project holders from under-represented groups.	1	1

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Practices and actions undertaken		
D1.0	Is there a financial gap or a suboptimal investment situation for SME financing in the region?		
D2.0	What are the most commonly used financial support schemes or means of financing for entrepreneurs and SME?		
D3.0	How do governance mechanisms contribute to start-up/SME development while making up for the reduced availability of public funding?		
D4.0	Are regional authorities prompt to take economic risks when providing financial support to SME?		
D5.0	Who supports and fosters higher accessibility of the region (physical infrastructure)? How (grants/PPP, etc.)		
D6.0	What is done to improve the governance standards at national/regional/local level?		

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities ensure the development of an entrepreneurial culture in the region looking at other regions' governance structures and mechanisms to improve their own entrepreneurship and SME policies and create partnerships with other regional authorities to foster innovation as well as the development of synergies.	2	2
	Regional authorities are integrated into a multi-level governance system and actively collaborate to identify best practices and challenges solving options beyond regional and national borders.	1	1
	Co-funded projects are driving the need for further collaboration between regional authorities and between regions.	1	
	Developing contacts and partnerships is the spearhead of regional authorities and key actors to make up for potentially limited public intervention (e.g. public funding) and autonomously find solutions to local issues (without recurring to external support).	1	
	Practices and actions undertaken		
E1.0	Have regional clusters developed ties and are collaborating with other clusters at the national/EU level?		
E2.0	Which are the regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment?		

4 Results of the SWOT analysis

Internal factors – factors of competitiveness

Major strengths
Clusters and networks, highly connected enterprises
Research structures and institutions
(Engineering/Technical) Educational and training facilities
Broad variety of industries
Other strengths – less pronounced
International leading companies and large enterprises
Quality of life
Major weaknesses
Lack of skilled workers and educated workforce
Unfavourable geographic location, accessibility, infrastructure
Regulations and Administration
Other weaknesses – less pronounced
Governance – Administration
Home market and internationalisation
Missing brand
Exploitation of research results abroad
Ambiguous factors – represent a strength in some of the businesses/industries, but a weakness in others
Lack of venture capital
Neutral factors – represent neither a strength nor a weakness
Export-oriented (large) Enterprises

External factors – framework conditions

Major opportunities/drivers
Digitalisation and Smart Production
Crossover technologies and industry-related services (knowledge intensive business services)
Other opportunities/drivers – less pronounced
IT/ICT-Infrastructure
Appreciation of regional/local products
Dynamic tourism sector
Creative milieu
Major threats/challenges/barriers
Entrepreneurial mind-set
Above average unemployment rate
Securing young/skilled labour in technical/scientific professions
Other threats/challenges/barriers – less pronounced
Heterogeneous export markets
Air quality
Know-how marketing/signalling
Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others
Population growth and migration
Neutral factors – represent neither an opportunity/driver nor a threat/barrier
Founder-friendly environment

5 Future policy needs

What is needed to increase the potential of SME development?

To increase the potential of SME development, four central topics have been identified to be the most substantial leverage points: funding/financing, human capital, infrastructure and administrative burdens. Stimulating SME thereby is not reduced to the allocation of funds/resources but implies to a larger extent the development of connections (e.g. include different levels of governance, supportive institutions, development of suitable formats for different forms of businesses, matching of interested parties and networks, etc.).

Insufficient availability of funding/financing instruments for different stages of SME development. Although new forms of funding have been partially implemented (e.g. Crowdfunding) a broader spectrum of funding and financing instruments would further strengthen the development of SME. Furthermore, availability of target-oriented funding and financing according to specific needs of SME in various phases of business development are mandatory. Especially fast growing and innovative SME are depending on access to finance (e.g. risk capital or seed capital).

Human Resources are a persistent field of action that requires formats on many different levels, for example intensifying the promotion of human capital, further qualification as well as skills upgrading of employed persons (focus towards digitalisation), the active support of SME in the sphere of workforce issues (demographic aging, migration), specific strategies to reduce unemployment, reducing brain drain or changing the attitude of young people towards technical professional training (special focus on women). Also, it will be essential to encourage entrepreneurial spirit in schools and universities to raise the number of persons willing to create start-ups, including training them on basic business competences.

With regard to infrastructure, crucial activities have been set already (e.g. setup of a logistics centre in Graz, major tunnel constructions, municipal railway). Nevertheless, there are still pending actions to be taken to facilitate an optimal inner regional transport concept (Graz – Graz Hinterland) and interregional accessibility of the region (e.g. international railway net, flight connections). Furthermore, comprehensive broadband infrastructures have to be ensured, especially in rural areas (implementation of the Styrian broadband strategy).

The simplification and unification of legal and administrative frameworks in the region as well as nationwide is imperatively required. Reduced complexity and the acceleration of legal procedures reduce associated administrative burdens for companies. With respect to public steering activities (governance) a decrease of spatial/political entities and the harmonization of local competences would support cooperation between municipalities and establish equal conditions for enterprises in the region (coherent local fees and administration costs).

What are successful SME-support structures that should be further strengthened?

A large number of institutions in the Graz region focus on the promotion and support of start-ups and SME. Therefore, they bundle activities and are sources of information for founders

(City of Graz, Chamber of Commerce, SFG, Gründerland network, etc.; see Figure 3.1). Thus, start-up consulting and funding is a high priority and SME have access to a broad variety of institutions, service provider as well as financial support measures.

Styria is a pioneer in the establishment and development of good working clusters, communities, networks, Styrian competence centres, etc. They are an important support structure for existing enterprises as well as for start-ups and SME in the region. Interdisciplinary cross-cluster initiatives and less formalised cooperation forms beside traditional initiatives add further value to the network and knowledge transfer structures of the region.

Various low-threshold measures for the support of SME have been mentioned in the interviews, for example Science!Fit (programme that links SME with local research facilities to facilitate knowledge transfer towards businesses. It covers the whole process from needs assessment to realisation of innovation projects.), funding for co-working spaces, rent funding for start-ups (“Mietförderungen”), start-up coaching or matchmaking.

What role could European Cohesion Policy and European funding play, especially through the ERDF?

Making available sufficient funds that can be used to support different forms of financing of SME (also in advanced regions).

Summarizing, which framework conditions and regional factors need to be improved and how?

at the regional level (NUTS 2 and NUTS 3)

- Reduction of administrative and regulative obstacles and acceleration of administrative decisions (e.g. “golden plating”, plant permit proceedings, one person coordinating all admin. processes for a business).
- Structural reforms (e.g. merging of municipalities, transregional development strategies (spatial, economic, transport)).
- Multitude of target-group-specific funding and financing possibilities.
- Further efforts towards industrial transition from mid-tech to high-tech industries (smart production and services, mobility, health tech, etc.).
- Joint perception/marketing of the region to create awareness for the regions capabilities and a stronger regional brand.

at the national level

- Harmonisation of legal regulations at national level (e.g. construction law).
- Lesser bureaucratization of communication between enterprises and public authorities.
- Reduction of administrative obstacles concerning access to and the execution of subsidies.
- Reduction of administrative obstacles concerning the establishment or passing of enterprises.
- Reduction of administrative and financial obstacles regarding employment.
- Expanding consulting and support measures for enterprises along all business stages.
- Adaption of professional law to latest developments.

at the European level

- Enhanced transparency of information, especially for SME.
- Reduce administrative procedures for developing and setting co-financed programmes.

6 Annex

6.1 Interview partners

Name	Organisation	Position	Special expertise/years of experience ⁸³	Interview Date	Tel/f2f
MMag. Eric Kirschner	Joanneum Research	Forschungsgruppenleiter			Tel
DI Tanja Arzberger	Silicon Alps Cluster GmbH	Project Manager			Tel
Mag. Andreas Morianz	City of Graz	Abteilungsleiter Stv			Tel
Dr. Gerd Gratzer	Regional Government Styria	Referatsleiter-Stellvertreter			Tel
Eberhard Schrempf	Creative Industries Styria	Managing Director			Tel
Mag. Ewald Verhounig	Styrian Chamber of Commerce	Leiter des Institutes für Wirtschafts- und Standortentwicklung			Tel

6.2 Focus Group participants

Name	Organisation	Position	Special expertise/years of experience ⁸⁴	Date of workshop	Tel/f2f
MMag. Eric Kirschner	Joanneum Research	Forschungsgruppenleiter		26/6/2017	f2f
DI Tanja Arzberger	Silicon Alps Cluster GmbH	Project Manager		26/6/2017	f2f
Mag. Andreas Morianz	City of Graz	Abteilungsleiter Stv		26/6/2017	f2f
Dr. Gerd. Gratzer	Regional Government Styria	Referatsleiter-Stellvertreter		26/6/2017	f2f
Mag. Raimund Kurzmann	Regional Government Styria	Referent		26/6/2017	f2f
Mag. Ewald Verhounig	Styrian Chamber of Commerce	Leiter des Institutes für Wirtschafts- und Standortentwicklung		26/6/2017	f2f

⁸³ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

⁸⁴ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

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Case study report: Pfaffenhofen an der Ilm

Christian Lürer

Spatial Foresight

1 Mapping the SME sector in the region

The county of “Pfaffenhofen an der Ilm” is, like all counties (“Landkreise”) in Germany, a NUTS 3 region (DE21J). It is located in the North of the administrative district (“Regierungsbezirk”, NUTS 2) Upper Bavaria (“Oberbayern”), in the middle of the Free State of Bavaria (NUTS 1) (see Figure 1.1). Around 123,000 inhabitants (2015) live in the county, i.e. about 1% of the population living in

Figure 1.1: Pfaffenhofen county and other counties and free cities in Bavaria



Source: KUS Pfaffenhofen⁸⁵

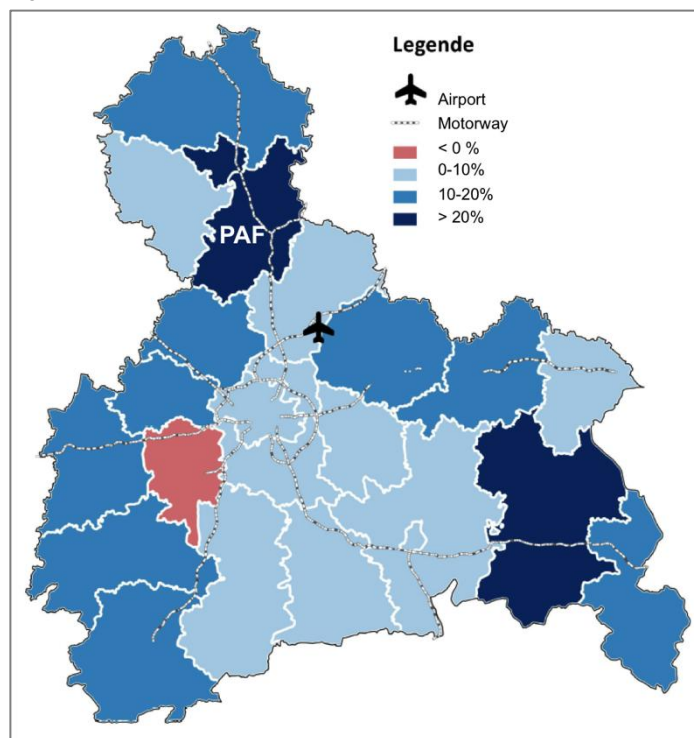
Bavaria. This implies a population density of 158 inh/km², which is below the average value of both Bavaria (180 inh/km²) and Germany (230 inh/km²). Despite its rather rural character, the county is strategically well located between the metropolitan areas of Munich and Nuremberg and shows high values with regard to potential accessibility by road (168; EU28 average: 100), rail (153) and air (161). With regard to the share of households with broadband access, the state of Bavaria can be compared with Germany: 85% of all households had access to broadband in 2013 both in Germany and in Bavaria. In 2016, it was 89% in Bavaria and 90% of all households in Germany.

There is a strong focus on innovative activities in the region. In Upper Bavaria, the total intramural R&D expenditures per inhabitant were at 1,941.5 PPS in 2013, which is more than 2.2 times as much as the average value for Germany (866 PPS) and 1.73 times as much as in Bavaria (1,123 PPS). This pattern is also confirmed in relation to the GDP. In Upper Bavaria, intramural R&D expenditure accounted for 4.4% of the regional GDP in 2013, compared to 3.1% in Bavaria and 2.8% in Germany.

⁸⁵ http://www.kus-pfaffenhofen.de/tourismus/wp-content/uploads/sites/3/Landkreise_Bayern-1016x1024.jpg

The county is an economically viable region with a low unemployment rate of 2.5% in 2013, compared to about 4% in Bavaria and about 5% in Germany. The regional economic strength is also reflected by the value-added, which increased from EUR 2,919 m in 2008 by more than 32% to EUR 3,861 m in 2013.

Figure 1.2: GDP Development in counties in Upper Bavaria 2008-13



Source: IHK für München und Oberbayern 2017 (edited)

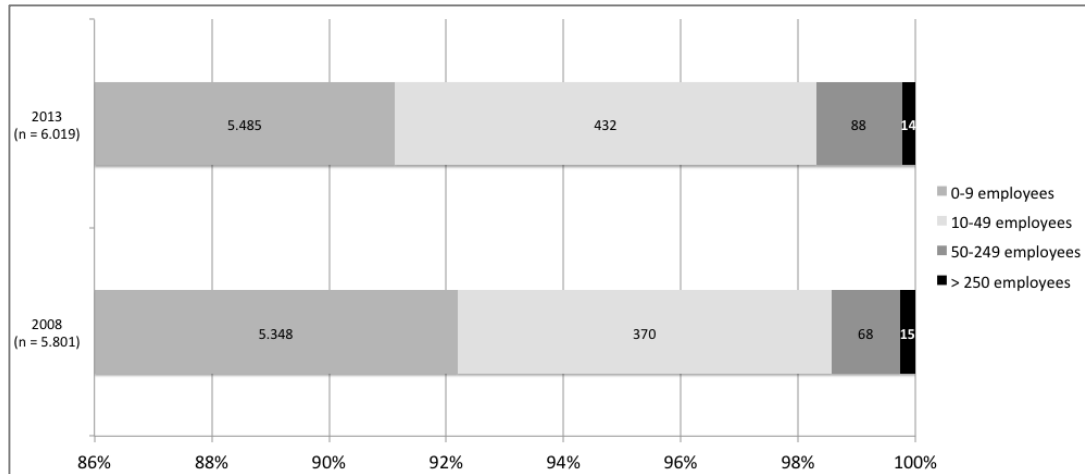
Over the same period, the Gross Domestic Product per capita grew by about 42% from around EUR 25,000 to almost EUR 36,000. Although this is still far below the GDP per capita for Upper Bavaria (2013: EUR 48,000) and Bavaria (2013: EUR 39,000), it is important to note that only the city of Ingolstadt and the county of Traunstein showed similar relative GDP growth values as Pfaffenhofen county (PAF) (see Figure 1.2). This growth led to a disposable net income per capita of EUR 23,800 in 2013.

Pfaffenhofen an der Ilm did rather well during the last economic crisis with constant good positions in national rankings on the attractiveness and competitiveness of German regions, which led a newspaper to comment: "In good years, we are at the top. And in bad years, we are crisis-resistant."⁸⁶

One main reason for its economic viability is the strong SME sector. 91% of all enterprises were micro enterprises in 2013 (2008: 92%) (see **Fehler! Verweisquelle konnte nicht gefunden werden.**). The share of SME with 10-49 employees increased from 6.4% in 2008 to 7.2% in 2013 (+ 62 enterprises) whereas the share of enterprises with 50-249 employees only slightly changed, from 1.2% in 2008 to 1.5% in 2013, which amounts to an increase of 30% (2008: 68; 2013: 88). The number of large enterprises remained almost stable. Only 14 (0.26%) out of 6,019 enterprises were large enterprises with at least 250 employees in 2013 (2008: 15 out of 5,801; 0.23%).

⁸⁶ <http://www.donaukurier.de/lokales/pfaffenhofen/Pfaffenhofen-Es-geht-wieder-aufwaerts;art600,3003881>

Figure 1.3: Numbers and shares of enterprises by size classes in 2008 and 2013



Important indicators to understand SME development and its dynamics over time are the numbers of firm births and closures. The birth rate has been constantly decreasing from 19.8% in 2008 to 17.8% in 2013 and 16.1% in 2015. Over the same time however, the total number of newly established enterprises only decreased by 5% from 1,425 in 2008 to 1,347 in 2015. Not only the birth rate, also the closure rate had gone down from 16.2% in 2008 to 15.5% 2015. The rate was however swinging. For example in 2013, the closure rate was significantly lower at only 13.9%, which hints at the good resilience of the regional economy to the crisis.

To get a better understanding of the labour market relevance of SME and other enterprises, it is important to have a closer look at how many employees were employed in enterprises of different sizes. In 2008, 76% of all employees were employed by micro enterprises and SME. By 2015, this share only decreased slightly (74%). The share of people not working in micro enterprises or SME, i.e. in enterprises with more than 250 employees, consequently increased from 24% (7,000) in 2008 to 26% (9,578) in 2015 (see Table 1.1).

Over the same period, the total number of employees increased significantly as well, by around 26% from 29,192 in 2008 to 36,754 employees in 2015. The total number of employees working in micro enterprises and SME also increased, by about 22% from 22,192 in 2008 to 27,176 in 2015, with a growth rate of 10% for micro enterprises and 27% for SME with 10-249 employees. Nevertheless, large enterprises show the highest relative increase in the number of employees (+37%) after the crisis.

Table 1.1: Total numbers and shares of employees working in enterprises of different size

	1-9 employees		10-249 employees		> 250 employees		Total
2008	6,311	21.6%	15,881	54.4%	7,000	24.0%	29,192
2015	6,948	18.9%	20,228	55.0%	9,578	26.1%	36,754
Total change	+ 637	- 2.7 pp	+ 4,347	+ 0.6 pp	+ 2,578	+ 2.1 pp	+ 7,562
Relative change	+ 10%	- 12.6%	+ 27%	+ 1.2%	37%	+ 8.7%	+ 26%

Focusing only on micro, small and medium-sized enterprises, almost 72% of employees working in these enterprises were employed in enterprises with 10-249 employees in 2008. The remaining 28% were working in micro enterprises with 1-9 employees. By 2015, the share of employees working in enterprises with 10-249 employees increased to almost 74%, which implies a share of 26% of employees working in micro enterprises with 1-9 employees. Hence, one can conclude from both total numbers and relative changes that the relevance of the SME sector has increased in Pfaffenhofen.

The ESPON SME project focuses on three specific sectors: Knowledge & creative economy; ICT; low-carbon economy. Although no specific values are available for the county at NUTS 3 level, it can be concluded from the available figures at NUTS2 level that the three sectors play an important role. Around 46% of all employees in Upper Bavaria work in these three sectors with the knowledge & creative economy being most important (19.6%), followed by the low-carbon economy (14.5%) and the ICT sector (11.7%).

2 Factors influencing the dynamics of the region

Strengths

The region benefits from its **good accessibility**, especially by road. Two main motorways cross the county: The A9 from Nuremberg to Munich and the A93 to Regensburg and East Bavaria (Upper Palatinate, Lower Bavaria) (see Figure 2.1). In comparison to other counties in the surrounding of Ingolstadt, the region's main urban and economic centre, the county of Pfaffenhofen is very well accessible. The level of accessibility by rail and road is even on a similar level as for Ingolstadt (TU München et al. 2011). This strategically beneficial position also implies a high business and sales market potential.

Figure 2.1: Transport infrastructures in the county of Pfaffenhofen



Source: KUS Pfaffenhofen 2015⁸⁷

The economy of the county is characterised by **sectoral diversity**. A mix of various branches forms the opposite pole to Ingolstadt as main economic centre of the area with a strong focus and clear dependence on the automotive sector (Donaukurier 2017). This diversity is a key success factor for the region's attractiveness (Donaukurier 2015). As the regional economy is not so sensitive to economic fluctuations, the economic development is more sustainable in the long run.

Another strength that is closely related to the before mentioned infrastructure endowment and economic structure refers to the geographical context of a **booming region**, which entails strong intra-regional economic ties. Although the county is not primarily dependent on the automotive sector, it benefits from employees who work in the automotive sector (e.g. Audi in Ingolstadt) and live in Pfaffenhofen county. The region benefits from these workers as they use their bonuses to pay for renovation and modernisation works, for which they contract local and regional handicraft enterprises. However, as the entire region is booming, intra-

⁸⁷ <http://www.kus-pfaffenhofen.de/tourismus/wp-content/uploads/sites/3/LKR-PAF-Landkreis-Karte-Version-A-Gr%C3%BCn-FINAL-RGB-nur-Eigendruck-2015-04-11-775x1024.jpg>

regional competition for the best employees is also intense, which entails the risk that enterprises from other parts of the area also attract employees.

Furthermore, the business location policy in the county can be considered a regional strength (cf. chapter 3). On the one hand, regional decision makers try to promote **new enterprises that create synergies** with existing enterprises. This allows the existing enterprises to further develop their competences and specialise but also results in a more diverse business landscape. One key aspect in this context is the high share of **start-ups in technology-oriented manufacturing industries**. In 2011, the value was 1.65 times higher in Pfaffenhofen county than in Germany (TU München et al. 2011).

When it comes to future developments, the educational level and availability of training and education facilities is an important location factor. The **public technical secondary school** (“Fachoberschule”) in Scheyern started in 2012. As of 11th grade, pupils can attain different qualifications: technical diploma (“Fachabitur”), general and subject-related matriculation standards (“allgemeine/fachgebundene Hochschulreife”). Due to its close relations with the higher vocational school (“Berufsoberschule”), which uses the same buildings, and good relationships with regional enterprises, the educational and training offerings are very practice-oriented, which is appreciated by the enterprises.

In addition, the public sector provides various **support services** and established **different institutions** that focus on economic policy and support the process of further developing and improving the regional economic profile at county level. Two important institutions are the **Municipal Enterprise Structural Development** (“Kommunalunternehmen Strukturentwicklung”; KUS) and the **Economic Advisory Board** (“Wirtschaftsbeirat”). The KUS’s services were assessed being of similar importance as the infrastructure endowment in an internal survey in 2011. Both institutions are presented in further detail in chapter 3.1.

Besides rather “hard” factors, also **“soft” location factors** play a role. The Bavarian landscape and the natural endowment are the cornerstones of an attractive living environment and contribute to a high **quality of life**. According to a recent survey conducted by the Chamber of Trade and Commerce for the NUTS2 region of Ingolstadt in 2015, regional enterprises are especially satisfied with the image of their respective municipality, the environmental quality, medical supply, shopping facilities, choice of schools and child care (IHK für München und Oberbayern 2015).

Weaknesses

A main point is the **quantitative availability of skilled workforce**. It is considered as a major concern that might have significant impact on future development. The Economic Advisory Board is supposed to discuss this issue and develop proposals that focus on the issue where the needed workers should come from and what needs to be done to attract them (Donaukurier 2017). As engineers and other university graduates are often more willing to move and not need in such high quantities, they can also come from other regions. Skilled workers,

however, are more rooted in their home regions because they usually start their training and first jobs earlier than university graduates and, hence, have already developed more and stronger social ties. It is therefore important to supply the need for skilled workers in the region itself.

Another main weakness of the county Pfaffenhofen an der Ilm is the **limited land availability** for businesses development and industrial sites. The potential of industrial and commercial land decreased from almost 200 hectare in 2010 to less than 93 hectare in 2015 (-53%) (IHK für München und Oberbayern 2017). One consequence is that expansion of existing enterprises is considered as more important than attracting new enterprises. Due to constant demand for new land, this development has furthermore led to **high price levels**. Despite the fact that land availability is restricted in the county, people complain about **high land consumption** that already today affects the cultural landscape of the region.

Closely related to the before-mentioned aspect is the **availability of affordable housing**, which is paramount for a region to maintain a good quality of life and to attract skilled labour force, which is urgently needed (see above). The relevance of this factor is enormous as even an own committee focusing on this issue shall be established within the Economic Advisory Board (Donaukurier 2017).

A more general weakness are the **long administrative processes**, e.g. to get a building permit. Long processes are time-costly and require additional resources. They furthermore hinder and delay business development. However, administrative procedures do not seem to take longer than in other regions. One main reason is that awareness for legal provisions is higher and they are implemented more strictly than in the past. Whenever it comes to upgrading and expanding facilities, it is furthermore important to consider that the demand for such measures is high and regional enterprises have problems keeping the pace given the constantly high level of new requests and orders.

With regard to infrastructure, the provision of **broadband access** is insufficient. Digitisation processes entail a need for transferring data sets reliably at high speed. This can slow down business development and prevents enterprises from taking part in and contributing to innovation processes in digital networks and global value chains. One main issue in this regard is that broadband expansion only takes place iteratively with a focus on first ensuring basic supply in all (rural and remote) areas. At the same time however, the enterprises' demands continuously increase so that the gap further widens in the end.

Finally, the supply with **public transport** is rather bad. People depend on the availability of cars. In contrast to the good infrastructure accessibility by road, the coverage with buses or other means of public transport is not sufficient, especially in small towns and rural areas.

Opportunities

As described above, the economy in Pfaffenhofen County is characterised by strong intra-regional economic ties. Hence, a **stronger export focus** could be an opportunity for future

business development and growth. Although several enterprises already today have and maintain economic relationships with business partners in foreign countries (e.g. China), the export sector could play a stronger role. Regional delegations and more enterprises could make use of their chances to develop new markets.

Creative and cultural industries are considered another opportunity for the region. So far, it is not that well developed in Pfaffenhofen County. The turnover generated in the relevant branches *per capita* is about EUR 1,000 compared to about EUR 4,000 in the county of Starnberg, for example (close to Munich). Furthermore, enterprises in this sector are often small enterprises with comparatively low space requirements, which makes it an interesting sector for the county of Pfaffenhofen with limited land available for future business development. The Municipal Enterprise Structural Development (“KUS”) organises regular meetings for entrepreneurs from these industries and intends to further promote cluster development in this field.

Another opportunity is closely related to the exploitation of the natural capital and the maintenance of the abovementioned **“soft” location factors**. Business promotion in Pfaffenhofen is not limited to manufacturing and processing industries or trade but also comprises tourism and recreation. On average, tourists only stay for 1.9 overnight stays. To further develop the tourism sector, new collaborations need to be developed. Potential exists in the field of cooperation with the agricultural sector, for example. As the region is an important hop-growing area, the increasing interest in small and microbreweries, traditional brewing methods and hop varieties could be a specific starting point for the future. For the conservation of land and other resources, it is however important to ensure that higher space requirements of other companies are still met so that they are not forced to leave the region.

Threats

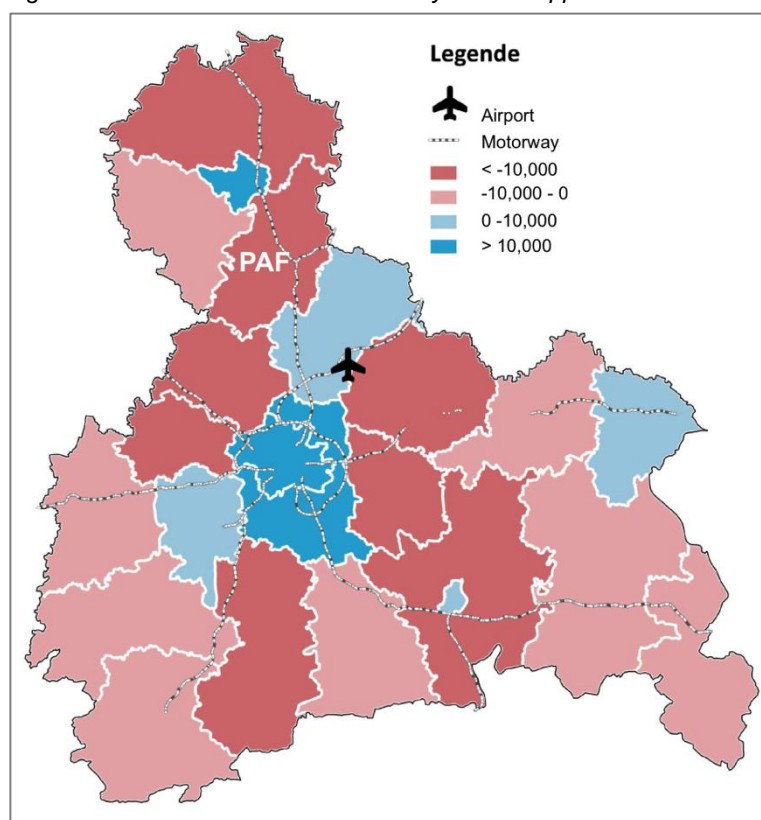
Digitisation can become a threat for future development in the county of Pfaffenhofen an der Ilm due to two main weaknesses that were specified above. First, the supply with broadband access is a fundamental precondition to successfully take part in and benefit from digitisation, however, partly perceived being insufficient in the county. At the same time, highly skilled workforce is needed to fully exploit the potential of digitisation. Again, the availability of skilled workforce is considered to be a challenge. If regional decision-makers do not succeed in fulfilling these two essential preconditions, Pfaffenhofen might fall behind in this segment and other knowledge-intensive branches in the future.

Another threat for the strong position of SME in the county is that no **succession plan** exists, especially in family-run companies. Around 2,000 enterprises in the entire county do not have clear succession arrangements (Local Action Group 2014).

A third aspect refers to stronger **competition between regions**. On the one hand, the strategic proximity to agglomeration areas like Munich is an opportunity from which the county can benefit. However, it will become increasingly difficult, or at least more expensive, to attract

highly skilled employees and compete with such areas that also offer a very high quality of life.

Figure 2.2: Net commuter flows at county level in Upper Bavaria in 2015



Source: IHK für München und Oberbayern 2017 (edited)

commute to Munich. As a consequence, new residents would not be well integrated in local and regional communities (both socially and economically) anymore, which would then lead to villages that become bedroom communities for Munich. Already today, Pfaffenhofen (PAF) is characterised by a high net number of commuters of almost -15,000, which is typical for many rather rural counties in Upper Bavaria such as Bad-Tölz-Wolfratshausen or Erding counties. Only a few counties, among them the main urban centres Munich, Ingolstadt and Rosenheim as well as the counties of Starnberg, Freising and Altötting, show a net inflow of commuters (see Figure 2.2).

Another relevant risk related to the before-mentioned is the development of **dormitory towns**. Compared with the surrounding of Munich, real estate prices in Pfaffenhofen County are still low. So, there is a certain risk that more and more employees accept a job position in the area of Munich (which might be better paid than in Pfaffenhofen) have their social relationships there, do their shopping and spend their leisure time, but still build a house in Pfaffenhofen County and

3 Governance issues

3.1 Institutions and governance levels

Germany is a federal country with a political-administrative system of five main levels, which can however differ between different federal states. In the following, the levels are described as they are characteristic for Bavaria:

The federal level (NUTS 0) is the overarching national level. At NUTS 1 level, there is the Free State of Bavaria, one of 16 German federal states (“Bundesland”; 13 territorial and 3 city states). The administrative districts (“Regierungsbezirk”) constitute the next level (NUTS 2) and also belong to the state government. The State of Bavaria has seven such administrative districts.

The local government in Bavaria has one unique specificity compared with other German states. At NUTS 2 level there are districts (“Bezirk”) which are part of local government, together with the counties (NUTS 3) and the municipalities (LAU 2). These districts are in charge of supralocal matters that go beyond the capacities and responsibilities of the counties and independent cities. The 71 counties (“Landkreis”; NUTS 3) are also part of municipal administration. 25 independent cities do not belong to a county (“Kreisfreie Stadt”), i.e. they have to fulfil the obligations of a county in self-responsibility. Finally, there are about 2,000 municipalities (“Gemeinde”; LAU 2) in Bavaria. Almost 50% of all municipalities have created administration communities (“Verwaltungsgemeinschaft”, LAU 1) for intermunicipal cooperation, i.e. to fulfil their local obligations conjointly, more effectively and more efficiently.

In the following, the focus will be put on the role of the county of Pfaffenhofen (NUTS 3) and the municipalities (LAU 2) at local level, as well as the administrative district of Upper Bavaria (NUTS 2), the state of Bavaria (NUTS 1) and a public-private initiative at a non-statutory, informal level between NUTS 3 and NUTS 2 at regional level.

County level (NUTS 3)

With regard to relevant institutions at **county level**, the Municipal Enterprise Structural Development (“Kommunalunternehmen Strukturentwicklung”, KUS), the Economic Advisory Board (“Wirtschaftsbeirat”) and the County Administrator (“Landrat”) need to be mentioned. They are briefly presented in the following:

The **Municipal Enterprise Structural Development** has been helping enterprises to overcome obstacles since its establishment in 2013. It takes care of business development for the entire county and bundles various activities that, previous to the enterprise’s establishment, were carried out by each municipality individually, often on a voluntary and unsalaried basis (Donaukurier 2017). KUS is a professional enterprise with full-time employees who work on maintaining and further developing good framework conditions for business development for enterprises and skilled workers. A prominent example for its activities is the Entrepreneur Day (Unternehmertag) with about 350 enterprises, which is organised and conducted by KUS.

Enterprises see the added value and send their representatives to benefit from networking with other enterprises or exchanging views with politicians and other relevant decision-makers.

Since 2012, the **Economic Advisory Board** has been an important institution promoting economic policy at county level. Its members are representatives of regional enterprises, banks and chambers. The Council supports the Municipal Enterprise Structural Development (KUS) and advises politicians in economic matters. It furthermore acts as an umbrella organisation for all local business and trade associations in the county of Pfaffenhofen. This way, the Council represents the interests of all enterprises at county level and bridges the gap between the business sector and county politics. The Board played an important role during the crisis when especially suppliers of the automotive sector and the mechanical engineering sector were hit hardest. Even well-known companies had difficulties to cope with drops in sales and orders. The Board intensively advised several enterprises that were in immediate danger of bankruptcy. In cooperation with local banks, they managed to prevent this worst case scenario. They furthermore informed enterprises, especially suppliers in the automotive sector, how to decrease their dependence on this sector significantly and diversify their portfolio (Donaukurier 2017).

Another important governance player is the **County Administrator** ("Landrat"). In Bavaria, the county administrator is elected directly by the citizens and is head of the county office ("Landratsamt"/"Kreisverwaltung"), the administrative authority of the county. He/she furthermore chairs the sessions of the county council ("Kreistag") and officially represents the county. Elected county administrators of the county of Pfaffenhofen supported the diversification process politically in the past by promoting those enterprises that showed a potential to lead to greater independence from the automotive sector, which was crucial to become more resilient to and withstand economic crises (Donaukurier 2017).

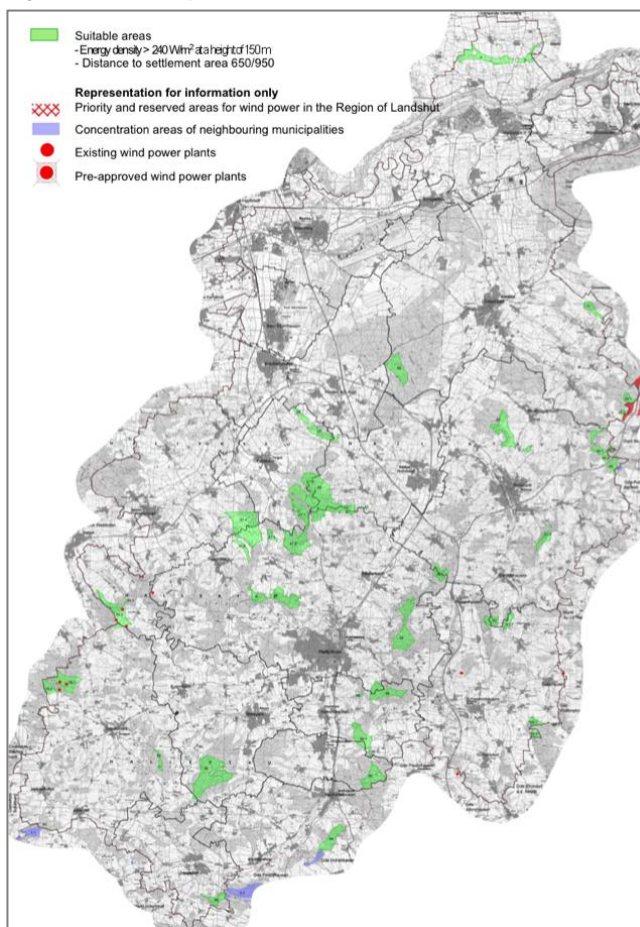
Local level (LAU 2)

With regard to governance levels and interaction between different governance levels, one needs to distinguish between the municipalities' own activities on the one hand, and inter-municipal cooperation at county level, often with the involvement of the county, on the other hand.

The main players, relevant for SME and business development in the **municipalities**, are the local councils, the mayors and the local authorities. Together they are in charge of, and responsible for local self-government of a municipality and, this way, shape key framework conditions for businesses and business development. Only some municipalities in the county of Pfaffenhofen have an own local agency (publicly owned) or a unit in their local administration that is responsible for local economic development, e.g. Pfaffenhofen or Reichertshausen. Business development is otherwise taken care of centrally at county level (see paragraph on the "Municipal Enterprise Structural Development" above).

The establishment of KUS can be seen as a joint effort of all municipalities to better coordinate and pool local activities in the field of business promotion and development. One reason for close cooperation between the municipalities and the county is a comparatively low redistribution rate from local to county level (i.e. the amounts of money, all municipalities have to pay for the tasks carried out on county level, "Kreisumlage"). This leaves the municipalities' resources and room for manoeuvre for own activities. Nevertheless, the municipalities see the need for cooperation and are willing to address issues conjointly. One example for this is broadband expansion. In the beginning, each municipality took care of its own broadband network. As the county suggested in 2009 to tender and coordinate a feasibility study⁸⁸, all municipalities could join for a small financial contribution. Since then broadband expansion is coordinated centrally and more feasibility studies have been conducted in the following years to monitor supply possibilities and develop strategies. This resulted in more effective and more efficient expansion measures. Another example for such coordination at county level is the identification of suitable locations for wind power plants, for which a joint land-use and zoning plan was developed (see Figure 3.1).

Figure 3.1: County-wide land-use plan on wind power



Source: Landkreis Pfaffenhofen 2014 (edited)

State level (NUTS 1)

The **Free State of Bavaria** as a federal state has wide-ranging competences. Hence, the state ministries are important players to create suitable framework conditions for enterprises. The main State Ministry working in the field of economic development is the Ministry of Economic Affairs and Media, Energy and Technology (StMWi). Other State Ministries of relevance with regard to both hard and soft locational factors are the Ministry of the Interior, for

⁸⁸ https://www.landkreis-pfaffenhofen.de/buergerinfo/to0050.asp?__ktonr=1094

Building and Transport (StMI) and the Ministry of Finance, Regional Development and Regional Identity (StMF), for example.

Another key player at state level with a particular focus on innovation is the **Bavarian Research and Innovation Agency** (“Bayerische Forschungs- und Innovationsagentur”), which is fully owned by the Bavarian state. Founded in 2009, the Agency is a central contact point that offers services and advice for SME and vocational educational institutions on public support and funding in the fields of research, innovation and technology transfer.

“**Bayern Innovativ**” is an enterprise owned by the Bavarian public sector bank (“LfA Förderbank Bayern”). It provides support for SME and other players in the fields of business and science to further develop their innovation activities.

“**bayernkreativ**” is the Bavarian centre for cultural and creative industries, owned by “Bayern Innovativ”. To promote these industries in all regions and not only in the major metropolitan areas, “bayernkreativ” cooperates with regional partners that offer their services at 20 different locations in all areas of Bavaria. The services range from workshops and networking events to individual counselling.

“**Bayern International**” is a company fully owned by the Free State of Bavaria that has supported export activities and ambitions of Bavarian small and medium-sized enterprises since 1996. The enterprise initiates and implements projects in Bavaria and abroad that aim at export promotion of Bavarian enterprises but also implements marketing activities to attract enterprises to invest in Bavaria.

The **Bavarian Alliance for Patents** (“Bayerische Patentallianz”) is an enterprise owned by Bavarian universities and universities of applied sciences. It is the main patent and marketing agency and functions as an interface between science and business. It offers support for SME with regard to proprietary protection and marketing of inventions.

Bavaria Capital (“Bayern Kapital”) is an enterprise owned by the Bavarian public sector bank (“LfA Förderbank Bayern”). It provides venture capital from different funds for Bavarian SME to develop and launch innovative products and processes. It covers all phases of a business life cycle, from the seed phase (first idea, proof of technics) and start-up phase (proof of market, market launch) to the expansion phase (diversification, new products and processes) and later-stage phase (new markets, international sales).

Administrative district level (NUTS 2)

The **District Government of Upper Bavaria** (“Bezirksregierung Oberbayern”) is a state authority that is responsible for the administrative district of Upper Bavaria. It represents the state government at regional level but also the administrative district to the state government. Its main responsibility is to coordinate and moderate between the state (state government, ministries, technical authorities) and the local level (municipalities, counties, districts). Its main

fields of competences are related to spatial planning, infrastructure, education, and environmental and economic development.

Figure 3.2: Map of the future for Upper Bavaria 2030



Source: IHK für München und Oberbayern⁸⁹

An important player, whose area of competence corresponds with the administrative district, is the **Chamber of Industry and Commerce for Munich and Upper Bavaria** (“Industrie- und Handelskammer für München und Oberbayern”). The chamber is a regional cross-sector business association that represents all enterprises in Upper Bavaria and lobbies for them, but also offers various services and support for the enterprises with regard to acquiring funding, business succession, legislation and taxation or external markets, for example. Special services address new business founders and successors. They range from individual coaching about business plans and marketing to seminars on the different phases of setting up a business. For a recent initiative (2015), the Chamber initiated an interactive dialogue with about 500 enterprises and other stakeholders on the future development in Upper Bavaria. As a result, a Future Map Upper Bavaria 2030 (“Zukunftskarte Oberbayern 2030”, see Figure 3.2) was elaborated. Against the background of past milestones (left side of the map) and current challenges and potentials (in the centre of the map), three key topics were identified for the future of Upper Bavaria (right side of the map):

- Labour and education: Until 2030, there will be a lack of about 100,000 skilled workers. For the region it is important to develop ideas what can be done to tackle this challenge.

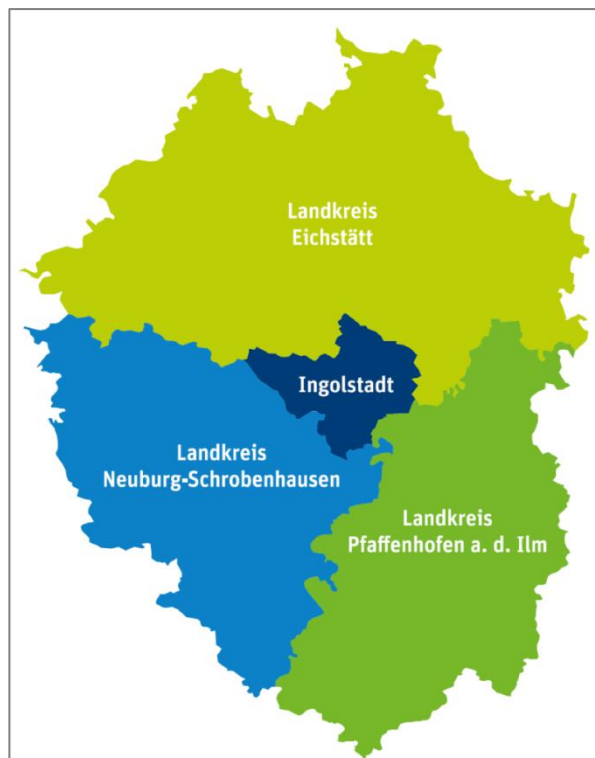
⁸⁹ <https://www.ihk-muenchen.de/ihk/pictures/zukunftskarte-oberbayern-2030.jpg>

- Digitisation: To be fit for the future, adequate infrastructure must be provided. This does not only concern enterprises but also schools, the public sector and remote areas in Upper Bavaria.
- Mobility: Future-oriented mobility concepts need to be developed from an integrated perspective, which includes both individual mobility and public transport in a smart way.

Ingolstadt region (inter-NUTS 3, below NUTS 2)

High awareness for the region and the right level(s) to address different development issues can also be identified for the entire **Ingolstadt region**, which consists of the economic centre and main urban area of Ingolstadt and the three surrounding counties (the counties of Pfaffenhofen an der Ilm, Eichstätt and Neuburg-Schrobenhausen; Figure 3.3).

Figure 3.3: Territory of the IRMA initiative



Source: LAG Altbayerisches Donaumoos 2014

These public bodies and the cities of Eichstätt, Neuburg an der Donau, Schrobenhausen and Markt Manching together with various major enterprises such as Airbus, EDEKA, Media-Saturn and other regional players such as the major local sports clubs (FC Ingolstadt 04, ERC Ingolstadt Eishockeyclub), the Catholic University (KU) of Eichstätt-Ingolstadt and three LEADER regions (Altbayerisches Donaumoos, Altmühl-Jura, Altmühl-Donau) are members of a public-private initiative that is responsible for regional management in the Ingolstadt Region (Initiative Regionalmanagement Region Ingolstadt e.V.; IRMA). The initiative employs four staff members (August 2017) who work in three defined thematic key

areas: economic development, training, and research. It is another good example for the willingness of local and regional as well as public and private players to work together beyond administrative boundaries and different sectors.

3.2 Policy strategies in place

Although it was planned in the past, no strategy with a particular focus on economic and business development has been recently drafted or adopted on county level. The general atmosphere in the county is very positive toward cooperation. The open communication culture helps the players in the county to bring crucial issues on the table, discuss them together and then aim at implementing joint activities. Instead of administering and *re-acting*, it is important for the players in the region that they can *pro-actively* shape processes and are in

control of the next steps. Hence, coordination takes place rather implicitly and wherever necessary and not because it is written down explicitly in a strategy. Nevertheless, there are several strategic documents at various levels, some of which are presented in the following. However, it is important to note that most strategies, especially at county and local level, are development concepts and strategies that address various issues more broadly and do not solely focus on SME or business development. Strategies at state level, on the other hand, are more focused on innovation, digitisation and business development.

Strategies at county level (NUTS 3)

To apply for LEADER support in the ongoing funding period 2014-2020, a **Local Development Strategy Pfaffenhofen** (“Lokale Entwicklungsstrategie Landkreis Pfaffenhofen an der Ilm”) was developed in 2015 for the entire county (Lokale Aktionsgruppe 2015). Based on a SWOT analysis, needs and potential for development were identified. Four development targets were defined and each target is further specified by 3-4 operational objectives:

- Promotion of a life in harmony with nature: (i) Securing the diverse cultural landscape and biodiversity; (ii) Reducing land consumption through eco-area management; (iii) Transfer of knowledge about nature and our natural resources; (iv) Protection of the climate and raise awareness for the energy transition;
- Shaping demographic change conjointly: (i) Mobility for all – without barriers; (ii) Cooperation of the young and the elderly; (iii) Promotion of the attractiveness of towns and inner development;
- Promotion and networking of tourism, leisure and regional culture: (i) Creating a high-quality region for cycling; (ii) Development of future-oriented tourism and leisure offers; (iii) Professionalisation and networking of tourism structures and hops growing region Hallertau; (iv) Promotion and networking of the regional culture;
- Strengthening business and promoting education: (i) Strengthening regional economic cycles; (ii) Promotion of the creative industries; (iii) Promotion of complete education; (iv) Portfolio maintenance of the economy and location marketing.

Although the local development strategy does not specifically aim at SME or business development but is a more general strategy in the context of rural development, it addresses various elements that were mentioned in the SWOT analysis of chapter 2 or are at least closely related to them, e.g. education and training, soft location factors, tourism, land availability and creative industries.

Another example refers to the field of education. After successfully submitting an application for an initiative of the Free State of Bavaria, the county has been awarded and is now a so-called “**Educational Region**” (“Bildungsregion”⁹⁰) since 2016 with an own office to take care of management, monitoring and coordination of the concept and, thereby, improve educational opportunities in the region. For the application, the county developed a concept with measures and projects related to five main areas (Landkreis Pfaffenhofen 2015):

- Organise and oversee transition phases: Transition phases when changing from one to another educational institution are paramount in an educational career of children, teenagers and young adults, e.g. from kindergarten to primary school, from primary to secondary school, and after graduation from secondary school to vocational training and the first job.
- Networking of curricular and extracurricular educational services and institutions: Cooperation between schools, science, businesses, youth care and adult education is needed to create synergies.
- Support for young people in specific circumstances: Inclusion and integration are important cornerstones to address specific needs of children who are socially deprived or with migrant background, for example.
- Strengthening and developing the civic society: The civil society shall be further developed as a whole through civic engagement, which ranges from youth work and care and whole-day offers to cross-generational dialogue and exchange.
- Meeting the challenges of demographic change: An ageing and more diverse society will affect educational institutions and consequently needs to be taken into consideration for developing new offerings and adjusting existing programmes to future requirements.

As for the local development strategy developed in the LEADER context, again several linkages with elements from the SWOT analysis can be identified, especially with regard to vocational and educational offerings or the availability of skilled labour force. Therefore, one can conclude that also this strategy is of relevance to improve the framework conditions for SME development in Pfaffenhofen County.

Strategies at local level (LAU 2)

Various municipalities have developed and adopted local strategies, which are also going to shape the future framework conditions in the county of Pfaffenhofen. In the following, selected examples are presented.

A first example that covers not only one but even five municipalities is the **Inter-Municipal Development Strategy for Urban-Rural Cooperation in Pfaffenhofen** (“Interkommunales Entwicklungskonzept zur Stadt-Umland-Kooperation Pfaffenhofen a.d. Ilm mit Hettenhausen, Rohrbach, Scheyern und Schweitenkirchen”), which was developed in 2014 to apply for ERDF funding. Six areas of activity were identified to achieve the general outline (Figure 3.4) (Stadt Pfaffenhofen 2014):

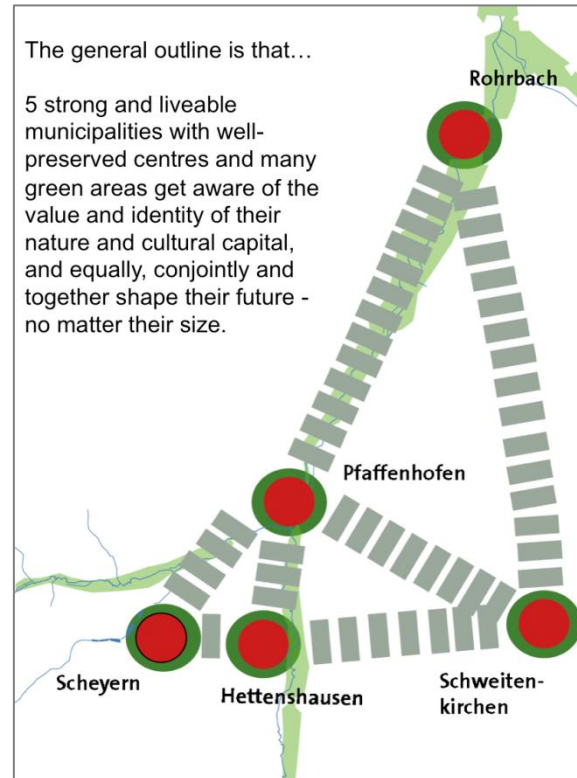
- Green infrastructure and sustainable development of nature and recreational areas
- Flood protection

⁹⁰ <https://www.landkreis-pfaffenhofen.de/default.aspx?ID=0dddb574-3af1-4704-bc44-0db094c9af64>

- Structural development of town centres, incl. inter-municipal coordination of settlement areas and industrial parks; reduction of land consumption
- Self-confidence for the cultural region/Awareness for the cultural heritage, incl. joint identity, regional products and regional specificities
- Transport, incl. a joint transport concept for the cooperation area and better public transport
- Climate protection, incl. energy savings, energy efficiency and renewables

Action fields 1, 3, 4 and 5 are of particular relevance in the context of SME development. References to these fields can also be found in the SWOT analysis in chapter 2. The described aspects refer either directly to SME development (e.g. designation of inter-municipal industrial parks, potential for tourism, accessibility by public transport, land consumption) or are closely related to soft locational factors (e.g. nature and cultural heritage, regional identity). It is furthermore important to emphasise that the selected fields of activity partially overlap with development targets and operational objectives of the LEADER Local Development Strategy (see above), which offers potential for synergies and close integration of various measures on different scales (Stadt Pfaffenhofen 2014, p. 12).

Figure 3.4: Inter-municipal cooperation in Pfaffenhofen



Source: Stadt Pfaffenhofen 2014 (edited)

Another example for a policy strategy at local level is the **Urban Concept for the city of Pfaffenhofen** ("Städtebauliches Entwicklungskonzept Stadt Pfaffenhofen a. d. Ilm"). The concept defines six thematic areas and for each area a list of objectives (Stadt Pfaffenhofen 2012):

- Business and retail sector, e.g. strengthening the city centre, enhancing the gastronomic range, improving regional economic cycles in gastronomy, regional specificities and products, initiative for entrepreneurship
- Education and social affairs, e.g. maintaining the good level of social infrastructures, day care, offerings for the elderly, counselling for entrepreneurs, barrier-free accessibility
- Arts, culture and leisure, e.g. housing and studios for artists, art in the public space, marketing as economic and residential location, cultural education
- Traffic and parking, e.g. activating ring roads to reduce traffic in the city centre, better accessibility of the city centre by bike, foot, car and public transport
- Urban development and housing, e.g. development of an autonomous economic and residential location instead of a dormitory town for Munich, potential of existing land re-

sources (conversion areas, vacant lots), better availability of commercial properties, reduction of land consumption

- Nature, ecology and alternative energy concepts, e.g. networking of green infrastructures, better water quality, coordination of measures with regard to supply with renewables

Besides the first area with a specific focus on economic aspects, especially areas 2 and 5 describe objectives that are of particular relevance for SME owners as they refer to various locational factors, from general issues such as social infrastructures for all population groups to specific issues such as a lack of housing and land, the risk of becoming a dormitory town for Munich and the reduction of land consumption, all of which have already been described in further detail in the SWOT analysis in section 2.

The third example is the **Integrated Spatial Development Strategy for Ingolstadt and its surrounding municipalities** (“Integriertes räumliches Entwicklungskonzept der Stadt Ingolstadt und ihrer Umlandgemeinden”). Although it covers only one municipality of Pfaffenhofen County, Markt Manching, the strategy is introduced here because of its focus on Ingolstadt. As the main urban and economic centre of the entire region, measures developed for and implemented in Ingolstadt can also affect the development in Pfaffenhofen County. Based on a SWOT analysis, four action fields were identified for the strategy with particular potential for inter-municipal cooperation (Stadt Ingolstadt 2014):

- Revitalisation of fallow land and conversion areas, e.g. barracks, heavy industries
- Cultural and nature heritage and tourism, e.g. archeological excavations; Danube river; former city gates and castles
- Creating and optimising green infrastructure, parks and recreation areas, e.g. Danube river; green city ring; streams, trenches and their networks; preserving and developing the landscape
- Development of the economic structure, e.g. network for maths, information, natural and technical sciences; fabrication laboratory for individuals to use large industrial devices (e.g. 3D printers); technological park

A close relationship with SME development can be identified for the fourth action field. However, all measures rather refer to soft locational factors and overall conditions to create a framework that is attractive for enterprises as well as potential employees and future inhabitants.

The last example is a strategy mainly focusing on the neighbouring county of Neuburg-Schrobenhausen. The LEADER region “Altbayerisches Donaumoos” comprises all municipalities of this county and the **municipality of Markt Hohenwart**. As Hohenwart belongs to the county of Pfaffenhofen, the **Local Development Strategy “Altbayerisches Donaumoos”** (“Lokale Entwicklungsstrategie LES²⁰²⁰ Wir gestalten unsere Heimat.”) will also be shortly presented. The strategy defines five development objectives, each of which is further specified by 2-4 operational objectives (LAG Altbayerisches Donaumoos 2014):

- We increase the value added and the competitiveness of the region: (i) We strengthen the regional economy by establishing innovative cooperation structures; (ii) We support

life-long learning by inventing innovative educational offerings; (iii) We promote qualitative growth of local and small enterprises

- We promote the regional agriculture and improve the development of the energy sector, ecology and climate protection by better regional reference: (i) We support the production of regional and environment friendly products by setting up services for nutritional education or enhancing local structures for their marketing; (ii) We improve regional climate protection by measures of energy saving
- We increase the experiential value of our region for citizens and tourists by interlinking, expanding and qualifying existing offerings: (i) We increase the leisure value of our region by inventing new and upgrading existing offers; (ii) We make the culture and nature of our home region to be experienced by its citizens and this way promote regional identity; (iii) We strengthen tourism in our region
- We strengthen developed societal structures and link them to the challenges of demographic change; (i) We support the stimulation of towns and an integrative social communication structure; (ii) We promote new mobility in municipalities; (iii) We strengthen the welcoming culture of our region and promote integrated measures for people with special needs; (iv) We create a liveable home region for the youth and elderly
- We shape our home region; (i) We further develop the Local Action Group; (ii) We create citizen involvement by innovative events and effective communication; (iii) We expand our networks on regional and interregional scale; (iv) We seek transnational cooperation

As for the LEADER region of Pfaffenhofen County, the Local Development Strategy “Altbayrisches Donaumoos” touches upon several issues relevant for SME development from an integrated perspective. Again, one can find issues that are directly related to SME development such as a focus on the regional economy or local and small enterprises (1.i; 1.iv) or skilled labour force (lifelong learning and educational offerings, 1.ii). Furthermore, the regional value for citizens and tourists is emphasised with regard to tourism and regional identity (3.i, 3.ii, 3.iii) but also other aspects such as demographic change (4.) and a general welcoming culture and good framework conditions are addressed.

Strategies at state level (NUTS 1)

On state level, a number of important strategies can be identified, all of them of relevance for SME development, especially for innovative intensive and high-tech sectors and creative industries. They address specific issues such as digitisation, innovation, skilled labour force, i.e. issues that are also pressing in Pfaffenhofen County according to the SWOT analysis.

The “**Growth Plan Bavaria – World Leader**” (“Wachstumsplan Bayern – Weltspitze”) specifies four key priorities for Bavaria to remain one of the most successful and advanced regions in Europe and defines a particular focus on digitisation (StMWi 2016):

1. Digitisation

- A. Initiative for digital excellence to further develop digital competences in medium-sized enterprises: (i) a centre as interface between universities and extramural RTDI (“Zentrum Digitalisierung.Bayern”), (ii) a centre to transfer state-of-the-art methods to SME for software development (“Center for Code Excellence”), (iii) more attractive cloud solutions for SME (“Bayern-Cloud”), (iv) incentives for enterprises to develop own digital strategies (“Digitalbonus”);

- B. Initiative for start-ups (“Gründerland.Bayern”): (i) digital business incubators that consider regional specificities and structures, (ii) grants for start-ups in the field of digitisation (“Start?Zuschuss!”),
 - C. Flagship initiative Assistance Robotics (“Leuchtturminitiative Assistenzrobotik”) to develop new high-tech solutions in the field of care of the elderly and those in need of care,
 - D. Future initiative Mobile Communications (“Zukunftsinitiative Mobilfunk”): (i) Action programme to upgrade existing/build new infrastructures in underserved areas by 2020, (ii) feasibility of national roaming, (iii) pilots for new (5G) and alternative (Laser) transmission technologies and expansion of WLAN hotspots
 - E. Digital working world, reform of the working hours act to increase flexibility and benefit employers and employees
2. Technology promotion: (i) more transparency, (ii) one-stop-shops for funding, (iii) support for SME (cooperation with universities and extramural institutions), (iv) strategic innovation projects, (v) new competitive elements in technology funding
 3. Electric mobility: (i) charging infrastructure for electric vehicles, (ii) competence centre e-mobility, (iii) R&D on e-mobility
 4. Tourism: (i) touristic innovation boost and support for hotel industry, (ii) develop mountaineering regions as all-season tourism regions, incl. support for cable cars

The focus on digitisation is in line with the outcome of the SWOT analysis, which also identifies digitisation as a major development trend for Pfaffenhofen County, not only but also for SME. Digitisation can even become a threat if decision makers do not lay the foundations necessary for SME to partake in and benefit from digitisation. This especially refers to state-of-the-art physical and broadband infrastructures. Besides digitisation, also technology promotion specifically adjusted to the needs of SME and measures to upgrade tourism infrastructures are important for future-oriented SME development in rather rural areas such as Pfaffenhofen County.

The outstanding importance of digitisation for future business development is also underlined in a strategy that solely focuses on digitisation, “**Future Strategy Bavaria Digital**” (“Zukunftsstrategie Bayern Digital”), and addresses various issues in different sectors relevant in this context (StMWi 2015b):

1. Cross-cutting issues: IT security, big data, cloud computing, legislative framework,
2. Support for SME as the core of the strategy with a broad focus on various economic branches
 - A. Industry 4.0: the Internet of Things to link people, machines, products and businesses
 - B. Mobility: GPS, security, emissions, driver assistance, infotainment, smart mobility

- C. Health and care: telemedicine, health products and services, monitoring, data security
 - D. Energy: smart grids, smart homes, virtual power plants
 - E. Media: new media formats, online TV, visual effects, gaming industry, social media
 - F. Tourism: marketing, services and navigation at the destination
 - G. Trade: digital upgrades of counter retail, e-commerce
 - H. Craft: new value chains, optimising operations, integration of hard- and software
 - I. Financing: online payment and banking, crowd funding and lending, cyber security
 - J. Planning, construction and housing: 3D printing, digital architecture, smart homes
 - K. Agriculture: transparency, automation, scanners & sensors, land management
 - L. Environmental protection: monitoring, hazards,
3. Broaden the basis and improve structures
- A. Infrastructure: need for next generation high-speed networks
 - B. Research: science and business, technology transfer, platforms, young researchers
 - C. Start-up and entrepreneurial culture: framework conditions, financing, advice, incubators
 - D. Funding instruments: focus on SME and start-ups, bonus for ICT services
 - E. Internationalisation: scale-up of digital business models, attract enterprises from abroad
 - F. Working world: new jobs, new profiles, work structure, telework, flexibility, availability
 - G. Educational landscape: ICT as content and tool, e-libraries, quality control, competencies
 - H. Participation of persons with disabilities and elderly: assisted living, accessibility
 - I. State and administration: e-Government, registers, legal communication
4. Dialogue with the society: transparent public debate, knowledge & competences, awareness

The strategy brings together a wide range of elements and describes the comprehensive impact of digitisation. This underlines the need for a holistic approach to address all players necessary to create suitable framework conditions, develop policy responses to, and fully benefit from such a wide-ranging and influential development trend as digitisation. The various initiatives and approaches mentioned in the strategy are good starting points for SME to both raise awareness for the overall context and find specific references to public funding.

In a publication on skilled labour force, the **“Fachkräftewegweiser”**, which addresses SME and craft firms, the State government presents six action fields how to ensure supply of skilled workers in Bavaria (StMWi 2015a):

- Specifically shape staff recruitment and attractiveness of employers: (i) make work attractive, (ii) strategically align human resources work, (iii) professionalise communication, (iv) modern media and the potential of the Internet
- Sustainable maintenance of workforce through education and training: (i) education, (ii) professional development, (iii) personnel development and training

- Using all potentials: Employment of specific target groups: (i) flexibility with regard to working place and time, (ii) women and people with strong family ties, (iii) elderly, (iv) migrants, (v) persons with disabilities
- New ways – new opportunities: Migration and welcoming culture: (i) international recruiting, (ii) welcoming culture – attract and bind international skilled workers
- Company succession: (i) search for a successor, (ii) find a successor, (iii) select a successor, (iv) set up the transition process
- Improvement of productivity in times of demographic change: (i) implement productivity enhancements and increase the capacity of staff, (ii) human resources strategies in times of demographic change, (iii) age-mixed teams

This very specific strategy also addresses weaknesses and potential threats for future development in Pfaffenhofen County, with regard to both general shortage of skilled workers and, more specifically, the issue of company succession. Hence, the strategy is of relevance for current and future SME development in Pfaffenhofen County. It becomes clear that the demand for skilled labour force can only be met if it is tackled and addressed on various levels with different measures. There is no one-size-fits-all solution. Instead it is necessary to find the right mix of targeted measures that fit the region's framework conditions and overall situation.

The **“Bavarian Strategy for Research, Technology and Innovation Policy”** (“Gesamtkonzept für die Forschungs-, Technologie und Innovationspolitik der Bayerischen Staatsregierung”) was already developed in 2010 and adopted in 2011. Nevertheless, it is still an important document for innovation policy in Bavaria because it was accepted as Research and Innovation Strategy for Smart Specialisation (RIS3) for the current funding period 2014-2020. The strategy defines six strategic objectives (Bayerische Staatsregierung 2011):

- Strengthening societal awareness for science and research, e.g. research-friendly environment, transparency, information, arouse interest of children and young students
- Optimising framework conditions for RTI, e.g. legislation and taxation, venture capital, working conditions, adequate research infrastructures and facilities, financing and support
- Promoting competitiveness and growth of enterprises on all scales, e.g. incentives for RTI in enterprises, arouse interest of start-ups, SME and creative industries, attract international research-focused businesses
- Regional balance of RTI policy instruments, e.g. adequate framework conditions in small and medium-sized universities and research institutions, communication infrastructure
- Strengthening Bavaria in competition for EU and national funding through cooperation, e.g. cooperation of universities, universities of applied sciences and extramural research institutions, cooperation of science and business, support for applications
- Thematic foci of RTI policy, e.g. wide range with strategic focus on international visibility, synergies with other research facilities, business-oriented research, research of relevant societal challenges and trends

Especially the focus on business-oriented research (6.), research activities in enterprises (5.) and the interest of young enterprises and SME for extramural RTI (3.) is relevant for SME. Furthermore, for Pfaffenhofen County it is important that RTI policy takes into consideration all regions (4.) and not only the metropolitan regions of Munich and Nuremberg. Hence, the

RIS3 for Bavaria is a strategy that can be assessed as a policy strategy at state level that is relevant for SME development in Pfaffenhofen County.

3.3 Support instruments for SME and the three focus sectors

At **county level**, there are specific instruments that provide financial support for SME. The main supporting institution is the Municipal Enterprise Structural Development (KUS). However, its main task is not to provide and distribute public money from county level to enterprises. Instead, KUS focuses on different services:

- **Contact person:** As a neutral service provider, enterprises can contact KUS for various purposes, e.g. to get information about the current status of administrative procedures. KUS acts as an interface between the enterprises and the relevant public authorities. KUS staff knows the right persons responsible in the administrations they need to approach directly to get the information the enterprise is seeking. If necessary, KUS can “translate” between both parties and this way accelerate administrative procedures or at least support the enterprise to overcome the main obstacles.
- **Networking activities:** KUS organises conferences for all businesses or for specific sectors (e.g. creative and cultural industries, see above) to bring together different players who are relevant for the respective field, develop synergies and support match-making processes. As they take place on a regular basis, such events become well-known and well-established platforms for networking and exchange, e.g. the biennial “Entrepreneur Forum” (“Unternehmerforum”), which alternates with the biennial “Entrepreneur Day” (“Unternehmertag”).
- **Funding:** Most enterprises in the region do not lack financial resources. It is only a minor issue due to low interest rates and financial reserves and, hence, sufficient equity. Although specific funding might be interesting in general, it usually entails additional administrative burden. Especially grants require a lot of paperwork before, during, and after the use of the grant. It is furthermore important to bear in mind that Pfaffenhofen County is not among the priority regions eligible for regional and national public funding schemes.

At **state level**, a wide range of support measures for SME exists. The table below presents grants that specifically address SME and branches that are relevant in the context of this study (see Table 3.1). Loan instruments, guarantees and other off-the-shelf financial instruments that are available for all types of enterprises or individuals are not included in the list, which by no means claims to be exhaustive.

Table 3.1: Grant instruments for SME support at state level in Bavaria

Name	Description
Bavarian Growth Fund (“Wachstumsfonds Bayern”)	The fund provides venture capital (EUR 100 m in total) for start-ups and innovative technology enterprises in the seed and start-up phase. In 2016, the fund invested in 8 ventures with a volume of about EUR 17.5 m.
Start?Grant! (“Start?Zuschuss!”)	New enterprises (not older than 2 years) in the field of digitisation with an innovative and future-oriented business model can receive a grant for staff and rental costs, market launch of a product or R&D.
Digital Bonus (“Digitalbonus”)	The programme aims at the digitisation of SME in the field of industrial economy. They can apply for a grant for digitisation of products, processes and services as well as improvement of IT security.
Innovation coupon (“Inno-”)	Small enterprises, crafts businesses, liberal professions and start-ups receive a coupon for innovative activities at external R&D institutions.

Name	Description
ventionsgutschein")	The measure has a thematic focus on material and design studies, studies and concepts for manufacturing technology, construction, service engineering, prototype construction and tests for quality assurance
Transition to start-up ("FLÜGGE")	University graduates receive financial support to implement innovative measures with a substantial risk that nevertheless seem to be technically and economically feasible and promising (in the mid-term).
Programme for Technology-Oriented start-Ups ("BayTOU")	Persons, who want to establish a technology-oriented enterprise, and technology-oriented SME (< 6 years, < 10 employees) may apply for a grant to implement measures to develop and enhance the technological basis of the business.
Export Bavaria 3.0 – Go International	The Bavarian Chambers of Industry and Commerce (IHK), the Bavarian Chambers of Crafts (HWK) and the Bavarian Centre for Foreign Trade (AWZ) provides financial support for SME that intend to develop new foreign markets. The measure is supported by the ERDF (see below, IP 3d).
Trade Fair Programme for Medium-Sized Companies ("Mittelständisches Messeprogramm")	Bavaria International ("Bayern International") provides grants for SME and liberal professions that intend to enhance their export activities to take part in fairs, exhibitions and similar events in foreign countries.
Support for Game Development ("Computerspielförderung")	The "FilmFernsehFonds Bayern" ("FilmTVFund"), owned by the Bavarian state as well as public and private broadcasting stations, provide financial support for studios and enterprises that develop high-quality computer games of pedagogical or educational value. Supported activities range from concept and prototype development to actual game production.
"Premium-Offensive Tourismus"	The Free State supports SME in hotel business to refurbish their facilities. Supported measures range from upgrades to to attain higher classification and modern ICT infrastructures to saving resources and improving barrier-free accessibility.

ERDF OP 2014-2020

Various thematic objectives (TO) of the current ERDF Operational Programme for Bavaria refer to business development (StMWi 2014). The main TO relevant for SME is TO 3 "Enhancing the competitiveness of SME", which was selected for priority axis 2 (PA) of the Bavarian ERDF OP 2014-2020. 30.6% of the total budget was allocated to this priority axis. Under TO 3 the OP focuses on investment priority (IP) 3c "**Supporting the creation and extension of advanced capacities for product and service development**" and IP 3d "**Supporting the capacity of SME to grow in regional, national and international markets and to engage in innovation processes**".

Within IP 3c, two specific objectives (SO) were defined that address financial needs of young SME as well as the need of existing SME to innovate and grow:

- "Providing equity for SME" (SO 3) which is supposed to be achieved by means of innovative financial instruments that aim at SME with a focus on seed and start-up phases as the demand for equity is particularly high at this early stage; and
- "Strengthening of innovation and growth capacity of SME" (SO 4) for which support for investments of SME shall be provided. This support aims at SME that envisage growing, diversifying, or inventing and applying new technologies. The Bavarian ERDF OP therefore promotes SME development of both young enterprises and well-established enterprises.

For IP 3d, three specific objectives were defined, which address non-financial support for growing SME, the need for internationalisation and finally specific needs related to accessibility in the tourism sector:

- “Support for SME from institutions that contribute to a continuous innovation and growth process” (SO 5), which is to be achieved through service institutions for enterprises (except large enterprises) because the level of educational attainments and excellent innovation infrastructures are crucial preconditions for innovation;
- “Increasing the competitiveness of SME through support of suitable internationalisation activities” (SO 6) to be realised by means of Export Bavaria, an initiative from the chambers of commerce, craft and trade that aims at SME to receive support from the Centre for Foreign Trade as main multiplier (Außenwirtschaftszentrum Bayern) (see table above); and
- “Increasing the competitiveness of SME in the tourism sector through building, upgrading accessible public tourism infrastructures” (SO 7), which is to be achieved through support of public tourism infrastructures for handicapped people and SME in the tourism sector.

Another thematic objective related to SME support is TO 1 “Strengthening research, technological development and innovation”. Under TO 1, IP 1b “**Promoting business investments in R&I, developing links and synergies between enterprises, R&D centres and the higher education sector (...)**” was selected for the Bavarian ERDF OP 2014-2020. Here the focus is put on further developing knowledge and technology transfer between universities, research institutions and enterprises to strengthen Bavaria as a European frontrunner region (SO 2).

Furthermore, under TO 4 “Supporting the shift towards a low-carbon economy of energy derived from renewable sources” IP 4b “**Promoting energy efficiency and renewable energy use in enterprises**” was selected to promote energy savings in the private business sector (SO 8).

EAFRD OP 2014-2020

From the EAFRD Rural Development Programme (RDP) of Bavaria 2014-2020 (StMELF 2014), two focus areas can be highlighted being of particular relevance for SME development, both of which however have a strong focus on the agricultural sector and the involvement of primary producers in the food chain, respectively.

Under priority 2 “Enhancing farm viability and competitiveness of all types of agriculture in all regions and promoting innovative farm technologies”, focus area 2A was selected with a focus on **improving the economic performance of all farms and facilitating farm restructuring and modernisation**. This focus area contributes to thematic objective 3 “Enhancing the competitiveness of SME and the agricultural sector”. Respective measures should consider increasing market participation and orientation as well as agricultural diversification. The focus area addresses several needs identified in the RDP, from diversification and modernisation to cooperation and improving agricultural production structures. Hence, support is provided for both physical investments (M04) and cooperation (M16).

Under priority 6 “Promotion of social inclusion, poverty reduction and economic development in rural areas”, focus area 6A was selected with a focus on **facilitating diversification, creation and development of small enterprises as well as job creation**. Diversification measures are needed so that employees in the agricultural sector can develop additional sources of income. They shall help employees in the agricultural sector (especially part-time employees) to find additional jobs in the non-agricultural sector so that they can keep their jobs in the agricultural sector. Hence, measure 6 (M06) aiming at the development of both agricultural and other enterprises. This way, it shall support regional economies, decrease outmigration and promote the attractiveness of rural areas.

Table 3.2: Allocation of ESI funding to SME support in Bavaria (NUTS 1) in thousand EUR (000)

	Period 2014-2020		
	EU expenditure	National expenditure	Private expenditure
ERDF total	494,704	340,822	576,240
ERDF relevant for SME (IP 3c, 3d, 1b, 4b)	254,077		
IP 3c – M 2.1 Innovative financial instruments (TO 3)	112,179	44,347	409,190
IP 3c – M 2.2 Investment support for enterprises (TO 3)			
IP 3d – M 2.3 Service institutions for enterprises (TO 3)	24,000		
IP 3d – M 2.4 Export Bavaria (TO 3)			
IP 3d – M 2.5 Promotion of accessible public tourism infrastructures (TO 3)	15,000		
IP 1b – M 1.2 Technology transfer (TO 1)	62,898	<i>Not indicated in the OP on the level of measures</i>	
IP 4b – M 3.1 Energy savings in enterprises (TO 4)	40,000		
EAFRD total	1,515,976	1,115,845	
EAFRD relevant for SME (focus areas 2A, 6A)	121,200	363,300	1,432,500
M04 – Physical investments (focus area 2A)	115,000	351,000	1,398,000
M06 – Development of agricultural and other enterprises (focus area 6A)	4,200	7,300	34,500
M16 – Cooperation (focus area 2A)	2,000	5,000	-

ERDF OP 2007-2013

Also in the previous funding period 2007-2013 the ERDF Operational Programme of Bavaria supported SME development. Especially the following measures of priority axis 1 on “Innovation and science-based economy” and priority axis 2 on “Competitiveness and employment, especially in SME” address small and medium-sized enterprises (StMWi 2007):

- PA 1 – “Support for clusters and networks”: State-wide cluster platforms shall strengthen innovation, cooperation and competitiveness of various branches, as defined in the “Cluster-Offensive Bayern” initiative. A fund for cluster projects shall facilitate the involvement of enterprises and development and innovation strategies shall help initiatives of universities, universities for applied sciences and SME to cooperate and implement joint activities.
- PA 1 – “Service institutions for enterprises”: Educational facilities that offer education and training measures in the fields of industry, trade and craft shall receive support. The

measure covers creating, modernising and equipping educational facilities. Special emphasis is put on facilities, academies and centres that are owned by the chambers or business associations.

- PA 2 – “Innovative financial instruments”: Within this measure, venture capital funds shall be introduced that primarily invest in SME with a focus on innovative and technology-oriented activities.
- PA 2 – “Innovative investment support for individual enterprises”: Regional support programmes help SME carry out processes of adjustment to new challenges such as globalisation. Special focus is put on the development of new and better products and services, new production methods and the development and implementation of processes.
- PA 2 – “Innovation support and promotion of technology-oriented start-ups”: By strengthening the technological capacity, this measure supports structural change processes, both in individual enterprises and in cooperation projects of enterprises, research institutions and universities. Support for start-ups is provided through technology-oriented business incubators or networking activities, for example.
- PA 2 – “Qualification services for enterprises”: This measure covers concepts for science-based economy, development of process innovation systems, innovation promotion and counselling for individual enterprises. This way, it shall help enterprises to optimise their processes, develop new markets and launch innovative activities.

EAFRD OP 2007-2013

Various measures of the EAFRD OP in the previous funding period address agricultural enterprises. However, only a few measures could be identified with a particular focus on SME. They are presented in the following:

- “Investment support for individual enterprises – modernising agricultural holdings” (121): This measure aims at improving production and working conditions and increasing the operational value of farm businesses. It covers construction measures, technical equipment, special machinery and other durable goods to produce, process and market agricultural products.
- “Improvement of the market structure – increasing the value added of agricultural and forestry products” (123): This measure aims at improving the competitiveness, profitability, quality of products, environmental protection, animal welfare and securing jobs in the food sector. Producer organisations can receive support to invest in various measures, from cooling and processing to packaging and the development of new products.
- “Alternative income – diversification towards non-agricultural activities” (311): In order to promote diversification and secure the multifunctional nature of rural areas, this measure supports building, purchasing or modernising immovable assets, new machinery and facilities to create additional sources of income and other more general services, e.g. services (architects, engineers), feasibility studies, patents and licensing.

Table 3.3: Allocation of ESI funding to SME support in Bavaria in thousand EUR (000)

	Period 2007-2013		
	EU expenditure	National expenditure	Private expenditure
ERDF total	575,934	446,586	786,011
Priority Axis 1 – Innovation and science-based economy	122,220	105,348	16,872
Priority Axis 2 – Support for competitiveness and employment, especially in SME	164,655	96,653	588,252
ERDF relevant for SME according to categories of	169,877	623,620	

	Period 2007-2013		
	EU expenditure	National expenditure	Private expenditure
expenditure (dimension 1: 03-09, 14)			
<i>Priority theme "RTDI and entrepreneurship"</i>			
03 – Technology transfer and improvement of cooperation networks between SME, universities etc. (PA 1 + 2)	23,728	33,261	
04 – Assistance to R&TD, particularly in SME (PA 1 + 2)	2,598	10,749	
05 – Advanced support services for firms and groups of firms (PA 1)	3,128	3,128	
06 – Assistance to SME for promotion of environmentally-friendly products and production processes (PA 2)	5,158	21,991	
07 – Investment in firms directly linked to R&I (PA 1 + 2)	24,079	99,716	
08 – Other investment in firms (PA 2)	92,197	393,048	
09 – Other measures to stimulate R&I and entrepreneurship in SME (PA 1, 2, 3)	18,589	61,326	
<i>Priority theme "Information society"</i>			
14 – Services and applications for SME (PA 1)	400	400	
EAFRD total	1,413,245	1,413,245	898,229
EAFRD relevant for SME (121, 123, 311)	115,870	115,870	807,729
Investment support for individual enterprises (121)	74,370	74,370	470,752
Improvement of the market structure (123)	40,000	40,000	320,000
Alternative income (311)	1,500	1,500	16,977

Table 3.4: ESI funding relevant for SME support in Upper Bavaria in thousand EUR (000)

	Period 2007-2013	Period 2014-2020
a) EU FP: Cooperative Research		
Project 1..		
Project 2..		
(Or all projects in total, if available).		
b) EU FP: Research for SME		
COSME	Chamber Business Talks (IHK Munich & Upper Bavaria; since 2009) One-stop-shops for start-ups/Agency for entrepreneurs in Bavaria (IHK Munich & Upper Bavaria; since 2007)	<i>none</i>
Horizon 2020		
Please indicate the themes of the FP research projects below		
InnovFin SME Guarantee. http://www.eif.org/what_we_do/guarantees/single_eu_debt_instrument/innovfin-guarantee-facility/	-	-
InnovFin SME Venture Capital http://www.eif.org/what_we_do/equity/single_eu_equity_instrument/innovfin-sme-vc/index.htm	-	-
d) National/regional funding		
e) Private funds/investments		

4 Results of the SWOT analysis

Internal factors – factors of competitiveness

Major strengths
Good accessibility, especially by road
Located in a booming region
Sectoral diversity; compared with Ingolstadt the region is less dependent on the automotive sector
Other strengths – less pronounced
Support for new enterprises that create synergies with existing enterprises
High share of innovative, technology-oriented manufacturing enterprises
Public technical secondary school and other training and education facilities
Support services and institutions to support and further develop the regional business sector
Major weaknesses
Lack of skilled workforce
Limited land availability and high price level
Long administrative processes
Insufficient provision of broadband access
Other weaknesses – less pronounced
Public transport not that well developed, i.e. high dependency on the car
Ambiguous factors – represent a strength in some of the businesses/industries, but a weakness in others
Still strong dependence on the automotive sector, which is good because it is a strong sector; however, dependence on a specific sector increases the vulnerability of the regional economy
Strong intra-regional economic ties are the backbone of the economy; at the same time the region could develop a stronger focus on export sectors (see "opportunities")

External factors – framework conditions

Major opportunities/drivers
Stronger export focus as an opportunity for future economic development
Creative and cultural industries as they generate significant turnover but only have low space requirements (see above: limited land availability)
Other opportunities/drivers – less pronounced
Soft locational factors and exploitation of the natural landscape in the tourism sector; potential for more intense cooperation between tourism and the agricultural sector, for example
Major threats/challenges/barriers
Lack of company successors (about 2,000) and succession arrangements in family-run companies as a threat for the SME sector with strong local/regional roots
Other threats/challenges/barriers – less pronounced
Competition between regions as other areas that are close by and offer a very high quality of life, such as Munich, attract highly skilled employees
Development as a dormitory town for Munich with a high number of out-commuters; people live in the county but have no social ties or roots in the area as most of their social life takes place in Munich
Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others
Digitisation can be an opportunity <i>if</i> broadband access is improved; if not, the region might be at the verge of falling behind

5 Future policy needs

Two main needs can be identified with regard to general framework conditions that are of main relevance for enterprises and for which enterprises depend on public support from national and European level: The general administrative burden and the access to high-speed broadband networks.

Bureaucracy reduction is an important field of action because the administrative burden increases constantly. Additional regulations enter into force but no old provisions are abolished in return. Administrative processes require more background and support documents than in the past. To comply with various provisions, it is necessary to document and keep records of every single step that is undertaken, be it with regard to building regulations, environmental protection or social standards.

Broadband expansion is another pressing need where different policy levels need to undertake joint efforts. So far, the expansion process could not keep the pace of technological progress and increasing needs of the enterprises. The enterprises need to cope with the challenges and opportunities of digitisation. Supplementary initiatives like business forums or other meetings help enterprises to develop ideas how to shape and contribute to the digitisation process. When it comes to infrastructure, however, they rely on the public sector to ensure the accessibility to modern high-speed infrastructures.

Both needs are of strong relevance when it comes to policy support on different levels because both issues cannot be overcome in the region as such. Instead, the regional players and businesses depend on legislative initiatives and funding instruments where the responsible decision-makers from state, national and European level act together and create synergies between their activities.

6 Annex

At the beginning of the case study, potential interviewees and participants of the focus group were identified and the list was agreed with the lead partner of the project. Unfortunately, it was more difficult than anticipated to involve regional players from Pfaffenhofen County to take part the case study to contribute with their tacit knowledge. This is the reason why it was finally not possible to organise a focus group in the region. Thus, the case study is mainly based on secondary data, an interview with one of the most central actors in the region (Johannes Kofner, director of SME development of “Kommunalunternehmen Strukturentwicklung” (KUS) on the 27.7.2017), and a rather broad set of available literature.

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Case study report: Västra Götaland

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1 Mapping the SME sector in the region

There are around 200 000 work units in Västra Götaland. Around 70% are one-person enterprises with no employees. Around 50% of all employees in the region work at large or medium-sized enterprises with more than 50 employees. The biggest employers exist within the public sector (care and education) and the transport industry. The share of people employed within the big companies has decreased since 2003 and today small and medium-sized enterprises have a higher growth rate compared to the large enterprises in the region. One explanation for this trend is that large enterprises more and more outsource production and job creating activities to contractors.

Overall, the Swedish economy is strong and almost all industries in Västra Götaland now experience a positive business cycle. For the fourth quarter in a row, GDP-growth has increased in the region and most indicators show good prospects for 2017. During the last years, the business sector in Västra Götaland has had an economic turnover above levels before the economic crisis 2008. The foremost reason for the positive economic development is due to the increases in trade and exports. The Swedish economy is highly trade dependent, which is also true for the regional economy of Västra Götaland. Development and growth of export and trade companies is therefore highly significant for the local economy.

Most SME in Västra Götaland are one-person enterprises or micro enterprises with 1-10 persons employed. This is also true for Sweden on average. In 2016, the share of one-person and micro enterprises in Västra Götaland was 68.7% and 24.4%. Looking at the short-term perspective, the prognosis for SME development in Västra Götaland expects that SME are to perform well and continue to have a positive business cycle. Total production volumes, inflows of orders from export markets and import markets as well as total numbers of employees are expected to increase during the next months (Q3 and Q4 of 2017). During spring 2017, the business activity has been even more strengthened, and the economic index for the region is at its highest level since 2005. The positive business cycle seen within the industry is foremost driven by the transport industry, which is the largest industry sector in Västra Götaland. However, all sub-sectors of the industry have high business activity and the prognosis report a continued positive business cycle for all sectors, except the graphic industry where the economic development continues to be slow. Life Science and IT/ICT are the number two and three major sectors in the region. Compared to Stockholm, the capital of Sweden, the number of main sectors is relatively few, which creates some vulnerability in the business structure. If one sector is not performing well or has a negative business cycle, it may significantly influence other sectors.

Looking at employment, most positive development in terms of increased employment is seen within the construction sector. Revenue and profitability is also expected to develop positively. The ICT sector expects to have a continued positive economic development, due to the continued high demand for IT services. There is a big demand for ICT services in the region generally; much due to digitalisation process of the public sector initiated on both a national and

regional levels. Compared to other sectors, the ICT enterprises developed very well during the economic set back of 2008-2009, and have continued to stay strong since then.

The low carbon economy is a growing sector in Västra Götaland and numbers of employed within green-tech enterprises have increased with almost 20% over the last decade. Exports from green-tech enterprises have also increased significantly. Västra Götaland has a large production of biogas and is at the forefront from both, the national and international perspectives.

2 Factors influencing the dynamics of the region (strengths, weaknesses, opportunities and threats)

West Sweden and Västra Götaland has a unique geographical location on the west coast, between the metropolitan regions of Oslo and the Öresund region. Gothenburg, the second largest city of Sweden and the largest in Västra Götaland, is an important regional business centre. Except Gothenburg, the areas of Borås, Skövde and Trollhättan/Vänersborg/Uddevalla are important regional centers. In Borås, the textile and design industry is strong due to an old heritage of Swedish textile manufactories operating in the region. In Trollhättan, the transport industry used to dominate the business structure because of the SAAB automobile factory, but has since it closed specialised towards the cultural and film industry, under the name "Trollywood".

There has been a two-way split in growth in the regional area during the 21st century with strong growth in the Gothenburg region and Sjuhärad, while development in Skaraborg and Fyrbodal has been substantially below the national average. The Gothenburg region has experienced a substantially better trend in population and employment compared the rest of West Sweden. Gothenburg both attracts people and business to the region. The Gothenburg region is also notable for a high level of education. In the other parts of West Sweden and Västra Götaland, the proportion of people with post-secondary educational qualifications is lower than the national average.

Traditionally, Västra Götaland is characterised with a business structure of manufacturing industries. The vehicle and transport industry has been an important factor for economic and business growth in Västra Götaland. The Volvo Group has its headquarters in Gothenburg, and is one of the world's leading manufacturers of trucks, buses, construction equipment and marine and industrial engines.

However, fewer workers are today employed at the big industry companies. Västra Götaland today has a diverse business structure with many strong enterprises within both traditional industry sectors as well as new high-tech sectors. Small and medium-sized enterprises stand for most of the employment growth in Västra Götaland. There is an existing trend that the big industries more often outsource production of service and input goods, which contributes to an increase in employment within small and medium-sized enterprises. As of today, 4 out of 5 new jobs in the region are created in small and medium sized enterprises and most of them within the service sector. This shift from a heavy industry region to a more diverse regional business sector is seen as positive, since it contributes to diversification and reduced vulnerability, in terms of resistance in negative business cycles.

The region is strong on infrastructure for innovation and knowledge sharing. There is a well-developed cooperation and interaction between universities, research institutes and regional development centres, science parks and business incubators. In total, there are 6 universities located over 5 districts in the region. The University of Gothenburg and Chalmers University of Technology, both located in Gothenburg, are well-known and nationally and internationally

respected universities. Both attract skilled workers from all over the world. The high-quality education and research contributes to and complements the regional business sector. Chalmers University of Technology has been an important source of competence in western Sweden for a long time. Large parts of west Swedish industry have been developed in close collaboration with the university. Business enterprise and close cooperation with industry and the rest of the community still form a strong profile. Areas of research that just now are given priority are bioscience, information technology, environmental science and nanotechnology. The University of Gothenburg provides an important impetus in the development of the region and lifelong learning is one of the university's high priority assignments. University of Gothenburg has at present about 52 000 students, 5 000 employees and a turnover of about 4.6 billion SEK. The Swedish School of Textile, part of The University of Borås, has several programmes where the creativity of art is combined with the ingenuity of technology. The programmes cover the entire field of textiles, from design through manufacturing to management and technology.

Overall, the business sector of Västra Götaland is highly knowledge-intensive and has good potential in exploiting opportunities brought from the universities, as well as exploit business opportunities that arise when the business structure shifts from being industry-intensive to becoming more sectorial diversified. Factors such as international dependency from enterprises operating on national and international markets, high competitiveness, high level of specialisation and the presence of strong networks within national significant sectors have contributed to the strong development now seen in Västra Götaland. The Swedish economy is performing well, which is expressed as a major contributor to SME development in Västra Götaland by several reports, interviewees and experts. Employment continues to increase in the region and is at better levels than the capital Stockholm.

The industrial heritage and big-company tradition of Västra Götaland has made the region somewhat weak on factors such as corporate renewal and entrepreneurship. The region is lacking the background when it comes to start ups and entrepreneurship, making these questions a bit more challenging for Västra Götaland. However, with the many science parks, business incubators and test-platforms that have been established in the region over the last decades, Västra Götaland now provides good opportunities for entrepreneurs and innovators to test and develop their business ideas. Västra Götaland focuses and work actively with clusters, science parks and open innovation parks, something that is not done equally extensively in other urban regions in Sweden. Both Stockholm and Malmö focus more on creating project arenas and platforms for networking. The focus on science parks and innovation platforms in Västra Götaland, and the close relations between universities and business sectors, is described as an important strength of the region in terms of SME development.

Discussed by several interviewees, experts and expressed in reports, one of the main hindrances and threats for SME development in Västra Götaland is the lack of labour and problems of matching worker supply and demand. Many companies in the region experience trouble re-

cruiting workers with the right skills, knowledge and competences. 57% of enterprises answered in a survey performed by the labour market organisation Swedish Enterprise that they find it much difficult or rather difficult to recruit workers. In the short-term perspective, the region faces challenges of matching worker supply and demand and satisfy companies' needs of workers. In the long-term perspective, a shortage in skilled workers result in companies' risk losing in competitiveness and innovation abilities. The general low educational level and the lack of competence is a challenge that threatens future competitiveness of regional enterprises. The region must create conditions where companies can grow and meet the challenges as well as opportunities that comes from an increased demand for effectiveness and automatization. The problems of a lack in skilled work force is especially prominent within the ICT sector. Despite the many universities and research centres operating in the region, and with a special focus on technology and ICT, there is a shortage of skilled workers. According to interviewees and experts, too few is educated in ICT related subjects. This problem faced by the ICT sector is also intensified due to the high demand for ICT services and ICT competences. The number of workers with right skills and newly examined does not match up to the high increasing demand. Not an issue of matching workers with employers, but instead a question of too few worker on the labour market with the right skills needed.

Even though problems of finding skilled workers are considerable in Västra Götaland, and hinder SME development, it is not a unique problem for the region if comparing to the rest of the country. Problems of matching worker supply and demand and finding the right skills is seen in almost all Swedish regions, as well Stockholm. Important to emphasize is that the lack of labour is not because too few workers are moving into the region. The region does not differ from other metropolitan regions with regard to the trend in urbanisation. Only 14% of enterprises operating in Västra Götaland experience problems that work applicants do not want to move into the region for work. However, the region must continue its work of making Västra Götaland an attractive region to live, study and work in to be able to remain competitive.

Politicians' attitudes towards business operation are described as a determinant factor of the business climate. In a survey from 2016, businesses in all over Västra Götaland were asked to state how they experience the attitudes of their local politicians. On a scale from one to five, nine out of 49 municipalities received the grade over acceptable (4) and eight municipalities got the grade not fully acceptable (2). The rest were considered as acceptable (3). The result does not vary much from the national average. In the same survey, more than half of the regions 49 municipalities state that they experience that public activities have a tendency of displacing private businesses. Regarding how businesses experience the competitiveness between local activities and private businesses, all municipalities in Skaraborg and Fyrbodal perform below the national average. The public sector must increase their understanding for SME and how they contribute to societal development to provide better support and establish conditions that simulate SME development. The understanding of SME varies in the public sector. Representatives at organisations that work directly with business development have a

good knowledge of enterprising and what SME needs. Other institutions may lack this understanding. Overall, the knowledge and understanding of how enterprises contribute to societal development must increase in the region. Companies understanding of the public sector is something that can also be better. Interviewees report that enterprises' understanding of how governmental processes can be low. A mutual understanding between the public and business sector can be improved to create better conditions for business development.

Schools are considered as an important contributor to the business climate in the region. Entrepreneurial courses are offered at the school level, e.g. a course in young enterprising where students can start and manage their own business during their final year in high school. Some students choose to continue their business after leaving school.

The legislative framework is described as both contributing and preventive SME development. Labour market laws and laws regarding taxation are enterprise friendly and do not discriminate against SME. Sweden has one of the lowest business tax in Europe of 22%. However, legislation regarding public procurement is perceived by enterprises as complicated and very time consuming. SME do not have the resources necessary to partake in public procurement processes. Enterprises experience that building and planning permits take a long time to get. Enterprises must sometimes put projects and investments on hold due to slow and long processes of getting the necessary permits. This affects competitiveness negatively, both domestically and internationally. Terms of regulation and legislation are foremost a question on national level and difficult for regional actors to change.

The infrastructure of Västra Götaland both contributes and hinders SME development. The region has many good transport communications, i.e. a regional train-rail system for passenger and goods transportation, Landvetter which is the second biggest airport in Sweden, and the port of Gothenburg. The port of Gothenburg is the largest port in Scandinavia. Each year, goods worth a 500 billion SEK passes through the port, which is equal to 25% of Sweden's total international trade.

Commute transportations options varies a lot in the region. Gothenburg has a large commute transportation system, whereas other cities in the region lack good public transportation. This affects the possibility of workers getting to work. Overall, it is difficult to travel with public transportation during non-day hours, e.g. late evenings and nights. Many enterprises in Gothenburg have production during 24 hours.

Innovation capability and internationalisation are two major future challenges of Västra Götaland. Global competition increases the need of better and more innovative goods and services. Today, Västra Götaland has a good infrastructure for research and innovation and a high level of R&D investments come from the business sectors. However, most investments go to big international enterprises outside of the region. To increase innovation and innovation capability of the whole business sector in Västra Götaland, more companies of different kinds must be able take advantage the research and innovation competence that exist in Västra Götaland. Today, small and medium-sized companies act mostly on the local or re-

gional market. By increasing internationalisation of SME, by both increasing export and import, there is a great potential of increasing SME revenue and employment. Asia, Latin America and Africa are identified as potential markets. Norway, due to its geographical closeness and strong economy, is also an important market which may contribute to the growth of SME in Västra Götaland.

Västra Götaland as region is far ahead relative to many other regions in Sweden and Europe in terms of questions of sustainability, green innovation etc. Engaging in green solutions regarding technical developments, production of goods and services, new business models and other innovations provides opportunities and competitive advantages for SME's on both national and international markets.

3 Governance issues

3.1 Institutions and governance levels

Västra Götaland constitutes of 49 municipalities, organized under four associations of local authorities. The four associations are The Göteborg Region Association of Local Authorities (GR), Fyrbodals municipal association, Skaraborg municipal association and Boråsregionen – Sjuhärads association. The associations work to contribute towards long-term sustainable development in the member municipalities and to be a platform for cooperation where the municipalities can be more effective. Each association is engaged in questions regarding regional planning, environment, traffic, job market, welfare and social services, competence development, education and research. The task of each association is to promote co-operation over municipal borders and provide a forum for the exchange of ideas and experience within the region.

The four associations are represented by the regional organisation VästKom, which has the objective to develop and stimulate interaction between the 49 municipalities in Västra Götaland. Besides stimulating cooperating among municipalities, VästKom also represents and assist municipalities in their interaction with other regional institutions, such as Region Västra Götaland (VGR) and The County Administrative Board of Västra Götaland.

Region Västra Götaland is the responsible actor of strategy for growth and development in the region. The organisation is governed by democratically elected politicians and have over 50,000 employees, making the organisation one of Sweden's biggest employers. The political part of the organisation decides on the direction of the organisations activities and objectives, as well as the economic and financial framework. The committee of regional development is responsible of financing initiatives and measures to support growth and development of Västra Götaland. All initiatives are performed within the framework of different regional strategies and programmes, e.g. EU programmes. VGR is the main distributor of public funding to other regional institutions and actors working to promote SME development. They are the responsible actor of allocating funds that The Swedish Agency for Economic and Regional Growth distributes. VGR also finances several SME supporting programs, e.g. investment support programmes and other financial support instruments.

VGR operates closely together with the 49 municipalities in Västra Götaland, as well as trade and industry, academia and other organisations. All strategic questions of regional development are discussed between VGR and the 49 municipalities in a common forum with direct and formal links to regional decision making.

The County Administrative Board of Västra Götaland is responsible for sustainable growth in Västra Götaland. The authority serves as a link between the people and municipalities of Västra Götaland on the one hand, and between the government, Parliament and national authorities on the other. One of the objectives of The County Administrative Board is to stimulate business and associations in the region. By providing various grants and allowances, the

County Administrative Board helps create a good business climate, good infrastructure in the form of roads, communications, education and research as well as access to capital. Governmental funds are once a year allocated by The County Administrative Board to be used for different enterprise allowances in the region, designed to help the county's businesses with their long-term profitability and growth. The board provide grants for investment, marketing, growth of innovation and training in small and medium-sized businesses. The scope and direction of the allowances varies over time, depending on the resources and specific assignments that the government has issued to the counties. The County Administrative Board encourages the business sector to work with aspects related to equality, the environment and integration to ensure that they are an integral part of sustainable development and growth. The County Administrative Board also work, in close collaboration with the Swedish Competition Authority, to promote efficient competition in the private and public sector. The County Administrative Board of Västra Götaland is the regional institution responsible for the regional EARDF programme.

An important actor of SME development in the urban area of Gothenburg is the City of Gothenburg. The city is responsible for developing the cross-sectorial integration plan for sustainable city development, a mandate directed by the ERDF programme West Sweden 2014-2020. Implementation of the plan shall be guided by the objective of being beneficial for SME and contribute to employment and growth. The City of Gothenburg influence the business development in the region of Gothenburg in several ways, e.g. direct and indirect control over infrastructure, has educational responsibility, oversees licenses and regulations, own land and premises that enterprises may utilize. In recent years, the City of Gothenburg has signed agreements with the University of Gothenburg on in-depth cooperation with regards to education, further education and commissioned courses. The university has such agreements with other actors operating in the region as well, such as GR and VGR.

The organisation structure of the City of Gothenburg is divided between a public administrative part and a business structure. The city of Gothenburg owns several companies that in different ways support the city development and SME development. Business Region Gothenburg (BRG) is such company, which is responsible for the business development of the region of Gothenburg. The organisation represents thirteen municipalities and the main objective of Business Region Gothenburg is to work for a better business climate in the region and contribute to a high level of employment and diversified industry and commerce in the region. The organisation has a special focus on small and medium-sized enterprises. The three core areas of focus are business development, establishment & investment and Cluster & Innovation. The organisation keeps close interaction with The Gothenburg Region Association of Local Authorities (GR). One of the interviewees describes the role of BRG to be much of a coordinator in the work of business development. BRG often guide SME's and entrepreneurs to the right actor for their continued development and match enterprises with different programs and projects. Business Region Borås is a similar organisation operating in the Borås – Sjuhärad region. Both these Business Region organisations are publicly financed,

with financial means from VGR (50%) and municipalities of each region (50%). No quantitative evaluations or assessments of the Business Region organisations impact has been made, but interviewees argue for their importance and effectiveness. Employees of these organisations report that the services they provide to enterprises are much appreciated and firms that get their support show positive results in terms of growth, and perform better than the control group.

Examples of national governmental institutions represented in the region, and related to business growth and supporting SME development are The Swedish Agency for Economic and Regional Growth, ALMI Invest and The Public Employment Service. All three institutions have offices in the region, or multiple offices as for The Public Employment Service. The Swedish Agency for Economic and Regional Growth operates under the Ministry of Enterprise and Innovation, responsible for entrepreneurship and regional development. The Agency administers the national ERDF program and the regional office oversees the regional ERDF program West Sweden. ALMI invest WEST provides loans and venture capital to SME in Västra Götaland. Loans vary in size and form, depending on the needs of enterprises. Examples of loans are micro loans, investment checks for enterprises wanting to start export.

The Public Employment Service runs several operations that support the business life of Västra Götaland, e.g. provides support for enterprises regarding recruitment processes and help firms in finding workers with right competences and skills. The Public Employment Service operates several programs and initiatives aiming at making it easier for enterprises to recruit immigrants. Competence supply is a major issue in the region and SME experiences a hard time finding workers with the right skills and background.

The Svinesund Committee is an example of an inter-regional collaboration between Norway and Sweden, with a focus on cross-border co-operation in the border region between Gothenburg and Oslo. The Svinesund Committee is one of twelve Nordic border committees and is responsible for cross-border activities to promote business developments, extensive commuting and vast flow of goods. The point of departure for the Committee are the policies of the regions of Västra Götaland and Østfold. Svinesundskommittén has actively decided not to create its own policies, rather be the organisation that co-ordinates existing policies. The Committee runs several networks and is active in networks together with universities, firms and different regional organisations. It also co-operates with other border committees and contributes to the work on border obstacles on national level and on EU level.

3.2 Policy strategies in place

Two regional policy documents relevant for SME development in Västra Götaland is *The Vision of Västra Götaland – “The Good Life”* and *VG2020 – Strategi för tillväxt och utveckling i Västra Götaland* (Strategy for growth and development in Västra Götaland). These documents state the overall aim and objective of regional and business development. The four Regional Associations of Local Authorities each have their own strategy documents dictating

each district's action plan regarding overall regional development, and specific business development strategies.

The Vision Västra Götaland is the shared vision of Region of Västra Götaland (VGR) and the 49 municipalities in the region. The vision states the future desired state of affairs that the region shall strive for in their regional development work. The vision is built on three parts: (1) Sustainable development in terms of economic, social and environmental sustainability, (2) The perspectives of One United Region, Equality, Integration and Internationalisation, and (3) the five focus areas: A powerful and sustainable business sector, Leading in competence and knowledge development, Infrastructure and communication of high standards, A region with leading cultural sector and Good health.

The vision emphasises five importance areas for business development. These are to create opportunities and environments where new products and services can develop, to compete on a global market and attract investment both nationally and internationally; strong collaboration between academia, business and the public sector in order to strengthen innovation and clusters; opportunities for entrepreneurship and starting new businesses; strive for a sustainable and well-functioning labour market with high levels of employment; keep Västra Götaland an attractive tourism region. The vision also encourages to strive for a business sector that utilizes the opportunities of an equal and culturally diversified labour market.

The Strategy for growth and development in Västra Götaland, *VG2020 – strategi för tillväxt och utveckling i Västra Götaland* is the regions primarily strategy document which sets the overall framework for the regional work on growth and development. The current strategy plan covers the years 2014-2020. The main objective of the strategy document is to strengthen Västra Götaland as an attractive, responsible and a competitive knowledge-intensive region internationally. The strategy is described as the main tool to reach the overall regional common vision of "The Good Life". Both the regional development program VG2020 and the common Vision of Västra Götaland was developed in close collaboration with municipalities and organisations in the region. Both documents states models for monitoring and evaluation, and formally distribute responsibility for this to the common Committee for Sustainable Development.

The Region Västra Götaland (VGR) has a policy strategy for SME development. The current action plan covers the years 2016-2018. The action plan centres around two main priority areas: Business Climate & Innovation and Market development. All activities performed within each area of focus have well defined target groups and are to be customized to the needs of SME's. Sub-areas of focus are to simplify the process of running a business, public procurement, skills supply, knowledge transferring, new markets and finance opportunities. The plan also aims to contribute to equal terms for men and women wanting to start a business. The policy document stresses the importance of utilizing enterprise and innovation power from all kinds of people, to create a diverse pool of entrepreneurs and businesses. A business sector consisting of different types of companies contribute to innovation and development of indus-

trial and commercial life in the region, as well as sustainable growth. The Region Västra Götaland (VGR) has recently launched a pilot program to measure the allocation of program funding between men and women. The aim is to allocate resources equally between the sexes, guided by the principle of 40/60% to one of the sexes. With the perspective of equality in allocation of resources, public actors whom finance SME development and are embodied by the regional action plan are to define how they will integrate equality and diversity in their everyday work.

VGR is now in the process of developing a new action plan (period 2017-2020) for entrepreneurship and start-up companies. The action plan emphasises on young people in rural areas, integration through enterprising and women's' enterprising and isolation of young people on the labour market. Activity support will be given actor who promote entrepreneurship.

Alongside policy strategies directly concerning SME development, the Västra Götaland Region has implemented climate strategies influencing the regional work on business development. One such is the Climate Strategy of Västra Götaland, which emphasizes the usage of smart energy and how the region and all actors together shall work for sustainable development. Alongside the regional Climate Strategy, Västra Götaland has an ambitious vision of reaching a fossil free energy system in 2030. The vision is a broad arrangement between the region's municipalities, the business sector and academia. The regional commitment of shifting and adjusting to a fossil free energy system provides new business opportunities for SME's and is especially relevant for the case study's focus sector Low-carbon economy. A policy strategy relevant for one of the study's other focus areas, the ICT sector, is the Digital Agenda. The Digital Agenda is a governmental initiative from 2011 focusing on digitalisation of the public sector all over Sweden. Västra Götaland has developed a regional strategy of the Digital Agenda, a work driven by the organisation VGR. The regional digital agenda was developed in close cooperating with local authorities and The County Administrative Board. The business sector was invited to participate in a reference group. Both the national and regional digital strategy is described by interviewees as very important for SME development in Västra Götaland. As the region focuses more on digitalisation, more jobs and opportunities are created in the ICT sector and it contributes to more people getting interested in ICT businesses and increases the demand for knowledge and services within IT. VGR has during the last years focused much on standardising and stabilizing the technical infrastructure of the region. A work that has partly been performed together with the county council.

Other supra-regional policy strategies that have influenced the region and are relevant for SME development are the national policy of changing the care system so that people could choose their own selection of caregiver, instead of being given a certain public care giver based on one's regional area due to housing address. This structural change of the care system opened the opportunity for private actors to enter the market and provide care services side by side public actors. The possibility of selection of caregiver was implemented in Västra Götaland in 2009, and has, according to interviewees, been important in the development of

businesses and SME, particularly regarding the ICT sector. This since the care sector requires a lot of IT solutions and IT systems.

Another influencing policy strategy has been the nation-wide export strategy to support internationalisation of SME that was launched in 2015 by the Swedish government. The strategy came as a response to the fact that many Swedish enterprises had expressed the need of improvement regarding coordination of governmental support in questions of export and internationalisation. As part of the national export strategy, the concept of “Team Sweden” was launched. A systematic network coordination all public support on export and internationalisation. Also, six regional export centres across the country was established. The centres are to function as a support institution for enterprises on questions of internationalisation and export. Västra Götaland has one regional export centre operating in the region. As of today, the initiative is still quite new and it is difficult to see any direct effects so far from the policy initiative. However, the implementation of regional export centres is predicted to have a good impact in SME development and is much appreciated among companies that have been in contact with the centre.

A not yet implemented policy initiative, but if implemented may have an importance influence on SME development and business opportunities, is the new regulation framework regarding public procurement, proposed by the government in 2016. The new framework aims to give authorities more flexibility in public procurement process and increase the focus on innovation. Also, the framework would have an increased focus on small and medium-sized enterprises and their possibilities to participate in public procurement processes.

With regards to smart specialisation strategies, Västra Götaland has been a long-time practitioner and the introduction of the conception of smart specialisation from European level has not influenced the work on regional development in Västra Götaland.

3.3 Support instruments for SME and the three focus sectors

Small and medium-sized enterprises is a big constellation of different types of enterprises. The category includes everything from innovative entrepreneurs and start-ups, non-innovative entrepreneurs, SME with high-skilled workers, SME with low-skilled workers, SME focusing on product development, service development etc. All of types of SME are active and operates in Västra Götaland. Due to differences in business focus, support systems and support instruments need to be diverse and meet and answer to different types of needs among SME. Support systems for SME in the region tend to be more customized towards innovative entrepreneurial enterprises with a high-tech and green economy focus. These instruments are seen to have a positive impact and stimulate SME growth within certain sectors. However, more basic SME businesses have difficulties to gain utility from these support systems.

Västra Götaland has several science parks, open innovation networks and business incubators supporting SME growth. These platforms offer support for small and medium-sized enterprises and provides an environment for start-up enterprises and entrepreneurs where they

can test and develop business ideas and products. This type of support instruments targets SME within all three the focus sectors: ICT, creativity & knowledge economy and low-carbon economy. The six science parks located in Västra Götaland are connected in a regional network, ensuring efficiency and synergies between them. The parks have their own focus areas which contribute to the regional smart specialization strategy as well as societal challenges, as addressed in the regional climate strategy. Skövde is today, much because of the collaborative efforts at the science park, a leading Swedish location for the computer game industry. Innovatum in Trollhättan focusses on production technology, transport, energy and creative industries. Borås science park operates around the focus areas of textile, trade & logistics and city development. The Software Centre is another example, which is a partnership between the two universities Gothenburg University and Chalmers, and regional ICT and vehicle industry. The Science Parks and incubators in Västra Götaland show very good results in both a national and international perspective. Lindholmen Science Park, a park with focus on the ICT sector, Media and Transportation, has more recently started working more specifically towards SME's and initiating programs and services that targets small enterprises. The new added focus on SME and SME-customized services is a result from the fact that small and medium-sized enterprises typically need and require other forms of support, compared to larger firms. For example, one interviewee working at Lindholmen Science Park says that SME often lack in resources, and may need shorter programme periods to be able to participate in programmes and projects provided by the science park. Also, shorter and easier application processes for financial funding and programs may increase the opportunities for SME to participate in development support initiatives.

Overall, science parks, business incubators and test-platforms active in the region are considered to contribute to SME growth significantly. Results show that firms participating in these types of support instruments perform better compared to firms that do not.

Region Västra Götaland (VGR) provides several support initiatives and programmes for SME. The main objectives of their programmes are that they should result in new investments, increased employment and/or production. SME support is provided in forms of different loans, investment contributions, consultant checks and Research and Development card. The R&D-card is a support programmes where SME can apply for up to 500 000 SEK (50.00 euros). The purpose of the support instrument is to help enterprises increase their scientific knowledge to be able to develop goods, services and processes, which may provide firms with competitive advantages, e.g. strengthen immaterial resources or lower production costs.

Overall, the support programmes and instruments provided by VGR are found to have a positive impact on SME utilising the support instruments. Financial support instruments are foremost used by enterprises for consultant support and different types of investments, stated by an evaluation study of VGR financial instruments from 2016. Almost 60% of SME participating in the study says that the funding helped to develop new products and services. Only a small share of the funding was used for markets activities, in Sweden or other countries. The report

states that SME experience that the financial support provided by the VGR makes a difference for enterprises in their planning of development activities. A third of the investments made would not have been possible without the financial support, and around half of the investments would have been made in smaller scale. 8 out of 10 enterprises argue that the financial support contributes to production processes having higher quality and are more effective. 75% of the firms participating in the study argues that the funding has contributed to increased competitiveness. VGR receives very good reviews by the companies regarding management of the support instruments and contact with the firms.

The same evaluation report also performed an effect analysis of the VGR financial instruments. The effect analysis shows that firms utilising VGR financial support instruments in many ways performs better than the control group. However, the results do not show of any effects when looking at the target variables employment growth, turn-over growth and productivity growth. A conclusion drawn from the analysis was that VGR should see over the principles that guide if enterprises get support or not, which type of enterprises get which type of support. The study showed that enterprises that got the same type of support instruments were showing big differences in results. The report concluded that this fact may indicate that enterprises have different preconditions, which affects how much they gain from the support.

Besides financial support, VGR also organizes open seminars on public procurement where SME can participate free of charge to learn more about the public procurement process. VGR also manages the web-platform www.genvag.nu, where entrepreneurs, innovators and small enterprises can easily get in contact with support council and capital. The purpose of the platform is also to constitute a forum where SME can meet and get in contact. Another example of a support system in form of a web-platform is the initiative Move to Gothenburg, which aims attract and welcome highly skilled international talents and help them to establish in the region. The portal offers support and information of which authorities to contact regarding residence and work permits, register with authorities, where to find preschools and schools etc.

There exist several growth and development programmes available for SME, managed by different actors and both publicly funded and privately funded. Business Region Gothenburg (BRG) provides one such programme, Expedition ahead, that has been successful in increasing SME's financial growth. Target group are small-sized enterprises that themselves want to become a growing company. The financial performance of each company is measured before, during and after the programme period and results show that SME participating in the growth programme perform better than the control group. Participating SME also performed better during the financial crisis of 2008-2009. Evaluations of the programme has stated that from a public perspective was the programme very good, since it generated positive results of SME growth and public financial spending's were relatively low. The Born Global acceleration programme managed by Chalmers University is another example of a successful support instruments which improved SME financial performance. The Born Global

program was a national business development programme aimed at assisting Swedish ICT firms in developing the relevant skillsets to build scalable growth companies. The programme's main purpose was to assist SME that wanted to internationalise their business idea to find a model for scalable growth both domestically and internationally. Based on the premise that the overall success of such firms is dependent on their ability to also succeed internationally, the programme trained the CEO and their closest colleague(s) in business prototyping, a method based on customer development and lean start-up methods. The programme was aimed at companies that were at a very early phase in their development, as this would increase the potential influence that the programme might have in finding a scalable international business model.

Other examples of support programs for SME and innovators provided by Chalmers University are Produktion2030, Technical transformation and Chalmers Ventures acceleration program. All programmes provided by Chalmers have in common that they aim to ease the process of transferring results of science and innovations projects to SME, and thereby also in a natural way create contact between enterprises, science institutes and academia. The Chalmers Ventures acceleration program as a collaborative network which introduces SME to relevant actors for their business development. Another example of a collaborative network where Chalmers is present is the network Industriell Dynamik (Industrial Dynamic). The network consists of 15 member organisations, and is financed by VGR (around 7 million SEK each year). The network aim to function as a resource for technical and business development of small and medium-sized industry enterprises in all over Västra Götaland.

ESI funding to support SME

The main objective of West Sweden's Regional Structural Funds Programme for the 2007-2013 programming period was to enhance the regional economic growth by creating more enterprises and encourage entrepreneurship. The objective was also to contribute to new job creations and facilitate a sustainable regional development. The program aims were formulated as to enhance knowledge-based innovation, overcome problems of certain city areas and strive for a common goal for the region and the City of Gothenburg. Thematic objectives and priority axes of the programme were (1) Entrepreneurship & Innovative businesses, (2) Collaboration Initiatives & Innovative Environments and (3) Sustainable City Development.

Almost 44% of the total funding was allocated to the priority axe Entrepreneurship and innovative Businesses. Financial plan for the priority axe Entrepreneurship and innovative Businesses was from EU support, 25 812 619 SEK and from national counterpart, 46 099 099 SEK.

Important lessons learnt from the programme 2007-2013 were that the added value from the Structural Funds is greatest where the level of innovation is high, and lasting, long-term results are achieved by building sustainable structures. There was also found to be a lack of collaboration between Västra Götaland Region and the neighbour region Region Halland, both part of the West Sweden programme. The result were two strategies within the same

programme. By increased cooperation among the regional actors responsible for development, increased learning and procurement skills could be achieved. Cross-regional cooperation provides stakeholders and project sponsors with a larger base, access to more skills and greater opportunities for learning in the project work. Another assessment of the West Sweden programme 2007-2013 were that academia had too big influence in the formation of projects, which resulted in too large focus on creating new knowledge, and too little focus on commercializing project results, products and services.

The overarching objectives for West Sweden's operative program for programming period 2014-2020 were to strengthen the competitiveness of small and medium-sized enterprises, contribute to a more low-carbon economy and promote sustainable urban development. The target group is small and medium-sized enterprises. Activities and results in the programme are to be focused on small and medium-sized enterprises. Thematic objectives and priority axes of the programme are (1) Strengthening research, technological development and innovation, (3) Enhancing the competitiveness of SME and (4) Supporting the shift towards a low-carbon economy in all sectors. Selected investment priorities are (3a) Promoting entrepreneurship, in particular by facilitating the economic exploitation of new ideas and fostering the creation of new firms, including through business incubators, and (3d) Supporting the capacity of SME to grow in regional, national and international markets, and to engage in innovation processes. Justification for selection of investment priorities were formulated as:

"West Sweden needs more new innovative fast-growing enterprises for increased employment and a more diversified and less vulnerable business structure. More companies need to be created and established in all parts of Gothenburg, for increased employment and to contribute to reduced social exclusion." (Tillväxtverket, 2016)

And "Many West Swedish SME do not have their own development resources for innovation. — West Swedish SME need to utilise their potential better in new growth markets." (Tillväxtverket, 2016)

According to the financial plan for the thematic objective (3) Enhancing the competitiveness of SME, 21 510 655.00 euro are to be allocated from EU support, and 32 265 983.00 euro from national counterpart. As of today, 178 million SEK (around 17 800 000 euro) has been allocated to projects within thematic objective 3, which stand for almost 40% of the total programme funding.

Regarding the thematic objective (3) Enhancing the competitiveness of SME, disbursement of grants per year was 4 million SEK 2015, 17 million SEK 2016 and 9 million so far for 2017. The budget of project means for measure "Enhancing the competitiveness of SME" For the ongoing programme period, a total of 33 cases has been accepted as recipient of project means.

The Regional Structural Funds Programme for West Sweden is one of several tools to implement the regional development strategies. The programme is also one of several tools to

implement the Europe 2020 strategy. The concepts of smart, sustainable and inclusive growth, which relate to the economic, social and environmental dimensions which the regions and regional growth policy must deal with, are used in the Europe 2020 strategy. Overall, the region strives to obtain synergies between different programmes and funds. This by utilizing programmes strategically and as measures to reach regional objectives. Create synergies not only between the operative programme of ERDF and for example Horizon 2020, but also more generally between regional, national and European means.

The Regional Development Programme of the EARFD fund has six priority areas and 15 focus areas. The region of Västra Götaland has developed their own action plan, which is developed in collaboration with responsible authorities and regional actors of the ideal, private and public sector. Regarding support of SME, relevant priority and focus areas of the action plan of Västra Götaland are number two (2) and six (6). Priority area number two (2) focuses on better profitability and competitiveness of all kinds of agricultural enterprises and to stimulate innovative agricultural techniques. One focus area of number two, is to make it easier for young with right competence and skills to start business within agriculture, gardening and reindeer management. Priority area number six (6) focuses on stimulating and improving social and economic development in rural areas, and has the focus areas of a) promote business diversification, creating and development of SME and b) promote local development in rural areas.

Regarding Horizon 2020, in 2016 the overall programme participants in Västra Götaland were 251 in number. The regional share of participants constitutes 20.1% of all Swedish participants in 2016. Number of coordinators were 68, which make up 21.5% of the total number of coordinators in Sweden. Total means distributed in Västra Götaland 2016 were 132 065 832 euros. That equals 18% of all allocated programme means in Sweden. 650 844 euros were allocated to businesses. Allocation of means to Universities was 70 692 793 euros. 729 881 euros were allocated to SME programme in Västra Götaland. No specification of regional share of SME participants was accessible.

In Sweden, the total means in 2016 were allocated to projects thematic categorized accordingly: 60.9% to Social challenges (246 projects), 29.5% Industrial leadership (142 projects), 5.4% Excellent Science (49 projects), 2% EC (9 projects), 1.9% Euratom (8 projects) and 0,1% each to Science with and for society (1 project) and Spreading excellence (1 project). No statistical data on allocation of funding over the programme period 200-2013 has been accessible.

Table 3.1: Allocation of ESIF funding to SME support in the region in thousand EUR (000)

	Period 2007-2013			Period 2014-2020		
	EU expenditure	National expenditure	Private expenditure	EU expenditure	National expenditure (budget)	Private expenditure
ERDF						
Strengthening					203 033 688	

	Period 2007-2013			Period 2014-2020		
	EU expenditure	National expenditure	Private expenditure	EU expenditure	National expenditure (budget)	Private expenditure
research, technological development and innovation					SEK	
Enhancing the competitiveness of SME					180 474 395 SEK	
Supporting the shift towards a low-carbon economy in all sectors					67 677 893 SEK	
EAFRD (national)						
FA_2A/M04				111 980 925	163 834 161	
FA_2B/M06				6 564 399	9 604 071	
FA_3A/M04				3 620 073	5 296 363	
FA_3A/M14				51 405 037	75 208 355	

Table 3.2: ESI funding relevant for SME support in the region in thousand EUR (000)

	Period 2007-2013	Period 2014-2020
a) EU FP: Cooperative Research		
No data found.		
b) EU FP: Research for SME		
COSME Examples of relevant practices in the Small Business Act Database are: 883 Regional procurement guide with practical examples, 894 Creation of a startup accelerator on the Internet apps and cloud computing model, 885 Business networks and network contract, 875 Online administrative burden calculator, 877 Entrepreneurship through Education Scheme, 798 Knowledge as a success factor, 313 Export Incubation Programme.		
Horizon 2020 See page 16 for data over Västra Götaland.		729 881 EUR (2016)
Please indicate the themes of the FP research projects below		
InnovFin SME Guarantee. http://www.eif.org/what_we_do/guarantees/single_eu_debt_instrument/innovfin-guarantee-facility/ Intermediaries 2017: ALMI Företagspartner, Norrlandsfonden, Svensk Exportkredit. (Loan/Guarantee). Theme: Enterprises research and development activities. Total participants in Sweden: 23. Allocation of means: 1 393 751 euros.		
InnovFin SME Venture Capital http://www.eif.org/what_we_do/equity/single_eu_equity_instrument/innovfin-sme-vc/index.htm Theme: Innovative Swedish enterprises. The European Investment Fund (EIF) and Swedish company Almi Företagspartner signed in 2015 the first InnovFin SME guarantee agreement in the country under Horizon 2020 to finance innovative companies.		127.5 million EUR (2016, 2017)
d) National/regional funding		
e) Private funds/investments		

3.4 Results of the FOG Test

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities steer decisions made over matters related to SME and entrepreneurship support structures and mechanisms in the region in a unilateral manner.		
	Regional authorities exercise their powers mainly providing services and resources, in turn monitoring the achievement of specified objectives with respect to SME development (performance and results oriented)		
	Regional authorities collaboratively develop and foster, with key stakeholders, SME and entrepreneurship support structures and mechanisms in the region.		X
	Regional authorities have delegated powers to other entities or relevant stakeholders as a way to proactively develop and foster SME and entrepreneurship support structures and mechanisms in the region.	X	
	Practices and actions undertaken		
A1.0	Is the development of an entrepreneurship culture in the region rather organically driven (grassroots movements) or rather stemming from a top down approach (institutionally driven)?	Both top down and bottom up driven.	
A2.0	Which main actor/s is/are informally driving the promotion and shaping the development of an entrepreneurship culture in the region?	Schools (by the entrepreneurial program Young Enterprising) and Universities and research institutions.	
A3.0	Which main actor/s is/are formally driving the promotion and shaping the development of an entrepreneurship culture in the region?	National authorities.	

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities, along with other actors create partnerships to foster an entrepreneurship culture in the region, going beyond the national or European framework/requirements.	X	
	Activities intended to promote an entrepreneurship culture are financially supported and closely monitored to optimise the efficiency, effectiveness and transparency of the actions undertaken by stakeholders receiving support from the regional authorities.		X
	A top down approach is adopted by regional authorities when promoting the development of an entrepreneurial culture (e.g. initiatives on the organisations of start-up conferences stem from local authorities)		

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities are enabling all actors to take on the initiative to promote the development of an entrepreneurship culture in the region (e.g. via advisory services, training)		
B1.0	Which actions are undertaken in the region to develop an entrepreneurial climate and culture?	B1.1: Entrepreneurship courses offered at schools B1.2: University level B1.3: Courses for unemployed persons B1.4: Competitions and awards. Less prominent: B1.5: trade-fairs B1.6 measures to allow failed entrepreneurs to have a 2nd chance.	

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities facilitate the creation of business start-up support structures by engaging with a large array of stakeholders themselves.		
	Regional authorities directly contribute to increase the business start-up rate by initiating and managing business start-up support structures.		
	Networks, incubators, portals and gateways are being developed hand in hand by local authorities and citizens, proactively stepping in to create a start-up friendly environment in the region.	X (regional variation)	X
	Regional authorities support the development of start-up support structures by providing the necessary resources to (intermediate) working to boost entrepreneurial skills in the region.		
C1.0	According to you, which support structure or practice for start-ups and SME is the most effective and should be further emphasised to ensure the development of entrepreneurial skills in the region?	C1.2: Mentoring and coaching on how to find investors, marketing and development strategies for project holders and SME.	

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities have developed strategies and implement schemes intending to reduce barriers to entry, eliminate obstacles and foster an environment conducive to the development of start-ups and SME.		
	Off-the-shelf financing practices as well as the provision of a venture capital environment provide innovative and inclusive sources of financing, which are tailor-made to the needs of the actors in the region.		
	The provision of financing support by the region is provided and can be conditional on the achievement of set objectives and result-oriented approaches are favoured by authorities, which encourage a greater ownership of the projects to ensure the success of the action and a return on investment.	X	
	Regional authorities use the synergies developed in networks of stakeholders supporting entrepreneurship. They accordingly facilitate the development of conventional financing bodies as well as participative financing schemes targeting start-ups, SME and project holders from under-represented groups.		X
	Practices and actions undertaken		
D1.0	Is there a financial gap or a suboptimal investment situation for SME financing in the region?	Yes.	
D2.0	What are the most commonly used financial support schemes or means of financing for entrepreneurs and SME?	D2.1: Financial instruments (loans, guarantees, etc.) from financial intermediaries. (Varies among sectors).	
D3.0	How do governance mechanisms contribute to start-up/SME development while making up for the reduced availability of public funding?	D3.2: Facilitation of communication between key actors.	
D4.0	Are regional authorities prompt to take economic risks when providing financial support to SME?	Question not relevant in the Swedish/regional context. Authorities does not provide financial support in terms of an investment with an underlying economic risk. Hence, authorities do not take an economic risk with their financial support. Participants cannot rate authorities' propensity for risk.	
D5.0	Who supports and fosters higher accessibility of the region (physical infrastructure)? How (grants/PPP, etc.)	D5.2: National institutions D5.3: Regional institutions.	
D6.0	What is done to improve the governance standards at national/regional/local level? D6.1: No D6.2: No, but discussion about it is going on. Support for procurement if offered. D6.3: No, but it has been performed earlier. D6.4: No, but there is on national level. D6.5: Yes, at all levels.		

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be"*)	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities ensure the development of an entrepreneurial culture in the region looking at other regions' governance structures and mechanisms to improve their own entrepreneurship and SME policies and create partnerships with other regional authorities to foster innovation as well as the development of synergies.		
	Regional authorities are integrated into a multi-level governance system and actively collaborate to identify best practices and challenges solving options beyond regional and national borders.		
	Co-funded projects are driving the need for further collaboration between regional authorities and between regions.	X	
	Developing contacts and partnerships is the spearhead of regional authorities and key actors to make up for potentially limited public intervention (e.g. public funding) and autonomously find solutions to local issues (without recurring to external support).		
	Practices and actions undertaken		
E1.0	Have regional clusters developed ties and are collaborating with other clusters at the national/EU level?	Yes.	
E2.0	Which are the regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment?	E2.1: Attending cross-regional meetings and SME fairs. E2.2: Project cooperation with various other EU regions. E3.3: Emphasis on the development of competitive clusters.	

* Participant could not tick a box for what "should be", because they did not understand the question. Chose to not tick a box for what the situation should be.

4 Results of the SWOT analysis

Internal factors – factors of competitiveness

Major strengths
<p>Digitalisation.</p> <p>The public system is transforming towards a more digital system and digital solutions, e.g. in the educational system and care sector or digitalisation of application for programmes and projects.</p> <p>National initiatives of digitalisation have had important influences on the region. Digitalisation of public sector creates many job opportunities. The public administration is aware of the positive effects of better IT infrastructure and commits to digitalisation and to improve IT systems, i.e. the city of Gothenburg has integrated all their IT systems within the organisation, provide open data to the public.</p> <p>Sweden has overall high competence regarding IT and digitalisation, compared to other European countries.</p>
<p>Good infrastructure for networking, interaction and co-operation.</p> <p>Good availability of creative hubs, test platforms, science parks and other forums which encourage innovation and entrepreneurship, and stimulates collaboration and help bringing people and institutions together.</p>
<p>Universities and research institutions.</p> <p>Two high ranked universities in Gothenburg and several other universities located in the region. Attractive for large enterprises to collaborate with universities. Several science and research centres located in the region, both near Gothenburg and located in other regional cities, e.g. Borås, Skövde. Provides good educational opportunities. Attracts national and international competences.</p>
<p>A strong and knowledge-intense industrial region.</p> <p>Several strong industrial sectors, which are performing well on smart specialisation. Manage to stay relevant as the business sector structure changes. The industrial sector in Västra Götaland is increasing, at the same time there is a parallel trend of decreasing industrial sector in Europe and other parts of Sweden. Overall a well-educated population in Västra Götaland.</p>
Other strengths – less pronounced
<p>Development of the physical infrastructure.</p> <p>Improving roads, train tracks, commute routes etc. Widening the centre of Gothenburg, building apartments. The city of Gothenburg is growing.</p>
<p>The port of Gothenburg.</p> <p>An important infrastructural exit and entrance nod, and important channel for transportation of goods. Co-occurrent strikes and industrial actions take place at the port from time to time. Creates instability and insecurity for enterprises relying on the port as enter and exit point for shipment of goods/input goods.</p>
<p>The region is strong in green innovation and sustainability.</p> <p>Awareness within the public administration. Sustainability is a well prioritised matter by politicians (and governmental representatives). Sustainability is well included and integrated in regional and local action plans and policy strategies. Technology, transport, production processes, innovation, high-tech solutions are expert areas of the Chalmers University and science centres in the region.</p>
Major weaknesses
<p>Lack of competence supply.</p> <p>SME having troubles finding workers, recruit employees with the right skills. SME experience it to be difficult to recruit senior workers, due to the insecurity of hire a more expansive worker. SME working processes usually are fast and the need of new workers may come quickly and it can be difficult to speed up recruitments processes. A major weakness/hinder in the ICT sector. Too few educate in relevant subject areas, which result in low supply of workers in relation to the high demand for IT competence.</p>
<p>SME lack resources to partake in support programs or initiatives.</p> <p>SME lack financial resources, time, engagement etc. to invest in the future and make strategical plans.</p> <p>(No regional factor per se, but a major problem existing in the region)</p>
Other weaknesses – less pronounced
<p>Competence move out of the region.</p> <p>The region experiences issues of keeping competence to stay in the region for work. University stu-</p>

dents move abroad or to Stockholm after graduating, because of better supply of jobs.
Lack of housing. Enterprises confirms that it is sometimes difficult to find housing and apartments for employees and international students and postgraduates. Lack of housing is foremost an issue in the urban area of Gothenburg, but also confirmed in other cities in the region. Skövde municipality has had troubles with workers wanting to move to and work in the region but has a hard time finding a place to live. This is not an issue specific for Västra Götaland, but rather an issue for all three urban city areas of Sweden, Stockholm and Malmö included.
Ambiguous factors – represent a strength in some of the businesses/industries, but a weakness in others
Globalisation. Provides business opportunities in terms of increased trade, closeness to foreign markets, access to foreign capital, contacts and networks, labour and input goods. However, also increases competitiveness.
Neutral factors – represent neither a strength nor a weakness

External factors – framework conditions

Major opportunities/drivers
Strong economy, positive business cycle. Strong economic growth, both nationally and regionally. Low levels of unemployment in the region. The geographic location (a cost region, close to Norway/Oslo and Öresund region) provides valuable opportunities.
Improved IT/ICT infrastructure. Broadband internet access, access to open data. Better infrastructure provides a good environment for developing and exploiting new products and services.
Well-functioning collaboration and interaction between public institutions, academia and business sectors. Much of SME support systems are built on the model of co-operation between the public (financing, infrastructure), academia (knowledge) and business sector (financing, commercialising). However, co-operation and interaction varies among sectors and actors. The interaction between the business sector and academia is well-developed within several sectors, e.g. ICT, green innovations. Interaction between the business sector and the educational system is not as much developed. Overall a good working governance model of co-operation and interaction between public institutions and authorities
Other opportunities/drivers – less pronounced
National policy initiatives and strategies. Affects the regional work with SME when implemented. E.g. digitalisation strategy, export strategy.
Authorities with a good understanding of SME development. Overall, authorities seeing to the needs of SME, for increased competitiveness and conditions of development. Interaction between public institutions to provide good services for SME. However, varies between sectors and governmental institutions. Even though describes as a major driver, there still exists needs of improvement and areas/questions where the understanding of different types of SME can become better.
Major threats/challenges/barriers
Big company dependency. The region is quite dependent on a few large industrial companies, which supply many job and out-sources production to SME. Lack of large businesses in different types of sectors. Low diversification of industrial sector.
Transportation infrastructure and public transportation. The quality of transportation possibilities varies over the region. In some parts is it a bigger issue than in others. In some cities is it almost impossible to get to work with the public transportations system. Foremost in the Gothenburg area but also in other parts of the region have enterprises several shifts of workers during the day, and employees must be able to get to work during most hours of the day. If employees can't get to the job when needed, it may hinder production.
Other threats/challenges/barriers – less pronounced
Regulations and legislative frameworks. Takes time to get building and planning permission. May hamper business development if enterprises

<p>must put projects and investments on hold due to slow and long processes of getting the necessary permits. May negatively affect competitiveness, both domestically and internationally. Legislation regarding public procurement is experienced as complicated and very time consuming. SME do not have the resources or effort to partake in public procurement processes.</p>
<p>International political instability.</p> <p>International markets are important for Swedish SME export. UK is an important market which now experience significant shifts in the political environment. The same for the United States.</p>
<p>Capital support not always allocated in the right time.</p> <p>Commercialisations of Swedish innovations often take place on international markets. Foremost a factor relevant for entrepreneurial SME and start-ups focusing on innovative products.</p>
<p>Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others</p>
<p>Neutral factors – represent neither an opportunity/driver nor a threat/barrier</p>

5 Future policy needs

By taking part of reports and the results from the interviews and the focus group meaning, one overall conclusion is that Västra Götaland needs more innovative fast-growing companies, and small and medium-sized enterprises play a crucial role in employment, modernisation and diversification of industry in Västra Götaland. A steady increase in start-ups in Västra Götaland has not resulted in an increase in the number of entrepreneurs. This is due to enterprises disappearing at the same rate as new enterprises are being created. The development of enterprise dynamics with a high inflow and outflow is fundamentally positive and contributes to modernisation of trade and industry. There is a need for a net increase in the number of enterprises for more jobs and greater competitiveness in Västra Götaland. Governmental institutions' work for regional growth needs to stimulate growth and competitiveness of new and existing SME in all sectors.

The structural change of the business sector that has taken place recent decades has resulted in a shift in employment from manufacturing industry to the private service sector. By providing good support instruments and conditions that support SME development, public institutions and government organisations can facilitate SME development. As of today, there exist a good business climate in the region for SME. The younger generation has a positive attitude towards entrepreneurship and schools are providing courses in entrepreneurship and how to run a business. Legislative frameworks are non-discriminatory towards SME. There are many support instruments and programmes available for SME in Västra Götaland, and many are much appreciated and show of good results. However, the support instruments need to develop to become better at targeting micro enterprises. Overall, programmes and support systems can be better customized towards different types of SME. Also, the structure of programmes and projects can change to become more SME friendly. For example, by have shorter and simpler application processes and shorter programme periods. Many SME does not know if they are still active within three years. Therefore, a six-month programme may sometimes be more convenient. Policy strategies must also develop to become more effective in providing conditions for very small enterprises. This holds for both regional, national and EU policies. SME in Västra Götaland are foremost one-person enterprises or micro enterprises. For these types of firms, it takes a lot of administrative resources to get access to public support means through projects and programmes. It is hard for such micro enterprises to compete with other European SME on getting finances from EU programmes. Participants from the focus group meaning emphasized the importance of clarifying the definition of SME in different contexts. Enterprises in the category SME have very much different conditions, which are both given by enterprise size and sector belonging.

Regarding EU programmes, and especially activities within the operational programme of ERDF, participants of the focus group meeting concluded that in terms of support of SME development, the administrative processes could be much easier. One example of making it easier for SME to participate were not to have to perform a project report each quarter. A

representative from Region Västra Götaland (VGR) shared an example of when a project had to employ a controller to administrate the project, which cost around a quarter of the budget. If easier administrative processes, more means could be used to project activities.

Today, administrations of Västra Götaland strive to obtain synergies between different EU programmes and funds, by utilizing programmes strategically and as measures to reach regional objective and implement regional development strategies. This operation method could be furthered strengthened and supported by the EU.

Better information, as well as government institutions being better at informing SME on projects and programmes available, is discussed by experts as an important factor to increase the potential of SME development. Västra Götaland do not suffer from having too few SME support instruments. There exist a good variety of support instruments and projects, however, SME are generally bad informed and does not know of all these instruments available. Many small enterprises experience that to start looking for projects relevant for one's business is too much of an effort. Both regional and national actors can help with this, by better informing SME of what project participation requires, how application processes work etc. SME know that there are projects and programmes to apply for, but they are not sure of how to apply. This is an important aspect since firms that do not participate in programmes and projects does not get access to much of the public funds that are available.

Another future policy need identified is simplifying and develop public procurement. Generally, enterprises and especially SME, does not have the strength or resource to participate in procurement processes. Looking at public procurement at the local level, Swedish enterprises has the lowest participating rate in Europe. As the system looks now, it is a hinder for development and growth of SME, even though the regulations in action allow more than what is praxis. There is a need of increased knowledge, both among enterprises and public actors. Need of interventions that contributes to reduction of non-relevant terms of the framework.

Successful SME support structures that should be further strengthened are the interaction and collaboration between the universities, the industry research institutes and development centres in the region. The interaction may be even more effective, which would contribute to the improvement of support initiatives. Collaboration and cooperating among universities, science institutes and industrial development centres needs to be developed further, especially regarding areas of service innovation. Activities focusing on innovation support and simplifying export processes are priority areas of regional actors, e.g. VGR. Interaction between governmental institutions, authorities and public actors are well-developed in when it comes to support systems of science parks and incubators. However, interaction should be further strengthened in other areas, for example education.

Enterprises must become better in commercialising their knowledge and results from research projects. As of today, research and development investments (R&D investments) are dominated by a few big-companies, e.g. Volvo group. This makes the R&D investment system vulnerable for structural changes. There is a need of R&D investment from a more diver-

sified pool of companies, as well as interventions to increase and SME production processes and innovation capability, and make these processes more effective. Development of services, processes and concepts are equally important as product development for SME growth. The region should also continue to promote interaction forums and networks where enterprises can meet and collaborate. Especially in sectors where networks are not established.

Summarizing framework conditions and regional factors that need to improve:

Regional level:

- Structures and conditions for interaction between academia, business sector and public institutions. Foremost in areas where interaction is weak.
- Develop ways to target micro enterprises, customized support instruments.
- Simplify and customise support programmes to the needs of SME.
- Provide support and help simplifying matching of worker supply and demand.

National level:

- Develop the public procurement framework.
- Improve framework conditions that may help matching worker supply and demand.

European level:

- European regulations regarding national public procurement framework (if changing the national framework is hindered by European regulations).
- Regulations for EU-programmes, e.g. participation conditions. SME all over Europe must have equal abilities to participate in EU programmes.

6 Annex

6.1 Interview partners

Name	Organisation	Position	Special expertise/years of experience ⁹¹	Interview Date	Tel/f2f
Erik-Wilhelm Behm	Business Region Gothenburg	In charge of ICT	Expert in ICT sector	17/5/2017	+46 313676155
Marcus Nordanstad	Region Västra Götaland (VGR)	Regional developer	VGR action plan for SME	29/5/2017	+46 739 60 32 58
Anna Gillek	Swedish Enterprises	Manager of regional office	Representative of business association, SME	31/5/2017	+46 73 398 78 79
Leif Axelsson	Lindhomen Science Park	Test Site Sweden	Phd. ICT/Media sector	2/6/2017	+46 73 904 70 26
Lars Bern	Business Region Gothenburg	In charge of innovation	Low carbon economy	22/5/2017	+46 313676124

6.2 Focus Group participants

Name	Organisation	Position	Special expertise/years of experience ⁹²	Date of workshop	Tel/f2f
Isabella Fält	Swedish Agency of Economic and Regional Growth	Case worker	Representative of regional administration, Regional ERDF programme West Sweden	12/6/2017	+46 70 287 02 47
Johan Brink	University of Gothenburg, Department of innovation and entrepreneurship.	Researcher	Researcher/10 years	12/6/2017	+46 70-175 95 17
Peter Warda	Business Region Göteborg	Analyst	Regional business development/10 years	12/6/2017	+46 31 367 62 11
Sebastian Mårtensson	Business Region Borås	Regional developer	Business sector in Borås-Sjuhärad region. Previously been working at Swedish Enterprises, business association.	12/6/2017	+46 705 93 86 59
Kristel Turesson	Fyrbodals kommun	Case worker	Business development. Representative of regional administration.	Invited and accepted participant. Could not make it the meeting do to transportation issues.	+46 70 966 62 46

⁹¹ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

⁹² Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

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6.4 Statistics

Table 6.1: Number of work units, 2016, by SNI and unit size

Län Avdelning inom bransch SNI 2007	Storleksklass (efter antal anställda)									TOTAL
	0	1-4	5-9	10-19	20-49	50-99	100-199	200-499	500-	
14 Västra Götaland	137 663	38 909	9 999	6 928	4 345	1 603	619	280	105	200 451
Avdelning saknas	1 052	74	8							1 134
A Jordbruk, skogsbruk och fiske	34 204	1 323	176	53	17					35 773
B Utvinning av mineral	55	41	10	7	5					118
C Tillverkning	5 361	1 985	703	540	399	160	93	46	19	9 306
D Försörjning av el, gas, värme och kyla	1 239	67	17	18	28	6	4	2	1	1 382
E Vattenförsörjning; avloppsrening, avfallshantering och sanering	147	143	63	35	27	8	4		1	428
F Byggverksamhet	9 344	5 007	1 148	759	406	94	22	9	2	16 791
G Handel; reparation av motorfordon och motorcyklar	13 103	6 777	2 543	1 433	666	191	49	17	4	24 783
H Transport och magasinering	2 408	1 768	497	348	250	107	40	27	5	5 450
I Hotell- och restaurangverksamhet	1 927	1 979	707	455	210	49	12	1	1	5 341
J Informations- och kommunikationsverksamhet	6 010	2 148	312	234	168	43	19	10	2	8 946
K Finans- och försäkringsverksamhet	2 734	599	167	115	55	10	8	6	2	3 696
L Fastighetsverksamhet	13 617	2 131	247	112	81	22	9	2		16 221
M Verksamhet inom juridik, ekonomi, vetenskap och teknik	18 663	7 065	789	524	304	105	42	15	13	27 520
N Uthyrning, fastighetsservice, resetjänster och andra stödtjänster	3 747	1 519	428	286	189	102	47	27	7	6 352
O Offentlig förvaltning och försvar; obligatorisk socialförsäkring	37	108	70	83	147	116	60	32	11	664
P Utbildning	3 239	745	611	780	632	279	84	23	6	6 399
Q Vård och omsorg; sociala tjänster	3 616	1 786	827	796	586	273	117	59	28	8 088
R Kultur, nöje och fritid	8 557	1 438	316	161	79	19	5	3	2	10 580
S Annan serviceverksamhet	8 601	2 205	360	189	96	19	4	1	1	11 476
T Förvärvsarbete i hushåll; hushållens produktion av diverse varor och tjänster för eget bruk		1								1
U Verksamhet vid internationella organisationer, utländska ambassader o.d.	2									2
Total Sweden	884 741	249 840	62 720	41 078	26 495	9 417	3 735	1 502	544	1 280 072

Table 6.2: Number of work units by size class in Västra Götaland

År	Size given by number of employed				Total
	0	1-9	10-49	50-	
1998	100 549	35 441	8 862	1 943	146 795
1999	97 527	35 888	8 918	1 975	144 308
2000	98 847	36 171	9 171	2 009	146 198
2001	100 810	36 258	9 292	2 081	148 441
2002	102 743	35 617	9 247	2 122	149 729
2003	103 509	35 829	9 358	2 156	150 852
2004	104 854	36 251	9 353	2 147	152 605
2005	107 928	37 007	9 308	2 251	156 494
2006	108 649	38 670	9 517	2 265	159 101
2007	111 346	40 054	9 776	2 314	163 490
2008	113 462	40 838	10 106	2 361	166 767
2009	114 655	40 948	10 295	2 363	168 261
2010	115 059	41 986	10 266	2 315	169 626
2011	131 745	44 276	10 447	2 351	188 819
2012	130 974	46 136	10 645	2 421	190 176
2013	129 350	47 094	10 750	2 443	189 637
2014	132 954	47 989	10 917	2 483	194 343
2015	135 085	48 864	11 061	2 546	197 556
2016	137 663	48 908	11 273	2 607	200 451

Source: Regionfakta, <http://www.regionfakta.com/Vastra-Gotalands-lan/Naringsliv/Arbetsstallen-efter-kommun-och-naringsgren/>, From Statistical Sweden, Enterprise Database

Table 6.3: Number of persons employed (daytime)

Län/kommun	2009	2010	2011 Old method	2011	2012	2013	2014	2015
Västra Götalands län	735 532	754 091	765 886	774 463	784 323	790 008	795 280	811913

Year	Number of firm births		Number of firm failures
	Västra Götalands län	Sweden	Västra Götalands län
2000	5 932	39 520	819
2001	5 507	35 517	899
2002	5 650	37 348	981
2003	5 291	36 413	887
2004	6 664	41 792	903
2005	6 973	43 932	745
2006	7 038	44 386	682
2007	9 219	57 194	611
2008	9 256	57 801	746
2009	9 588	59 597	912
2010	11 423	69 855	850
2011	11 860	73 709	795
2012	10 899	69 216	840
2013	11 472	69 242	928
2014	11 473	71 668	832
2015	11 317	70 135	822

Source: Regionfakta, <http://www.regionfakta.com/Vastra-Gotalands-lan/Naringsliv/Nystartade-foretag/Nystartade-foretag-/>, From Swedish Agency of Growth Analysis

Table 6.4: R&D expenditure, Millions SEK

14 Västra Götalands län	Sector:	2007	2009	2011	2013	2015
	Enterprises	17160	18796	19376	18814	23362
	Universities	3868	4758	5409	5741	6170
	Government authorities	118	133	91	47	58
	county council and municipalities	485	502	531	542	586
	private non-profit sector

Source: Statistiska centralbyrån (SCB)

Table 6.5: Operational programme Västsverige (Västra Götaland + Halland)

Measure	Budget	Netto grant amount	Allocated amount	Total number of cases	On-going cases	Closed cases	Allocated amount of total grant amount (%)
Total	451 185 976	237 004 787	56 224 336	63	41	21	
Supporting the shift towards a low-carbon economy in all sectors	67 677 893	33 927 027	5 983 949	7	5	1	17,64
Enhancing the competitiveness of SME	180 474 395	126 358 965	30 377 277	33	23	9	24,04
Strengthening research, technological development and innovation	203 033 688	76 718 795	19 863 110	25	13	11	25,89

Data source: Swedish Agency of Economic and Regional Growth

Case study report: Loire-Atlantique

Helene Gorny

ÖIR

1 Mapping the SME sector in the region

Loire-Atlantique is one of the five departments of the Region, Les Pays de la Loire, which covers 6% of the French territory.



Loire-Atlantique is the 12th most populated French department with 1 328 620 inhabitants (2013)⁹³. The territory is likewise very attractive as is shown in a study from the French Institute for Statistics and Economic Research (INSEE), Loire-Atlantique gains 11 500 per year, and if the trend continues, the department could reach 1.5 million inhabitants by 2030(Lambert & Roux, 2013).

Table 1.1: Overview – latest figures available on enterprises creation in Loire-Atlantique⁹⁴

Total number of enterprises in Loire-Atlantique (2015)	77.064
Share of enterprises created in the industry sector (2015)	5,3%
Share of enterprises created in the construction sector (2015)	9,8%
Share of enterprises created in the trade, transport, accommodation and catering sectors (2015)	21,9%
Share of enterprises created in the households service sector (2015)	25,0%
Share of enterprises created in the business service sector (2015)	38,0%
Number of enterprises created in 2015	9.707

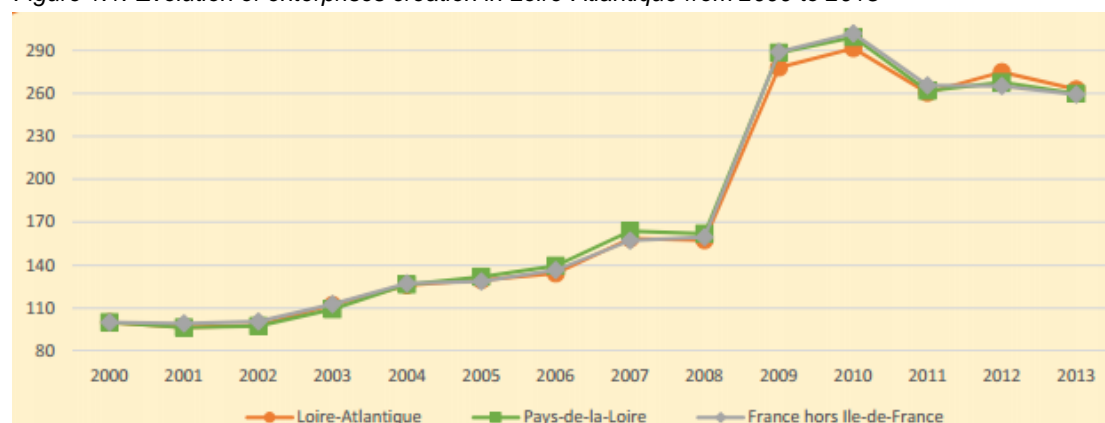
Loire-Atlantique is one of the most dynamic French departments in terms of business creation. In total, there were 9 734 enterprises created in 2013, among which 56,6% were self-employed entrepreneurs. Looking at the evolution of the number of enterprises created in the department (Figure 1.1), it appears that after a long period a relative stagnation and phase of increase (+60,8% between 2002 and 2008), a significant spike (+85,1%) in enterprises crea-

⁹³ <https://www.insee.fr/fr/statistiques/1405599?geo=DEP-44>

⁹⁴ http://www.statistiques-locales.insee.fr/carto/ESL_CT_cartethematique.asp?nivgeo=DEP&indic_id=273

tions occurred during the economic downturn (2008-2010). Since then, despite a decrease between 2010 and 2011, the department still exhibits business creation rates that are somewhat higher to the regional and national levels (Agence France Entreprendre, 2014).

Figure 1.1: Evolution of enterprises creation in Loire-Atlantique from 2000 to 2013

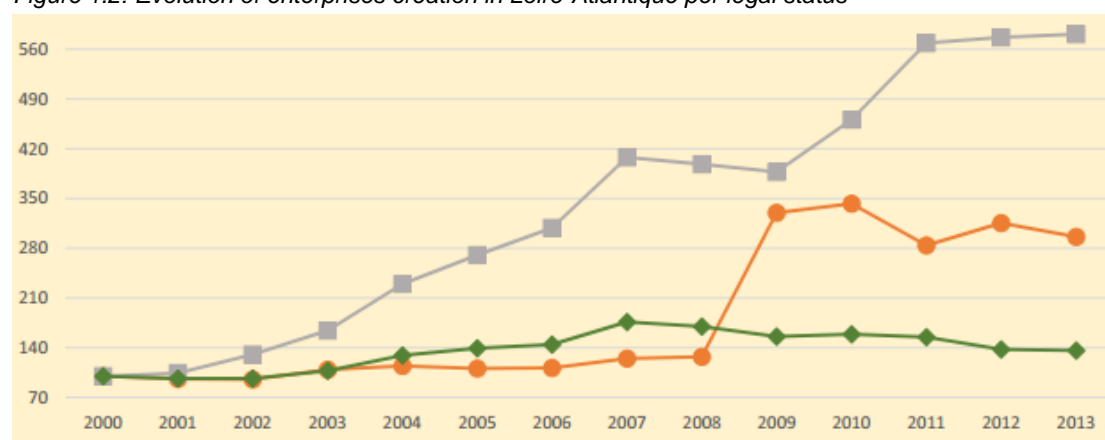


Source: Agence France Entreprendre (2014)

Note: Index basis with 2000=100

Complementary information is illustrated by Figure 1.2, which presents the evolution of enterprise creation over the same period, per enterprise legal status.

Figure 1.2: Evolution of enterprises creation in Loire-Atlantique per legal status



Source: Agence France Entreprendre (2014)

Note: Index basis with 2000=100; grey: single-member companies in the form of ltd. companies; orange: single undertakings as natural persons; green: multi-partners companies

The grey line corresponds to single-member companies in which the liability of the owner (having the status of a legal person) is restricted (Limited Liability Company). In comparison, the orange line represents single undertakings in which the entrepreneur is a natural person rather than a legal person. The green line finally corresponds to multi-partners companies. The main difference between these types of legal status relates to the extent of the entrepreneur's liability, one person enterprise vs. multi-partner enterprise and the type of taxation applied to each type.

The following table presents data on the size of the enterprises when created in 2013, in Loire-Atlantique.

Table 1.2: Initial size of start-up companies

	Number of creations in 2013	Distribution of enterprises creations
No employees	9 338	95,93%
With employees – total	396	4,07%
1-2 employees	286	2,94%
3-5 employees	70	0,72%
6-9 employees	17	0,17%
10+ employees	23	0,24%
Total	9 734	100%

Source: Agence France Entreprendre (2014)

It shall be noted that although start-ups created without employee remains the large majority (+ 97,1% between 2008 and 2010), the trend has, to some extent, recently shifted. Indeed, while the number of enterprises created without any employee decreased by 10,3%, the number of start-ups with employees rose by 1,3%.

At the regional level, SME occupy a cornerstone position in the economic fabric. For instance, in the industrial sector, in 2012, SME (from 50 to 500 employees) represented 52,1% of the sector's workforce (44,5% at the national level). In comparison, companies with less than 50 employees are somewhat less represented in the region (29,6% against 34,4% at the national level, in the industrial sector) (Secrétariat Général pour les Affaires Régionales, 2016).

Table 1.3: Enterprise creation per sector

Sector	Number of creations in 2013	Distribution of enterprises creations	Evolution between 2008 and 2010	Evolution between 2010 and 2013
Industry	547	5,6%	+161,9%	-9,6%
Construction	1.285	13,2%	+60,2%	-9,6%
Trade ⁹⁵	2.960	30,4%	69,1%	-20,2%
Services ⁹⁶	4.942	50,8%	100,7%	-2,4%

Source: Agence France Entreprendre (2014)

Observing the sector division, a rather morose picture emerges. Between 2008 and 2010, while enterprises creations in all sectors were skyrocketing, notably in the industrial sectors (+161,9%), car sales and repair (+162,1%), person to person services (+177,9%), scientific and technical activities (+140%), entertainments and recreation activities (+155,6%), and education (+239,2%), the evolution between 2010 and 2013 shows completely reversed trends. The only sectors where enterprises were still being created were food services activi-

⁹⁵ Trade includes the following sub-sectors: retail business, wholesale business, food service activities, real estate activities, Hotels and Restaurants, car sales and repair, person to person services.

⁹⁶ Services comprises the following sub-sectors: Brokerage, transport, scientific and technical activities, business support services, Information and Communication, Education, arts, entertainments and recreation, health, financial operations

ties (+40, 7%), information and communication (+9,1%), and health (+39,2%)(Agence France Entreprendre, 2014).

As mentioned by Marine Hugues from Nantes Metropolis (Service SME/CSR), it shall be highlighted that the structure of the department's productive fabric is very diverse, which represents a key strength since "such diversity ensure a relative resilience to the uncertain economic situation". Along those lines, the strong and tight network or meshing of enterprises of different sizes, micro-enterprises, SME and also Mid-Sized Businesses (MSB) (Entreprises de Taille Intermédiaire, ETI, in French) is critical. Notably, MSB are to be distinguished from SME and larger companies. They are defined as enterprises having less than 5000 employees with an annual turnover inferior to 1.5bn euro or a balance sheet total of less than 2bn euro.

In 2014, the department's economy improved and the number of enterprises created soared again with the establishment of 10 261 new enterprises, of which 10,3% (+5,4% in 2014 compared to 2013). The dynamism of the department is potent as nearly 50% of the enterprises created in the Région Pays de la Loire are located in Loire-Atlantique. In 2015, 9.707 enterprises were created and 10 212 in 2016(INSEE, 2017)(Coutard, 2015).

With regards the closure of enterprises, trends are following the above described evaluations. 2013 was notably a rather negative year counting for more enterprises failures than at any point in time over the past 10 years(Banque Publique d'Investment, 2014). At the regional level, in 2014, 2 980 enterprises had filed for bankruptcy⁹⁷ compared to 3 120 in 2013 (-4,4%). Of all sectors in Loire-Atlantique, the number of failure cases decreased by 5,4% (in 2014 compared to 2013) but does not make up for the high of closure (+17,9%) observed in 2013 (Coutard, 2015). More recently, in 2016, the number of enterprises filing for bankruptcy decreased by 15,1% compared to 2015. Those figures reflect the more favourable economic conditions; however, according to Marc Castel from the incubator Audencia Business School, "preventive measures to reduce the number of SME or micro-enterprise going bankrupt are still missing". He kept on explaining that, in Loire-Atlantique, regardless of the economic situation (economic downturn or flourishing environment), in the majority of the case (approximately 70%), small entities, micro-enterprises are closing down. This is due to the fact that enterprises of a larger size (e.g. 50+ employees) having a more significant turnover also possess more steering tools which allow them to better adapt and evolve in any economic conditions (Castel, M. 2017).

In fact, the strong presence of medium sized enterprises is a key feature of the economic dynamism in the region since those companies are well-anchored in the territory and have showed a significant resilience when facing the financial crisis. This specific business ecosystem is also structured around well implanted medium sized, family owned enterprises. Audencia Business School even established (in 2013) a Chair in Entrepreneurship, Family and So-

⁹⁷ Filing for bankruptcy here refers to the opening of a safeguard procedure, a case of judicial redress or liquidation of an enterprise by the regional High Court

ciety to observe this particularity (Castel, M. 2017). The strengths of those family owned companies lies on various factors, e.g. on a limited need of external financing, high employee retention rates in line with the reported trustworthiness (or from a more archaic perspective: "fatherly figure") of managers (Radu Lefebvre, 2016).

A survey conducted by the Chair on entrepreneurs' psychology and family owner enterprises⁹⁸ shows that Loire-Atlantique has a higher share (33%) of medium sized – family owned enterprises than the other departments in the region. 93% of the respondents declared being very attached to the territory of the company and 85% state having no difficulties finding and retaining employees. In 2015, family-owned SME in the region maintained their staff resources (46%) or hired new employees (39%). Only 15% of them had to lay one or more employees off. Overall, these enterprises present an annual increase of their turnover and 46% of them reported a 2% increase from 2014 to 2015. What could be considered as a downside is linked to the weak development towards the international markets, the majority of the companies surveyed declaring primarily focusing on the regional market, then on the national level, only 45% of them having some activities outside of the national territory. Moreover, for 2/3 of the surveyed heads of SME, the development of international operations is not considered as a priority. Nonetheless, whereas international development does not appear to really matter, investing in innovation seems much more important: 74% of the interviewees declare actively fostering innovation in their enterprises and earmark between 1 and 5% of their turnover to R&D investments (Audencia Business School, 2016).

Interestingly enough, SME of the Region Pays de la Loire and in Loire-Atlantique are considered as key players for actions and investments in terms of Research & Development. Data on R&D and SME investment are unfortunately only available at the regional level. In comparison to the rest of France, the region's R&D activities are amongst the lowest (1,2% of the GDP in Region Pays de la Loire, 2,3% at the national level). The share of expenditure dedicated to private research is very limited in large companies implanted in the region (compared to large companies' R&D expenditures in other regions). More recently, thanks to the support of the region, SME have been incentivised to invest in R&D activities. As a result, numerous fields of competences, niches and synergies between public, semi-public and private actors have been developed. Of note, in France, R&D is mostly driven by specialised national research institutes (e.g. EPIC⁹⁹ and EPST¹⁰⁰), which are not present (or only small subsidiaries) in the region. In 2013, the amount of R&D investments by SME in the region reached 279

⁹⁸ 171 heads of SME were surveyed in Region Pays de la Loire between February 24th, 2016 and March 29th, 2016.

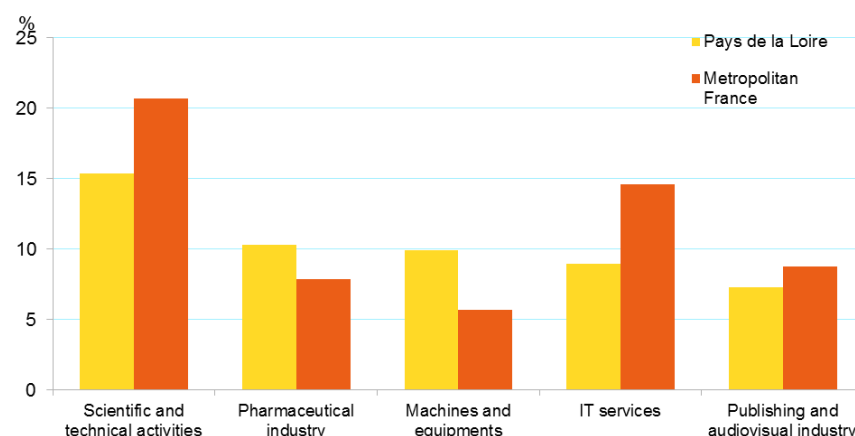
⁹⁹ EPIC: An établissement public à caractère industriel et commercial is a category of public undertaking in France. It includes state-controlled entities of an industrial or commercial nature, including some research institutes and infrastructure operators.

¹⁰⁰ EPST: A Public Scientific and Technical Research Establishment (French: Établissement public à caractère scientifique et technologique) is a category of public research institutes.

million euro, of which the largest share (236 million euro) stems from SME having more than 20 employees.

R&D expenditures by SME are following the principles of smart specialisation by favouring R&D in sectors deemed to have a strong potential in the region (Chaillot & Hamzaoui, 2016). Figure 1.3 below presents the R&D spending by SME according to the main investment areas, in the Region Pays de la Loire, in 2013.

Figure 1.3: Share of R&D expenditures from SME in the region and distribution according to key focus areas

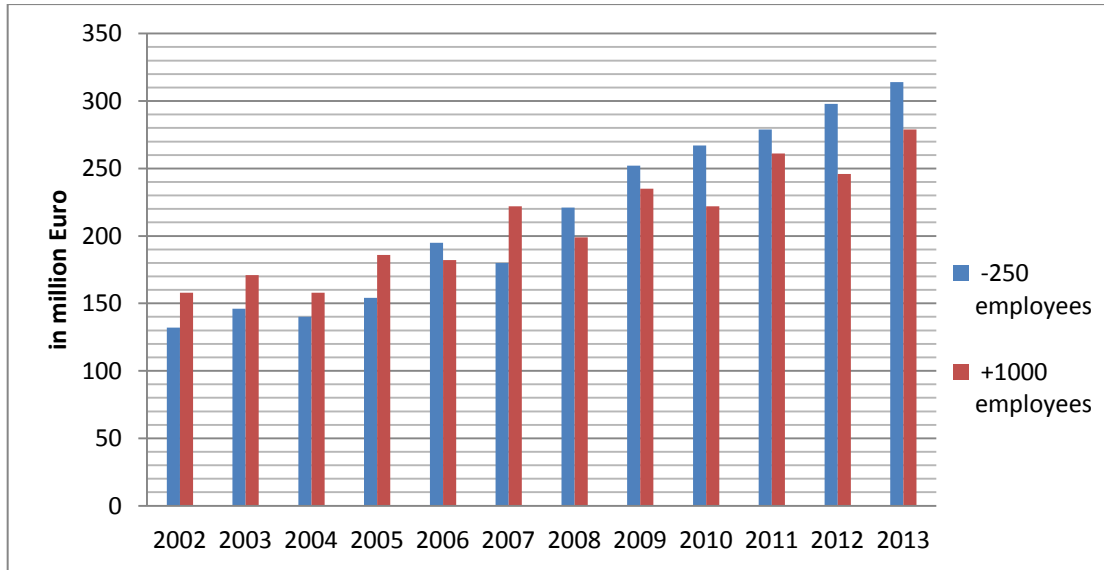


Source: Ministry of National Education, Higher Education, Training and Scientific Research (2016)¹⁰¹

SME in the region are considered as very dynamic with regards to R&D investments, which is “a territorial characteristic” according to Marine Hugues. Such comments shall be considered bearing in mind the sources of R&D financing in the region itself and in comparison with the dominant R&D sources at the national level, as mentioned the previous paragraph. Indeed, given the limited interventions of “traditional” R&D financing sources (large groups and public research institutes), SME are considered as the main driving forces of R&D in the region, their R&D investment effort corresponding to 0,27% of the regional GDP (in 2013). Figure 1.4 below shows that enterprises with less than 250 employees have invested in R&D to a greater extent than larger companies (more than 1000 employees) since 2008.

¹⁰¹ <https://www.insee.fr/fr/statistiques/1908474>

Figure 1.4: Evolution of private R&D expenditure in Pays de la Loire, per enterprise size



Source: Ministry of National Education, Higher Education, Training and Scientific Research (2016)¹⁰²

All in all, in comparison with other regions, the total amount of private R&D expenditure remains one of the lowest¹⁰³, and therefore, lack of R&D is deemed as one of the major regional weakness. Ms Hugues also adds that the efforts made by regional SME in terms of R&D investments, in spite of their relatively limited scope, represents a real catalyst for economic prosperity, especially since the efforts target not only sectors where the region has a comparative advantage but also other areas with high potential. In comparison, in other French regions, where SME are investing less in R&D (but where national research institutes and large companies play a more prominent role), the targeted sectors are less diverse. In conclusion, SME investments in R&D are extremely important to explore the untapped potential of sectors/areas that may have been disregarded by other R&D financing sources.

Regional SME are well organised and connected; their investment strategies in R&D demonstrate a willingness to look at but also beyond the most outstandingly promoted investment areas, based on their strong territorial anchorage, know-how and thrive for innovation. Further support for R&D investment accordingly appears to be essential for the long-term economic development of the region.

¹⁰² <http://ores.paysdelaloire.fr/861-depenses-de-r-d.htm>

¹⁰³ The total private R&D expenditure represents 0,8% of the regional GDP. The region is ranked 9th out of the 12th French regions with regards to total R&D spending

2 Factors influencing the dynamics of the region (strengths, weaknesses, opportunities and threats)

In a study published by the National Institute for Statistics and Economic Studies (INSEE, 2014), several indicators illustrating the economic attractiveness of Loire-Atlantique were identified based on a typology (developed at the national level) categorising French departments according to two factors: productivity of the territory and residential appeal. In terms of employment, the main findings of the study showed that the economic dynamism of Loire-Atlantique is assessed with the following indicators:

- A positive employment inflow rate, which corresponds to the average number of jobs created or transferred from outside the territory out of the average employment rate in the department.
- A positive enterprises inflow rate. For example, numerous ICT companies (or companies for which localisation close to large economic hubs such as Paris) have delocalised their activities to Nantes, attracted by favourable features (inter alia, cheaper rents than in the Parisian region, excellent 4G and optic fibre coverage) (Hugues, M. 2017).

Other indicators are also looked at, such the work-related commuting rate from and to the department, inflow of highly qualified employees as well as self-employed workers. All indicators show positive trends for the department. Reasoning in terms of flux rather than only in terms of stocks is very important to better understand the role and intensity of the inter-departmental and regional relations according to Jean-Marc Trichet (Chamber of Commerce and Industry). Moreover, looking at the unemployment rate figures, the region is very well positioned, having the second lowest rate in comparison with all the other regions (as of December 31st, 2015). Loire-Atlantique presents a rate of 8,7% (2015), inferior to the national average of 10%(Orientation Pays de la Loire, 2016). It should be highlighted that the entire region not only has a lower unemployment rate than the rest of the country but it also has a high employment rate. This means that the volume of job created can absorb the active workforce's dynamism(Observatoire des territoires , 2016).

While the unemployment rate in Loire-Atlantique is decreasing, all sectors are likewise following the same trend. As mentioned in the first part of this case study (see tables 1 and 3), the department's productive apparatus is relatively well diversified between primary, secondary and tertiary sectors. Such diversification provides the department with various sources of growth and hence, a competitive advantage while productive sectors keep evolving and mutating. This specificity is also to be found in the employment structure itself. At the regional level, 72% of the jobs fall under the tertiary sector, 23,9% in the industrial sector (20,1% at the national level), 4% in agriculture (2,5% at the national level).

Industrial activities are the backbone of the department's economic fabric. The entire region has historically been very much industrialised. From the end of the 90's, while low added value productions were being reallocated to developing countries, traditional industrial sectors were able to change the deal by largely capitalising on advanced technologies to establish an Industry 4.0 and poles of excellence.

The following presents an overview of the strengths, weaknesses, opportunities and threats shaping the dynamics of the regions:

Strengths

Demography and territory

- Positive natural demographic and positive migration balance (demographic growth (+0,8%) higher than national average (+0,5%));
- Territorial attractiveness;

Economy

- good overall economic performance and capacity to recover from the economic crisis (region recovered to its pre-crisis GDP by 2011);
- Annual average growth of 1,56% between 2007-2013 (stronger than national growth of 1,34%);
- Good, above average, GDP growth- 4% growth in 2011 (After a 3% recession in 2009, neutral growth in 2010);
- Industry sales show optimistic trend in both long and short term;

Industry

- third industrial region in France with a dense and diversified production basis (industry being 18,3% of GDP and 16,8% of employment)
- Medium-sized companies in the region able to adapt to changing and competitive environment;
- The large core network of medium-sized enterprises guarantees absorption of innovation, due to appropriate size (50-500 employees);
- 7 active clusters in the region;

Regional policies

- Involvement of the region (and clusters) with the “Industry of the Future” plan (launched 2015) aiming to support investments in factories that are environmental friendly, smart, digital and closer to their ecosystem;
- The Regional Innovation Strategy for Smart Specialisation for the period 2014-2020 aims at inclusive growth of enterprises; many regional innovation support measures;
- Regional investments, particularly in robotisation and diffusion of advanced manufacturing techniques to SME and financial support to regional companies;

Weaknesses

Industry

- Seemingly low R&D spending (only 0,5% of the industrial turnover);
- Under average internationalization (Pays de la Loire has the 9th place in terms of export), possibly partly due to the regional paradox, domination of medium-sized and family-owned manufacturers which are not interested in internationalization;
- R&D is concentrated to a limited number of industries (mainly aerospace, marine, rail, transport);
- Little cooperation with other regions in France that are also leaders in manufacturing innovation;
- Little presence of national public research institutions;

Opportunities

Industry

- Many large corporations, often international, stationed in the region (i.e. Airbus, DAHER, STX, Bénéteau, Auto Chassis International, Manitou France) as well as clusters fuel innovation and R&D and offer subcontracting opportunities to SME;
- Well-developed clusters such as MC2, Vegepolys, Neopolia, Atlansun (sun energy) offer support and acceleration for start-ups;
- Increasing involvement in international collaborative R&D projects within Horizon 2020 at the initiative of EMC2: “pro-PME” and European Task Force;
- Inter-clustering and brokerage activities;
- Shift from offensive to a defensive (market acquisition issues) innovation strategy (focused on improving productivity);

Regional policies

- Structured diffusion of R&D to regional actors delegated to EMC2 cluster and the network of Regional Innovation Platforms;
- Major investment projects include “Technocampus” (technological research platforms on manufacturing);

Threats

Unemployment

- negative influence of the economic crisis on employment (unemployment increase of 3,6% from 2008 to third semester of 2015) and regional workforce’s ability to adapt its skills to innovation;

Regional Policies

- Regional structural weaknesses in R&D spending;

Industry

- Risk of loss of innovative capacity and losing to regions more actively nationally and internationally engaged;
- The network of medium-sized enterprises can suffer from an insufficient critical mass to remain competitive on international markets;

3 Governance issues

3.1 Institutions and governance levels

Regional level

The Regional Council sets the regional innovation strategy (the 2014-2020 Regional Innovation Strategy for Smart Specialisation- SRI-SI) while the regional innovation agency is in charge of coordination and implementation of policy instruments. The regional economic, social and environmental committee (CESER) serves as an advisory body to the Regional Council and represents the civil society. The development of the SRI-SI was to a large extent based on participatory processes, as well as performance of various analyses (SRESRI-analysis of academic forces and regional schemes for higher education, research and innovation; SWOT; strategic roadmaps for regional clusters, in-depth analysis and consolidation of strategic roadmaps for the 22 industrial sectors) and workshops for discussion of the six smart specialisations as well as ideas on collaborative R&D projects. The process also involved consultations with The Regional Conference for Sustainable Economy and Employment (CREED), The Regional Consultative Committee for Research and Technological Development (CCRRDT) and The Regional Commission for Innovation (CRI) and the three bodies are also responsible for strategic governance of the smart specialisation strategy (SRI-SI). The regional innovation agency governs the operational implementation in coordination with the Network for the Development of Innovation as well as one designated representative in each domain, i.e. for advanced manufacturing technologies- IRT Jules Verne/EMC2 cluster, for maritime industries – Neopolia, for food and bio-resources- CAP Aliment, for computer science and electronics- We Network/Ouest Numérique, for design and cultural and creative industries – Quartier de la creation and for therapies of tomorrow and health – Atlanpole Bio-thérapies.

The region Pays de la Loire is committed to improving the environment for SME with policies that aim at tapping into national and international funding schemes as well as cooperation programmes which affects also the Loire Atlantique department. The overall idea of the strategy is to create a favourable ecosystem for SME, through fostering dynamics as well as knowledge as a way of celebrating and tapping into the culture of collaboration within the region. This concept is reflected in the permanent dialogue of all regional stakeholders, i.e. listed above bodies responsible for strategic governance and the four thematic hubs: international hub (including Chamber of Commerce and Industry), financial hub (with BPI France), innovation hub (with Regional innovation Committee), SME hub with the regional network of economic developers. The region cooperates with and supports the clusters, Regional Innovation Platforms (PRIs) and SME in the region, makes investments in education and R&D, commits to other initiatives as well as offers direct financial support to SME in forms of loans of which there are different thematic kinds.

Furthermore, the region developed an “innovation path” for regional SME who have a potential for innovation (“potential innovators” and “primo-innovators”). The innovation path consists of support measures towards innovation for SME, these include free of charge coaching session with SME managers to discuss innovation potential and steps towards exhausting it (Étincelle Innovation), free of charge seminar on discussing the capacity to implement innovation as well as consideration of the levels of risk (Déclic Innovation), four day training seminar at the price of 1500€ where SME managers can arrive at a preliminary feasibility study of the innovation project (Tremplin Innovation), as well as Dinamic Entreprises- a nine-month programme including coaching sessions, training seminars which is financed at 70% by the region (between €3000 and €6000 are to be paid by the participating enterprises).

The regional financing comes from regional FTI fund, co-funded by the Regional Council, the State and BPI France, which next to abovementioned loans, provides also subsidies, repayable advance as well as grants. The idea behind FTI is for it to function as a flexible toolbox. Also the Nantes-Atlantique Place Financière (NAPF) acts as a facilitator of exchange for regional entrepreneurs. Finally, there exist regional funds awareness raising events such as the Innovation Trophy, hoping for further enrichment of the innovation culture.

The region delegates some of the activities foreseen under the regional strategies and plans to clusters and Regional Innovation Platforms, for example R&D diffusion. Also having acknowledged its shortages in the R&D field, the region has established the Technological Research Institute Jules Verne (IRT Jules Verne) in 2012 that brings together public-private partnerships to help improve competitiveness in the region further.

The comprehensive process of preparation of the innovation strategy, which involved participative and consultation processes as well as various analyses has been very positively evaluated in a report by in Regional innovation Monitor Plus 2016 (Regional Innovation Report, Pays de la Loire (industry 4.0 and smart systems) for the European Commission). It seems also promising that the strategy leads to the development of dynamic platforms with the capacity to engage SME. On the other hand, it has been observed that the strategy focuses largely to explore the strengths and opportunities of the region but does not really sufficiently address the weaknesses (identified in the SWOT).

National and European level

The regional authorities oversee the involvement of ESI Funds around the six-specialisation areas of the SRI-SI within its three axes.

The actors in the region make use of the existing EU funding programmes such as Horizon 2020 with projects such as FORTAPE. The IRT Jules Verne is actively engaged in several European networks such as EFFRA (European Factories of the Future Association), EARPA (European Automotive Research Partners Association); EUROROBOTOCS (European Robotics Association). The institution is also the national Contact Point for the NMP Programme (Nanotechnologies, advanced materials and advanced manufacturing processing). Further-

more, the regional agency Pays de la Loire Territoires d'Innovation is increasingly more involved in the Vanguard Initiative, which brings together regions committed to smart specialisation strategies.

3.2 Policy strategies in place

Regional strategies

The region Pays de la Loire has a Regional Innovation Strategy for Smart Specialisation for years 2014-2020, which also aims at utilizing national and European funding schemes. The strategy foresees six priorities and focuses on manufacturing systems and associated services, processes, factories and equipment, automation, robotics and “cobotics”, measurement and sensitive systems as well as IT system controlling production processes. The strategy aims to create favourable environment and framework conditions for regional actors to cooperate and create regional innovation value chain. Major investment under this strategy as well as preceding strategies were EMC2 cluster, IRT Jules Verne as well as Technocampuses, investment into regional Innovation Platforms. Further investments of the region include

Next to the strategies aiming at development of SME and industries, the region also targets the education and skills development through plan Competences 2020. For example, one of strategic axes of the plan is improvement of workforce competences in advanced manufacturing. One of the strategic action plans is implemented in Loire Atlantique, in Nantes-Saint Nazaire. Important investments in this field are also Technocampuses, which also receive publicly money. The general council of Loire Atlantique invested into the Technocampus Composite (composite manufacturing) as well as Technocampus Smart Factory (virtual reality), Technocampus Ocean (shipbuilding).

National strategies

In 2013, the Ministry of Industry introduced 34 plans for a “New Face of Industry in France”, one of which is “Industry of the future”, which was officially recognized by the regional authorities of Pays de la Loire as a way to better position the region in the field of advanced manufacturing. “Industry of the future” aims to support factory investments in order to support the efforts towards more environmental friendliness, smarter, more digital and closer to their ecosystem factories.

In framework of the national “Investments of the Future” plan, with an investment of €10m the region has been creating a “robotisation pathway” for accelerating adoption of robots by regional SME. Similarly, a €10m was invested in diffusion of advanced manufacturing techniques to regional SME. Furthermore the “Industry of the Future” programme enabled disclosing of loans by the national public investment bank BPI France for four different types of loans: green loans (for increasing resource efficiency), robotic loans (for investing into automated production processes), industrialization loans (for industrializing and commercializing a successful R&D product) as well as digital loans (for digitalization processes).

3.3 Support instruments for SME and the three focus sectors

The region Pays de la Loire intends to maximise the diffusion of high tech techniques and processes in direction of regional SME. To do so, 10 million euro were invested in two years to create a “pathway towards advanced manufacturing for SME”. The plan includes awareness raising actions, the funding of technological diagnostics, training actions (dynamic RSE) and importantly the funding of collaborative R&D projects and demonstrators accessible to regional SME. SME can also rely on the financial support from the national public investment bank BPI France that has disclosed €1.2b of loans under the “Industry of the Future” programme, which displays a range of four thematic loans:

- “Prêts verts” (green loans) for companies that undertake actions to increase their resource efficiency
- “Prêts robotique” (robotic loans) targeting companies which invest in structuring project integrating automated production processes, including robots
- “Prêts pour l'industrialisation” (industrialisation loans) to cover material and immaterial spending following the achievement of R&D projects to sustain the industrialisation and commercialisation of an innovative product, process of service
- “Prêts numériques” (digital loans) for companies engaged in the digitalisation of processes to improve competitiveness.

The following presents three recent initiatives, which are considered as best practices for the support of SME development in the department:

The Jules Verne Manufacturing Valley: “the French industrial place to be” is the label that embodies the region’s ambition to create a unique ecosystem dedicated to advanced manufacturing and the factory of the future. The label is not an additional entity. It aims to gather all the actors engaged that form the innovation value chain in advanced manufacturing within a single community with a strong common visual identity, together with a shared vision and strategy. The label is a significant instrument to raise awareness among SME of the opportunities created by advanced industries, and to brand the performances of the departmental and regional ecosystem internationally.

Vision 2020: towards a Third Industrial and Agricultural Revolution: The “Third Industrial and Agricultural Revolution in Pays de la Loire” (French acronym TRIA, “Troisième révolution industrielle et agricole”¹⁷) is another illustration, an initiative launched in 2014 by the three regional consular chambers: the Chamber of Commerce and Industry, the Chamber of Trades and Crafts and the Chamber of Agriculture. TRIA’s first objective is to mobilise economic actors and public authorities in a common transition towards a shared strategy and objectives so as to achieve a more efficient, competitive and environmental friendly economy. The strategy is directly inspired by Jeremy Rifkin’s concept of the third industrial revolution, which relies on the combination of digital solutions and renewable energies.

Plateformes Regionales d’innovation (PRI): Since 2009, the regional authorities have supported the establishment of Regional Innovation Platforms in key industrial and technological sectors, which have been identified as being of particular importance for the economic devel-

opment of the region. PRIs make up an original instrument, with no equivalent in other French regions. Their specificity consists in the mutualisation of competences and means brought in by experts from research, training and technology transfers on one side and local companies on the other side to spread the adoption of emerging technologies. The objective is to improve the competitiveness of SME through collaborative R&D projects in a context of the economic crisis in which companies were particularly risk averse and under financial constraint. SME joining PRIs have the opportunity to access rare equipment and experts to support them in their innovation projects, but also benefit from the exchange of experience with the other members and receive tailored training to acquire new competences. PRIs also combine to the territorial structuration by targeting territorial value chains, increasing the dissemination of innovation towards local SME. Thus, PRIs contribute to reinforcing the innovative capacity of intermediary landscape beyond few key centres.

3.4 Results of the FOG Test

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities steer decisions made over matters related to SME and entrepreneurship support structures and mechanisms in the region in a unilateral manner.		
	Regional authorities exercise their powers mainly providing services and resources, in turn monitoring the achievement of specified objectives with respect to SME development (performance and results oriented)		
	Regional authorities collaboratively develop and foster, with key stakeholders, SME and entrepreneurship support structures and mechanisms in the region.	1	2
	Regional authorities have delegated powers to other entities or relevant stakeholders as a way to proactively develop and foster SME and entrepreneurship support structures and mechanisms in the region.	1	
	Practices and actions undertaken		
A1.0	Is the development of an entrepreneurship culture in the region rather organically driven (grassroots movements) or rather stemming from a top down approach (institutionally driven)?	Rather organic: Universities are extremely active and entrepreneurship classes are mainstreamed in all business schools. Private actors are also actively and visibly promoting events, involving the a large audience during public events	
A2.0	Which main actor/s is/are informally driving the promotion and shaping the development of an entrepreneurship culture in the region?	Business incubator, co-working spaces, business spaces renting agencies	
A3.0	Which main actor/s is/are formally driving the promotion and shaping the development of an entrepreneurship culture in the region?	Nantes Saint-Nazaire Développement Agency is a prominent actor, highly engaged in the promotion of an entrepreneurship culture	

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities, along with other actors create partnerships to foster an entrepreneurship culture in the region, going beyond the national or European framework/requirements.		
	Activities intended to promote an entrepreneurship culture are financially supported and closely monitored to optimise the efficiency, effectiveness and transparency of the actions undertaken by stakeholders receiving support from the regional authorities.		

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	A top down approach is adopted by regional authorities when promoting the development of an entrepreneurial culture (e.g. initiatives on the organisations of start-up conferences stem from local authorities)		
	Regional authorities are enabling all actors to take on the initiative to promote the development of an entrepreneurship culture in the region (e.g. via advisory services, training)	2	2
B1.0	Which actions are undertaken in the region to develop an entrepreneurial climate and culture?	Public start-ups pitching sessions, numerous conferences and business fairs featuring new and more established SME, career fairs in schools and universities	

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities facilitate the creation of business start-up support structures by engaging with a large array of stakeholders themselves.	2	1
	Regional authorities directly contribute to increase the business start-up rate by initiating and managing business start-up support structures.		
	Networks, incubators, portals and gateways are being developed hand in hand by local authorities and citizens, proactively stepping in to create a start-up friendly environment in the region.		1
	Regional authorities support the development of start-up support structures by providing the necessary resources to (intermediate) working to boost entrepreneurial skills in the region.		
C1.0	According to you, which support structure or practice for start-ups and SME is the most effective and should be further emphasised to ensure the development of entrepreneurial skills in the region?	Thematic clusters are particularly successful and are well integrated to the broader business ecosystem of the department. A participatory and collaborative approach underlines the functioning of these clusters proving that fostering competitiveness and creating partnerships are not mutually exclusive.	

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities have developed strategies and implement schemes intending to reduce barriers to entry, eliminate obstacles and foster an environment conducive to the development of start-ups and SME.	1	1
	Off-the-shelf financing practices as well as the provision of a venture capital environment provide innovative and inclusive sources of financing, which are tailor-made to the needs of the actors in the region.		1
	The provision of financing support by the region is provided and can be conditional on the achievement of set objectives and result-oriented approaches are favoured by authorities, which encourage a greater ownership of the projects to ensure the success of the action and a return on investment.		
	Regional authorities use the synergies developed in networks of stakeholders supporting entrepreneurship. They accordingly facilitate the development of conventional financing bodies as well as participative financing schemes targeting start-ups, SME and project holders from under-represented groups.	1	
	Practices and actions undertaken		
D1.0	Is there a financial gap or a suboptimal investment situation for SME financing in the region?	To some extent yes, but the gap is reducing as the economic situation improves and mutualist banks keep supporting SME when other commercial banks still remains too risk-averse.	
D2.0	What are the most commonly used financial support schemes or means of financing for entrepreneurs and SME?	Financial instruments such as loans and guarantees remain prominent.	
D3.0	How do governance mechanisms contribute to start-up/SME development while making up for the reduced availability of public funding?	Prevention is a key element of the public strategy to support SME, providing them with advisory services	
D4.0	Are regional authorities prompt to take economic risks when providing financial support to SME?	Only in a few sectors (ICT, high tech industries)	
D5.0	Who supports and fosters higher accessibility of the region (physical infrastructure)? How (grants/PPP, etc.)	The Region Pays de la Loire with national authorities. ESIF funds, notably the ERDF, are also contributing to developing infrastructure (e.g. fibre optic connection)	
D6.0	What is done to improve the governance standards at national/regional/local level?	Transparency and open dialogues with all stakeholders are cornerstones elements intending to improve governance structures supporting SME in the department	

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities ensure the development of an entrepreneurial culture in the region looking at other regions' governance structures and mechanisms to improve their own entrepreneurship and SME policies and create partnerships with other regional authorities to foster innovation as well as the development of synergies.		1
	Regional authorities are integrated into a multi-level governance system and actively collaborate to identify best practices and challenges solving options beyond regional and national borders.		
	Co-funded projects are driving the need for further collaboration between regional authorities and between regions.		
	Developing contacts and partnerships is the spearhead of regional authorities and key actors to make up for potentially limited public intervention (e.g. public funding) and autonomously find solutions to local issues (without recurring to external support).	2	1
	Practices and actions undertaken		
E1.0	Have regional clusters developed ties and are collaborating with other clusters at the national/EU level?	Not really, and that is a major weakness	
E2.0	Which are the regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment?	"Welcome packages" are promoted and offered to entrepreneurs, including in various languages to attract foreign companies. The set is comprehensive and comprises all information (contact persons, administrative procedures..etc.) which can be useful to know when arriving in Loire-Atlantique.	

4 Results of the SWOT analysis

Internal factors – factors of competitiveness

Major strengths
High social capital. The strong and long-established partnerships between key private and public actors present trust as an essential elements of the tight network. The existence of numerous family-owned companies also reinforces a specific atmosphere, which fosters collaboration. The department's strong cultural heritage and sense of identity is an important tenant shaping the development of the territory.
A dense and diversified network of SME (in terms of enterprise size and sector spread)
Territorial attractiveness (High quality of life, geographical location, 3 hours away from Paris). Nantes was elected (in 2013) the European Green Capital
Dynamic and growing clusters having a good territorial anchorage gathering universities, start-ups, SME and larger groups. Public authorities are also taking part, most often represented in the board of directors.
Nationally recognised scientific and research capacity
Highly skilled workforce , willing to stay in the department, limited effects of brain drain from the capital since job prospects in the region are high.
Infrastructure to support start-ups and entrepreneurs: co-working spaces offer a flexible work environment. Some co-working places are even dedicated to ICT projects (la Cantine) or on social and solidarity projects (le Solilab). These shared workplaces are aimed at professionals with varied profiles, who all share the same credo: innovation and well-being at work. Some co-working spaces target other specific fields: media, design, web, consulting, etc. Others target a specific audience: start-ups, freelancers, employees of large corporations, solopreneurs, artists, non-profits, etc. Along those lines, numerous specialised and general incubators
Major weaknesses
Insufficient R&D investments despite positive trends, linked to the limited presence of national research institutes, which are largely driving innovation
R&D is concentrated on a limited number of industries focusing on medium to high technologies in the sectors identified as having most future potential (e.g. aerospace, renewable energies (notably marine), health & biotechnologies, ICT). The risk is to limit knowledge transfers with a wider range of sectors and spillover effects.
R&D investment strategies are often defensive: for instance the metallurgy sector prominently focuses on cost reduction and organisational innovation.
Limited integration of SME (notably the largest ones) into the global value chains. The strong connections between large companies and SME may be a strength as it allows SME to contribute to large-scale projects but, however, may to some extent prevent them from growing and directly competing on other markets. This may create lock-in effects and path dependencies, which hinder the development of SME.
Limited levels of internationalisation: while medium-sized family owned companies have largely been dedicated to the local markets, a major barrier for their development is linked to the structure of the productive capacity and their lack of international culture.
Limited awareness of SME on EU-funded programmes or opportunities, for example, Horizon 2020.
Other weaknesses – less pronounced
The tight relations between the main stakeholders, whom one may associate with a certain chauvinistic attitude or regional pride, may result in barriers for entry or difficulties for entrepreneurs coming from outside of the department/region.

External factors – framework conditions

Major opportunities/drivers
Improved ICT infrastructure: While already 75 000 inhabitants have access to high speed Internet access, from 2017 to 2021, optic fibre access will be expanded beyond the metropolis. The project aims at connected 108 000 households, enterprises and local authorities (more than 30 Mbps). The investment of 108 million euro is co-finance by the ERDF, national governance and the Region Pays de la Loire.
Creativity at the heart of the economic development: numerous structures have been created to attract SME in the audio-visual industry, entertainment business, visual arts, fashion industry, etc. A concrete initiative is the foundation of "Quartier de la création", a 90 000m ² space to incubate start-ups, host events. At the regional scale, over 90 000 jobs are in the creative sector and the

<p>prospective job creations are very optimistic.</p> <p>In June 2017, a "mediacampus" was inaugurated and gathers communication schools, a local TV channel and various SME in the communication and media sector.</p> <p>The metropolis Nantes Saint-Nazaire is now France's fastest growing centre of digital employment.</p>
<p>Renewable energies: Loire-Atlantique is the first research centre in France in marine energies, a sector dominated by innovative SME. Two offshore wind farms are to open in 2018 and several technical universities have created specialised trainings and degrees to anticipate the increase demand for specialised labour force. Today, 5000 students are concerned, a figure expected to double with 5 years.</p>
<p>Silver economy: the coastal location along with a temperate climate attracts a significant number of retired people. The demand for specific services adapted to the need of this population is accordingly skyrocketing. More than 400 SME and associations are currently working in the sector, and the prospects for development are substantial.</p> <p>The "Rendez-Vous d'Affaires de la Silver économie Pays de la Loire" (Business meeting gathering all key public and private actors) is an important event contributing to foster networking as well business opportunities in the sector.</p>
<p>Health and biotechnologies: public support to the Nantes University Hospital Center contributed to place the hospital at the second rank, at the national level, in the field of transplantations and gene therapy. More and more SME have joined forces (Atlantplole Biotherapies cluster) to compete and providing all necessary equipment and know-how. The Chamber of Commerce of Nantes Saint-Nazaire considers this sector as one of the most promising perspective for diversification of activities.</p>
<p>The social and solidarity economy (SSE) and social innovation: offer sustainable projects fostering the department's social cohesion. Numerous think tanks (e.g. les Ecosolies) and associations are promoting social entrepreneurship practices at school and at university levels. Structures, such as MakeSense, intends to crowdsource support for social business entrepreneurs. Those initiatives are particularly in line with the living philosophy of the department's inhabitants.</p> <p>The sector notably benefits from a strong and lasting support from public authorities, which focus on promoting, inter alia, sustainable and inclusive forms of mobility, organic agriculture and distribution channels, hence supporting small businesses and entrepreneurs who may have suffered from the sector's high competition. In 2010, already 20% of the private employment fell into the SSE sector.</p>
<p>Major threats/challenges/barriers</p>
<p>Lack of outreach: Loire-Atlantique still needs to position itself as a national and European innovation hub, to enhance its visibility and foster cooperation with other renowned centres from other regions.</p>
<p>High national and international competition in the main prospected field of development</p>
<p>Other threats/challenges/barriers – less pronounced</p>
<p>Land pressure and increasing property prices at the expense of agriculture as a result of the booming demography and arrival of retired people having a higher purchasing power.</p>
<p>Neutral factors – represent neither an opportunity/driver nor a threat/barrier</p>
<p>Expected reform of the labour law during the current presidential mandate, which may result in strong opposition from various stakeholders. The impact of any attempts to reform the labour code generate a certain anxiety or rather uncertainty for entrepreneurs who fear having to deal with more complex procedures but in the same time would welcome a more favourable tax environment and more flexible hiring/lay off conditions. Paradoxically, the last simplification reforms reportedly resulted in increased complexity, especially for micro-enterprises.</p>

5 Future policy needs

SME located in Loire-Atlantique are facing challenges, which are not unique to the department but are pervasive issues across the national territory according to Marc Castel from the incubator Audencia Business School. Nonetheless, several issues inducing specific policy needs can be mentioned:

First and foremost, the main stumbling block hindering the development of SME in Loire-Atlantique is the limited access to financing, especially traditional sources of financing from financial intermediaries/commercial banks. A young entrepreneur from Nantes, Jules Hervouet (from DICTNOVA) even reported that some bankers, at the very first meeting, would try to discourage entrepreneurs from filing a loan application on the basis that the file would be ultimately rejected. On the other hand, as further noted, this may also create a psychological barrier for entrepreneurs who would anticipate a rejection and would therefore not even make a request in the first place. Such a case of self-censorship from entrepreneurs along with the reported risk aversion of banks may be a key issue limiting the creation of enterprises and the development of existing micro-enterprises or SME. Another side effect of the described phenomena is the underestimation of the financing needs (due to the low demand for financial instruments recorded). A suggested solution is to create more services of credit mediators or financial counsellors, which appear to be insufficient in Loire-Atlantique.

As mentioned earlier in this report, local authorities and diverse actors such the Chamber of Commerce and Industry are very committed and involved supporting SME. However, a paradoxical issue apparently relates to the fact that public regional and departmental aid rather focuses on supporting SME being in difficulties at the expense of start-ups or SME at a developing stage. Along those lines, monitoring and intervening at an earlier stage than when difficulties are unavoidable appears essential to minimise the risks of potential bankruptcy.

6 Annex

6.1 Interview partners

Name	Organisation	Position	Special expertise/years of experience ¹⁰⁴	Interview Date	Tel/f2f
Marc Castel	Incubator Audencia Business School	In charge of the Research laboratory	Researcher	14/6/2017	F2f
Jules Hervouet	DICTNOVA	Co-founder	Entrepreneur	13/6/2017	F2F
Marine Hugues	Nantes Metropolis	Department SME/CSR	Public representative	13/6/2017	F2F
Jean-Marc Trichet	Chamber of Commerce and Industry	Project manager "PME Bougez-vous"	Public representative	12/6/2017	F2F

6.2 Focus Group participants

Name	Organisation	Position	Special expertise/years of experience ¹⁰⁵	Date of workshop	Tel/f2f
Marc Castel	Incubator Audencia Business School	In charge of the Research laboratory	researcher	15/6/2017	
Jule Hervouet	DICTNOVA	Co-founder	Entrepreneur		
Marine Hugues	Nantes Metropolis	Department SME/CSR	Public representative		
Jean-Marc Trichet	Chamber of Commerce and Industry	Project manager "PME Bougez-vous"	Public representative		

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¹⁰⁴ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

¹⁰⁵ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

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Case study report: Murcia

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1 Characterization of the region

The Region of Murcia is an autonomous community that consists of only one province, located in the southeast of the Iberian Peninsula, and bordering Andalusia, Valencian Community, Castilla La Mancha and the Mediterranean Sea, and occupies an area of 11 317 km². Its capital is the city of Murcia where the headquarters of the regional institutional bodies are located, with the exception of the Regional Assembly, which is in Cartagena. This second city is the most important one in terms of economic activity, as its harbour is the fifth in Spain in terms of freight traffic and there are many industries that operate in the city.

Table 1.1: Main characteristics of the Murcia region

DEMOGRAPHY	MURCIA	SPAIN
Surface (km ²)	11 313	505 990
Population (1-7-2016)	1 469 596	46 468 102
Population density (pop./Km ²).	129.48	92.01
Life expectancy at birth (2015): both sexes	82.26	82.71
Life expectancy at birth (2015): women	84.74	85.42
Life expectancy at birth (2015): men	79.76	79.93
Proportion of population born abroad (2016)	15.05	12.74
Proportion of people aged over 64	15.34	18.73

Source: Spanish National Statistics Institute (INE). Own elaboration

The total population of the Region of Murcia is 1 469 596 inhabitants (INE 2016), representing the 3.2% of the total population of Spain. Something less than a third lives in the capital (441 003 inhabitants), which is the seventh Spanish city in terms of size, and approximately half is distributed among the municipalities of Murcia, Cartagena and Lorca. It is a relatively small community despite being single province and it is the ninth of Spain in surface and the tenth in population. In this sense, the population density is higher than the national average.

About other indicators that shape the demographic structure of Murcia, these are life expectancy at birth, the proportion of population born abroad and the percentage of people aged over 64. As for the life expectancy, it is very high and denotes the quality of life existing in Murcia, although it is slightly lower for both sexes compared to Spain. On the other hand, there are more people born abroad living in Murcia compared to Spain (2.31% more), and there are 3.39% less people aged over 64 in comparison to Spain: this means the society of Murcia is younger.

Table 1.2: Main characteristics of the Murcia region labour market

LABOUR MARKET (Q1 2017)	MURCIA	SPAIN
Labour participation	59.47	58.78
Unemployment rate	19.34	18.75
Employment in the agriculture sector.	13.5	4.6
Employment in the industry sector.	12.0	13.9
Employment in the construction sector.	6.3	5.9
Employment in the service sector.	68.2	75.6

LABOUR MARKET (Q1 2017)	MURCIA	SPAIN
Annual variation rate of employment	5.32	2.27
Annual variation rate of unemployment	-11.00	-11.19
Total labour costs per employee (€) (Q4 2016)	2,440.85	2,649.97

Source: INE. Own elaboration

According to the data provided by the last Spanish Active Population Survey (Q1 2017)¹⁰⁶, the labour market characteristics of Murcia and Spain differ in some aspects. As for the labour participation, both territories are in a similar level, although Murcia is slightly above, and the employment rate is similar as well for both of them, although here Murcia's figure is slightly above too. As for the employment distribution by sectors, there are interesting disparities, like the importance of the agriculture sector: in Murcia it employs three times more people than in Spain. In fact the agriculture sector's share is bigger than the industry sector share, and this second sector has more relevance in terms of employment in Spain. Moreover, Spain's service sector employment share is notably higher compared to Murcia. To end up with the labour market section, two positive aspects of Murcia are its variation rate of employment (two times higher than Spain's) and the lower labour costs per employee.

Table 1.3: Main characteristics of the GDP and economy of the Region of Murcia

PRODUCTION	MURCIA	SPAIN
GDPmp (million euros). Year 2015	27 528	1 075 639
Variation GDPmp 2015-2014 (%)	3.6	3.8
Participation of regional GDPmp in the national total (%). Year 2015	2.6	100
GDPmp per capita (Average of Spain = 100), 2015	81.2	100
GDP per capita (€) 2015	18 803	23 177
Gross disposable income per capita (Spain's average=100). Year 2014	79.7	100

Source: INE. Own elaboration

With regard to the production of the economy, Murcia's GDP represents 2.56% of the total Spanish GDP, and both territories have a positive and similar GDP variation at market price. However, Murcia's GDP per capita is 18.8% lower than the national average, representing the wealth of the region. Another important aspect that shows that the economy of Murcia is less vigorous than the Spanish economy is the gross disposable income per capita. Compared to Spain, each inhabitant of Murcia "receives" 20.3% less gross disposable income.

Table 1.4: Main characteristics of the Gross Value Added and productivity of the Region of Murcia

GROSS VALUE ADDED (GVA)	MURCIA	SPAIN
Gross Added Value (GAV) of the primary sector. 2015 (% over total)	4.4	2.3
GAV of the industry. 2015 (% over total)	17.4	16.4
GAV of construction. 2015 (% over total)	5.5	5.1
GAV of the service sector. 2015 (% over total)	63.4	66.9

¹⁰⁶ Spanish Active Population Survey (Q1 2017) ("Encuesta de Población Activa, trimestre 1/2017")
http://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176918&menu=ultiDatos&idp=1254735976595

PRODUCTIVITY GVA DISTRIBUTION BY EMPLOYED. Year 2015		
Agriculture	84.5	100
Industry	89.3	100
Construction	88.9	100
Services	84.9	100

Source: INE. Own elaboration

Other important indicators related to production are the Gross Added Value (GAV) and the productivity. Firstly, the main particularity of Murcia is that the primary sector's GAV is two times higher than in Spain, and also the regional industry sector offers slightly more added value. However, Spain's service sector comprises more added value compared to Murcia. As for the productivity, Murcia is below the national figures in all the sectors. According to the statistics compiled by the General Directorate of Industry and SME¹⁰⁷, the total productivity of the region is below 38.8 points the Spanish level, meaning that Murcia has many aspects to improve in this sense. Interestingly, the agriculture sector of Murcia- where in many aspects the region is a leader- has a weaker performance in terms of productivity.

Table 1.5: Relevant indicators about the implementation of ICT in companies of the Region of Murcia, compared to Spain

TECHNOLOGIES INFORMATION AND COMMUNICATIONS, IN COMPANIES. Year 2015	MURCIA	SPAIN
Social media: Companies that consider social media to be very useful for the generation or development of their business (%)	52.27	48.68
Companies with Internet connection and site/website (%)	71.06	77.52
Companies that send electronic invoices in a standard format suitable for automatic processing (eg EDI, UBL, XML...) (%)	29.13	31.17
Companies that have an Internet connection	99.22	98.35

Source: INE. Own elaboration

Having described briefly the most relevant indicators about the economy of Murcia, there are indicators related to ICT usage and R&D investment that provide a better picture of the regional competitiveness. In this sense, companies of Murcia are more into social media to develop their business, although in terms of companies with Internet connection and website 6.46% less companies meet with this standard compared to Spain's companies. The electronic invoices are not very spread still in both territories, but the Internet connection reaches practically all companies.

Table 1.6: Relevant indicators on the R&D investment in the Region of Murcia

RESEARCH & DEVELOPMENT. Year 2015	MURCIA	SPAIN
Internal R&D expenditure (% of GDP)	0.9	1.2
Personnel with full time contract devoted to R&D (% per thousand employed)	15.0	11.1

Source: INE. Own elaboration

¹⁰⁷ SME Statistics. Evolution and Indicators ("Estadísticas PYME. Evolución e Indicadores"). February 2017.

<http://www.ipyme.org/Publicaciones/Estadisticas-PYME-2016.pdf>

Finally, according to the National Statistics Institute, Murcia's Internal R&D expenditure in 2015 was lower than the Spanish average, something that affects negatively the competitiveness of the region. However, the proportion of personnel with full time contract devoted to R&D is higher in Murcia than in Spain.

2 Mapping the SME sector in the region

In this first chapter, a general overview will be given about the Region of Murcia and its performance in several aspects and indicators, mostly regarding the SME sector. During the analysis some relevant evidences will arise, that will be commented accordingly: for example, how has the crisis hit the regional economy and companies and the region's situation after it. The quantitative data provided by official institutions- mainly the Spanish National Statistics Institute (INE)¹⁰⁸ and the Eurostat (Regional Statistics)¹⁰⁹ will serve as a basis to explain the macro context in several aspects (employment, number of active and death companies, etc.) and after this a more detailed analysis will be done about the SME sector situation and the focus sectors (among other aspects). At the same time, this chapter will be useful to provide an introductory first big picture of the Region of Murcia to, later on, address the analysis of the competitive factors influencing the dynamics of the region.

Table 2.1: Active companies by economic sectors 2008, 2012, 2016

	Spain					Murcia				
	Total	Industry	Construction	Commerce	Rest of services	Total	Industry	Construction	Commerce	Rest of services
2016	3 236 582	195 619	406 682	757 537	1 876 744	92 008	6 711	12 306	25 311	47 680
2012	3 199 617	214 992	462 402	773 657	1 748 566	88 606	6 974	13 918	24 309	43 405
2008	3 422 239	245 588	501 056	843 212	1 832 383	100 075	8 020	16 455	26 588	49 012

Source: INE

Having explained briefly the aim of the present section, it is time to begin the general analysis of the business context of Murcia. In this sense, the impact of the recent crisis has been very considerable for both the region and Spain, but specially for Murcia. From 2008 to 2012, there were 11.5% active companies less in Murcia, a bigger drop than in Spain (-6.5%). This decline affected mostly the construction (-15.4%) and the industry (-13%), while the behaviour in Spain was different and less intense (-12.5% in industry and -8.2% in commerce). However, at the same time, Murcia's active companies' number recovery has been higher from 2012 to 2016: there are 3.7% more active companies, while in Spain only 1.1% more. In the other hand, the structure of the economy also has changed during the crisis. There has been a clear tendency towards the service sector strengthening: in Murcia, the industry and construction represented 8% and 16.4% of the total active companies in 2008; but in 2016, they lost weight, representing the 7.3% and 13.4% respectively. By contrast, the importance of commerce and other services has increased notably, comprising the 79.3% of all the active companies.

¹⁰⁸ Spanish National Statistics Institute website ("Instituto Nacional de Estadística"). <http://www.ine.es/>

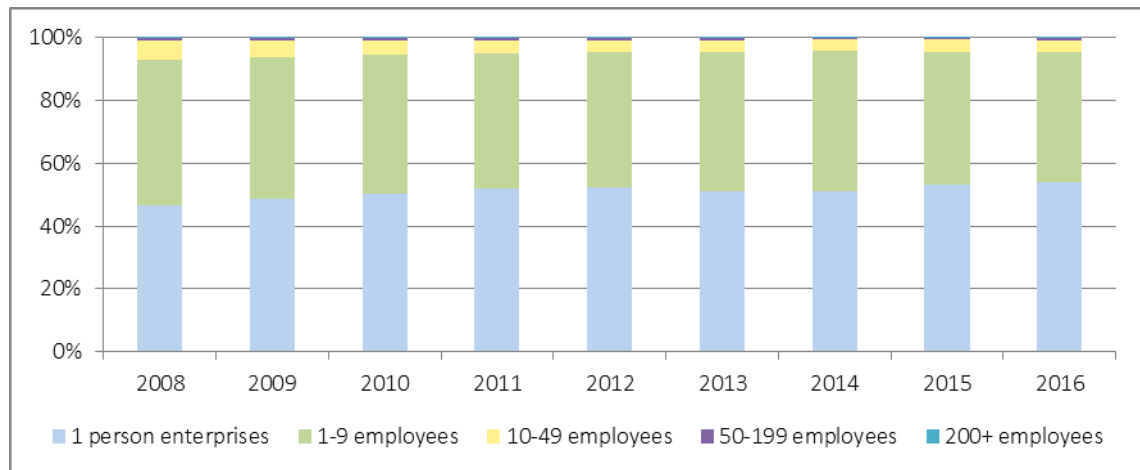
¹⁰⁹ Eurostat Regional Statistics by NUTS classification. European Commission. <http://ec.europa.eu/eurostat/web/regions/data/database>

Table 2.2: Number of enterprises by enterprise size in Murcia, 2008-2016

	1 person enterprises	1-9 employees	10-49 employees	50-199 employees	200+ employees	Total
2008	46 801	46 327	6 050	715	182	100 075
2009	46 473	43 215	5 162	655	131	95 636
2010	46 273	40 969	4 260	580	114	92 196
2011	47 130	39 184	3 885	545	112	90 856
2012	46 357	38 098	3 514	528	109	88 606
2013	44 427	38 864	3 282	461	112	87 146
2014	44 340	38 720	3 170	432	120	86 782
2015	48 014	38 100	3 334	463	120	90 031
2016	49 585	38 255	3 560	480	128	92 008

Source: INE

Figure 2.1: Number of enterprises by enterprise size, 2008-2016



Source: INE

Depending on the businesses' size, in Murcia the evolution of them has not been the same during the whole 2008-2016 period. Generally speaking, there were 8% less active companies and all the size branches have suffered a decline except for companies without employees (self-employed persons) that experienced an increase of 5.6%. This is because during the crisis, the long term unemployment has increased and the people have considered that becoming self-employed could be a solution to their unemployment. Also, the type of business that suffered most are the businesses with one to 9 employees (-17.4%) and with 10 to 49 employees (-41.1%), although they are experiencing recently a little recovery. About the relevance of the SME in the regional economy, they are crucial: in 2016, 99.3% of the active companies have less than 50 employees. Moreover, the 99.91% of the total companies are SME (0 to 249 employees)¹¹⁰, and 53.9% of the total number are companies without employees and 41.6% are microenterprises (1 to 9 employees). To complement this information, the companies of Murcia represent 2.84% of the total Spanish companies.

¹¹⁰ SME Statistics. Evolution and Indicators. Opt cit.

Table 2.3: Number of enterprises by enterprise-size in Spain, 2008-2016

	1 person enterprises	1-9 employees	10-49 employees	50-199 employees	200+ employees	Total
2008	1 791 909	1 305 270	115 917	18 263	5 223	3 236 582
2009	1 754 002	1 299 759	110 619	17 431	5 067	3 186 878
2010	1 672 483	1 316 431	108 383	16 976	5 037	3 119 310
2011	1 681 588	1 328 318	113 710	17 875	5 079	3 146 570
2012	1 764 987	1 288 390	122 183	19 134	4 923	3 199 617
2013	1 795 321	1 299 400	130 994	19 864	4 997	3 250 576
2014	1 774 005	1 354 176	137 161	20 843	5 078	3 291 263
2015	1 767 470	1 402 996	157 242	22 747	5 375	3 355 830
2016	1 754 374	1 465 019	172 078	24 303	6 465	3 422 239

Source: INE

If Murcia's evolution is compared to the Spain's data, it can be concluded that the performance has been better at national level. Unlike Murcia, in Spain there has been a slight increase in the active companies' number (+5.7%) during 2008-2016. Compared to 2008 results, all the branches have experienced a considerable increase, except for the companies without employees (-2.1%): companies with one to 9 employees (+12.2%), 10 to 49 employees (+48.5%), 50 to 199 employees (+33.1%) and more than 200 employees (+23.8%) experienced relevant improvements. This is just the opposite tendency compared to Murcia, where the only business type that increased was the one without employees, because of the higher unemployment existing in Murcia and because it has been seen as an escape from the unemployment (as previously stated).

Having explained generally the evolution of Murcia's business context compared to the Spain's data, the report will analyse the evolution according to the different sectors and focus sectors (when possible): ICT Sector, Knowledge/Creative Economy and Low Carbon Economy. In order to make the information more accessible and clear, the subsectors with less than 100 active businesses have been included under the category "other sectors" (except for the ICT Sector).

Table 2.4: ICT SECTOR: number of enterprises

Subsectors	Years		
	2016	2012	2008
26 Manufacture of computer, electronic and optical products	47	46	60
61 Telecommunications	166	132	110
62 Programming, consultancy and other activities related to information technology	554	458	335
63 Information services	93	20	74
ICT Sector	860	656	579

Source: INE

To begin with, the ICT Sector is the smallest one in size, but it has experienced an increase of 32.7% in the number of enterprises from 2008 to 2016, and the main subsector is the "IT

Programming, Consultancy and Related Services” (representing 64.42% of the total number of enterprises). However, the only subsector that has experienced a decline has been the Manufacture of Computers and Electronics, with 21.7% companies less in 2016 compared to 2008, following the decreasing tendency of the regional industry/manufacturing sector (although this subsector is the most marginal).

Table 2.5: KNOWLEDGE/CREATIVE ECONOMY Sector: number of enterprises

Subsectors	2016	2012	2008
18 Graphic arts and reproduction of recorded media	345	329	382
20 Chemical industry	170	170	199
28 Manufacture of machinery and equipment	242	240	289
58 Edition	122	127	153
61 Telecommunications	166	132	110
62 Programming, consultancy and other activities related to information technology	554	458	335
66 Activities auxiliary to financial services and insurance	1 988	1 783	1 771
69 Legal and accounting activities	4 524	4 843	4 364
70 Activities in headquarters; Business management consultancy activities	399	255	248
71 Architectural and engineering technical services; Technical testing and analysis	2 566	2 714	3 356
72 Research and development	192	150	535
73 Advertising and market research	708	485	582
74 Other professional, scientific and technical activities	894	658	731
75 Veterinary activities	289	240	224
79 Activities of travel agencies, tour operators, reservation services and related activities	195	171	178
80 Security and research activities	104	98	109
90 Creation, artistic and entertainment activities	542	351	345
91 Activities of libraries, archives, museums and other cultural activities	113	75	37
92 Gambling and betting activities	350	391	397
93 Sporting, recreational and entertainment activities	1 116	814	833
Other sectors	602	542	714
Total Knowledge/Creative economy	16 181	15 026	15 892

Source: INE

With regard to the Knowledge/Creative economy sector, the total figure of active businesses has increased as well from 2008 to 2016 and there are 1.8% more companies. The main subsectors are legal and accounting activities (28% of total), engineering and architectural services (15.9% of total) and auxiliary activities (12.3% of total), and all of them have experienced a rise except for the second one, which experienced a decline of 23.5%. This negative performance is due to the close relationship it maintains with the construction industry and the hard effects that crisis has caused in this precise sector. Apart from this, a subsector that has experienced a notable improvement during the 2012-16 period has been the “Sporting, Recreational and Entertainment” sector, as there are 37.1% more enterprises. Finally, there has been a significant decrease in companies related to research and development, which is a

dramatic factor for the regional competitiveness. Among the reasons behind this decrease could be mentioned the economic crisis and the dramatic fall in the public R&D investment (and other branches as mentioned previously). As already mentioned above, the decline in R&D investment is directly related to the economic crisis, which has led to a drastic reduction of investments in R&D, causing the loss of employment for many researchers (because in terms of firm-size, the biggest proportion in this subsector are self-employed people).

Table 2.6: LOW CARBON Sector: number of enterprises

Subsectors	2016	2012	2008
16 Wood and cork industry, except furniture; basketry and plaiting	292	351	479
35 Electricity, gas, steam and air conditioning supply	480	523	338
36 Collection, purification and distribution of water	213	198	86
38 Collection, treatment and disposal of waste; valorization	104	88	93
41 Construction of buildings	7 029	8 219	13 027
42 Civil Engineering	361	471	446
43 Specialized construction activities	4 916	5 228	8 149
49 Land and pipeline transportation	4 190	4 738	5 642
71 Architectural and engineering technical services; Technical testing and analysis	2 566	2 714	3 356
72 Research and development	192	150	535
Other sectors	111	112	109
Total Low Carbon	20 454	22 792	32 260

Source: INE

The third focus sector, the Low Carbon sector, is the only one that experienced a decrease and a very considerable one: in eight years, there are 36.6% enterprises less in Murcia in this sector. This decrease can be explained by the tremendous effects that the crisis had in the construction sector, taking into account the relevant proportion that the construction had (and still has) in the regional economy (as previously indicated). In this sense, all the major subsectors have less active companies in 2016 than in 2008, with a notable decrease in Construction of Buildings (-46%), followed by Land and Pipeline Transportation (-25.7%) and Architectural and Engineering Services (-23.5%). Generally speaking, all subsectors have reduced their size in terms of active companies, but the Distribution and Collection of Water has in 2016 147.7% more firms compared to 2008, an spectacular evolution in a key subsector for the region (as Murcia is not abundant in water resources and because of this water related technologies are quite developed in the region).

Table 2.7: Number of enterprises by focus sectors (NACE Rev 2.2) and enterprise size, 2016

Focus sectors	Enterprise size (employees)					
	Total	0	1 to 9	10 to 49	50 to 199	200+
TOTAL ICT SECTOR	860	519	282	53	2	4
TOTAL KNOWLEDGE/CREATIVE ECONOMY	16 154	9 792	5 753	536	48	25
TOTAL LOW CARBON	24 364	14 703	8 456	1 059	99	47

Source: INE

Analysing the focus sectors taking into account their size, the situation described previously is repeated here: in the focus sectors also the vast majority of the companies are small SME (with less than 50 employees). In this sense, within these three focus sectors the enterprises without employees represent around 60% of the total number, and around one third have 1 to 9 employees: 32.8% in the ICT sector, 35.6% in the knowledge/creative economy and 34.7% in the low carbon sector have 1 to 9 employees. The sector where the companies with 10 to 49 employees represent the biggest share of the total is the ICT sector, (6.1% of total).

Table 2.8: Occupied employees by economic sectors, in thousand people (and the percentage over the total)

Sector	Spain			Murcia		
	2016 Q4	2012 Q4	2008 Q4	2016 Q4	2012 Q4	2008 Q4
Total	18,508.1 (100%)	17,339.4 (100%)	20,055.3 (100%)	571.6 (100%)	510.2 (100%)	607.9 (100%)
Agriculture	816.7 (4.4%)	774.0 (4.5%)	813.2 (4.1%)	76.2 (13.3%)	63.3 (12.4%)	62.6 (10.3%)
Industry	2,579.1 (13.9%)	2,438.8 (14.1%)	3,078.5 (15.4%)	74.7 (13.1%)	72.1 (14.1%)	86.3 (14.2%)
Construction	1,079.3 (5.8%)	1,090.1 (6.3%)	2,182.6 (10.9%)	29.1 (5.1%)	33.7 (6.6%)	71.5 (11.8%)
Services	14,032.9 (75.8%)	13,036.4 (75.2%)	13,981.0 (69.7%)	391.6 (68.5%)	341.2 (66.9%)	387.4 (63.7%)

Source: INE

Having treated the major indicators of the business demography, this chart shows the data of employed people by overall sectors, not by focus sectors (as there was not data available in this sense). According to the Spanish Active Population Survey (EPA), in eight years and in absolute numbers, there has been a decline in employment both in Murcia and Spain, although recently it has experienced a recovery (but not reaching to 2008 levels). In few words, the labour market has shrunk and in 2016 there were 1,547.2 thousand less occupied people (8.4% less) in Spain and 36.3 thousand fewer occupied people in Murcia (6.4% less). This generates a paradoxical situation in Murcia, mainly in the service sector: while the employment increased only 1.1%, in 2016 the share of the service sector over the total employment increased 4.8 points.

As for the variation in the share of the different sectors, both in Spain and Murcia the ones that have grown are agriculture and services, and the ones that have shrunk are industry and construction. In Murcia, the weight of agriculture in the employment has increased around 30% (way above the Spain's numbers) and, on the other hand, the construction reduced its presence in 231.4% (loosing 42.4 thousand jobs).

Table 2.9: Number of firm births and deaths, by enterprise size, 2008-2014

	Births				Deaths			
	Total	0	1 to 9	10+	Total	0	1 to 9	10+
2008	8 279	6 094	2 082	103	12 027	6 061	5 771	195
2009	8 137	6 183	1 878	76	12 002	7 482	4 306	214
2010	8 352	6 390	1 899	63	9 558	5 839	3 588	131
2011	8 402	6 513	1 825	64	10 422	7 303	3 026	93
2012	8 709	6 682	1 973	54	9. 955	6 492	3 371	92
2013	8 669	6 511	2 101	57	8 972	5 790	3 099	83
2014	10 835	8 755	2 019	61	7 640	4 835	2 746	59

Source: INE (and Eurostat for 2008 data). Own elaboration.

Due to the crisis, in 2008 business deaths were significantly higher than the births (a balance of -3,865 enterprises), but as the years went by, the trend has been reversed and in 2014 (the last available data in Eurostat) the balance was plus 3,195 enterprises. This recovery in firm births has been led mainly by single employee firms, as there have been 2,698 births more since 2008. As for the second category (1 to 9), although in the beginning there was a decline in the end the number has remained quite similar (only 63 firms compared to 2014). However, the births of companies with ten employees or more is way below the 2008 figure (around 40% births less). Finally, according to the firm deaths or failures, all the size branches have experienced a decline, pointing to a recovery in the business demography.

Table 2.10: Birth rate & Death rate

		2011	2012	2013
Birth rate	Spain	8.2	8.3	8.6
	Murcia	8.5	9.0	9.1
Death rate	Spain	9.5	9.6	9.3
	Murcia	10.5	10.2	9.3

Source: Eurostat. Regional statistics by NUTS classification.

To complete this analysis on firms' births and deaths, this chart gives details about the birth and death rates. According to Eurostat – which only provides complete data corresponding to 2011, 2012 and 2013 – the figures with regard to Murcia are slightly higher than the Spain's average, but in both of them the death rate is higher to the birth rate. However, there is a positive tendency in the births proportion and a permanent decline in deaths (something that proves some kind of recovery in the business demography and the economy).

Table 2.11: Business births by sectors (NACE Rev. 2)

Sectors	2008	2009	2010	2011	2012	2013	2014
Total	8,279	8,137	8,352	8,401	8,709	8,669	10,835
Industry	514	369	369	364	420	420	501
Construction	1 406	1 153	1 004	1 148	1 008	938	1 365
Wholesale and retail trade; repair	2 178	2 185	2 385	2 381	2 671	2 632	3 186
Transportation and storage	267	221	298	333	352	304	332
Accommodation and food services	1 143	1 163	1 155	1 103	1 183	1 040	1 093
Information and communication	139	124	125	123	130	122	182
Financial, insurance, real state	514	477	429	441	482	508	639
Professional, scientific and technical activities	1 081	1 403	1 490	1 426	1 321	1 414	1 758
Education; health and social work activities	452	450	518	514	499	591	848
Arts, entertainment, recreation, and others	585	592	579	568	643	700	931

Source: Eurostat. Regional statistics by NUTS classification

As for the business birth by economic sectors and broadly speaking, the companies that suffered most during this period have been industry and construction, as the rest of the sectors (that form the service sector) in some way or another have experienced an increase in births (except for accommodation and food services). In this sense, in the industry sector there have been 13 births less after this period, although the figures are improving after the drop experienced in 2008-2009 period (28.2% births less). Something similar happened to the construction: after a significant drop in 2008-2009 period (-18%), as years went by, the number experienced a recovery. With regard to the service sector, the subsector that experienced the highest improvement in terms of firm births has been "Professional, scientific and technical activities", with 38.5% more births in 2014 than in 2008.

Table 2.12: Business deaths by sectors (NACE Rev. 2)

Sectors	2008	2009	2010	2011	2012	2013
Total	12 027	12 051	-	10 432	9 846	8 915
Industry (except construction)	685	721	-	590	567	539
Construction	4 519	2 995	-	1 958	1 973	1 329
Wholesale and retail trade; repair	2 562	2 923	-	2 630	2 688	2 477
Transportation and storage	425	489	-	402	440	461
Accommodation and food services	994	1 201	-	1 209	1 234	1 118
Information and communication	105	136	-	138	105	119
Financial, insurance, real state	629	793	-	518	508	352
Professional, scientific and technical activities	1 290	1 645	-	1 733	1 378	1 564
Education; health and social work activities	345	383	-	474	401	426
Arts, entertainment, recreation, and others	473	765	-	780	552	530

Source: Eurostat. Regional statistics by NUTS classification

On the other hand, as for the businesses' death figure, the Eurostat data is only available until 2013 (2010 data not being available). In this sense and globally speaking, firm deaths have experienced a decline, although the levels in 2008 were quite high. While in 2008, the 37.6% of the company deaths occurred in the construction sector (the highest proportion), in 2013 the highest proportion of firm deaths occurred in the Retail and Repair subsector (27.8% of all the deaths). Unlike in the previous chart, here both the industry and construction experience a lower amount of deaths by 2013; and service sectors like Professional services (+11.1%) and Accommodation and Food Services (+17.5%) subsectors experience the highest increases in firm deaths.

Table 2.13: Business survival rate by sectors (%)

Sectors	2014
Industry	59.07
Construction	41.90
Wholesale and retail trade; repair of motor vehicles and motorcycles	51.07
Transportation and storage	59.16
Accommodation and food service activities	39.98
Information and communication	54.47
Financial and insurance activities; real estate activities except activities of holding companies	63.49
Professional, scientific and technical activities; administrative and support service activities	54.63
Education; human health and social work activities	57.39
Arts, entertainment and recreation; other service activities	60.74

Source: Eurostat. Regional statistics by NUTS classification

The last relevant indicator that refers to the business demography to be analysed is the survival rate. It shows the number of enterprises in the reference period (t) newly born in t-n having survived to t divided by the number of enterprise births in t-n. According to Eurostat's Regional Statistics, it only comprises the number of enterprises that were born in 2011 and were still alive in 2014 by sectors, and this is why the following chart has been also included (to provide a better picture). In this sense, the accommodation and food services (39.98%) and construction (41.9%) subsectors recorded the lowest survival rates (following the trend arose in the previous charts). But overall, the service sector has shown a better performance, highlighting the financial and insurance activities (63.5%) and (60.7%).

Table 2.14: Survival rates in Spain (%)

Birth year (t-n)	Observation year (t)					
	2009	2010	2011	2012	2013	2014
2009	100	79.9	65.3	53.8	46.3	40.7
2010		100	76.5	62.4	52	44.9
2011			100	75.8	61.8	52.5
2012				100	76	63.4
2013					100	77.4

Source: INE

To complete the picture of the firms' survival rates, this chart is very useful to see the global performance of the companies as years passed by in Spain (as there are not figures related to the region). As it can be seen, each year the pattern has been quite the same and, for example, in all the referenced years the survival rate three years after the birth has been between 52-54%. Having said that, analysis closer the figures, the survival rate one year after the birth descends year by year until 2012, to start recovering from that year on. The same happens with the survival rate of 2-year-old-companies: from 2011 to 2013, the survival rate got worse, but in 2014 the tendency changed positively.

Until here, all the analysis has been conducted around the different indicators on business demography, to provide an image of the competitiveness of companies of Murcia. However, in order to provide a more accurate image about the regional competitiveness conditioners, there are more macro indicators related to R&D and ICT investment that are important to take into account to enrich this chapter.

Table 2.15: Total intramural R&D expenditure (GERD) by sectors of performance. Percentage of GDP

		2008	2009	2010	2011	2012	2013	2014
Business enterprise sector	Murcia	0.33	0.33	0.35	0.3	0.33	0.33	0.37
	Spain	0.72	0.7	0.69	0.69	0.68	0.67	0.65
Government sector	Murcia	0.16	0.17	0.17	-	0.14	0.13	0.12
	Spain	0.24	0.27	0.27	0.26	0.25	0.24	0.23
Higher education sector	Murcia	0.34	0.36	0.39	0.4	0.38	0.39	0.38
	Spain	0.35	0.38	0.38	0.37	0.36	0.36	0.35
Private non-profit sector	Murcia	0.1	0.5	0.2	-	0.2	0.1	0.1
	Spain	0.5	0.6	0.6	0.5	0.5	0.5	0.5
All sectors	Murcia	0.84	0.87	0.92	0.86	0.86	0.84	0.87
	Spain	1.32	1.35	1.35	1.33	1.29	1.27	1.24

Source: Eurostat. Regional statistics by NUTS classification

In this sense, the chart shows the total intramural R&D expenditures from 2008 to 2014. Intramural R&D expenditures are all expenditures for R&D performed within Murcia and Spain, whatever the source of funds. Having explained the indicator, the data provided shows that Murcia's performance in all sectors is quite weak compared to Spain, except for the higher education sector, where Murcia scores slightly higher numbers from 2009 in advance. Apart from this, the business enterprise sector's R&D investment in Murcia is significantly low, although it has slightly improved and the Spanish number decreased, still the difference is relevant: in 2014, Murcia's enterprises spent 43% less than Spain's ones. As for the government sector, while Spain maintained the investment level stable, Murcia has decreased its already lower investment level from 2008 to 2014 (25% less in 6 years). Finally, considering all sectors, in 2014 Murcia's investment level is way below the Spanish score, 29.8% less, and both of them have seen the R&D expenditure reduced from 2008: Murcia in 3.5% and Spain in 6% approximately.

Table 2.16: Total intramural R&D expenditure by sectors. Purchasing power standard (PPS) per inhabitant at constant 2005 prices

		2008	2009	2010	2011	2012	2013	2014
Business enterprise sector	Spain	176.2	162.7	160.3	157.3	150.3	145.8	144.5
	Murcia	66.9	64.1	67.8	55.3	59.7	58.9	67.6
Government sector	Spain	58.3	62.9	62.6	58.8	54.2	51.4	51.3
	Murcia	33.5	32.9	33.3	-	25.8	23.2	21.9
Higher education sector	Spain	85.8	87.3	88.1	85.1	78.7	77	76.8
	Murcia	70.5	69	73.7	73.4	68.9	69.5	68.7
Private non-profit sector	Spain	0.5	0.6	0.6	0.5	0.5	0.5	0.5
	Murcia	0.1	0.5	0.2	-	0.2	0.1	0.1
All sectors	Spain	320.9	313.6	311.6	301.7	283.8	274.7	273
	Murcia	171	166.5	175	159.2	154.6	151.6	158.3

Source: Eurostat. Regional Statistics

Considering the R&D expenditure from the PPS per inhabitant perspective, Murcia's results are even more disparate compared to Spain's, although both of them have seen reduced expenditure over the reference period, except for the business sector (where a slight increase occurred compared to 2008 in Murcia and the non-profit sector in both territories (where the results have kept being quite the same)). Having said that, in 2014 the business sector R&D expenditure in Murcia is 213.8% below the Spain's level, and the government sector's expenditure is 234.2% lower, which are very considerable disparities that affect the region's competitiveness. Similarly to the previous chart, in the higher education Murcia performs slightly better and it is closer to the Spanish figure, although both of them decreased: Spain scored 10.5% less and Murcia 2.6% less. Moreover, taking into account all the sectors, the decline in R&D expenditure has been softer in Murcia (-7.4%) than in Spain (-14.9%).

Table 2.17: Households with broadband access (%)

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Murcia	35	44	50	58	62	66	72	78	81
Spain	44	50	56	61	65	69	73	78	81

Source: INE

Finally, to end with the mapping of the SME sector, it is important to give some kind of context about the ICT sector or environment in the region of Murcia, as these technologies are crucial to improve the competitiveness of any territory and/or entity. In this sense, a relevant indicator is the number of households with broadband access in Murcia and the evolution during the period 2008-2016. At first, Murcia was below the national average in terms of broadband access to households, with 20.5% disparity in 2008. However, Murcia has experienced a relevant improvement towards the convergence, and in 2015 Murcia managed to reach the national level.

3 Factors influencing the dynamics of the region (strengths, weaknesses, opportunities and threats)

3.1 Factors influencing SME development in general

The Global Entrepreneurship Monitor (GEM)¹¹¹ for the Region of Murcia¹¹² analyses the circumstances and characteristics of the environment and its effect on the creation of companies in the Region, and therefore, on their development. The analysis is based on the information obtained by conducting personal interviews with 36 experts in various subjects, related to the dimensions of the environment that condition the ecosystem for businesses' development.

Accordingly, the factors most valued in the Region of Murcia to start a business are the existence and access to physical infrastructure and services (average value 3.9 out of a maximum of 5), followed by governmental programmes (3.1), and the existence and access to commercial and professional infrastructure (3.0).

At the opposite end, there are education and entrepreneurial training at school level (1.9), and government policies: bureaucracy and taxes (2.0) and financing for entrepreneurs (2.2). It should be noted that these circumstances have remained largely unchanged in recent years. In this regard, there is no doubt that changing this situation, which responds to structural difficulties, requires sustained effort for many years to see improvements in these indicators.

Table 3.1: Evolution of the average assessment of the environmental conditions of the Region of Murcia. 2010-2015

DIMENSIONS OF THE ENVIRONMENT	2010	2011	2012	2013	2014	2015	% Variat. 2014-15	Average 2010-15
Existence and access to physical infrastructures and services	3.8	3.9	3.7	3.8	3.8	3.9	2.9	3.8
Governmental programmes	3.1	3.0	2.9	3.0	3.1	3.1	-2.2	3.0
Existence and access to commercial and professional infrastructures	2.9	3.0	2.9	3.0	3.2	3.0	-7.2	3.0
Entrepreneurship education and training in the post-school stage	2.9	3.0	2.7	2.8	3.2	2.8	-14.6	2.9
Social and cultural standards	2.5	2.8	2.5	2.6	2.6	2.8	4.6	2.6
Governmental policies: entrepreneurship as a priority and its support	2.8	2.9	2.3	2.4	2.6	2.5	-1.6	2.6
Access barriers to the internal market	2.6	2.5	2.3	2.5	2.7	2.4	-8.7	2.5
Internal market dynamic	2.5	2.4	2.5	2.6	2.2	2.2	0.0	2.4

¹¹¹ Global Entrepreneurship Monitor. GEM Report Spain 2015 <http://www.gem-spain.com/wp-content/uploads/2015/03/Informe-GEM-2015-esafp.pdf>

¹¹² Entrepreneurship Initiatives of the Region of Murcia ("Iniciativas Emprendedoras en la Región de Murcia") <http://www.um.es/emprendedores/documentos/2016-17/Libro%20GEM%202015%20OK%20WEB.pdf>

DIMENSIONS OF THE ENVIRONMENT	2010	2011	2012	2013	2014	2015	% Variat. 2014-15	Average 2010-15
R&D transfer	2.5	2.6	2.3	2.4	2.5	2.2	-11.9	2.4
Financing for entrepreneurs	2.2	2.2	1.7	2.0	1.9	2.2	11.9	2.0
Governmental policies: bureaucracy and taxes	2.6	2.6	2.5	2.2	2.5	2.0	-19.2	2.4
Education and training in the school stage	1.9	2.0	1.8	2.0	2.1	1.9	-11.7	2.0

Source: GEM Spain NES 2015

These data show that the conditions of the environment to start a business in the Region of Murcia are on an average level, in which there are many aspects to improve. When comparing with data obtained at national level, it is verified that the values of the Region are practically equal to the national average.

The consultation of experts on the limiting factors identifies that the main obstacles to the creation and development of enterprises in the Region are the lack of financial support (mentioned in 77.8% of the answers), followed by governmental policies (58.3% of the responses received) and, at some distance, social and cultural norms (mentioned in 19.4% of cases). At the other end of the spectrum are R&D transference (5.56%), political, social and institutional context, market openness, barriers and commercial and professional infrastructure (all 8.33%). It should also be mentioned that access to physical infrastructure and the state of the labour market have not been cited as an obstacle in any case.

Table 3.2: Main obstacles for the creation (development) of companies in the Region of Murcia. 2010-2015

Factors mentioned by the experts as obstacles for the companies creation	2015		2014	2013	2012	2011	2010
	% of responses	Order	Order	Order	Order	Order	Order
Financial support	77.8	1	1	1	1	3	1
Governmental policies	58.3	2	2	3	2	4	3
Social and cultural norms	19.4	3	4	2	4	7	6
Economic climate	13.9	4	3	4	6	6	4
Entrepreneurship capacity	13.9	4	5	10	5	9	8
Governmental programmes	13.9	4	8	5	3	2	5
Education, training	8.3	5	4	6	4	1	2
Commercial and professional infrastructure	8.3	5	7	7	8	7	9
Market openness, barriers	8.3	5		5	7	9	10
Political, social and institutional context	8.3	5		8	6	8	7
R&D transference	5.6	6	9	9		5	6
Access to physical infrastructure	0.0		6	11		9	10
Labour market state	0.0		10	11		7	9

Source: GEM Spain NES 2015

Thereon, it should be noted that financial support is considered as the main obstacle in all years analysed (except in 2011, which was third). It should be mentioned that this dimension

has been cited since this study exists as the most important obstacle, both in recent years (with access difficulties to financing) and in the years before the crisis (where there were not so many difficulties).

Regarding the identification of factors that suppose a support to the creation of companies in the Region of Murcia, the governmental programmes are present in 41.7% of the answers. They are followed by economic context (36%), labour market status and social and cultural norms, both with 30.6% of responses.

On the other hand, with 5.6%, there are market opening, barriers and political, social and institutional context. It is noteworthy the case of financial support, which in 2014 appeared in 2.86% of the answers, while this year it does so in 19.4% of them.

Table 3.3: Main support for the creation (development) of companies in the Region of Murcia (2010-2015)

Factors mentioned by the experts as support for the companies creation	2015		2014	2013	2012	2011	2010
	% of responses	Order	Order	Order	Order	Order	Order
Governmental programmes	41.7	1	1	1	1	1	1
Economic climate	36.0	2	2	2	6	7	2
Labour market state	30.6	3	3	4	3	7	8
Social and cultural norms	30.6	3	4	3	8	7	6
Financial support	19.4	4	7	8	5	5	5
Education, training	13.9	5	4	6	2	3	8
Access to physical infrastructure	13.9	5	6	13	7	6	8
Governmental policies	13.9	5	7	12	7	2	4
R&D transference	8.3	6	6	7	7	4	5
Entrepreneurship capacity	8.3	6	6	10	4		3
Market openness, barriers	5.6	7	5	5	8		5
Political, social and institutional context	5.6	7		9	6	7	6
Commercial and professional infrastructures	0.0		7	11	7	7	7

Source: GEM Spain NES 2015

Regarding the role of the economic climate as a support for the creation of companies, we must point out that the current crisis situation forces many people to create their own business as the only way to find work, doing it by necessity and not by chance, as it would be desirable.

When comparing the factors identified at the national and regional levels, it should be mentioned the education and training, which is presented in 45.5% of the responses at the national level, while that figure is reduced to 13.9% in the Region of Murcia.

Logically the recommendations given by the experts who participated in this report are in line with overcoming the main obstacles. As a result, they focus on governmental policies, financial support, government programmes and education and training, which as we have seen is

a dimension with one of the lowest valuations, indicating that further work should be done to improve it. In long-term perspective, continuing and significantly increasing the efforts and initiatives that have been developed in the Region of Murcia in this line in recent years.

Apart from the analysis offered by the GEM, a more detailed description of some of the factors considered relevant by its influence in the dynamics of the economic activity at regional level is given in the following sections and pages.

3.1.1 Factors related to the economy as a whole

Greater impact of the economic recession in Murcia than at the national level

The economy of Murcia in the period 1995-2008 achieved the highest rate of economic growth in Spain¹¹³. Specifically, in that period, the average annual GDP growth was 4.3%, much higher than the nation average during the same period (3.5%). However, this expansive context began to change in the middle of 2008 at the international, national and regional level, and economic activity rapidly slowed down. In the period of economic recession, it can be noted that the crisis has affected the Region more negatively than the rest of Spain. Thus, while the economy of the Region of Murcia fell 1.8% in annual average in the period 2008-2013, in Spain the fall was 1.6%.

Lower GDP per capita than the national average

The Region of Murcia reached a GDP per capita of 19 411 euros in 2016, which puts it 19% below the national average (23 970 euros). This gap has increased in recent years as a consequence of the greater incidence of the economic recession in the Region. Thus, in 2008 the per capita GDP of Murcia was 16.1% below the national average.

Productive structure with greater presence of primary activities than in the national level

The structure of the economy of Murcia is the same as the one of a developed region¹¹⁴, being the service sector followed by industry the two sectors contributing the most to the Gross Domestic Product. These two sectors represent approximately 89% of GDP in 2016. The contribution of agriculture has fallen significantly in recent years as a result of the economic growth and currently accounts for 5% of total GDP, doubling the importance of this sector at national level.

At the bottom of the Spain's ladder in terms of labour productivity

According to data from 2015, Murcia has the lowest labour productivity ratio (nominal GDP/number of jobs) in all Spanish regions, with a value of 84.7% of the national average.

¹¹³ Evolution of Murcia's GDP. Datos Macro <http://www.datosmacro.com/pib/espana-comunidades-autonomas/murcia>

¹¹⁴ Evolution of Gross Domestic Product at market prices and its components (current prices). Regional Statistics Centre of Murcia http://econet.carm.es/web/crem/inicio/-/crem/sicrem/PU_contabilidadRegional/sec41.html

The lower productivity of the Murcia's economy compared to the Spanish economy is one of the most important factors that prevent the regional economy from reaching the level of per capita income existing in Spain.

High unemployment rates with high levels of temporariness

From 2007 onwards, with the onset of the crisis, the regional (and national) labour market suffered from deterioration, until the end of 2013, reaching an unemployment rate of 28.5% (25.7% in Spain). 20.9% higher than the regional unemployment rate in 2007, when this ratio was at its lowest level (7.6%). By the beginning of 2017, the unemployment rate in the Region stood at 19.34%, quite the same as the national figure (18.75%), although slightly higher.

Meanwhile, the Region has temporary employment levels well above the national average (34.9% in Murcia at the end of 2016, 26.5% in the national level).

3.1.2 Intrinsic factors of the business fabric

Business density below the national average

According to Eurostat and the INE, in January 1st 2016, there were 92,008 active non-agricultural enterprises in the Region of Murcia. This figure represents 2.8% of the total Spanish business, a figure that exceeds the importance of the Region in terms of GDP (2.5%), which it could be concluded in principle, that the Region has a good situation in terms of Business fabric. However, if the analysis is made taking into account the number of inhabitants, it is observed that the "business density" is 7 points lower than the national average (in Murcia there are 62.8 businesses per 1,000 inhabitants, while in Spain are 69.5), sharing position with the less wealthy regions of Spain. Moreover, if it is taken into account that the GDP per capita is below the national average, it indicates that there is a direct relation between the business density and the GDP per capita.

Reduced business dimension

The companies of the Region are characterized by their small size; in 2016, 95.5% of the companies are micro-enterprises, undoubtedly playing a key role in the regional productive fabric (53.9% of the companies do not have any salaried workers and 41.6% have 1-9 salaried employees).

Therefore, only five out of 100 regional companies have more than 10 workers. As for larger regional companies with more than 200 employees, these represent only 0.14% of the total regional productive fabric, being constituted in 2016 by 128 companies, among which are those dedicated to trade in Wholesale of food products, beverages and tobacco and activities of temporary work agencies.

Low business concentration in high added value sectors

As for the main sector where regional companies operate, in 2016 79.3% of the companies were in the service sector (27.5% in the trade sector and 51.8% in the rest of services), mainly in the hospitality services and business activities, followed by retail trade. Moreover, 13.4% were in the construction sector and the remaining 7.3% in the industry. The industry sector is basically manufacturing, with a predominance of metal fabrication, furniture manufacturing and food and beverage industry. In this sense, the industry of Murcia is focused on sectors with medium-low added value, with low R&D intensity and with a commodity nature in some cases.

A great exporting tradition in some sectors, with a high concentration in a small number of companies and low technological content

Murcia has a great exporting tradition in some sectors, such as the agro-food sector, but the position of the regional companies in foreign markets is not yet significant enough. Based on data from the ICEX Institute of Foreign Trade, in 2016, Murcia's exporting companies have increased by 2.3%, to a total of 4 825 (5.2% of all companies of Murcia). If it is used the most demanding variable "regular exporting companies", which implies that only those that have exported each year and over the last four consecutive years are considered, the regional exporting companies in 2016 augmented to 1 583, an increase of 5.6% over the previous year.

On the other hand, the concentration of exports in a small number of companies has increased in recent years, although in 2016 the trend reversed. In the last year, 10 companies accounted for 33.2% of total exports (compared to 46.8% in 2013), and the top 25 were 44.2% (in 2013, 55.8%).

With regard to the technological content of Murcia's supply to the exterior, the data available for the last financial year indicate that 23.9% of exports have medium-low technological intensity and 24.4% low intensity, corresponding the 17.4% to high and medium-high technology activities.

Positive developments in business creation

The creation of companies has had significant growth in the last five years (2012-2016), highlighting the number of self-employed people in absolute terms. If we compare 2016 with 2015, the number of companies increased in the Region by 2.2%, while the number of self-employed grew by 3.3%, the number of medium-sized companies increased by 3.7% and the number of large in 6.7%. In terms of sectors, in the ICT sector the number of companies in the Region increased by 31.1% in the period 2012-2016; In the knowledge/creative economy the business fabric has increased by 7.7%; while in low-carbon economy the number of enterprises decreased by 10.3% in the same period.

Entrepreneurial dynamism in recent years

According to GEM Murcia 2015, the total entrepreneurial activity rate (TEA)¹¹⁵, which estimates the percentage of entrepreneurial initiatives among the population aged 18-64, was 5.81%, in line with the average rate obtained at the national level (5.7%). In this regard, it should be noted that in the period 2012-2015 the rate in Murcia has increased by 1.9%-points (3.9%-points in 2012), showing a greater dynamism than the national behaviour that has remained in the same rate (5.7% in 2012).

3.1.3 Human capital

Educational level of the Region of Murcia, lower than the Spanish average

The population older than sixteen years has an educational level below the Spanish average. There are more illiterates, a higher proportion of the population with a low educational level and a lower proportion of university students. Hereafter, there are some relevant data regarding the level of education in the Region:

- In 2016 there was a 3.2% illiterate population over 16 years of age (1.5 points above the national average).
- In that same year, the indicator of early school dropouts was 26.4% (18.98% in Spain and 10.7% in the EU-28).
- In the academic year 2014-2015, the gross enrolment rate in compulsory secondary education stood at 71.9% (68.1% in national average).
- Regarding Vocational Training (VT), data for the 2014-2015 academic year show that the gross enrolment rate in middle grade VET, 32%, is one of the lowest in Spain. The rate in higher education (30%) is also among the lowest in Spain.
- The proportion of people with higher education has been increasing gradually, representing 23.2% (19.6% in 2010) of the total number of people over 16 years old at the end of 2016, still five points below the national average (28.3%).

Unbalanced levels of qualification and labour demand

Education is essential to have a more efficient productive system, but the advances made in this field do not carry out the benefits that would be expected if the labour force is not well adjusted to the demand of the labour market. The rapid development of some sectors such as construction and services and the weight that the agricultural sector still maintains in the productive structure of Murcia has contributed to the increase of low-skilled occupations. Thus, the analysis of the employed population in Murcia shows a lower level of average qualification compared to the national average, with the Region of Murcia showing the highest percentage of employed persons in low levels of education (up to the first stage of secondary school at the end of 2016, 43.2% in Murcia, 34% in Spain). The referenced strong demand for non-qualified labour facilitates early school dropouts among young people, as it has been seen.

¹¹⁵ Piece of news "The rate of entrepreneurial activity in the Region remains above the national average" ("La tasa de actividad emprendedora en la Región se mantiene por encima de la media nacional"). Murcia.com <http://www.murcia.com/region/noticias/2016/11/21-la-tasa-de-actividad-emprendedora-en-la-region-se-mantiene-por-encima-de-la-media-nacional.asp>

On the contrary, the modest expansionary dynamics and the growing sophistication of the Murcia's economy have also allowed the growth of highly qualified occupations. Thus there has been an increase in occupations with high qualification to the detriment of those with low qualification. Even so, the percentage of employed persons with higher education represented 34.8% of those employed in Murcia at the end of 2016, far from the national average (42%).

3.1.4 R+D+I and ICT

Reduced private investment in R+D+I. Little innovative culture of the society of Murcia and its business fabric

The Region, like the rest of Autonomous Communities, has been increasing the resources dedicated to Science, Technology and Innovation over the last years, reaching the maximum values in 2010 in which the R&D expenditure registered 0.92% of the Region's GDP (in Spain, 1.35% of GDP). However, from 2010 on, there has been a decline in R&D spending in the regional and national level as a result of adjustment policies, reaching in the year 2014 the 0.87% of regional GDP (1.24% in the case of Spain). It is also observed that there is a low private R&D investment level in relation to GDP, reaching the 0.37% in 2014, much lower than the national average (0.65%). It is an important distance that explains in part the productivity and competitiveness deficit of the companies from Murcia in relation to the Spanish ones.

The cost and lack of funds, the main factors hindering innovation in the region's private sector

In 2015, the main factors that have slowed down the innovation have been the lack of funds and the cost. Among the innovative companies, 31% of the cases experienced the lack funds, the cost was too high in 29.1% of cases and the lack of external financing to the company was a problem in 23.5% of the cases. It also highlights the uncertainty factor regarding the demand for innovative goods and services, a factor cited by 17.5% of innovative companies in 2015.

As a matter of fact, and as something positive, in 2015 the percentage of companies that cited the lack of information on technology as a difficulty was halved, when it was cited as a difficulty between 11% of innovative companies in 2010, and only 4.3% in 2015. Likewise, the lack of skilled personnel (8.4% in 2015, 9.8% in 2010) continues to decline.

Insufficient coordination of the Regional System of Science, Technology and Companies

In the Region of Murcia there is insufficient coordination of the Regional System of Science, Technology and Companies (SRCTE), producing little understanding between the research and business world. As discussed in the previous point, the Region of Murcia is still far from

the Spanish average in terms of R&D expenditure, as well as in the innovation levels of companies.

Low use of Information and Communication Technologies among the business fabric of Murcia

The company of Murcia has a lower ICT use than the national average, although there has been an intense process of convergence in recent years¹¹⁶. Particularly favourable are the latest data obtained regarding the Internet connections of regional companies. Thus, 99.57% of regional companies with 10 or more employees have access to the Internet, which places the Region of Murcia slightly above the national average (99.48%). 73.2% of the companies have broadband Internet access (71.5% nationally). On the other hand, in relation to the percentage of companies that have access to the Internet by optical fibre, in the Region of Murcia is 26.8%, a record far from the penetration obtained at the national level (41.4%). Regarding the use of digital electronic signatures, the Region of Murcia is the fifth Autonomous Community with less use (71.8% of the regional companies compared to 75.1% nationally). Finally, the percentage of Murcia's companies with a website is 71.1% by the end of 2016 (77.5% in the national level).

3.2 Factors influencing the primary sectors

The agro-food complex, given its contribution in terms of employment and production, is a strategic and essential sector in the Region of Murcia. It is a consolidated productive sector that has a great tradition and experience, and also maintains an important dynamism. All this, places Murcia in an optimum position in the international markets and, in many cases, it is placed in the vanguard. The agro-food sector is generally composed by agricultural nature activities and by transformation activities of these products, but their importance is beyond these magnitudes. From these subsectors, a broad network of economic relations with other productive branches such as chemistry, paper, metallic products, hospitality, services and transport is generated. For these reasons, the agro-food complex is considered a “driving” sector of the regional economy.

The following are specific factors that influence the development of this agro-food sector in the region:

Murcia has comparative advantages for the development of the primary sector

With regard to the horticulture sector, Murcia has 1 131 391m² of useful agrarian surface, including 178 536m² of irrigated area. The region is one of the main zones of citrus fruits cultivation, stone fruits and dry cultivation in Spain (mainly lemon, apricot, grape, peach and

¹¹⁶ Science and Technology. Statistical Report of Spain 2016 (“Ciencia y Tecnología. Anuario Estadístico de España 2016”). INE http://www.ine.es/prodyser/pubweb/anuario16/anu16_15tecno.pdf

almonds). One of the strengths is the wide variety of produced fresh agrarian products, and Murcia is internationally recognized for the quality of its fruits and vegetables. In this sense, Murcia is the second autonomous community in terms of fresh vegetables production. Environmental, climatic and ecological conditions are particularly favourable for intensive and highly intensive cultivation, and Murcia has long experience and know-how on agricultural practices. Also, another competitive business opportunity is arising in the region with the ecological agriculture development.

Water scarcity

However, all these horticultural activities demand a lot of water resources and the Region of Murcia, particularly, does not have water abundance. In fact, the region has a dry climate and it is threatened by climate change, and these factors represent a weakness for the sector, but also an opportunity to develop advanced and efficient watering systems and similar techniques.

Sector with high impact on the economy and employment of the Region

As for the agro-food industry, according to the last data available (Industrial Companies Survey, 2014)¹¹⁷ it involves 30% of the total regional industry employment and the 27.84% of the total production. It is a crucial industrial employment generator (in a region with 19.34% unemployment so far) and a competitive and exporter sector. It involves mainly fruit and vegetables preserves, wine, olive oil candy, and meat industry.

Clear export-oriented sector

Agro-food products are among the main export commodities in the Region. Murcia is the 2nd Spanish region (after Andalusia) with the highest number of agro-food and beverages exports, which represented 51.5% of the total region's exports in 2016. Fruits, vegetables and legumes accounted for two thirds of the total sector's exports.

Strong atomization of the agriculture

The small size of many processing and commercialization companies and farms is considerable. Despite the fact that the total number of farms has suffered a sharp fall in recent years, there is still an important atomization of the sector. Thus, according to INE statistics, in the period 2007-2013 they have been reduced from 34,084 to 30,091 farms, representing a reduction of 11.7%. The Useful Agricultural Surface (SAU) also decreased by 6.1% in this period. 77.8% of farms have less than 10 hectares, and 63.1% have less than 5 hectares.

¹¹⁷ Structural Business Statistics: Industrial Sector ("Estadística Estructural de Empresas: Sector Industrial")
http://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736143952&menu=ultiD atos&idp=1254735576715

For the moment, the merger process of cooperatives has been limited and there is still an excessive “individualism” that keeps the sector very atomized. This situation results in less strong structures and less negotiation power with distribution companies. Likewise, there are greater difficulties to innovate, access new technologies, reduce production costs or develop appropriate marketing actions.

Low productivity sector

The agro-food sector in Murcia has low productivity per worker, a situation that derives in large part from the mechanization difficulties of intensive crops of region’s typical fruits and vegetables.

Highly competitive food industry

The Murcia producers have a high degree of specialization in the cultivation, marketing a reduced number of products, which forces them to acquire and apply very advanced technological levels with high degree of investment in research-experimentation and in productive structures.

The food industry of the Region of Murcia is distinguished by:

- The first producer of vegetal preserves in Spain.
- The world's first producer of canned apricots.
- Have the second largest meat industry in the whole of Spain.
- Leadership of the Region’s companies in the production of juices with their brand recognition.

Differentiation through quality

In terms of food quality, the Region has many differentiated products. It has eight designations of origin (“denominación de origen”) and two protected geographical Indications (“indicación geográfica protegida”). It is also worth mentioning the Traditional Specialties Guaranteed (“especialidades tradicionales garantizadas”) and the Brands of Guarantee (of Agro-food Quality and Integrated Production), as well as the importance of organic production.

High levels of intra-sectoral and cross-sectoral integration

The vegetable processing sector (canned vegetables, frozen vegetables, juices and nectars, pickles, etc.) has a high level of intra-sectoral and cross-sectoral integration that generates economies of agglomeration and organizational forms like an industrial facility does: it integrates the agricultural and horticultural sector as supplier of raw materials; services and various suppliers of intermediate goods and equipment (packaging, graphic industries, transport companies, agricultural and industrial machinery, phytosanitary products, food additives, etc.) and other advanced services (specialized logistics companies, innovation centres, transport, laboratories or quality certification).

In addition, it is necessary to highlight the high degree of sectoral organization produced by two related and complementary institutions: the Grouping of Canneries and Food Companies

("Agrupación de Conserveros y Empresas de Alimentación")¹¹⁸ -traditional employers of the sector-, and the National Technology Centre for Canning and Food (CTC), oriented to development and technological advice for the sector.

Support institutions and technology and research centres

This sector has a large fabric of innovative and related industries, such as agricultural technology, greenhouses, agro-food machinery, packaging, etc., which support the competitiveness of the sector. Finally, region has leading agro-food R&D infrastructures and facilities, like the IMIDA, the CEBAS-CSIC¹¹⁹ and the CTNC¹²⁰, all of them devoted to make the sector more competitive and productive (these institutions are going to be analysed later), as well as the research activity carried out by the University of Murcia, the Polytechnic of Cartagena and the Catholic University San Antonio of Murcia.

Imbalance of power in the agro-food chain

There is a certain imbalance of power in the agro-food chain, facing a highly atomized production and industry before a large highly concentrated distribution.

Likewise, there is insufficient transparency along the value chain and growing dependence of the sector on a smaller number of marketing and distribution channels and the preference, among a growing segment of the population, for large supermarkets to the detriment of the small distributor. All this means that price transmission is imposed from top to bottom, with the producer sector being the most affected by its low bargaining power, and by the enormous dependence on inputs from abroad (raw materials and energy, fundamentally). It should be noted the high dependence of the road transport sector, which significantly increases energy expenditure.

Generational replacement, a pending task

Aging and the limited generational replacement of small family industries and farms, although not as dramatic as in the whole of Spain, is an element of concern.

3.3 Factors influencing the secondary sector

The industrial structure of the Region of Murcia can be characterized by its duality, In other words, it is composed of two large groups of activities clearly differentiated. On one hand, what is called endogenous or traditional industry, specifically based on metallurgy and metal product manufacturing; furniture and wood industry; non-metallic mineral products: marble

¹¹⁸ The Grouping of Canneries and Food Companies ("Agrupación de Conserveros y Empresas de Alimentación") <http://www.agrupal.com/Inicio/Index.aspx>

¹¹⁹ Soil Science and Applied Biology of Segura ("Centro de Edafología y Biología Aplicada del Segura") http://www.cebas.csic.es/index_eng.html

¹²⁰ National Technological Centre of Preserve and Food ("Centro Tecnológico Nacional de la Conserva y Alimentación") <http://www.ctnc.es/>

and natural stone; graphics arts; textile industry; the chemical industry and the agro-food industry (as previously commented). On the other hand, the exogenous component, largely linked to what has been the Spanish public business sector, with a low degree of intersectorial relations within the regional productive fabric- losing opportunities to establish potential synergies and collaborations-, which has given rise to large-scale establishments that address intensive production processes in capital (petroleum refining, shipbuilding, etc.).

Hereafter, there are specific factors that influence the development of the industrial sector in the region:

Sector with moderate impact on the economy and regional employment

It is estimated that the Gross Value Added (GVA) of the industrial manufacturing sector in 2015 reached 4 781 134 million euros, which represents 14.8% of the regional total, which equals the national average (14.2%). In terms of employment, the industry concentrated in the first quarter of 2017, 68.5 thousand people employed, which represents 12% of the total employment in the Region (13.9% in the national level), being the secondary sector, followed by construction, the one which registers the lesser number of people employed.

The activity branches of traditional industries with major contributions to GVA and industrial employment in the Region of Murcia, and therefore the most relevant, are metallurgy and metal products and the manufacture of furniture and wood industries.

Low specialization of the Region's industry

However, in the industry of Murcia there is a lesser specialization than the national group (although the agricultural sector, energy and construction have a specialization index higher than the Spanish average). Also, the size of the industry sector is turning smaller: there is a reduction in the weighting of companies in the industrial sector, to the benefit of the services sector.

Predominance of the traditional industry

The traditional industry is predominantly composed by regional capital and it is labour-intensive in nature, with low productivity and small business dimension. Also, it is focused in sectors with medium or medium-low value added or sophistication (in some cases commodity nature) and it is oriented mostly to the national market, which is improving although it has been stagnant. All this factors represent a weakness for the regional industry, which hampers the competitiveness and the export strength of the region.

In the traditional industry, to become competitive in a global scale, the positive thing is that labour costs are lower than the national average. However, it needs to increase productivity and improve products' quality, design and innovation (to avoid competition based only on prices and scape from the commodity nature).

Low qualification of human capital

The traditional conception of this sector is one of the consequences of the low qualification of associated human capital, because it makes it difficult to find young people from both vocational training and university studies, interested in developing their professional career in these sectors, as they are unattractive.

In this sense, the improvement in the training of labour associated with these traditional sectors is absolutely necessary, since knowledge is the real engine of growth and innovation, being the most competitive strategic variable.

Reduced inter-company cooperation

Apart from improving the mentioned aspects, in order to gain competitiveness, the region has a lot to improve in terms of business cooperation, which is low currently. Despite having a well-defined regional industrial policy (RIS3, Iris 2020 Regional Strategy, etc.), it is necessary to continue moving towards greater sophistication between companies and between sectors. In this sense, the region has a weak cluster structure, and it is essential to provide each of the “clusters” with sufficient critical mass to enable them to be internationally competitive. As said, this will require greater business cooperation, especially in view of the low average size of the region's businesses and low cooperation.

The size issue is crucial for the competitiveness as it is a limitation to finance, negotiate with clients and suppliers, innovate and export. Promoting the association of regional clusters in order to share experiences, generate synergies and reach an international dimension through the constitution of metaclusters (association between two or more different sectors) is also a great opportunity for the region.

Low levels of investment and cooperation in R+D+I

However, as previously advanced, the industry of Murcia is focused mostly in traditional sectors, which are not very competitive especially in the international scale (except for agro-industry and few other exceptions). In this regard and as previously stated, the region needs to identify key technological spaces on which to promote the activities of greater value added and with promising future (like energy, environment, ICT, water resources and sea, nanotechnology, automation, etc.). In order to achieve this objective, it is essential to increase the investment in R&D, which nowadays is below the national average, and the cooperation between the industry sector and research centres and universities is scarce. In this sense, it is necessary to continue promoting the participation of universities and technological centres of the Region of Murcia in the business sphere.

Reduced commitment to innovation

The industrial sector in Murcia has not addressed (except in specific cases such as the manufacture of irrigation technologies) a technological change process and commitment to innova-

tion as it has occurred in other areas of Spain and Europe, so it still suffers from some structural rigidity that prevents a competitive positioning in the international markets and a greater dynamism.

Important plastic-chemical pole not entirely leveraged as a “driving” sector of the industry

Murcia is one of the main energy poles of the country, both in electricity generation and in petroleum refining and, closely linked to it, it has an important plastic-chemical pole in Cartagena area, made up of large companies as well as numerous SME. The regional plastic-chemical sector is engaged in the manufacture of petroleum products, such as agrochemicals, phytosanitary products, pharmaceuticals, greenhouse plastics, packaging for agricultural and industrial products, etc.

However, the capacity of the chemical sector to produce synergies with the energy sector and generate an industrial base that attracts new investments may not be fully exploited. These sectors are not yet developing their full potential to generate related industries, linked to both the industrial sector and business services (consultancy, IT services, R&D, transport, maintenance of large facilities, etc.).

3.4 Factors influencing the tertiary sector

The situation of the service sector in Murcia is in line with the phenomenon typical of the advanced economies, which is the switch of the economy to the tertiary sector. In view of the decomposition of the sector by branches of activity, the service activities that have served as “drivers” of economic growth until the crisis have been financial Intermediation services, real estate and business services, followed by commerce and repair. However, the excessive dependence on construction industry and the related services (real state, banking, etc.) turned out to be the ones that suffered most during the crisis.

Hereafter, here are commented the specific factors influencing the development of the service sector in the region:

Sector with high impact on the Murcian economy

The tertiary sector is the main economic sector of Murcia. It occupies 68.2% of the population (2017 Q1 data, provided by INE) and accounts for 63.48% of Community’s GDP (2015 data provided by INE).

Regarding the number of companies, the services sector absorbs 79.3%: that is, almost 4 out of 5 companies in the Region belong to the services sector. This figure for the services sector is at the same time divided into 27.5% of commercial enterprises and 51.8% of companies in other services (legal activities, health activity, personal activities, etc.).

Tourism sector based on second residence model with high seasonality and concentration in national tourism

Tourism is one of the most important and dynamic pillars of the Murcian economy. In the Region of Murcia tourism has historically focused more on national tourism. Its structure with respect to other places is based on second homes or residences, instead of on a hotel model or tourist houses. The real estate sector attracted the main assets generated by the tourist sector and, unlike the rest of the country, it did not carry out a growth based mainly on the hotel model (more profitable and with greater possibilities of development in the long term).

In the service sector, the summer tourism campaign stands out, with increase of national and foreign visitors. The recovery of the economy in the EU can boost the sector, although it suffers from excessive seasonality and high concentration in the national tourism (and also British people, among the foreign tourists¹²¹). Likewise, it is a little diversified sector, basing its proposal mainly on “sun & beach” tourism, which does not contribute to its deseasonalisation. In the short term, the food and drinks services have better perspectives, while accommodation and other tourist activities have slightly worse perspectives.

Commercial reference in decline

Trade is an important sector of activity in the economy of Murcia, having been the regional capital a commercial reference for a wide hinterland that goes beyond regional borders. However, in recent years a rapid adjustment process is taking place, due to the opening of shopping centres, where traditional trade has lost weight. In addition, the economic crisis has hindered the survival of a great part of the regional commercial fabric.

Little relevance of business development services

The services for companies, of little relevance and under-professionalized in the region, are the reflection of an atomized business fabric. In this regard, if business concentration initiatives are materialized, the accompaniment of local business services companies with an adequate size and efficiency will be very necessary. Therefore, there would be opportunities linked to the relaunch of the large productive sectors in Murcia, with a broader scope than the regional one, including regional agents of relevance. Also for outsourced business services companies, as the integration of small businesses progresses and the new units generate synergies, they will demand more advanced services.

¹²¹ Data on the tourist activity in the region of Murcia- Year 2015 (“Datos de la actividad turística en la región de Murcia- Año 2015”) https://www.murciaturistica.es/webs/murciaturistica/documentos/1/DOCUMENTOS_1_1826.pdf

3.5 Factors influencing the three focus sectors

3.5.1 ICT Sector

Sector under consolidation in the Region

The ICT Sector of Murcia is mainly engaged in the design and implementation of information systems, telecommunications, and electronics and audio-visual. Most of them are SME, although in telecommunications and in the auxiliary industry of the naval construction there are a small group of companies of bigger dimension. It is a relatively young sector, with very dynamic companies and a growing increase of entrepreneurship. However, in the Spanish panorama, the Region of Murcia is positioned in twelfth position (out of 17 autonomous communities) in number of ICT companies, which indicates that the sector is not very consolidated in the region¹²².

The ICT sector of the Region of Murcia is based on three fundamental pillars: a) development, implementation and services of value added software; b) telecommunications; and c) air-naval and auxiliary industry. Concretely, in the area of telecommunications, it can be distinguished two types of companies. On one hand, traditional installation companies, linked to the wiring and connection of telephone and cable networks, with a medium and large dimension, solid structures and a national or international geographical scope; on the other hand, related companies with new communication technologies and with integrated computer systems, with a smaller size and limited scope of action.

Low penetration of broadband connections

As for other challenges that Murcia faces regarding the ICT sector, there is a lower penetration of broadband connections in homes and companies of Murcia, compared to the national figures. There are also small and medium-sized municipalities which, because they are in disadvantaged areas, are lacking of high-speed and ICT services. This is why, actions are needed to put in place to increase the percentage of population with broadband coverage (greater than or equal to 30 Mbps), and to expand both the existing inter-administrative network and the Network of Science and Technology and Information Society (CTnet Network).

With regard to the business sector, there is an inadequate strategy for the use of Information society services, which implies a loss of competitiveness for them, leading to an increase in the digital gap, due to stagnation of business development and high unemployment.

Finally, there is an insufficient ICT training for citizens and businesses, a need to develop ICT services for e-health and e-inclusion. It requires the implementation of measures that contribute to online training, the implementation of digital literacy programmes and the development of ICT services related to health and inclusion.

¹²² Sectorial Report. ICT and Content sector of the Region of Murcia ("Informe sectorial. El sector de la TIC en la Región de Murcia). April 2016
http://www.impulsoexterior.com/COMEX/servlet/MuestraArchivo?id_=2_7718

Atomized sector

In 2016, the number of enterprises in the ICT sector (NACE 26, 61, 62, 63) in the Region was 860 enterprises. Out of these, 519 were self-employed companies that do not have any employees, representing 60.3% of total enterprises. On the other hand, 282 companies (32.8% of the total) had less than 10 employees; 53 companies (6.2%) had 10 to 49 employees. Therefore, only 0.7% of the companies (6 companies) had more than 50 employees.

The ICT sector of Murcia does not offer high value products on average

Having described briefly how the sector is composed in Murcia, it is time to mention the size and importance of the sector. In this sense, ICT sector of Murcia is not relevant at the Spanish level. According to April 2016 report¹²³, only 1.6% of total ICT companies in Spain were located in Murcia, and it comprised 0.3% of total turnover in Spain. And for the employment, Murcian micro-enterprises and SME of 10-49 employees comprise 1.6% and 1.3% respectively of the total ICT sector's employment of Spain. Focusing on the telecommunication sub-sector (one aspect of the ICT sector), 3.9% of the companies were located in Murcia, but they only represented 0.1% of the total turnover.

High degree of specialization in certain segments

In the development and implementation activities of software and related services, the Region has a core of medium-sized companies, with a relative seniority and a diversified offer, around which a large number of small companies operate, with high degree of specialization. In this last group, there are included companies related to Internet, e-commerce and e-business, in fast growth after a slowdown stage. The small size of these companies, together with their diversity and dynamism, are configured as positive competitive elements in a context of a permanent changeable market, where the rapid and flexible response to innovations and new demands, operational agility and adaptation to the market are valued as key factors.

Slightly internationalized sector

For the moment, the international relations of this sector's companies are very scarce. Only about 150 companies had international activity in 2015, selling products related to the sector worth 9.5 million euros, mainly in telecommunications equipment and computer hardware. These figures put Murcia in the tail of Spain in terms of export performance of the sector (16 out of 17 Communities), accounting for 0.3% of the total national exports of the sector.

Sector with business cooperation culture

In Murcia it is frequent to find links and cooperative relations between companies of regional scope and large national and multinational entities related to software and Internet. In this way, many small and medium-sized Murcia companies are part of global networks, which

¹²³ Sectorial Report. ICT and Content sector of the Region of Murcia. Opt cit.

allows them significantly to expand their range of products and services and their competitive capacity.

The boundaries that delimit the information technologies and the communication are little precise and a great number of companies offer jointly products and services of software, hardware, consulting, engineering, tailored projects, technical assistance and telecommunications, with frequent changes in the offered range.

Support institutions and technology and research centres

The association that structures the regional ICT sector is the Association of Information and Communications Technology Companies of Murcia (TIMUR), which has partners related to information technology, telecommunications, digital content creation and component electronics for ICT, to whom it provides information, training, reports, projects and publications.

In addition, the region also has the CenTIC, the Technological centre for Information and Communication Technologies, a business association whose mission is to promote and consolidate the processes of innovation and technological development in ICT companies

3.5.2 Creative/Knowledge economy

Murcia performs poorly on key indicators related to Creative/Knowledge Economy

The economy of Murcia experienced a very notable economic growth until 2008, when the economic crisis. From that moment on, it has been probably the region where the crisis's negative impact has been the most intensive. In this sense, the weaknesses of the previous growth model and the severity of the subsequent crisis are related to structural deficiencies for the adaptation of the regional economy to the new global circumstances. These new circumstances are characterized by rapid innovation on new technologies, products, etc., and the importance of knowledge and creativity, leaving obsolete old value chains. In order to make the economy of Murcia stronger and more adapted to the new era, there have been multiple attempts in form of new policies and plans.

This new creative/knowledge economy is supported on R+D+i effort, the wide use of ICT at all levels (innovation, production, marketing and consumption) and the human talent, among other aspects. In this sense, the region of Murcia has a lot to improve, although some interesting policies have been put into place. The R+D+I expenditure over GDP is very low: in 2015, 0.88% in Murcia (Spain's average, 1.22%)¹²⁴. As for the human talent, the situation of Murcia is not better: in 2015, approximately 30% of the active population had higher studies, while the proportion in Spain was around 37%. There are several indicators that can be ana-

¹²⁴ Statistics on R&D activities (2015). 24th November 2016 Press Release
<http://www.ine.es/prensa/np1002.pdf>

lysed on the issue, but there is a summary with the most relevant of those, included in the study “Competitiveness in the Spanish regions facing the knowledge economy”¹²⁵.

Contribution of knowledge-based assets to the Gross Value Added (GVA)

Knowledge-based assets have made significant contributions to the GVA in Murcia, showing in the years of crisis greater capacity for resilience and ability to even make positive contributions. However, according to the latest available information (2012) of the analysis of the Murcia GVA according to assets, it is observed that human capital makes the most relevant contribution (37.2% of the total GVA in Murcia, 40.4% in Spain). On the other hand, the contributions of the capital base on technology (machinery and equipment) make a contribution of 16% to the GVA in Murcia, above the Spanish average (15.1%). As for the factors that do not incorporate knowledge, the weight of unskilled labour contributes 19.1% to the GVA of Murcia, above the 15.9% that it supposes in the whole of Spain.

Murcia, region of modest innovation

The European Union elaborates a Summary Innovation Index (SII) that measures the performance of R+D+I systems among its Member States. Applying the same methodology to the Spanish Autonomous Communities, 25 variables are grouped into three main dimensions: Factors that enable innovation (human resources, open and excellence-based research systems, institutional support for R+D+I); Business activities (business investments in R+D+I, entrepreneurial activity, intellectual property assets); Results of innovation (number of innovative companies, new products and processes, economic effects of innovation on employment, exports and business figures).

The Region of Murcia is ranked 13th out of the 17 autonomous communities in the ranking of the SII, being classified as “Region of Modest Innovation”. This means Murcia is a region with few qualified human resources and R+D+i systems with little openness to the exterior; with low investigative, patenting and innovative intensity in companies; and low impact in the innovative and technology and knowledge based business fabric.

Insufficient coordination of the Regional System of Science and Technology and Companies

In the Region of Murcia there is an insufficient coordination of the Regional System of Science and Technology and Companies, producing little understanding between investigation and businesses. Murcia is far from the Spanish average in terms of R&D expenditure in relation to GDP (as previously stated) and less innovation is carried out in the companies compared to the national set. However, there are areas for improvement: spin-offs, a boost to the Intelligent Specialization Strategy (RIS3), fostering relations between the public and private

¹²⁵ The Competitiveness of Spanish Regions facing the Knowledge Economy (“La Competitividad de las Regiones Españolas ante la Economía del Conocimiento”). October 2016
http://www.fbbva.es/TLFU/dat/Monografia_Economia_Conocimiento.pdf

sectors, and developing new forms of cooperation and partnership to overcome the business fragmentation in the field.

In Murcia, the importance of the R&D is not spread enough in the society and companies. In this sense, it is considered vital to carry out actions to raise awareness, energize and raise awareness of the importance of R+D+i in the competitive improvement of companies. The existence of a very atomized business sector and little cooperation, makes it uncompetitive for not having resources for innovation and internationalization.

3.5.3 Low carbon economy

In some aspects of the low carbon industry the region has huge potential, although at the same time it needs to face numerous challenges. The following are specific factors that influence the development of low carbon industry in the region:

High emissions of greenhouse gases

The socioeconomic development in the Region in recent years has led to an increase in greenhouse gas emissions¹²⁶, which in 2008 stood at around 12,208.1kt CO₂ equivalent, way above the emissions of the Region in the base year (1990, 5,744.2kt CO₂ equivalent). Nevertheless, this growth stops in 2009, when a considerable decline is observed (in 2014, 8,732.9kt CO₂ equivalent), due to the crisis and the reduction in energy production.

Potential for renewable energy

As for the energy production¹²⁷, the main part of energy generated came from fuel gas and combined cycle (40%) and cogeneration (33%). In this sense, a significant part of the energy comes from fossil fuels, which increase the CO₂ emissions. About renewable energy sources, 14.87% is photovoltaic solar energy, 8.36% wind energy and 1.3% hydraulic. But the region has a huge potential on solar energy mainly, as it is one of the Spanish and European regions that has the highest insolation throughout the year. Also, taking into account that the primary sector is very significant in the region and the amount of organic waste it generates, huge opportunities can be explored in biomass. In conclusion, the so-called renewable technologies generally represent an advantageous option by their very nature and Murcia has potential in those.

Energy efficiency: very energy demanding industries in Murcia

With regard to the energy efficiency, the region has a relevant field to cover. It should be noted that in the Region, due to the importance of the agro-food complex, there is a high level

¹²⁶ Greenhouse gases emissions in the Region of Murcia (“Gases de efecto invernadero en la Región de Murcia”) <http://transparencia.carm.es/gases-de-efecto-invernadero>

¹²⁷ Annual Electric Statistics (2013-2015) (“Estadísticas Eléctricas Anuales”) <http://www.minetad.gob.es/energia/balances/Publicaciones/ElectricasAnuales/Paginas/ElectricasAnuales13.aspx>

of energy intensity in companies in the sector and, on the other, there is a sector related industrial cold and refrigeration with a high energy consumption. The high emissions of greenhouse gases by regional companies in this sector and the importance of the Low Carbon Economy, both in environmental and economic terms, demand an effective and updated policy framework aimed at companies to favour the reduction of primary energy consumption, increase energy savings and promote the generation and self-consumption of final energy, through generation facilities from renewable energy sources.

Still inadequate waste collection and treatment

As for waste collection and treatment, the region has a Waste Management Plan aligned with the Europe 2020 objectives, in order to articulate an strategy to reduce waste disposal and reuse them as a resource. This is an important step forward, taking into account the high rate of waste dumping in the Region of Murcia, the existence of illegal waste discharges and the lack of a regional waste inventory. The aim is to strengthen the municipal selective collection infrastructures network and update the urban waste treatment plants so that it is sufficient to collect and correctly manage all the waste produced in the domestic and commercial areas. If these objectives are not accomplished, the waste dumping will imply a serious problem for the environment and the population. In fact, the high degree of contamination of the Mar Menor coastal lagoon as a result of agricultural discharges (nitrate contamination), the problems of eutrophication of sensitive water bodies (reduction of nutrients) and pollution from the Bay of Escombreras (energy and chemical industries), represent a serious threat for the environment (something that will be explained more in detail later).

Organic material content in the soil

The soils of the Region of Murcia store 80 million tons of carbon, of which half are in agricultural lands. The average loss per hectare is 72 tones, 40 percentage points below the European average, implying that these are low carbon soils.

On the other hand, the fact that these values are so low also means that the soil has a greater potential to store carbon, which implies that carbon sequestration practices in these areas will have a very positive effect on the environment. It is estimated that the soils of the Region of Murcia could retain up to 50% more organic material with a good forestry management policy and sustainable agricultural practices.

Wide natural and environmental heritage

Murcia is characterized by its extensive natural and environmental heritage. This natural heritage represents an opportunity for the development of alternative economic activities, such as ecological and sustainable tourism. The Region should reorient its tourism model by promoting products that diversify the traditional “sun and beach”, as is the case of rural tourism and leisure in the natural environment. This type of tourism demands infrastructures “soft” that allow to travel and enjoy the territory, connecting places with cultural and natural values. The

“greenways”, abandoned old railroad tracks that are reused and conditioned with small investments, satisfy this demand, favouring non-motorized traffic (on foot, by bicycle, on horseback...) in comfort and safety.

The exceptionally rich biodiversity of the Region; the importance of forest area; and the serious problem of erosion and desertification need to approve and implement measures (taking into account the present and future potential of protected areas). The region needs to establish a suitable framework to promote the conservation and sustainable use of biological diversity as a way to achieve a balance between the development and maintenance of natural resources. In this sense, the region is strong on the environmental richness. The biodiversity of the Region is exceptionally rich, with 185 endangered species, included in the National Catalogue of Threatened Species, of which 4 are catalogued in “danger of extinction”. However, and none of these species have a conservation plan, and this makes their situation even harder.

Scarcity of protected areas

The Region of Murcia has a total area of more than 1,100,000 hectares, of which 45 percent corresponds to forest use, compared to 55 percent of the state average. The agricultural use of the soil (49.41%) is higher than the national average (42.05%). On the other hand, the surface of protected natural spaces is low in Murcia compared to the rest of the Spanish regions, and only 24.4% of the surface is protected over the total territory (17th position out of the 19 regions of Spain). Based on these two data, there can be a correlation between the agricultural use of the soil and the surface of protected territory. Moreover, the predominance of the agriculture and agro-food sectors can suppose a hazard for the forests and natural environment of the region, as they are based in the use of the soil.

Potential of the water economy

The water cycle system in the region is thoroughly proven, with clear superiority compared to other regions. It can be exported, if local bases are formed with sufficient entity, size and technological and global ambition. Emerging countries need each and every one of the systems, technologies, plants and facilities tested in the region for many years.

Transport and logistics gain relevance in the economy of Murcia

Transport and logistics are now more important than ever in the Murcia economy. The new options offered by road and port infrastructures serve to project the transport capacity (refrigeration, food processing, natural stone, granules and goods arrived at the port of Cartagena) throughout the Mediterranean arc and to the urban region of Madrid. Although the potential of the new infrastructures has not yet been fully developed, and some major projects are still pending, the region is no longer the doubly peripheral island it was a decade ago.

Construction with low energy consumption

The construction sector needs to restructure and look for new business opportunities. In this sense, the construction of buildings with almost zero energy consumption is a major challenge for the construction industry of Murcia, although there is a lack of technical capacity and knowledge to deal with this challenge.

Efforts to improve energy efficiency and integrate renewable energy sources are progressing slowly, especially in the renovation of existing buildings. Above all, everything indicates that the new housing market is stagnant and, in no case, will recover the levels of the past years, and the construction sector should see in this situation an opportunity to innovate and attract new talent. New technologies offer considerable potential, not only to build new homes, but also to renovate thousands of existing buildings in order to increase their energy efficiency to reach the objectives of the EU 2020 Strategy.

4 Governance issues

4.1 Institutions and governance levels

The Region of Murcia (“Región de Murcia”) is one of the 19 Autonomous Communities that exist in Spain, and it is also at the same time a province (there are 52 in Spain). In few words, Murcia is an Autonomous Community formed by a single province. In that sense, the basic institutional legislation of Murcia is its Statute of Autonomy¹²⁸, and it establishes the essential competences and regulations in terms of finance, economy and economic development (among other areas).

Currently in the Region there are different types of institutions and governance levels shaping the framework conditions of SME and entrepreneurs. On one hand, in the regional level, the Statute establishes the structure of Murcia’s regional government. In terms of economic development and SME support, the main body is the Department of Employment, Universities and Business. However, there are some other relevant departments in certain areas like the Department of Finance and Public Administration; the Department of Water, Agriculture, Farming and Fishing; and the Department of Tourism, Culture and Environment.

In the regional government there is the Institute of Promotion (INFO)¹²⁹, which is the main regional development agency in the region. Its objectives include promoting technological development, promoting the international expansion of companies, providing consultancy and advisory services to companies in investment projects, facilitating access to finance for business projects and participating in innovative financing instruments to support SME and entrepreneurs. In this sense, a set of tools and instruments have been jointly implemented by the INFO and all the agents involved in the creation of employment and entrepreneurship. A series of very innovative measures, such as the Office of the Entrepreneur¹³⁰, have been implemented in order to give personalized assistance (specific operational measures) to entrepreneurs and SME

Secondly, there is the non-profit entity European Business and Innovation Centre (CEEIM)¹³¹ whose main mission is to support the creation of new businesses and diversification of existing ones, especially those with an innovative nature.

The third relevant body is the Regional Employment and Training Service (SEF)¹³², which has its own offices in all municipalities, and whose mission as an autonomous body of the admini-

¹²⁸ Autonomy Statute of Murcia’s Region (“Estatuto de Autonomía de la Región de Murcia”) http://www.congreso.es/consti/estatutos/ind_estatutos.jsp?com=78

¹²⁹ Institute of Promotion (INFO)’s website (“Instituto de Fomento Región de Murcia”) <http://www.institutofomentomurcia.es/>

¹³⁰ The Office of the Entrepreneur (“Oficina del Emprendedor”) <http://www.panelempresarial.com/web/emprende/oficina-del-emprendedor>

¹³¹ The European Business and Innovation Centre (CEEIM) (“Centro Europeo de Empresas e Innovación de Murcia” <https://www.ceeim.es/>

stration is the orientation, training and job intermediation for citizens to have a decent job. Their role in relation to the creation of new enterprises is the promotion of self-employment.

In the local level of the Region of Murcia, the most important institutions are the municipalities and, within the municipalities, the most important entities devoted to economic promotion and development are Local Development Agencies¹³³. Among other functions, they assist business projects facing their first steps (offering information on technical, economic and finance viability) and also support constituted companies offering consultancy services in managing and learning processes. Also, there are the Local Employment Centres, which offer counselling on self-employment and business projects.

To end up with the regional institutions, it is relevant to describe the regional R+D+i and technology infrastructures and institutions. Firstly, the Scientific Park of Murcia, which is dependent of the INFO provides support to businesses with technological and scientific base. Specifically, it is kind of a business incubator and it offers offices and facilities (like spaces of co-working, etc.) to entrepreneurs. The park as well contributes to impulse the RIS3 Strategy. Secondary, there are six technological centres in the region that form the Federation of Technological Centres of Murcia (CITEM)¹³⁴, and which are devoted to different key sectors: metal (CTMETAL)¹³⁵, TIC (CENTIC)¹³⁶, footwear and plastic (CETEC)¹³⁷, Furniture and Wood (CETEM)¹³⁸ and Energy and Environment (CETENMA)¹³⁹. All of them are devoted to support the technological research and innovation actions of the companies and improve their competitiveness.

Apart from these institutions, the Science, Technology and Information Society Network of Murcia (CTnet Network)¹⁴⁰ is an interesting initiative pushed by the General Directorate of Commerce, Consumption and Administrative Simplification¹⁴¹. This network is a telecommu-

¹³² Regional Employment and Training Service's website ("Servicio Regional de Empleo y Formación de la Región de Murcia") <http://www.sefcarm.es/web/pagina?IDCONTENIDO=8&IDTIPO=180>

¹³³ Agencies for Local Development ("Agencias de Desarrollo Local") [http://www.sefcarm.es/web/pagina?IDCONTENIDO=5156&RASTRO=c\\$m5061&IDTIPO=100](http://www.sefcarm.es/web/pagina?IDCONTENIDO=5156&RASTRO=c$m5061&IDTIPO=100)

¹³⁴ The Federation of Technological Centres of Murcia ("Federación de Centros Tecnológicos de la Región de Murcia") <http://www.citem-rm.es/index.html>

¹³⁵ Technological Centre of Metal ("Centro Tecnológico del Metal") <http://www.ctmetal.es/>

¹³⁶ Technological Centre of ICT ("Centro Tecnológico de TICs") <http://centic.es/>

¹³⁷ The Technological Centre of Footwear and Plastic ("Centro Tecnológico del Calzado y del Plástico") <http://www.ctcalzado.org/CC/jsp/Portal/PortadaPortal.jsp?ce=CETEC>

¹³⁸ The Technological Centre of Furniture and Wood ("Centro Tecnológico del Mueble y la Madera") <http://www.cetem.es/>

¹³⁹ Technological Centre of Energy and the Environment ("Centro Tecnológico de la Energía y del Medio Ambiente") <http://www.cetenma.es/CC/jsp/Portal/PortadaPortal.jsp?ce=CTMA>

¹⁴⁰ Science, Technology and Information Society Network ("Red de Ciencia, Tecnología y Sociedad de la Información") <http://www.redctnet.es/>

¹⁴¹ General Directorate of Commerce, Consumption and Administrative Simplification [https://www.carm.es/web/pagina?IDCONTENIDO=22800&IDTIPO=100&RASTRO=c818\\$m22727](https://www.carm.es/web/pagina?IDCONTENIDO=22800&IDTIPO=100&RASTRO=c818$m22727)

nications platform that offers to the connected institutions interconnection services, Internet access and access to the Spanish R&D network (RedIRIS NOVA). CTnet interconnects regional universities, technological centres, technological innovative businesses (EIBT) and offers them R&D development facilities and ultrafast Internet velocity. In fact, in 2016 it was renowned as one of the three best practices of European projects¹⁴².

Having said that, in the region there are leading agro-food R&D infrastructures and facilities, like the IMIDA, the CEBAS¹⁴³ and the CTNC¹⁴⁴. IMIDA is a public regional research body, whose main objective is to meet the research needs of the agricultural sector of the Region of Murcia. It is divided in six departments: biotechnology, horticulture, natural resources, citrus growing, animal production and viticulture. With regard to the CEBAS, it is a research institute devoted to carry out multidisciplinary researches in three main areas (agrarian sciences, food science and technology and natural resources). This institution develops key improvements in soil conservation; watering and water management; vegetal nutrition; vegetal pathology; vegetal improvement and food technology. Finally, the CTNC is a state level institution whose headquarters are in Murcia and whose objectives- among others- are to carry out research in the food field and to assist technically the food sector.

In the national level, a relevant body devoted to SME support is the General Directorate of Industry and SME¹⁴⁵ (dependent of the Ministry of Economy, Industry and Competitiveness). Its objective is to facilitate the Implementation of policies to support and promote SME, in order to promote and boost their business and improve their competitiveness. Inside this administrative body it is inserted the state owned company ENISA¹⁴⁶, whose objective is to promote the financing of viable and innovative business projects of the Spanish SME, favouring the diversification of its financing sources. It follows different strategic lines: to serve the financial Impulse to SME to strengthen their business structures and to meet their global financing needs and to provide added value services beyond funding.

4.2 Policy strategies in place

4.2.1 Main regional policy strategies relevant for SME

The Region of Murcia has put in place several policy strategies in order to boost the dynamism of the Region's economy and also support SME. As mentioned before, recently, Murcia

¹⁴² Piece of news about CTnet. January 2016. http://www.f-integra.org/servlet/s.SI?sit=a,0,c,877,m,3604&r=Portal-36258-DETALLE_NOTICIA

¹⁴³ Centre of Soil Science and Applied Biology of Segura ("Centro de Edafología y Biología Aplicada del Segura") http://www.cebas.csic.es/index_eng.html

¹⁴⁴ National Technologic Centre of Preserve and Food ("Centro Tecnológico Nacional de la Conserva y Alimentación") <http://www.ctnc.es/>

¹⁴⁵ General Directorate of Industry and SME ("Secretaría General de Industria y PYME") <http://www.ipyme.org/es-ES/Paginas/Home.aspx>

¹⁴⁶ National Company of Innovation ("Empresa Nacional de Innovación") <http://www.enisa.es/es/conocenos/info/quienes-somos>

approved its own Intelligent Specialisation Strategy (RIS3)¹⁴⁷. It is the integrated agenda of economic transformation of the territory, which seeks to concentrate policies and investments primarily in research and innovation, from the perspective of knowledge based economic development.

The Strategy is the result of the reflection and consensus among the regional government, universities, businesses and business organisations, among others. Based on this understanding, a limited number of economic development priorities were identified and aligned with the existing and potential sectors of the Region of Murcia. These prioritized sectors are the following:

- Agro-food chain.
- Environment and cycle of water
- Transportation and logistics
- Habitat
- Health, biomedicine and wellbeing
- Tourism
- Offshore and maritime
- Energy

Thus, the priorities for the Region of Murcia are structured around those activities in which there is a clear or at least certain leadership, such as those linked to the agro-food value chain. In this aspect, in addition to the nuclear activities of agriculture (livestock, fisheries and the food industry), there are included those activities linked to the water cycle (treatment, purification and management), the environment and logistics and transport. All these activities, prioritized in a systemic way, coordinated, oriented, and transformed through the intensive use of advanced technologies, are set to obtain competitive advantages for the Region.

On the other hand, the Region of Murcia relies also on a series of potential activities. These activities are tourism, health, and habitat, grouped under the heading “quality of life”, since they contribute to the well-being of its inhabitants. At the same time, Murcia has a set of “driving” activities supported by large companies. Their uniqueness and volume make them a differentiating element compared to other regions, which are exploited in the strategy. In this sense, the areas of energy and marine or maritime, participate in the RIS3 Murcia Strategy.

For the purpose of this paper, the RIS3 Strategy of Murcia matches well with the current mapping of the SME sector in Murcia and the chosen focus sectors ICT Sector, Creative/Knowledge Economy and Low Carbon Economy (especially matching with the last two of them).

¹⁴⁷ Strategy of Research and Innovation for the Intelligent Specialization of the Region of Murcia (“Estrategia de Investigación e Innovación para la Especialización Inteligente de la Región de Murcia”) http://www.redidi.es/sites/default/files/biblioteca-documentos/ris3_murcia_final.pdf

Having described the RIS3 Strategy, another important framework that affects SME is the Murcia's Region Strategic Plan (Iris 2020)¹⁴⁸. This Plan is based on the guidelines set by the Europe 2020 Strategy¹⁴⁹; the National Reform Plan 2013¹⁵⁰; the previous Strategic Plan (2007-2013)¹⁵¹; and experts', social agents' and civil society's contributions. This document serves as the basis of the Government Action for the mentioned period, and also guides and promotes the private initiative's actions (as some actions are to be done by the private initiative and social agents).

The Plan is structured around seven strategic lines, being the most important ones for the purposes of present analysis "Production fabric and business environment", "Economy based on talent" and "Land management and environmental sustainability". The first strategic line (Production fabric and business environment) is divided in financing, business cooperation, internationalization, innovation, social economy and entrepreneurship and strategic sectors. It contains several measures like boosting alternative financing instruments to the traditional banking, promoting coordination between administrations in key sectors, reinforce the Exterior Promotion Plan¹⁵² of the region and the successful implementation of the RIS3 Strategy, among others. As for the strategic trend "Economy based on talent", the idea is to boost talent as a generator of wealth based on increased productivity, greater differentiation, innovation and diversification of goods and services. In this segment, several measures and recommendations are included: increasing the R&D investment, boosting researchers' participation in business projects and promoting the ICT Plan for SME and e-commerce, among many other measures. Finally, when it comes to land management and environmental sustainability, the Iris Plan conceives it as a transversal element to take into account in the implementation of sectorial policies. This objective includes the identification of agrarian areas of interest for the region, to conceive "waste as a resource" (to generate new products and market niches) and the improvement of selective waste collecting and treatment in companies and industrial parks.

Apart from these two major Plans or policies, there are other specific plans supporting certain economic sectors. Almost all of them are linked to the prioritized sectors of the RIS3 Strategy. Precisely because of their relevance for the economy and businesses of Murcia, these sectors have their own policy frameworks. Also, all of them match quite nicely with the focus sectors.

¹⁴⁸ Website of the Iris Plan 2020

<http://planiris2020.carm.es/web/pagina?IDCONTENIDO=75&IDTIPO=180>

¹⁴⁹ Europe 2020 Strategy. European Commission https://ec.europa.eu/info/strategy/european-semester/framework/europe-2020-strategy_en

¹⁵⁰ National Reform Programme. Kingdom of Spain. 2013 (English version)
http://ec.europa.eu/europe2020/pdf/nd/nrp2013_spain_en.pdf

¹⁵¹ Strategic Plan of the Murcia's Region 2007-2013

<http://www.um.es/observalocal/index.php/documentos/Documentos-de-trabajo/Estudios-e-Infornes/Planificaci%C3%B3n-estrat%C3%A9gica/Plan-Estrat%C3%A9gico-de-la-Regi%C3%B3n-de-Murcia-2007-2013/>

¹⁵² Exterior Promotion Plan ("Plan de Promoción Exterior. Región de Murcia")
http://www.impulsoexterior.com/COMEX/public_html/General/

Table 4.1: Relevant regional strategic plans

Plan's denomination	Brief description
Rural Development Plan ¹⁵³ 2014-2020	It serves as the reference policy making framework for the Department of Agriculture and Water and other agents in the agricultural and agro-food sector. It is co-funded by the EAFRD and it is aligned with the EU Guidelines for Rural Development. The plan is conceived the mean that will enable the strengthening of the government action and of all professional and business organizations in the Region of Murcia within the scope of their competencies, orienting their work towards the achievement of high standards in terms of agricultural incomes, volumes produced, added value, etc.
Strategic Tourism Plan 2015-2019 ¹⁵⁴	It is a plan to invigorate the sector by integrating diverse policies coordinated with the action of economic agents, innovation and quality learning to increase competitiveness. It includes specific measures concerning the SME of the sector: building R&D capacities adapted to the businesses' capacities, counselling and support to the business sector and protection of the companies' rights, among others.
Energetic Plan 2016-2020 ¹⁵⁵	A consensual plan that serves to the prime, industrial and tertiary sectors, as well as to the transportation and public administration. Also, it seeks to respond to the needs of the region in terms of energy planning. It contains in total 23 specific actions supporting companies (out of 105 actions). Some of these specific actions are the impulse of the Energy Cluster, counselling on energy contracting management in the business sphere and subsidies to improve energy efficiency.
Plan to Support Entrepreneurship 2014-2017 ¹⁵⁶	The objectives of the plan are to create companies and consolidate recently created business initiatives and to make the new projects more innovative, specialized and competitive with clear export vocation. This Plan is an initiative led by the Government of Murcia and coordinated from the INFO. It is structured in seven axes and each of them contains several actions. Some of these actions supporting SME are specific funding lines, virtual pay-checks for entrepreneurs and SME (checks valued in kind to access and obtain basic support services for the creation of companies and to receive advanced services) and the establishment of specialized assistance programme for innovative companies, among others.
Strategy for the Digital Transformation of the Murcia's Region Industry ¹⁵⁷	The aim of the strategy is the progress and improvement of the industrial evolution that has been called "Industry 4.0". To this end, it aims to stimulate technological entrepreneurial projects by industrial SME in the Region of Murcia. It is structured in 5 strategic lines containing 44 strategic actions. These actions include the implementation of the dual work based training, industrial financing, promotion of industrial cooperation (clusters) and the incorporation of technologists into the industry, among others
Plan Region of Murcia- Digital Community 2014-2020 ¹⁵⁸	The final objective of the plan is the full incorporation of the Region in the Information Society. This plan is aligned with the Digital Agenda of Spain and Europe. It involves two areas: Digital Citizenship and Digital Economy. This second line includes crucial aspects for SME like ICT Infrastructures development, SME' digital transformation to increase productivity and digital innovation.

Source: different sources. Own elaboration

¹⁵³ Rural Development Plan 2014-2020 ("Programa de Desarrollo Rural, Región de Murcia") [https://www.carm.es/web/pagina?IDCONTENIDO=49548&IDTIPO=100&RASTRO=c487\\$m45758](https://www.carm.es/web/pagina?IDCONTENIDO=49548&IDTIPO=100&RASTRO=c487$m45758)

¹⁵⁴ Turistical Strategic Plan 2015-2019 ("Plan Estratégico Turístico 2015-2019") <http://transparencia.carm.es/-/plan-estrategico-turistico-2015-20-1>

¹⁵⁵ Summary of the Energetic Plan of Murcia (2014-2020) ("Resumen del Plan Energético de Murcia 2016-2020") http://cityinvest.eu/sites/default/files/library-documents/Resumen_Plan%20energetico_0.pdf

¹⁵⁶ Support Plan for Entrepreneurs 2014-2017 ("Plan de Apoyo a los Emprendedores de la Región de Murcia 2014-2017") <http://www.panelempresarial.com/web/emprende/plan-emprendemos-region-de-murcia1>

¹⁵⁷ Strategy for the Digital Transformation of the Murcia's Region Industry ("Estrategia de la Región de Murcia para la Transformación Digital de la Industria") http://ametic.es/sites/default/files/archivos_noticias/AMETIC%20ESTRATEGIA%20MURCIAINDUSTRIA%2020160112_0.pdf

¹⁵⁸ Plan Region of Murcia- Digital Community 2014-2020 ("Plan Región de Murcia, Comunidad Digital") [http://www.carm.es/web/pagina?IDCONTENIDO=41503&IDTIPO=11&RASTRO=c2749\\$m51741,49378](http://www.carm.es/web/pagina?IDCONTENIDO=41503&IDTIPO=11&RASTRO=c2749$m51741,49378)

4.2.2 Supra-regional policy strategies with an important influence on the region

Having explained the different regional strategies and plans to strengthen the economy and the competitiveness, now it is time to describe the main framework existing in the national and supranational level. One of these instruments is the “Agenda for Strengthening of the Industrial Sector in Spain”¹⁵⁹. This Agenda has a specific chapter devoted to supporting the growth and professionalization of Spanish SME. It contains different actions to facilitate the increasing of SME’ size so that they can gain better access to international markets and financing sources. Some of the initiatives are to reduce costs associated to SME size growth, promote the implantation of ICTs in SME and to establish mechanisms to increase the participation of SME in the execution of large contracts run by leading companies. As for entrepreneurship and youth employment promotion, the Strategy for Entrepreneurship and Youth Employment¹⁶⁰ contains 100 specific measures in this direction (a Strategy that will be updated during 2017). It includes incentives and stimulus to hire young workers, tax incentives, special financing initiatives, etc., to support self-employed workers and micro-businesses (with less than 9 employees).

In the European Union level, there are several SME support programmes, which some of these are summarized in the following chart:

Table 4.2: Some EU measures and programmes to support SME

Name of the measure/programme	Description
COSME. Europe’s Programme for SME ¹⁶¹	It helps entrepreneurs and SME start operations, access finance and internationalization, and it also supports authorities in improving the business environment and facilitating economic growth in the European Union. It contributes to the overall objectives of the Europe 2020 Strategy and it is structured according to four action areas: a) Improving access to finance for SME in the form of equity and debt; b) Improving access to markets, particularly inside the EU but also at a global level; c) Improving framework conditions for the competitiveness and sustainability of enterprises, particularly SME, including in the tourism sector; d) Promoting entrepreneurship and entrepreneurial culture.
Erasmus for Young Entrepreneurs ¹⁶²	In this programme European new entrepreneurs gather and exchange knowledge and business ideas with an experienced entrepreneur, with whom they stay and collaborate for a period of 1 to 6 months. It is a tripartite relationship, between the New Entrepreneur (NE), the Host Entrepreneur and the Intermediary Organisations (IO) (forging the working relationships but also in providing support, ensuring quality, etc.). It is partly financed by the European Commission. The purpose of the

¹⁵⁹ Agenda for Strengthening of the Industrial Sector in Spain (“La Agenda para el fortalecimiento del sector industrial en España”) <http://www.minetad.gob.es/industria/es-ES/Servicios/Paginas/agenda-sector-industrial.aspx>

¹⁶⁰ Strategy for Entrepreneurship and Youth Employment 2013/2016 (“Estrategia de Emprendimiento y Empleo Joven 2013/2016”) http://www.empleo.gob.es/ficheros/garantiajuvenil/documentos/EEEJ_Documento.pdf

¹⁶¹ COSME. Europe’s programme for small and medium-sized enterprises https://ec.europa.eu/growth/SME/cosme_en

¹⁶² Website of Erasmus for Young Entrepreneurs <http://www.erasmus-entrepreneurs.eu/>

Name of the measure/programme	Description
	support to the NE s to contribute towards travel costs to and from the country of the stay and subsistence costs during the visit (which is paid by the IOs)
The Small Business Act for Europe ¹⁶³	The Small Business Act (SBA) is an overarching framework for the EU policy on Small and Medium Enterprises (SME). It aims to improve the approach to entrepreneurship in Europe, simplify the regulatory and policy environment for SME, and remove the remaining barriers for their development. One of the main tools to monitor and assess countries' progress in implementing the SBA is the SME Performance Review ¹⁶⁴
European SME Week ¹⁶⁵	The European SME Week is a pan-European campaign that aims to promote entrepreneurship in Europe. It helps existing entrepreneurs find information on available support (EU, national, regional, and local level) and tries to encourage people to become entrepreneurs. The event gives a chance to organisations providing business support services to promote themselves to entrepreneurs in Europe. Organisations can benefit from the branding and the promotion of their events through a central website located on the Europa website.
European Enterprise Promotion Awards ¹⁶⁶	The European Enterprise Promotion Awards reward those entities who promote entrepreneurship and small business at the national, regional and local level. Participants from all EU countries (plus Iceland, Serbia and Turkey) can take part in the competition. There are several award categories: 1) Promoting the entrepreneurial spirit; 2) Investing in entrepreneurial skills; 3) Improving the business environment; 4) Supporting the internationalisation of business; 5) Supporting the development of green markets and resource efficiency; 6) Responsible and inclusive entrepreneurship
Project on enforcement of outstanding claims by SME operating across borders (2013-2014) ¹⁶⁷	The main aim of this project was to raise awareness of claims management instruments and improve their use through a series of events organised in all EU countries. The objectives of the project were: a) To provide SME that operate across borders and SME stakeholders with information on credit and claims management; b) To distribute practice-based guidelines; c) To develop teaching modules for vocational advanced training and the advanced training of young entrepreneurs.
AGRI Guarantee Facility ¹⁶⁸	The European Investment Fund (EIF)'s AGRI is an initiative that aims at facilitating greater access to finance for agriculture, agro-food, forestry and rural businesses. The initiative is destined to financial intermediaries, by offering reduced overall interest rate and/or collateral requirements (to increase the amount of finance made available towards the mentioned sectors). This instrument provides a high leverage creating larger market impact of the EAFRD and national/regional resources. As a guarantor, EIF is acting in its own name but for and on behalf of, and at the risk of the region/EU Member State participating in the Facility.

Source: different sources. Own elaboration

¹⁶³ Website of the Small Business Act for Europe http://ec.europa.eu/growth/SME/business-friendly-environment/small-business-act_en

¹⁶⁴ Website of the SME Performance Review http://ec.europa.eu/growth/SME/business-friendly-environment/performance-review-2016_en

¹⁶⁵ Website of the European SME Week http://ec.europa.eu/growth/SME/support/sme-week_en

¹⁶⁶ Website of the European Enterprise Promotion Awards http://ec.europa.eu/growth/SME/support/enterprise-promotion-awards_en

¹⁶⁷ Website of the Project on enforcement of outstanding claims by SME operating across borders (2013 – 2014) http://ec.europa.eu/growth/SME/support/cross-border-enforcement_en

¹⁶⁸ AGRI Guarantee Facility. European Investment Bank http://www.eif.org/what_we_do/guarantees/agri_guarantee_facility/index.htm

4.3 Support instruments for SME and the three focus sectors

4.3.1 Initiatives and programmes to support SME of Murcia

The Government of Murcia, as part of its competences, has implemented many initiatives and measures to support SME, mainly through the INFO. For instance, it hosts the Financial Office¹⁶⁹ which is devoted to offer a complete financial advice to businesses of the Region. As for its operation, the Office analyses the financing needs of companies and offers the product that best suits their needs, while helping them in the way of carrying out the accomplishment process. It also provides advice and mediation on structured financing projects, among other services.

Having said that, in the following chart there is a list of the main SME support measures and a brief description of each of them:

Table 4.3: Regional aids and measures to support SME

Name of the measure	Description
Aids for hiring innovation services by SME (Innovation Check) ¹⁷⁰	The aim is to encourage SME, based in Murcia's region, to hire advanced advice and technical support services. Concretely, the measure covers the hiring of innovation services in management and organization. It is applicable to all sectors, except for primary sector and for export related activities.
Aids for enterprises for R&D ¹⁷¹	The objective is to promote a clear competitive improvement of the company by supporting industrial research and experimental development activities. It is applicable only to SME whose activity is located in Murcia. The eligible costs can go from 50,000€ to 300,000€ and the subsidy cannot exceed the 70% of the eligible costs in activities classified as industrial research, and the 45% in the case of experimental development activities.
Aids for contracting services based on ICT by regional SME ("ICT Check") ¹⁷²	The aim is to encourage SME based on the region, to contract advanced counselling and technical assistance services based on ICT. Concretely, it involves ICT tools for businesses' internal management and e-commerce implantation. The subsidy covers up to 80% of the approved expenditure and the subsidy can be maximum 8,000€.
Aids to encourage the contracting of advisory services in preparation of proposals for European programs and	The aim is to encourage regional SME with little or no experience in European Programmes and Projects to hire advanced R+D+i services in international cooperation (in programmes like Horizon 2020). Both the supplying entity and the competent personnel must have the pertinent accreditation. The minimum contribution of the beneficiary must be 20% or 40%,

¹⁶⁹ Website of the Financial Office ("Oficina Financiera") <http://www.institutofomentomurcia.es/oficina-financiera>

¹⁷⁰ Aids for hiring innovation services by SME (Innovation Check) ("Programa de ayudas para la contratación de servicios de innovación por las Pymes ("Cheque de Innovación") [https://www.carm.es/web/pagina?IDCONTENIDO=1271&IDTIPO=240&RASTRO=c40\\$m2511,2373](https://www.carm.es/web/pagina?IDCONTENIDO=1271&IDTIPO=240&RASTRO=c40$m2511,2373)

¹⁷¹ Aids for enterprises for R&D ("Ayudas a Empresas para Investigación y Desarrollo") <http://www.institutofomentomurcia.es/infodirecto/servlet/Controlador;jsessionid=4865D92AA160C8FDD2DA3EFEEF369B8B?idServicio=478>

¹⁷² Aids for contracting services based on ICT by regional SME ("Programa de ayudas para la contratación de servicios basados en tecnologías de la información y las comunicaciones por las PYMES regionales") [https://www.carm.es/web/pagina?IDCONTENIDO=1164&IDTIPO=240&NOMBRECANAL=Empresas&RASTRO=c40\\$m2511,2373](https://www.carm.es/web/pagina?IDCONTENIDO=1164&IDTIPO=240&NOMBRECANAL=Empresas&RASTRO=c40$m2511,2373)

Name of the measure	Description
projects. ("Check Europe") ¹⁷³	depending on the cases.
Aids for product development and innovation in manufacturing processes ¹⁷⁴	The aim is to support projects conducted by SME (preferably exporting ones) that imply product development or an innovation in the manufacturing process. To become beneficiary, the company must hire a project manager and the services of a research entity must be subcontracted in the subsidized project.
Aids for companies enabling industry 4.0 technologies ¹⁷⁵	The Programme is aimed at promoting innovation for the digital transformation of companies, by the Enablers of Industry Technologies 4.0 based in Murcia. The beneficiaries are SME considered as "technology enablers": companies that develop a set of technologies that link the physical world to the virtual world (management software, communications and data treatment software, etc.) to turn the industry into an intelligent industry. The aid cannot exceed 45% of eligible costs nor the amount of 30,000€.
INFO Aids to the Digital Transformation of the Region ¹⁷⁶	The aim of the Programme is to support industrial manufacturing SME to fulfil technological projects and to effectively introduce digital technologies in the industry. The subsidy cannot exceed the 50% of the eligible costs, nor the maximum amount of 60,000€, according to a certain scale.
Entrepreneur Check ¹⁷⁷	The aim of the measure is to subsidize the professional advice services provided by Professional Associations to entrepreneurs. The staff of the ADLE Cartagena manages the measure, as they analyse the business project and decide whether give or not the Check.
Promotion of energy efficiency and the use of renewable energies ¹⁷⁸	The aim is to subsidize investments done by companies in certain areas: conducting energy audits, renovation of energy consuming equipment and installations, energy efficiency improvement in productive processes, etc.
Aids for young farmers to create agrarian companies ¹⁷⁹	The aim is to subsidise the creation of an agrarian company led by people between 18-40 years old. It is essential to have a Business Plan. The amount of the aid is 22,500€ per young farmer, up to 70,000€ per farmer (depending on the characteristics of the farm).

Source: different sources. Own elaboration

¹⁷³ Aids to encourage the contracting of advisory services in preparation of proposals for European programs and projects ("Ayudas INFO para incentivar la contratación de servicios de asesoramiento en preparación de propuestas para programas y proyectos europeos")
[https://www.carm.es/web/pagina?IDCONTENIDO=1462&IDTIPO=240&NOMBRECANAL=Empresas&RASTRO=c40\\$m2511,2373](https://www.carm.es/web/pagina?IDCONTENIDO=1462&IDTIPO=240&NOMBRECANAL=Empresas&RASTRO=c40$m2511,2373)

¹⁷⁴ Aids for product development and innovation in manufacturing processes ("Ayudas para el desarrollo de productos y la innovación en los procesos para su fabricación")
[https://www.carm.es/web/pagina?IDCONTENIDO=2326&IDTIPO=240&RASTRO=c40\\$m2511,2373](https://www.carm.es/web/pagina?IDCONTENIDO=2326&IDTIPO=240&RASTRO=c40$m2511,2373)

¹⁷⁵ Aids for companies enabling industry 4.0 technologies ("Ayudas a Empresas Habilitadoras de Tecnologías Industria 4.0")
<http://www.institutofomentomurcia.es/infodirecto/servlet/Controlador?idServicio=460>

¹⁷⁶ INFO Aids to the Digital Transformation of the Region ("Ayudas INFO a la Transformación Digital de la Región de Murcia (INDUSTRIA 4.0)")
<http://www.institutofomentomurcia.es/infodirecto/servlet/Controlador?idServicio=419>

¹⁷⁷ Entrepreneur Check ("Cheque Emprendedor")
http://adle.cartagena.es/publicas/empresas_empleo/Cheque_emprendedores/_nWG9FHqeSb9qt22EQ1AsGQ

¹⁷⁸ Promotion of energy efficiency and the use of renewable energies ("Fomento de la eficiencia energética y el uso de energías renovables")
[https://www.carm.es/web/pagina?IDCONTENIDO=415&IDTIPO=240&NOMBRECANAL=Ayudas+y+Subvenciones&RASTRO=c673\\$m3270](https://www.carm.es/web/pagina?IDCONTENIDO=415&IDTIPO=240&NOMBRECANAL=Ayudas+y+Subvenciones&RASTRO=c673$m3270)

¹⁷⁹ Aids for young farmers to create agrarian companies ("Ayudas destinadas a los jóvenes agricultores para la creación de empresas agrarias")
[https://www.carm.es/web/pagina?IDCONTENIDO=6442&IDTIPO=240&RASTRO=c212\\$m2894,3179](https://www.carm.es/web/pagina?IDCONTENIDO=6442&IDTIPO=240&RASTRO=c212$m2894,3179)

In the national level, there are several support services offered to business development. Firstly, there are one-stop window offices (VUE)¹⁸⁰ spread all over the main cities where all public administrations offering counselling and support to entrepreneurs and SME to implement their business. Also, there are several public financing schemes available for SME in favourable conditions. Two of these are the ICO Funding Lines¹⁸¹ and the ENISA Funding¹⁸². The first one is offered by the Official Credit Institute (ICO) and it concentrates the largest volume of financing to companies and self-employees through lines that manages in collaboration with credit institutions. The second one, meanwhile, is focused on financing SME' and young entrepreneurs' strategic innovation projects. ENISA offers financing mainly through the participatory loans, which considerably strengthens the financial structure of companies. ENISA also has a mixed co-investment scheme: the Spain Start-up Co-investment Fund (SSCF)¹⁸³.

Finally, among many other SME support initiatives, the Reindustrialization Programme (Reindus)¹⁸⁴ is a relevant one. It is a programme destined to disadvantaged territories and regions of Spain to ensure their regeneration and development of their industrial fabric. The beneficiaries are public entities, and businesses and associations (both public and private) that develop industrial productive activities, among other beneficiaries. In the case of Murcia, there is a specific funding call to regenerate the industrial fabric of Lorca (Murcia) after suffering the earthquake of 2011.

4.3.2 Analysis of the region's OPs of the 2007-2013 and the 2014-2020 programming periods

The Region of Murcia has received several funding from the European Union from different sources, as it can be seen later on in more detail. In this aspect, there are going to be analysed the different funding schemes divided in two periods of time: 2007-2013 and 2014-2020. These programmes aim to boost economic growth in the region of Murcia by creating employment, especially in activities with high added value. It is expected to increase productivity, particularly in SME, by supporting smart growth and sustainable use of resources.

For the period 2014-2020¹⁸⁵, the European Regional Development Fund (ERDF) is aligned with the agreed (and commented) regional "Smart Specialisation Strategy" (RIS3) aiming to

¹⁸⁰ One-stop window offices ("Ventanilla Única Empresarial") <http://www.ventanillaempresarial.org/>

¹⁸¹ ICO Funding Lines ("Líneas de Financiación ICO") <https://www.ico.es/web/ico/empresas-y-emprendedores>

¹⁸² ENISA Funding Lines ("Líneas de Financiación ENISA") <http://www.enisa.es/es/financiacion>

¹⁸³ Spain Startup Co-Investment Fund <http://www.enisa.es/es/financiacion/info/spain-startup-co-investment-fund>

¹⁸⁴ The Reindustrialization Programme ("Programa de Ayudas para Actuaciones de Reindustrialización") <http://www.minetad.gob.es/PortalAyudas/Reindus/Descripcion/Paginas/Descripcion.aspx>

¹⁸⁵ Murcia European Regional Development Fund (ERDF) 2014-2020) Operational Programme http://ec.europa.eu/regional_policy/en/atlas/programmes/2014-2020/spain/2014es16fop019

strengthen research institutions, with improved scientific and technological infrastructure. R+D+I activities are promoted from public institutions, leveraging private investment. Moreover, SME competitiveness and the diversification of their business activities is promoted through improved access to credit, as well as fostering SME' position on international markets. In the referenced period, the Thematic Objective 3 on SME competitiveness has been taken into account and represents 18.7% of the total funding. In this sense, the expected impacts are the following: 40% of companies to engage in innovation activities and to promote Investment in 5,000 existing SME, among others.

Analysing deeper the 3rd ERDF Thematic Objective, it is divided in investment priorities and each of the priorities is divided in different specific objectives. Concretely, the investment priorities of the 3rd Thematic Objective are:

- Promote entrepreneurship, in particular by facilitating the economic exploitation of new ideas and promoting the creation of new businesses, including the development of business incubators.
- Provide support to the capacity of SME to grow in regional, national and international markets, and to become involved in innovation processes

Table 4.4: Allocation of the ERDF Murcia 2014-2020 Operational Programme's funding

	Period 2014-2020				
	EU expenditure	National expenditure	National public expenditure	National private expenditure	TOTAL
ERDF	296 405 884	74 101 473	74 101 473	0	370 507 357
TA – Technical Assistance	9 599 000	2 399 750	2 399 750	0	11 998 750
TO1 – Research and innovation	58 759 212	14 689 803	14 689 803	0	73 449 015
TO2 – Information and communication technologies	31 915 755	7 978 939	7 978 939	0	39 894 694
TO3 – SME competitiveness	55 502 431	13 875 608	13 875 608	0	69 378 039
TO4 – Low-carbon economy	22 584 058	5 646 015	5 646 015	0	28 230 073
TO6 – Environment and resource efficiency	82 534 635	20 633 659	20 633 659	0	103 168 294
TO9 – Social inclusion	6 255 101	1 563 776	1 563 776	0	7 818 877
TO10 – Education and training	29 255 692	7 313 923	7 313 923	0	36 569 615

Source: ERDF Murcia 2014-2020 OP

Previously, in the period 2007-2013¹⁸⁶, the ERDF's support to the regional R&D infrastructures and R&D projects was also a crucial aspect of the Programme, as well as increasing the use of ICT infrastructures and services and fostering innovation and entrepreneurial spirit among businesses across all economic sectors, among other aspects. There were seven priority axes foreseen, being the most important ones for SME the "Priority 1: Development of the Knowledge Economy" (13.4% of total funding) and "Priority 2: Entrepreneurial Develop-

¹⁸⁶ Murcia European Regional Development Fund (ERDF) 2007-2013) Operational Programme http://ec.europa.eu/regional_policy/en/atlas/programmes/2007-2013/spain/operational-programme-murcia

ment and Innovation” (17.3% of total funding). The first one’s primary objective is to encourage public and private investments in R&D projects in order to safeguard existing competitive enterprises and to create favourable conditions for their growth; while the second’s main objective is to stimulate innovation, quality standards and entrepreneurial spirit across all sectors of the economy. The second axis’s objective is to stimulate innovation, quality standards and entrepreneurial spirit across all sectors of the economy, including encouraging e-commerce and e-administration in regional enterprises.

Table 4.5: Allocation of the ERDF Murcia 2007-2013 Operational Programme’s funding

	Period 2007-2013				
	EU expenditure	National expenditure	National public expenditure	National private expenditure	TOTAL
ERDF	523 856 034	130 964 807	88 463 199	42 501 608	654 823 841
1. Development of the Knowledge Economy (Information Society and ICTs)	79 789 845	19 947 475	0	19 947 475	99 737 320
2. Development and innovation by and for enterprises	90 216 487	22 554 133	0	22 554 133	112 770 620
3. Environment, Water resources and Risk Prevention	111 087 847	27 771 966	27 771 966	0	138 859 813
4. Transport and energy	171 418 792	42 854 709	42 854 709	0	214 273 501
5. Local and Urban Sustainable Development	26 365 048	6 591 267	6 591 267	0	32 956 315
6. Social infrastructures	39 715 000	9 926 750	9 928 750	0	49 643 750
Technical Assistance and Reinforcement of Institutional Capacity	5 263 015	1 316 507	1 316 507	0	6 582 522

Source: ERDF Murcia 2007-2013 OP

As for the European Union’s rural development policy, one of the most relevant funding instruments is the European Agricultural Fund for Rural Development (EAFRD). The aim of this fund is to improve competitiveness in agriculture; ensure that natural resources are managed sustainably and that measures to tackle climate change are implemented effectively; and to ensure that rural areas across the EU receive support for development, which includes creating new jobs and protecting existing ones¹⁸⁷. The Fund complements national, regional and local actions and measures.

In this sense and in the case of Murcia, the EAFRD co-finances the Rural Development Programme (RDP) of the Region of Murcia, which is in line with the European Guidelines for Rural Development 2014-2020 and is consistent with what is established in the National Strategic Rural Development and National Framework). The PDR (and largely the EARDF) is one of the main instruments of the structural agrarian policy that the Region has to articulate ac-

¹⁸⁷ Regulation (EU) No 1305/2013 — support for rural development. Eur-lex. <http://eur-lex.europa.eu/legal-content/EN/LSU/?uri=celex:32013R1305>

tions, aid and investments aimed at contributing to the maintenance and sustainable development of rural areas of Murcia.

For the purposes of this analysis, in the following charts there are the funding allocations concerning the EAFRD programmes of the periods 2014-2020¹⁸⁸ and 2007-2013¹⁸⁹. In the case of the Programme corresponding to 2014-2020, the allocation only specifies the EU contribution (without specifying the contributions of other entities).

Table 4.6: Allocation of the EAFRD Murcia 2014-2020 Programme's funding

	Period 2014-2020
	EU expenditure
EAFRD	219 304 740
M01: Knowledge transfer and information actions	2 346 120
M02: Advisory, management and replacement services for holdings	2 346 120
M03: Quality schemes for agricultural products and foodstuffs	308 700
M04: Investments in physical assets	77 105 700
M05 – Reconstruction of agricultural production potential damaged by natural disasters and catastrophes and implementation of adequate preventive measures	2 904 104.70
M06: Development of agricultural and business holdings	17 312 400
M08: Investments in the development of forest areas and improving the viability of forests	17 400 451.95
M10: Agroenvironment and climate	37 907 384.76
M11: Organic farming	33 667 200
M12: Payments for Natura 2000 and the Water Framework Directive	630 000
M13: Payments to areas with natural limitations or other specific limitations	8 458 380
M16: Cooperation	3 704 400
M19 – Support for local development of LEADER	11 896 920
M20: Technical assistance at the initiative of the Member States	3 316 858.59

Source: Rural Development Programme of the Region of Murcia (2014-2020)

However, in the case of EAFRD Programme for the period 2007-2013, the information provided is more complete, and it is disaggregated by sources of funding (whether it is EU expenditure, national public expenditure or national private expenditure).

Table 4.7: Allocation of the EAFRD Murcia 2007-2013 Programme's funding

	Period 2007-2013			
	EU expenditure	National public expenditure	National private expenditure	TOTAL
EAFRD	219 240 689	143 404 435.14	226 720 854.65	589 365 978.79
AXIS 1. Increasing the competitiveness of the agricultural and forestry sector	99 953 924 57	61 686 871.33	202 702 388.65	364 343 184.55

¹⁸⁸ Rural Development Programme of the Region of Murcia (2014-2020)
[https://www.carm.es/web/pagina?IDCONTENIDO=49548&IDTIPO=100&RASTRO=c487\\$m45758](https://www.carm.es/web/pagina?IDCONTENIDO=49548&IDTIPO=100&RASTRO=c487$m45758)

¹⁸⁹ Rural Development Programme of the Region of Murcia (2007-2013). September 2015 version
[https://www.carm.es/web/pagina?IDCONTENIDO=10183&IDTIPO=100&RASTRO=c487\\$m45758,4689](https://www.carm.es/web/pagina?IDCONTENIDO=10183&IDTIPO=100&RASTRO=c487$m45758,4689)

	Period 2007-2013			
	EU expenditure	National public expenditure	National private expenditure	TOTAL
AXIS 2: Improving the environment and rural environment	90 991 253.43	72 125 982.37	4 198 199.84	167 315 435.64
AXIS 3: Quality of life in rural areas and diversification of the rural economy	0	0	0	0
AXIS 4: LEADER	23.793.006 00	7 931 001.98	19 820 266.16	51 544 274.14

Source: EAFRD Murcia 2007-2013 Programme

Having explained both the ERDF and the EAFRD, it is now the turn to analyse the ESI funding relevant for SME support in the region. However, there are several comments to be made previously. In this sense, there is not centralised regional level information on projects conducted in these time periods, and the data available is rather disperse when it comes to the projects involving institutions or companies of Murcia. In any case, the Community Research and Development Information Service (CORDIS) does provide information about the beneficiary entities of FP7¹⁹⁰ and Horizon 2020¹⁹¹ schemes (and therefore, the EU funding allocation).

Table 4.8: ESI funding relevant for SME support in the region (in EUR)

	Period 2007-2013	Period 2014-2020
Research projects under FP7	29 365 454.79	N/A
Research projects under Horizon 2020	N/A	18 778 281.97
COSME	N/A	2 023 903

Source: COSME data hub; CORDIS.

Under the FP7 funding and until 2011 (the most recent data obtained on regional level expenditure), there were 17 beneficiaries, and of those 4 were SME. As for the EU contribution, Murcia received 3 155 834€, going 364 231€ to SME. One of the projects conducted under the FP7 framework is the “My Europa” project¹⁹², a European network of expertise in research on myopia. The total European contribution was 3 173 961€, for a period of 4 years and one of the participants was the University of Murcia. Another project where this same university participated in was an international cooperation project with Jordan¹⁹³ between 2012 and 2014. The sum allocated was 488 636€ and the project included support actions for the National Centre for Research and Development.

¹⁹⁰ CORDIS – EU research projects under FP7 (2007-2013)
<https://data.europa.eu/euodp/es/data/dataset/cordisfp7projects>

¹⁹¹ CORDIS – EU research projects under Horizon 2020 (2014-2020)
<https://data.europa.eu/euodp/es/data/dataset/cordisH2020projects>

¹⁹² Website of “My Utopia” European research Project. CORDIS
http://cordis.europa.eu/project/rcn/82408_en.html

¹⁹³ International cooperation project with Jordan
<http://ec.europa.eu/research/iscp/index.cfm?amp;pg=jordan-projects>

With regard to Horizon 2020 framework, provisional results¹⁹⁴ have been released about the participation of Murcia in the programme between 2014 and 2016. During this period, Spain received 1 933 8 million euros, and out of those Murcia received 18.8 million euros in funding. This subsidy went to support 44 entities, out of these 30 were companies (97% SME). Overall, these entities participated in 65 activities, and 24 of those were led by regional entities, standing out among those the University of Murcia and the Polytechnic University of Cartagena. Finally, as far as the European Investment Fund is concerned, it is highlighted the case of the Murcia-based start-up Odilo¹⁹⁵, a digital content lending platform, that received funding from InnovFin SME and the EFSI programmes.

4.3.3 Legislative frameworks and regulations influence SME development in Murcia

As for main legislative frameworks and regulations existing in the context of Murcia that influence SME development, in the regional level there are two. On one side, the Law on urgent measures to reactivate business activity¹⁹⁶ is a very transcendent legislative production because it reforms many existing laws and it affects multiple sectors and aspects like retail trade, tourism, environmental authorizations and industrial activity, among others. This law pursues to fight the region's weaknesses derived from the existing business structure of Murcia. In this sense, it establishes the Office for the Defence of Self-Employed Worker and SME (DEPA)¹⁹⁷, with the aim of eliminating bureaucratic obstacles that may generate unjustified delays for these collectives. It establishes the legal obligation for the Regional Administration, to meet the requirements that the Office may present in a preferential and urgent manner.

Another regional legislative framework is the Law 5/2013¹⁹⁸ to support the competitiveness and internationalization of entrepreneurs and SME. It seeks to implement economic, fiscal and financial measures to consolidate SME of the region, as well as to promote SME' competitiveness through R&D, innovation, internationalisation and business cooperation, among

¹⁹⁴ Spanish participation in the Horizon 2020 (2014-2016). Provisional results by Autonomous Communities ("Participación española en Horizonte 2020 (2014-2016). Resultados provisionales por CCAA") http://eshorizonte2020.cdti.es/recursos/doc/Programas/Cooperacion_internacional/HORIZONTE%2020/12233_23523520171651.pdf

¹⁹⁵ Website of the case study "Odilo: Digital content leading platform") http://www.eif.org/what_we_do/guarantees/case-studies/efsi_innovfin_odilo_spain.htm?lang=-en

¹⁹⁶ Law 2/2017 on urgent measures to reactivate business activity ("Ley 2/2017, de 13 de febrero, de medidas urgentes para la reactivación de la actividad empresarial y del empleo a través de la liberalización y de la supresión de cargas burocráticas") <https://www.boe.es/buscar/pdf/2017/BOE-A-2017-2468-consolidado.pdf>

¹⁹⁷ Website of Office for the Defense of Self-Employed Worker and SME ("Oficina para la Defensa del Autónomo y la Pyme") <http://depa.carm.es/web/depa>

¹⁹⁸ Law 5/2013 to support the competitiveness and internationalization of entrepreneurs and SME ("Ley 5/2013, de 8 de julio, de apoyo a los emprendedores y a la competitividad e internacionalización de las pequeñas y medianas empresas (PYMES) de la Región de Murcia") <https://www.boe.es/boe/dias/2013/08/15/pdfs/BOE-A-2013-8989.pdf>

other objectives. To accomplish these objectives, the role of the INFO Institute is reinforced and other public entities like municipalities also become relevant, especially since the award “Entrepreneurial Municipality” (“Municipio Emprendedor”) is introduced to acknowledge those municipalities that promote active policies to develop business activities in their territories.

At the national level, the Law 14/2013¹⁹⁹, to support for entrepreneurs and their internationalization, aims to facilitate all entrepreneurs and entrepreneurial activity, from the creation of companies and their fiscal regime, to the financing support and the need to establish a more fluid relationship between companies and public administrations. Also, if necessary, it aims to provide them with greater facilities when it comes to solving business difficulties through different measures linked to what has been called “the second chance” (“segunda oportunidad”). This national legislative framework is complemented by the Royal Decree of 22th January 2013²⁰⁰ that includes a series of measures to boost the entrepreneurship culture and to facilitate the start of business activities, and the Royal Decree of 22th February 2013²⁰¹ to support the entrepreneur and the employment creation.

¹⁹⁹ Law 14/2013, to support for entrepreneurs and their internationalization (“Ley 14/2013, de 27 de septiembre, de apoyo a los emprendedores y su internacionalización”) https://www.boe.es/diario_boe/txt.php?id=BOE-A-2013-10074

²⁰⁰ Royal Decree of 22th January 2013 that includes a series of measures to boost the entrepreneurship culture and to facilitate the start of business activities (“Real Decreto-ley 4/2013, de 22 de febrero, de medidas de apoyo al emprendedor y de estímulo del crecimiento y de la creación de empleo”) <https://www.boe.es/buscar/doc.php?id=BOE-A-2013-2030>

²⁰¹ Royal Decree of 22th February 2013 to support the entrepreneur and the employment creation (“Real Decreto-ley 4/2013, de 22 de febrero, de medidas de apoyo al emprendedor y de estímulo del crecimiento y de la creación de empleo”) http://www.boe.es/diario_boe/txt.php?id=BOE-A-2013-2030

Note: This FOG test has been prepared by the consulting team based on the answers obtained during the conducted interviews.

4.4 Results of the FOG Test

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities steer decisions made over matters related to SME and entrepreneurship support structures and mechanisms in the region in a unilateral manner.		
	Regional authorities exercise their powers mainly providing services and resources, in turn monitoring the achievement of specified objectives with respect to SME development (performance and results oriented)	x	
	Regional authorities collaboratively develop and foster, with key stakeholders, SME and entrepreneurship support structures and mechanisms in the region.		
	Regional authorities have delegated powers to other entities or relevant stakeholders as a way to proactively develop and foster SME and entrepreneurship support structures and mechanisms in the region.		x
	Practices and actions undertaken	The activities developed by the INFO for promotion, innovation and competitive improvement at the enterprise level	
A1.0	Is the development of an entrepreneurship culture in the region rather organically driven (grassroots movements) or rather stemming from a top down approach (institutionally driven)?	Institutionally, mainly through the INFO	
A2.0	Which main actor/s is/are informally driving the promotion and shaping the development of an entrepreneurship culture in the region?	N/A	
A3.0	Which main actor/s is/are formally driving the promotion and shaping the development of an entrepreneurship culture in the region?	The INFO	

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities, along with other actors create partnerships to foster an entrepreneurship culture in the region, going beyond the national or European framework/requirements.		
	Activities intended to promote an entrepreneurship culture are financially supported and closely monitored to optimise the efficiency, effectiveness and transparency of the actions undertaken by stakeholders receiving support from the regional authorities.		
	A top down approach is adopted by regional authorities when promoting the development of an entrepreneurial culture (e.g. initiatives on the organisations of start-up conferences stem from local authorities)	x	
	Regional authorities are enabling all actors to take on the initiative to promote the development of an entrepreneurship culture in the region (e.g. via advisory services, training)		x
B1.0	Which actions are undertaken in the region to develop an entrepreneurial climate and culture?	The activities developed by the INFO for business promotion and integral support for the entrepreneur.	

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities facilitate the creation of business start-up support structures by engaging with a large array of stakeholders themselves.	x	
	Regional authorities directly contribute to increase the business start-up rate by initiating and managing business start-up support structures.		
	Networks, incubators, portals and gateways are being developed hand in hand by local authorities and citizens, proactively stepping in to create a start-up friendly environment in the region.		
	Regional authorities support the development of start-up support structures by providing the necessary resources to (intermediate) working to boost entrepreneurial skills in the region.		x
C1.0	According to you, which support structure or practice for start-ups and SME is the most effective and should be further emphasised to ensure the development of entrepreneurial skills in the region?	Provide the INFO with more resources so that it can impact more companies. The incubator of the municipality of Murcia is functioning properly, although other municipal incubators in the Region have not reached targets.	

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities have developed strategies and implement schemes intending to reduce barriers to entry, eliminate obstacles and foster an environment conducive to the development of start-ups and SME.	x	
	Off-the-shelf financing practices as well as the provision of a venture capital environment provide innovative and inclusive sources of financing, which are tailor-made to the needs of the actors in the region.		
	The provision of financing support by the region is provided and can be conditional on the achievement of set objectives and result-oriented approaches are favoured by authorities, which encourage a greater ownership of the projects to ensure the success of the action and a return on investment.		
	Regional authorities use the synergies developed in networks of stakeholders supporting entrepreneurship. They accordingly facilitate the development of conventional financing bodies as well as participative financing schemes targeting start-ups, SME and project holders from under-represented groups.		x
	Practices and actions undertaken	The programme "Murcia, Area of Economic Freedom"	
D1.0	Is there a financial gap or a suboptimal investment situation for SME financing in the region?	The region presents very severe structural problems in terms of financing	
D2.0	What are the most commonly used financial support schemes or means of financing for entrepreneurs and SME?	INFO offers funding lines, but they are not enough to improve the weak regional funding structures.	
D3.0	How do governance mechanisms contribute to start-up/SME development while making up for the reduced availability of public funding?	Through counselling and training programmes	
D4.0	Are regional authorities prompt to take economic risks when providing financial support to SME?	No risk is assumed, nor even the mutual guarantee society	
D5.0	Who supports and fosters higher accessibility of the region (physical infrastructure)? How (grants/PPP, etc.)	Normally public funding, often supported by European funds. However, there are public-private partnership (PPP) schemes that have worked, for example in the Port of Cartagena. The idea is that more and more projects will be carried out in PPP.	
D6.0	What is done to improve the governance standards at national/regional/local level?		

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities ensure the development of an entrepreneurial culture in the region looking at other regions' governance structures and mechanisms to improve their own entrepreneurship and SME policies and create partnerships with other regional authorities to foster innovation as well as the development of synergies.	x	
	Regional authorities are integrated into a multi-level governance system and actively collaborate to identify best practices and challenges solving options beyond regional and national borders.		
	Co-funded projects are driving the need for further collaboration between regional authorities and between regions.		
	Developing contacts and partnerships is the spearhead of regional authorities and key actors to make up for potentially limited public intervention (e.g. public funding) and autonomously find solutions to local issues (without recurring to external support).		x
	Practices and actions undertaken	The INFO conducts a permanent benchmarking of programmes and actions developed in more advanced regions at both state and European level.	
E1.0	Have regional clusters developed ties and are collaborating with other clusters at the national/EU level?	Not really, they are not functioning as true cluster structures that constitute a framework for cooperation between companies and agents of the system.	
E2.0	Which are the regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment?	The INFO, through its programmes of industrial land promotion, for example. Also the UNAI's (Investment Acceleration Unit) service, aimed at helping companies to streamline procedures with the Regional Administration and accelerate investments.	

5 Results of the SWOT analysis

Internal factors – factors of competitiveness

Major strengths
<p>Strength on traditional sectors Consolidated, very specialized activities and critical mass; some sectors are internationally competitive with high export levels</p>
<p>Leadership on primary sector and agro-food industry Competitive agro-food industry, International leadership in agricultural R+D+I, competitive leadership in activities related to agriculture, relevant production capacity</p>
<p>Agro-food: a sector with clear exporting vocation Murcia is the 2nd Spanish region (after Andalusia) with the highest number of agro-food and beverages exports, which represented 51.5% of the total region's exports in 2016.</p>
<p>Key sectors An important state-owned naval industry, oil refinery and related chemical products; competitive tourism sector</p>
<p>R&D, sciences and technology facilities and institutions Good provision of scientific and research infrastructures (Regional System of Science, Technology and Business (SRCTE)); extensive academic offer in Science and Technology; good basis of coordination in the field of R+D+I; progress is being made in R+D+I cooperation with neighbour regions; certain international research groups relatively oriented to certain sectors of specialization</p>
<p>Strength in energy sector Existence of a relevant energy hub (oil refinery- Valle de Escombreras); great potential in solar energy; important infrastructures of gas and electric distribution; many leading companies in the energy sector; energy demanding sectors (naval, agro-industry)</p>
<p>Leadership in niche sectors Development of water cycle technologies (desalination, purification, efficient irrigation, etc.) and linked counselling services</p>
<p>Increasing commercial exchanges Both to the exterior and to other Spanish regions; increasing exports of agro-food and oil derived products and electricity</p>
Other strengths – less pronounced
<p>Dynamism in business creation The creation of companies has had significant growth in the last five years (2012-2016), highlighting the number of self-employed people in absolute terms. In the ICT sector the number of companies in the Region increased by 31.1% in the period 2012-2016; In the knowledge/creative economy the business fabric has increased by 7.7%; While in low-carbon economy the number of enterprises decreased by 10.3% in the same period.</p>
<p>Entrepreneurial dynamism In the period 2012-2015 the entrepreneurial activity rate in Murcia has increased by 1.9 points, showing a greater dynamism than the national behaviour that has remained invariable.</p>
<p>Public support measures and instruments for businesses Existence of a comprehensive consultancy service for SME in the field of finance; funding lines and subsidies for SME and self-employed people</p>
<p>Policy strategies and efforts Existence of the Regional Science Plan; RIS3 Strategy</p>
<p>Important educational and learning facilities The existence of 3 universities and diverse business schools</p>
<p>Differentiation through quality in agro-food Murcia has eight designations of origin and two protected geographical Indications. It is also worth mentioning the Traditional Specialties Guaranteed and the Brands of Guarantee (of Agro-food Quality and Integrated Production), as well as the importance of organic production.</p>
<p>High levels of intra-sectoral and cross-sectoral integration in agro-food industry The vegetable processing sector has a high level of intra-sectoral and cross-sectoral integration that generates economies of agglomeration and organizational forms like an industrial facility does.</p>

<p>Support ICT institutions and technology and research centres</p> <p>The association that structures the regional ICT sector is the Association of Information and Communications Technology Companies of Murcia (TIMUR). The region also has the CenTIC, the Technological centre for ICTs.</p>
<p>Major weaknesses</p>
<p>Reduced size of enterprises</p> <p>In 2016, 95.5% of the companies are micro-enterprises (53.9% of the companies do not have any salaried workers and 41.6% have 1-9 salaried employees)</p>
<p>In the bottom of the Spain's ladder in terms of labour productivity</p> <p>Murcia has the lowest labour productivity ratio (nominal GDP/number of jobs) in all Spanish regions, with a value of 84.7% of the national average.</p>
<p>Low business concentration in high added value sectors</p> <p>The industry of Murcia is focused on sectors with medium-low added value, with low R&D intensity and with a commodity nature in some cases.</p>
<p>Scarce funding</p> <p>Not enough adequate funding sources for SME; little alternatives to bank financing for business development</p>
<p>Commodity nature of produced goods</p> <p>Limited generation of value; low differentiation in specialized niches; reduced capacity in general to generate value; high sensitivity to cycle changes (technological); focused on medium-low and low technologies</p>
<p>Low educational level</p> <p>The employed Murcia's population shows a lower level of average qualification compared to the national average, with the Region of Murcia showing the highest percentage of employed persons in low levels of education.</p>
<p>The level of training of SME in Murcia is below the Spanish average</p> <p>The 35.2% of Murcia's companies are managed by managers with university studies or postgraduate studies, compared to 48.5% of Spanish companies. Similar results are obtained when analysing the level of studies of employees (6% in Murcia with university degree, 12.7% in Spain).</p>
<p>Underdeveloped R+D+I effort</p> <p>Scarce private and public funding (compared to Spain and EU); not internationalized research; out of current canons in certain cases; low private R&D investment; low public funding availability towards R&D.</p>
<p>Scarce coordination of the Regional System of Science, Technology and Companies</p> <p>In the Region of Murcia there is insufficient coordination of the Regional System of Science, Technology and Companies (SRCTE), producing little understanding between the research and business world.</p>
<p>Reduced commitment to innovation</p> <p>The industrial sector in Murcia has not addressed (except in specific cases) a technological change process and commitment to innovation, so it still suffers from some structural rigidity that prevents a competitive positioning in the international markets and a greater dynamism.</p>
<p>Reduced inter-company cooperation</p> <p>The region has a lot to improve in terms of business cooperation, which is low currently. Murcia has a weak cluster structure, and it is essential to provide each of the "clusters" with sufficient critical mass to enable them to be internationally competitive.</p>
<p>Negative environmental effects</p> <p>High pressure on the natural resources (water pollution, soil erosion, nitrification contamination, etc.); high waste disposal; illegal waste dumping; poor development and sustainable use of forest areas; difficulty in recovering natural ecosystems.</p>
<p>Other weaknesses – less pronounced</p>
<p>High levels of temporariness</p> <p>The Region has temporary employment levels well above the national average (34.9% in Murcia at the end of 2016, 26.5% in the national level).</p>
<p>Business density below the national average</p> <p>The "business density" is 7 points lower than the national average (in Murcia there are 62.8 businesses per 1,000 inhabitants, while in Spain are 69.5), sharing position with the less wealthy regions of Spain.</p>
<p>The efficiency and efficacy of the Administration</p>

Complexity and slowness in processing in certain administrations
Strong atomization of the agriculture and agro-food chain: less negotiation power with distribution companies There is a certain imbalance of power in the whole agro-food chain, facing a highly atomized production and industry before a large highly concentrated distribution. All this means that price transmission is imposed from top to bottom, with the producer sector being the most affected by its low bargaining power.
Underdeveloped Information and Communications Technologies (ICT) Low penetration of the electronic administration services; low demand for e-Government services; Insufficient ICT training for citizens and businesses; relatively small dimension and need of greater co-management and common strategy
Atomized ICT sector In 2016, the number of enterprises in the ICT sector (NACE 26, 61, 62, 63) in the Region was 860 enterprises. Out of these, 519 were self-employed companies that do not have any employees. Only 0.7% of the companies (6 companies) had more than 50 employees.
Slightly internationalized ICT sector Murcia is in the tail of Spain in terms of export performance of the ICT sector (16 out of 17 Communities), accounting for 0.3% of the total national exports of the sector.
Energy intensity and use Energy intensity above the national average; inexistence of collective management culture of energy resources; inadequate consumption habits in Public Administrations
High seasonality in tourism activities Tourism in Murcia is a little diversified sector, basing its proposal mainly on "sun & beach" tourism, which does not contribute to its deseasonalisation.
Little relevance of business development services The services for companies, of little relevance and under-professionalized in the region, are the reflection of an atomized business fabric.
Ambiguous factors – represent a strength in some of the businesses/industries, but a weakness in others
Progressive aging of the population Less young employees, more business opportunities in certain sectors (health, tourism, etc.)
Construction sector still very damaged due to the crisis Hugh negative effect on employment, the appearance of new business opportunities (rehabilitation, energy efficiency, etc.)
Productive structure with greater presence of primary activities The contribution of agriculture has fallen significantly in recent years as a result of economic growth and currently accounts for 5% of total GDP, doubling the importance of this sector at national level.
Agro-food industry with high impact on the economy and employment of the Region The agro-food industry involves 30% of the total regional industry employment and the 27.84% of the total production. It is a crucial industrial employment generator and a competitive and exporter sector.
Neutral factors – represent neither a strength nor a weakness
Size of industrial activities The size of the industry sector is turning smaller: there is a reduction in the weighting of companies in the industrial sector, to the benefit of the services sector.

External factors – framework conditions

Major opportunities/drivers
Great location and standard of living Attractive strategic location for certain activities, very high cultural heritage
Comparative advantages for the development of the primary sector Environmental, climatic and ecological conditions are particularly favourable for intensive and highly intensive cultivation, and Murcia has long experience and know-how on agricultural practices.
Emerging sectors Sectors linked to knowledge-intensive activities and with capacity to diversify are emerging; generation of a fabric of auxiliary companies in most strategic sectors; knowledge-intensive sectors (eco-

industries and cultural tourism)
<p>Change in mentality</p> <p>Growing cooperation; it is opening the way for the applicability of research through companies; improving relations between companies and researchers</p>
<p>Opportunities in knowledge economy and Information Society</p> <p>New commercialisation channels through Internet (less costs, more opportunities); opportunities at international level can lead to competitive advantages in the region; design of an electronic administration based on the knowledge of procedures and adapted to the needs of citizens</p>
<p>New opportunities in tourism and cultural businesses</p> <p>Tourism is one of the most important and dynamic pillars of the economy of Murcia. It is also relevant the increase of business for companies of new digital applications relying on the existing digital contents</p>
<p>R+D+I in the European level</p> <p>New R+D+I policy from Europe (Horizon, RIS3 and ERDF, etc.), new trends; participation in networks at European level; valorisation of the rural area (architecture, gastronomy, etc.); change in touristic demand, offering more quality and services (cultural, rural, gastronomical... tourism).</p>
<p>Large investment projects</p> <p>Generation of "driver" effects for companies/auxiliary sectors</p>
<p>Industrial land available</p> <p>Murcia has abundant industrial land available in industrial sites generally well connected with highways.</p>
<p>Potentialities and opportunities in the energy sector</p> <p>Exploitation of residual energies in industrial processes; high potential in non-exploited energetic savings (mainly edification sector); possibility to increase the use of combined cycle centrals; high potential in solar energy; the incorporation of biomass (it allows the agriculture and livestock sector to close the production cycle by generating from its waste a by-product that is marketable).</p>
<p>Strategic location</p> <p>Placement in the Mediterranean Arch; geographical proximity to territories on the process of industrial development to where export technology and services; possibility of joining forces and concentrating investments (Mediterranean Arch and North Africa)</p>
<p>Potential of the water economy</p> <p>The water cycle system in the region is thoroughly proven, with clear superiority compared to other regions.</p>
<p>Other opportunities/drivers – less pronounced</p>
<p>Low labour costs</p> <p>In the Region of Murcia, labour costs are lower than the national average in the traditional industry. However, it needs to increase productivity and improve products' quality, design and innovation (to avoid competition based only on prices and scape from the commodity nature).</p>
<p>New trends</p> <p>Increased consumption of delicatessen products and low calorie foods, organic products, prepared dishes, etc., in which the Region of Murcia has a wide potential.</p>
<p>Wide natural and environmental heritage</p> <p>Murcia is characterized by its extensive natural and environmental heritage, which represents an opportunity for the development of alternative economic activities, such as ecological and sustainable tourism.</p>
<p>Major threats/challenges/barriers</p>
<p>Increasing global competition and lack of competitiveness</p> <p>Greater number of competitors; an increase of costs; reduction of the price, especially in the commodities; dependence on the global market variation of raw materials; worsening of the Spain brand</p>
<p>Funding shortage</p> <p>Widespread problems of access to finance (mainly for SME and traditional sectors); scarce European subsidies in certain sectors</p>
<p>Human talent</p> <p>Competition for attracting talent from neighbouring regions, emigration of skilled labour</p>
<p>Low R&D resources (public and private) and duplications</p> <p>Not enough critical mass to obtain significant results; increasing dependence on national and Euro-</p>

<p>pean funds; duplications in terms of R+D+I with neighbouring regions (generally in terms of infrastructure provision)</p>
<p>Update the tourist sector and other competitors Improve the region's brand image; change the "sun & beach" model; increase the internationalisation degree; other countries and regions offering a similar tourism model</p>
<p>The Brexit Important dependency on British tourism; an important share of agro-food exports go to UK</p>
<p>Other threats/challenges/barriers – less pronounced</p>
<p>Uncertainty in the energy sector Legal uncertainty (mainly in the area of remuneration); adverse effects of the "tariff deficit" ("déficit de tarifa"); uncertainty in the supply and the cost of fossil fuels</p>
<p>Dependence on natural resources Industries with intensive water use (agro-industry); lack of water; high vulnerability in climate change effects; risk of desertification in about 80% of the surface of the Region.</p>
<p>Generational replacement in primary activities Aging and the limited generational replacement of small family industries and farms, although not as dramatic as in the whole of Spain, is an element of concern.</p>
<p>Tourism sector based on second residence model Murcia's tourism structure is based on second homes or residences, instead of on a hotel model or tourist houses (more profitable and with greater possibilities of development in the long term).</p>
<p>High emissions of greenhouse gases The socioeconomic development in the Region in recent years has led to an increase in greenhouse gas emissions.</p>
<p>Inadequate waste collection and treatment High degree of contamination of the Mar Menor coastal lagoon as a result of agricultural discharges, the problems of eutrophication of sensitive water bodies and pollution from the Bay of Escombreras.</p>
<p>Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others</p>
<p>Need to restructure the economic sectors due to the crisis</p>
<p>Water scarcity The Region of Murcia has a dry climate and it is threatened by the climate change, and these factors represent a weakness for the agro-food sector, but also an opportunity to develop advanced and efficient watering systems and similar techniques.</p>
<p>Transport and logistics Although the potential of the new infrastructures has not yet been fully developed, and some major projects are still pending, the region is no longer the doubly peripheral island it was a decade ago.</p>

6 Future policy needs

6.1 Policy needs to increase the potential of SME development

Improvement of Human Resources and Lifelong Learning

The preparation and qualification of human capital (skills, qualifications, etc.) is fundamental in the race to improve the competitiveness of the Region.

Murcia must boost its large productive sectors improving their competitiveness and for this purpose is essential the training of workers and new generations in medium and higher skills, as well as the implementation of quality education in technology/sciences, languages and basic education. With respect to the basic education, in Murcia a change of educational model is required to promote the cultural change the knowledge society requires: reducing the rate of school dropouts, betting on bilingualism, promoting creativity, promoting entrepreneurship, using the potential of new technologies, and consolidating the commitment for Vocational Training (adjusted to the needs of the productive fabric).

Likewise, the improvement in the training of the workforce associated with the productive sectors is absolutely necessary, since knowledge is the authentic engine for growth and innovation, being the most competitive strategic variable. In this sense, there should be investments devoted to the lifelong training, both for workers and entrepreneurs, in order to improve their knowledge and skills, but also to introduce cross-cutting values to foster competitiveness in the business fabric (such as profitability In the long term, innovation, the search for external markets, stability and quality in employment, etc.).

Policies and Programmes to promote entrepreneurship

In general, it can be affirmed that there is some instruments to favour the creation of companies and their successful survival, thanks to the catalogue of resources, mainly provided by the INFO, to support innovation, internationalization, training and financing of the business fabric of Murcia (although other entities such as Chambers of Commerce, CROEM²⁰² and other regional relevant actors also contribute). In Murcia it has been possible to advance in the creation of companies and in the internationalization, but the region must persevere in order to reach, at least, similar parameters to the national average. It will be necessary to focus on young people, women, immigrants and unemployed people (collectives for whom entrepreneurship can be an important source of employment).

In this regard, it is also interesting to propose second opportunities' programmes for entrepreneurship, as well as actions to help re-undertake after a business failure, trying to reduce the stigma that punishes culturally to those who fail in a business project. At the same time, it

²⁰² Regional Confederation of Business Organizations of Murcia ("Confederación Regional de Organizaciones Empresariales de Murcia")
<http://www.croem.es/Web20/CROEMPortal.nsf/xPrincipal.xsp>

is desirable to continue working on the implementation of transversal educational programmes to promote entrepreneurial culture from an early age.

A real R+D+I policy

One of the strategic challenges in the new production model is the boosting of innovation and technology transfer. These aspects play a decisive role in business consolidation, not only helping to improve production processes and marketing, but also facilitating leadership through market knowledge, identifying opportunities, improving the quality of products, acquiring a greater technological specialization and obtaining better results.

The last Science and Technology Plan of the Region of Murcia was for the period 2011-2014. This Plan entailed a strategy that, for the first time, tried to unite scientific research, technological development and innovation under one common framework, so that all of them, in a coordinated way, would be part of the same chain of value. However, it has not been reissued and there has not been a follow-up for the following period, once the validity of the same has expired.

In order to ensure the technological advances necessary to increase the competitiveness of the Region of Murcia's sectors, it is important for the region to make greater efforts in the area of R+D+I, aligned with the regional specialization model. To this end, Murcia must increase the funds and incentives for research of greater applicability in the sectors and technologies considered strategic for the period 2014-2020, as well as to increase the inter-sectorial collaboration, especially in the technological improvements that can have impact in several aspects of the regional economy.

In addition, it is important for the region to create alliances with other regions to access new technologies and to get to know new instruments that accelerate the creation of a sustainable economy in harmony with the main European trends.

Impulse of innovation in business

Continuing with the issue of R+D+I, a greater involvement of the regional productive fabric should be encouraged. Companies must be protagonists of their own innovation processes, and the entire productive fabric should be aware and incorporate elements of innovation of greater or lesser scope. To this end, economic incentives and other accompanying measures (business support services, reinforcement of the promotion of innovative culture, etc.) need to be put in place for companies to tackle R+D+I projects that improve their competitiveness.

In addition, a broad concept of innovation should be disseminated among the agents and recipients of R+D+I public policies, not only in terms of technological aspects, but also in organizational terms, distribution and marketing, new products or services, etc.

Technification of the companies

The traditional and artisanal image of some key sectors of Murcia's economy (mainly agrobusiness) does not respond to the current reality, since these are industrialized sectors that are incorporating advanced technologies in their processes. The incorporation of new technology will be essential, not only in order to reduce production costs, but also to improve the quality of the product.

Talent and human capital devoted to research

A key issue in the coming years will be the maintenance and enhancement of human capital devoted to research, as it is a crucial factor to achieve results. In Murcia, it is necessary to find effective formulas of talent management, betting on interdisciplinary groups and promoting internationalization and the exchange of scientific knowledge. It will also be necessary to incorporate new merit evaluation criteria into the trajectory of researchers from universities and other public R&D centres, enhancing their incorporation and mobility towards companies, and carrying out projects that have positive impacts for those companies.

Collaboration between University, Technological Centres and Companies

There is little collaboration between academia and businesses, which sometimes act as watertight compartments. Although the region has an extensive cooperation system between companies, technological centres and universities, the results obtained are still not adequate for the needs of the business community in Murcia, which perceives as insufficient the involvement and usefulness of universities and technological centres for the development of the productive network. Thus, although its main priority should be to provide technological coverage to companies in the region and provide them with solutions and incentives to innovate, sometimes the knowledge centres are accused of being disconnected islands from the business reality. In this sense, it is necessary to redefine the policy of incentives to universities and technology Centres to link part of their funding to the implementation of initiatives in collaboration with companies in the region.

Establish mechanisms for business cooperation

Increased business cooperation is necessary, especially in view of the small average size of companies in the region, both horizontal (through association) and vertical (through strategic alliances and cooperation agreements between companies at different levels of the value chain), in order to achieve economies of scale, strengthen specialization and coordination to take advantage of synergies and develop activities more efficiently, reducing production costs, increasing innovation power and quality (and therefore the added value of the final product). It is also essential to promote the association of regional clusters, among themselves or with those from other regions and countries, in order to share experiences, generate synergies and reach an international dimension.

Development of key infrastructures

The full development of infrastructures in the region is still in the process of consolidation. It is true that much progress has been made in achieving a large network of high-capacity roads (motorways and highways), but this development has been delayed in relation to neighbouring regions, which has diminished the competitiveness of Murcia's economy, generating an opportunity cost for years by featuring the region a less advantageous access to European markets than other communities.

The poor development of the rail system, the limited air connections and the untapped maritime access with potential hampers the competitiveness of the region, despite the privileged location of the autonomous community as a possible basis for intercontinental routes.

It is necessary to continue supporting projects to remedy this lag, through the consolidation of the highway network, the set-up of the Corvera International Airport, the project to expand the Port of Cartagena and the future arrival of the high speed train (AVE) and the Mediterranean corridor of goods to the region. The Region of Murcia, by mouth of its main socio-economic agents, insistently demands the updating of all these infrastructures, as currently their capacity for future development is limited.

Among them, the Mediterranean Corridor has been declared a priority within the Trans-European Transport Networks of the European Union²⁰³, and constitutes an infrastructure of vital importance for the economy of Murcia and the competitiveness of its companies.

6.2 SME-support structures that should be further strengthened

Institute of Promotion of the Region of Murcia (INFO)

The Institute of Promotion of the Region of Murcia (INFO) has a clear objective: to promote the productive fabric, being the companies its unequivocal customers. The innovation policy that INFO is doing, although it has limited resources, is well designed and well thought out. It is an asset that the Region has, and should benefit from more resources so that it can impact on a greater number of companies.

INFO is the body that manages the Global Grant ("Subvención Global") included in the Operational Programme, being the Intermediate Agency of it. To this end, it is allocated 34% of the ERDF resources referred in the OP. It executes exclusively the Thematic Objective (TO) number 3, 58.3% of the interventions framed in TO 1 and 19% of those included in the TO 2.

Among the programmes of INFO that have greater acceptance among the productive fabric of Murcia, it is possible to emphasize on these:

- Financing lines: Through the financial office, INFO acts as an active mediator, advising in a personalized way the companies to know and select the most appropriate financing

²⁰³ TENT-T Connecting Europe. European Commission
https://ec.europa.eu/transport/themes/infrastructure_en

formulas for each project, whether a new or expansion project of R+D+I or exporting. INFO has multiple options available, from grants to alternative sources of funding (such as participatory loans and management of contributions from private investors). The financial office advises 1,500 companies in Murcia each year.

- **Business innovation:** INFO managed 43.5 million euros in innovation for 10,000 companies during the year 2015. Among the services provided are: comprehensive advice throughout the innovation process, from the diagnosis to the commercialization of innovation, and also the advice to finance it.
- **Internationalization:** INFO's internationalization area offers services and instruments for personalized advice and the necessary training to advance the export process. Through the Foreign Investment Plan (PPEX) 2014-2020 and the co-financing of the EFRD, the INFO offers aid to companies in Murcia to participate in missions and fairs, design plans and opt for international tenders.
- **Business growth/entrepreneurship:** INFO provides services to entrepreneurs and SME for the development of the company, with personalized advice on procedures, training, aids or the search of industrial spaces. In 2015, INFO intervention led to the creation of 200 companies and the Entrepreneur's Office advised more than 3,000 entrepreneurs.

Economic Freedom Area: administrative simplification

There are administrative procedures that hinder the natural development of businesses and investments, such as difficulties and slowness in obtaining permits and concessions. A programme for administrative simplification and digital administration has recently been launched, which is part of the Regional Government's programme "Murcia, Area of Economic Freedom". One of the objectives is to streamline administrative procedures by setting maximum deadlines for obtaining concessions and standardizing legal procedures, in addition to increasing transparency and also available information of companies in the sector.

In this regard, a specific directorate has been created for administrative simplification issues and, despite it has been active for little more than a year, it is considered a good practice that should be strengthened as it forms the basis of the business development programme. Among the objectives in which the programme has been concentrated to this date are: reducing bureaucracy and seeking greater efficiency; efficiency of regional administration; and streamline administrative procedures, preventing them from being perpetuated or exceeding the mandatory deadlines (which leave the employer in a state of helplessness and impotence).

Difficulties for SME to find financing

As stated previously during the analysis of the region, many times SME have difficulties finding suitable funding sources for them. In fact, during the interviews and the focus group conducted in Murcia, some of the participants mentioned that the region has very severe structural problems in terms of financing, and it is an underfinanced region in many aspects. Currently, the most important regional body for SME support is the INFO and, although it does offer funding lines and support to SME, they are not enough to improve the weak regional

funding structures. Also the INFO's budget relies almost entirely on European Funds (ERDF mainly), which creates a strong dependence on factor outside the control of the region.

As the existing funding mechanisms are insufficient, new policy measures should be implemented to promote alternative funding schemes like an effective regional venture capital and mutual guarantee institutions ("sociedades de garantía recíproca"). There are indeed these kinds of regional institutions, although these are also underfunded and the resources allocated to the SME of Murcia are very scarce: on one hand, Avalam²⁰⁴ is the mutual guarantee institution and Murcia Emprende²⁰⁵ is the joint venture capital institution.

Murcia in figures

At the municipal level, the city of Murcia has recently launched an interactive platform called Murcia in Figures ("Murcia en Cifras")²⁰⁶ for the transparency of municipal data, both on socio-demographic and economic activity, which allows information to be obtained structured by neighbourhoods and even by streets. In this way, this portal offers constantly updated information that provides with an accurate diagnosis of the social, labour, economic and demographic reality of Murcia. The data collected, treated, interpreted and interconnected are materialized in three concrete utilities: "Spot your business idea", "Locator of equipment and services" and "Cartographic Viewer".

With regard to its application for entrepreneurs, through the platform it can be accessed, free of charge, to a basic market study before opening a new business, depending on the sector and the placement. There are five levels of development potential (from very high if the conditions are optimal to very low, if it is an overcrowded area) and the chances of success are established according to a methodology that crosses the information obtained by the Tax of Economic Activities with the population (also offering the possibility to consult data such as the density of that area or the age segments of that specific population areas). In this way, before starting a business, any entrepreneur can know which geographical area is suitable or which people is part of their target audience.

This initiative is included in this section given its novel character and its potential for replicability in other municipalities within the region.

6.3 Role of the European Cohesion Policy and European funding, especially through the ERDF

The European Cohesion Policy, and specifically the ERDF, is of extraordinary importance for the development of the Region of Murcia. Since 1994, Murcia has received more than 5,000 million euros that have been devoted to develop the network of highways, the improvement of

²⁰⁴ Website of Avalam <http://www.avalam.es/>

²⁰⁵ Website of Murcia Emprende <http://murciaemprende.com/>

²⁰⁶ Website of Murcia in Figures ("Murcia en Cifras") <http://murciaencifras.es/>

the tourist infrastructures, the transportation systems and ports, and has been favoured a more efficient management of the water, a scarce but fundamental resource for the Region.

However, in the light of the region's indicators, there is still a long way to go in terms of improving regional SME's competitiveness and consolidating the R+D+I system. For this reason, it is considered fundamental to continue making efforts in these lines, working in actions framed in the Thematic Objectives (TO) defined in the Regional Operational Programme 2014-2020, with special emphasis in:

- TO 1: Boost research, technological development and innovation. It is necessary to consolidate the Regional R+D+I System, promoting public and private investment and encouraging collaboration among the agents that make up the mentioned System. Therefore, it requires the development of actions focused on promoting investment by companies in R&D, transfer of knowledge and cooperation between companies and research centres, and the promotion and generation of knowledge oriented to the challenges of society.
- TO 3: Improve the competitiveness of SME. Continue to promote entrepreneurship, promoting the creation of new businesses, and the internationalization of SME.

6.4 Interaction of different governance levels

The actions related to policy needs mentioned in the previous sections involve the collaboration of several economic agents to generate joint initiatives and facilitate the efficient coordination of the programmes. Some agents involved are: public administration, the industry, technology centres, universities, the financial community, civil society, etc.

In this regard, it is particularly important to achieve coordinated management of the Regional Science, Technology and Enterprise System (SRCTE). In the coming years, it will be necessary to consolidate SRCTE, fundamentally in terms of the relationships and synergies among the many agents that compose it. In this sense, Institutional agents (Public Administration, Universities) and non-institutional actors (companies) need to approach positions, seek shared goals and create value chains for more dynamic, integrated and optimized system operation. In this regard, measures like this should be promoted:

- Periodic actions of communication and exchange of knowledge and experiences among SRCTE agents (face-to-face or online actions).
- Mechanisms that facilitate the interaction between the qualified personnel of the companies and the universities, so that both spheres are better known and can establish synergies. Partial linking of university funding to the establishment of these interactions and to the achievement of business competitiveness objectives (as a result of the application of their research).
- Improvements in the role of Technology Centres, in aspects such as planning and efficient use of resources; incentives for greater interaction between technology centres and companies; establishment of alliances and external projection, at national or international level.

On the other hand, Murcia must solve the structural problem that experiences with the water. Water is a scarce and valuable resource in this region, indispensable for life and for the development of most economic and social activities (agriculture, food production, tourism re-

sorts, etc.). The lack of water is mainly due to the climate (insufficiency and irregularity of rainfall in the Region), as well as to the expansion of productive activity. This chronic deficit may jeopardize the development of strategic sectors with intensive water use, such as the agricultural sector. It should be noted that the unit cost of water in Murcia is much higher than the national average. In the Region, numerous measures have been put in place to improve the efficiency in the exploitation of this resource, having developed and implemented very innovative techniques (and being international leaders in the efficient management of water). Water supply cannot be an obstacle for the socio-economic development of the Region of Murcia. That is why, it is necessary to join forces and achieve a consensus that allows the achievement of a Regional Water Pact, and to promote a National Water Pact, so that the resource goes where it is necessary, creating economic development.

7 Annex

7.1 Interview partners

Name	Organisation	Position	Special expertise/years of experience ²⁰⁷	Interview Date	Tel/f2f
Jesús Maeso	Regional Confederation of Business Organizations of Murcia – CROEM (“Confederación Regional de Organizaciones Empresariales de Murcia”)	Director of the Economy Department	Representative of the business association	27/6/2017	f2f
Mar Navarro	Regional Confederation of Business Organizations of Murcia – CROEM (“Confederación Regional de Organizaciones Empresariales de Murcia”)	Technical (Economy Department)	Representative of business association	27/6/2017	f2f
Luis Miguel Aldeguer	Integra Foundation (ICT)	CECARM Project Manager	ICT sector (electronic commerce)	27/6/2017	f2f
Antonio Aragón	University of Murcia	Professor of Business Organisation Area (“Profesor Área Organización Empresas”) Director of the Foundation for Strategic Analysis and Development of SME (FAEDPYME)	Researcher	27/6/2017	f2f
Alicia Rubio	University of Murcia	Professor of Business Organisation and Finance (“Profesora Organización de Empresas y Finanzas”) Director and Coordinator of GEM Murcia	Researcher	27/6/2017	f2f
Rafael Martínez	INFO	Entrepreneurial Competitiveness Director/ (“Director Competitividad Empresarial”) University lecturer (“catedrático”)	Representative of INFO	28/6/2017	f2f
Domingo García	Polytechnic University of Cartagena (“Universidad Politécnica de Cartagena”)	Director of FAEDPYME/ Director of the SME Economic Observatory of the Region of Murcia (“Director Observatorio Económico de la PYME Región de Murcia”)	Researcher	28/6/2017	phone

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²⁰⁷ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

base%20INDUSTRIAS%20TRADICIONALES%20%2813%20Mar.%202013%29.pdf&TABLA=ARCHIVOS&CAMPOCLAVE=IDARCHIVO&VALORCLAVE=103132&CAMPOIMAGEN=ARCHIVO&IDTIPO=60&RASTRO=c\$m47432,47657,47544 [Last access 7th July 2017]

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Case study report:

Timiș

Madalina Nunu

VVA Europe

1 Mapping the SME sector in the region

Timiș County is located in western Romania on the border with Hungary and Serbia²⁰⁸, in the historical region Banat and is part of The Danube–Criș–Mureș–Tisa Euroregion (DKMT). On the 1st of July 2016, the region's population was of 744,373 and had a population density of 85,6/km². Out of the total population, 452,510 (60.8%) live in the urban area and 291,863 (39.2%) live in the rural area in 2016.²⁰⁹ In the same year, the percentage of people living in an urban area in Timiș was above the national average (53.8%).²¹⁰ In administrative terms, Timiș County consists of 2 municipalities (Timișoara and Lugoj), 8 cities (Sânnicolau-Mare, Jimbolia, Buziaș, Făget, Deta, Ciacova, Recaș and Gătaia) and a number of 89 communes with 313 villages.²¹¹

Figure 1.1: The Danube–Criș–Mureș–Tisa Euroregion (DKMT)



Source: DKMT. Available at: <http://www.dkmt.net/en/>

Timiș is part of the West Region in Romania (NUTS 2 level)²¹² who has experienced rapid economic growth in the last 20 years and significant entrepreneurial activity. The West Region has the highest concentration of enterprises and exporters in Romania.²¹³

Timiș is also the county with the largest surface in Romania (869,665 ha, representing 3.65% of the country's territory)²¹⁴, whose agricultural production is also the biggest in Romania. As

²⁰⁸ The external border accounts for one third of the region's border

²⁰⁹ Direcția Națională de Statistică Timiș. Available at: <http://www.Timiș.insse.ro/cmsTimiș/rw/pages/geogr.ro.do>

²¹⁰ The percentage was calculated based on data retrieved from the Romanian National Institute of Statistics.

²¹¹ Direcția Națională de Statistică Timiș

²¹² The West Region in Romania comprises 4 counties: Timiș, Arad, Caraș-Severin and Hunedoara).

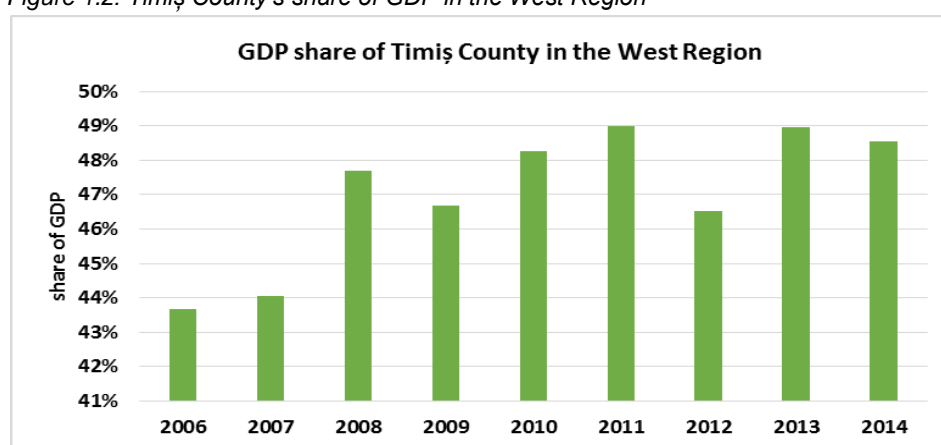
²¹³ World Bank (2014), Romania Western Region Competitiveness Enhancement and Smart Specialisation. P. 23. Available at: <https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/policy-document/romania-western-region-competitiveness-enhancement-and-smart-specialisation>

for the industry, this is focused mainly on high-tech, machine building, chemical, light industry and services.²¹⁵ Nonetheless, the industry sector in Timiș covers almost all the industrial segments: ICT, automotive, wood processing, textiles, pharmaceutical, etc, making the region highly attractive for various investors.

The economic evolution of Timiș County is directly linked to the evolution of the national economy. From 2003 onwards, the national economy has undergone 2 separate phases of development: (i) economic growth between 2003 and 2008 and (ii) slow economic recovery after the economic crisis of 2008.²¹⁶ Although affected by the economic crisis, the West Region slowly reconsolidated its economic position and, as of 2017, is the second most performant region in Romania (after Bucharest).

In both levels of development and growth, Timiș County dominates economically in the West Region, having increased its GDP per capita from 118% of the national average in 2000 to 154% by 2010. Furthermore, Timiș accounted between 2006 and 2014 for almost half of the region's GDP, while the other three counties encountered a significant decrease.^{217 218} The figure below illustrates the evolution of Timiș' GDP between 2006 and 2014. Eurostat data shows that Timiș has had a share of over 40% of the total's region GDP, with higher rates in 2008, 2010, 2011, 2013 and 2014.

Figure 1.2: Timiș County's share of GDP in the West Region



Source: Eurostat

The region's GDP at current market prices reached its highest value in 2008, totalling € 6,740 million. The figure below provides a breakdown of the West Region's GDP at NUTS 3 level

²¹⁴ ADETIM (2015), Analiza Economico-Socială. Strategia de dezvoltare socio-economică a județului Timiș (2015-2020/2023). p. 11

²¹⁵ DKMT. Available at: <http://www.dkmt.net/en/index.php?bov=75471200392464>

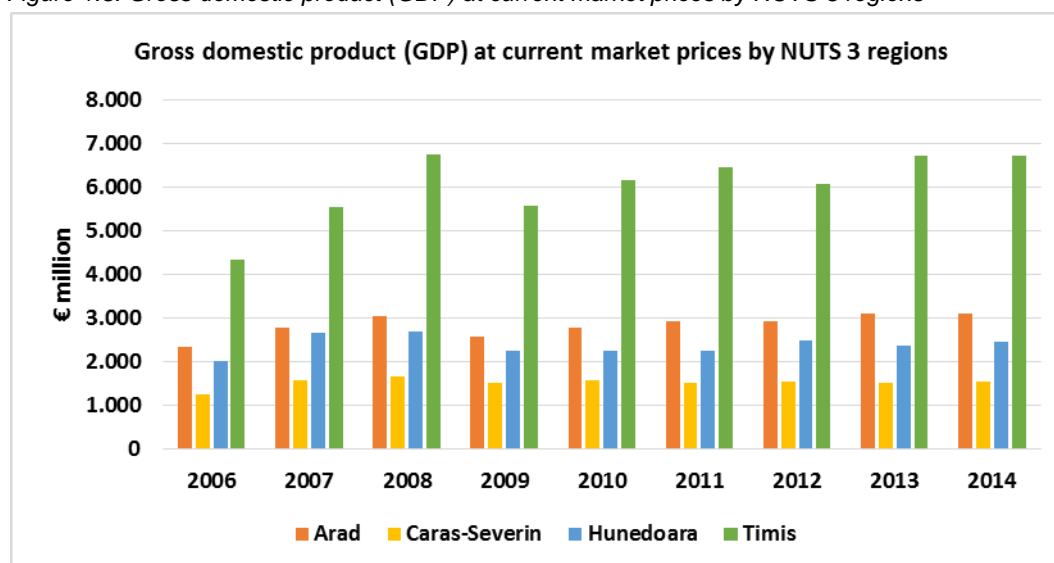
²¹⁶ Primaria Timișoara (2014), Strategia Națională de Dezvoltare Urbană 2015-2020. Polul de creștere Timișoara. p. 11. Available at: http://www.primariatm.ro/uploads/files/PID_2016/Cap_2_1_03_2016.pdf

²¹⁷ Ibid. p. 28

²¹⁸ Eurostat, Gross domestic product (GDP) at current market prices by NUTS 3 regions

and shows that Timiș is by far the most developed county in the region. With few exceptions, the GDP of the three remaining counties has been steady between 2006 and 2014.

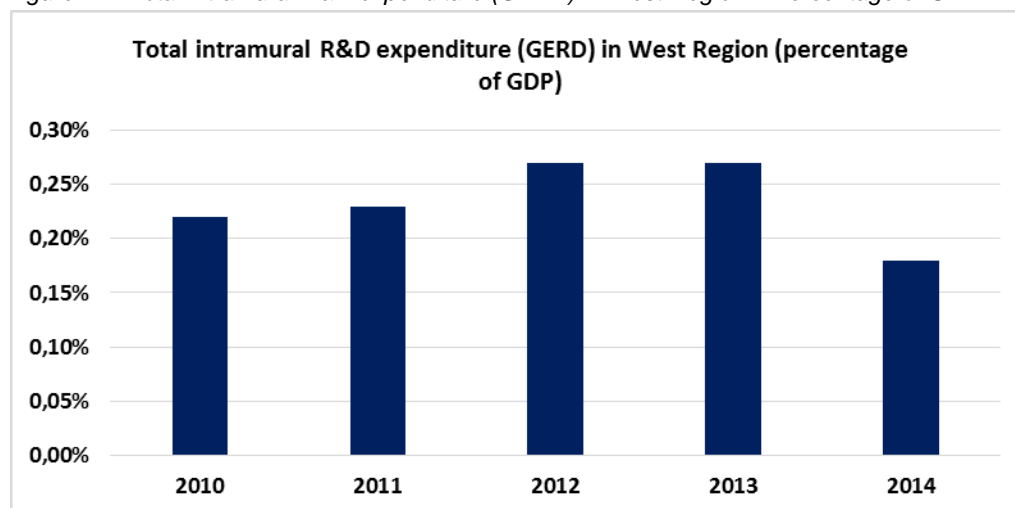
Figure 1.3: Gross domestic product (GDP) at current market prices by NUTS 3 regions



Source: Eurostat

According to Eurostat data, the total intramural R&D expenditure in the West Region as percentage of GDP was merely 0.22% in 2010 and decreased to 0.18% by 2014.²¹⁹

Figure 1.4: Total intramural R&D expenditure (GERD) in West Region – Percentage of GDP



Source : Eurostat [rd_e_gerdreg]

As for the total intramural R&D expenditure, the most performing sectors in the West Region by purchasing power standard (PPS) per inhabitant at constant 2005 prices are the higher education sector and the government sector.

²¹⁹ The total intramural R&D expenditure includes the following sectors: business enterprise, government, higher education and private non-profit.

Table 1.1: Total intramural R&D expenditure (GERD) by sectors of performance in West Region – Purchasing power standard (PPS) per inhabitant at constant 2005 prices

	2010	2011	2012	2013	2014
All sectors	22.3	23.2	28.8	29.4	19.8
Business enterprise sector	3.4	3.8	7.7	9.4	4.5
Government sector	7.4	5.7	5.7	7	5.7
Higher education sector	10.7	13.7	15.3	13	9.5
Private non-profit sector		0	0	0	0.1

Source : Eurostat [rd_e_gerdreg]

The table below illustrates a breakdown of the gross added value (GVA) at basic prices by economic activity (NACE Rev. 2). It can be observed that, overall, Timiș County generates almost half of the West Region's GVA (48.6% in 2014) and below 5% of Romania's GVA (4.5% in 2014). In terms of economic activity, Timiș generates 82.6% of the West Region's GVA in the information and communication sector. At national level, manufacturing and real estate activities provide the highest percentage of GVA, with 6.1% and 6.5% respectively.

Table 1.2: Gross value added at basic prices in Timiș County between 2011 and 2014

Economic sector/year	2011 (€ million)	2012 (€ million)	2013 (€ million)	2014 (€ million)	% of the West Region's GVA (2014)	% of Romania's GVA (2014)
Agriculture, forestry and fishing	373.31	295.32	347.39	293.61	39.9%	4.1%
Industry (except construction)	2,317.80	1,797.52	2,035.23	2,029.70	51.5%	5.3%
Manufacturing	2,119.55	1,671.41	1,896.58	1,926.53	54.5%	6.1%
Construction	301.31	310.39	307.78	233.05	35.9%	2.5%
Wholesale and retail trade; transport; accommodation and food service activities; information and communication	985.45	1,223.80	1,313.22	1,336.18	49.8%	4.5%
Wholesale and retail trade, transport, accommodation and food service activities	658.28	909.60	891.83	924.43	42.3%	4.1%
Information and communication	327.17	314.20	421.38	411.75	82.6%	5.7%
Financial and insurance activities; real estate activities; professional, scientific and technical activities; administrative and support service activities	992.76	959.48	1,172.32	1,172.81	50.9%	4.3%
Financial and insurance activities	174.78	64.83	87.60	77.86	45.3%	1.4%
Real estate activities	626.97	707.87	806.63	790.29	50.2%	6.5%
Professional, scientific and technical activities; administrative and support service activities	191.01	186.78	278.09	304.66	54.8%	3.2%
Public administration and defence; compulsory social security; education; human health and social work activities; arts, entertainment and recreation, repair of household goods and other services	699.04	740.79	736.73	871.35	45.6%	4.0%
Public administration, defence, education, human health and social work activities	511.45	544.91	578.00	685.37	44.2%	3.9%
Arts, entertainment and recreation; other service activities; activities of household and extra-territorial organizations and bodies	187.59	195.88	158.72	185.97	51.2%	4.5%

Sources: Eurostat, series [nama_10r_3gva]

In the years after 1990, the rapid development of the Romanian business environment became a necessity, hence a rapid establishment and growth of private companies occurred.²²⁰

Timiș County has been attracting many foreign investors in the last years. In 2013, there were more than 4,000 foreign-owned companies in Timiș County, out of which roughly 600 companies invested directly in manufacturing.

Among the foreign investors in Timiș County, the most notable are: Continental AG, Solelectron Corp. România, Zoppas Industries România, Philips&Elba Street Lighting, ABB Rometrics, Alcatel NS, Delphi Packard, Siemens Automotive, Procter&Gamble, Eybl Textil, Eybl-Automotive-Components, Kromberg&Schuberrt, Lisa Drexlmayer, Mecatim (Group Daewoo).²²¹

Timiș has become a very attractive destination for foreign investors, due to several advantages that other Romanian regions lack. The region's geographical position as well as its developing infrastructure, highly qualified workforce and favourable investment climate has facilitated the attraction of foreign investors. Nonetheless, the region's economic performance is generated mostly by Timișoara, the region's municipality, although other cities such as Sânnicolaul Mare, Lugoj, Jimbolia, Deta, Sânanndrei, Recaș, Făget or Șandra also have significant contributions to the region's GDP.²²²

Since 1990, the SME sector has undergone significant developments, representing approximately 95% of the total enterprises registered in the Companies Register. As for the overall structure of the SME sector of Timiș County, this comprises mainly services, commerce and import-export operations.²²³ As for the dynamics of the overall business environment in Timiș County, the graph below shows that, between 2001 and 2011 a high number of companies ceased to exist. High values were registered particularly in 2010, partly as an effect of the economic crisis:²²⁴

²²⁰ ADETIM (2015). p. 29

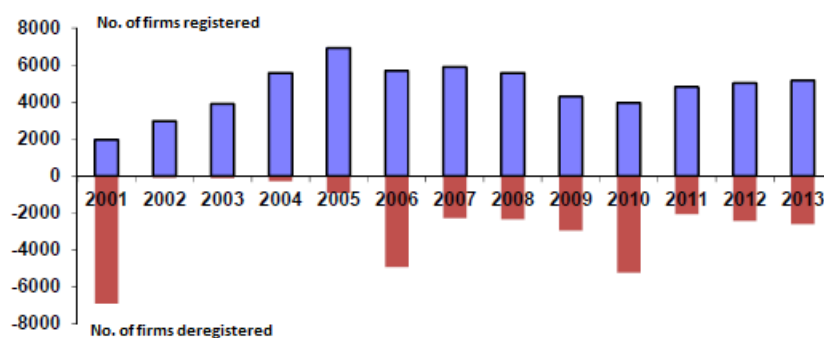
²²¹ <http://www.cjTimiș.ro/judetul-Timiș/economie.html#main-menu>

²²² Primaria Timișoara (2014)

²²³ <http://www.cjTimiș.ro/judetul-Timiș/economie.html#main-menu>

²²⁴ ADETIM (2015). p. 30

Figure 1.5: Business environment dynamics (number of registered firms vs. number of deregistered firms)



Source: ADETIM (2015)

Timișoara represents the “growth pole” of the Timiș County; its economy is based mainly on the tertiary sector which generated between 2010 and 2012, 61.5% of the total turnover. In the same period, the secondary sector generated 22.5% of the turnover, the construction sector 12.5% and agriculture merely 3.5% of the city’s turnover.²²⁵

In the West Region of Romania, the birth rate²²⁶ of enterprises (see) was of 14.6% in 2008 and dropped to 10.5% in 2014. In Timiș County, the birth rate of enterprises was slightly higher in 2008 and 2015, with a percentage of 15.1% and 11.6% respectively. Among micro enterprises with 1-9 persons employed in the West Region of Romania, the birth rate was of 13.3% in 2008 and 10.6% in 2014 whereas in Timiș County the birth rate was somewhat higher in 2008 and 2014 with 13.9% and 10.9% respectively. The death rate²²⁷ among enterprises in the West Region was of 10.8% in 2008 and increased to 25.6% by 2014. Similar rates were registered in the Timiș region in 2008 and 2014 with a rate of 10.2% and 26.8% respectively.²²⁸ Therefore, the net rate²²⁹ in the West Region of Romania was of 10.8% in 2008 and increased considerably by 25.6% in 2014. In Timiș County, the net rate was slightly lower, with 10.2% in 2008 and 26.8% in 2014.

²²⁵ Primaria Timișoara (2014)

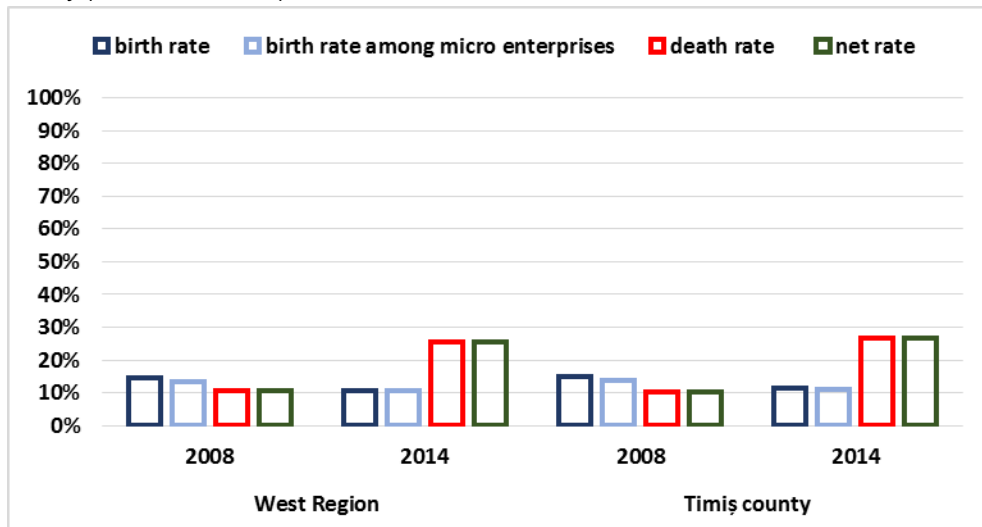
²²⁶ Number of enterprise births/number of active enterprises

²²⁷ Number of enterprise deaths/number of active enterprises

²²⁸ Data retrieved from the Romanian National Institute of Statistics

²²⁹ Birth rate – death rate

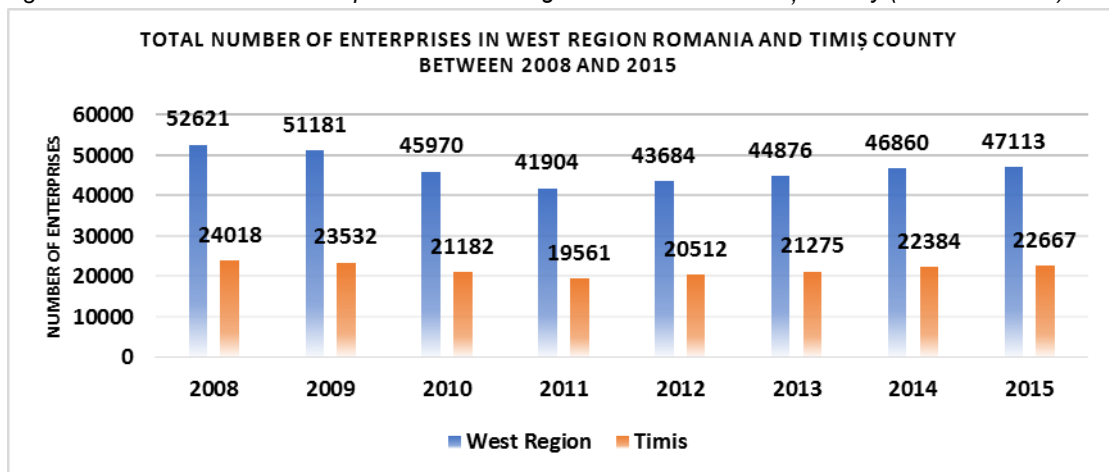
Figure 1.6: Birth rate, death rate and net rate among enterprises in the West Region compared to Timiș County (in 2008 and 2014)



Source: Staff's own calculation based on data retrieved from the Romanian National Institute of Statistics

The figure below shows that Timiș County generates nearly half of the total number of enterprises in the West Region of Romania. Therefore, between 2008 and 2015, Timiș County generated between 45% and 48% of the region's enterprises. Although the total number of enterprises in the West Region was in 2015 with 10.5% smaller compared to 2008, in Timiș County the decrease was merely 5.6% for the same years.²³⁰ Moreover, as indicated in Figure 1.7, there has been a considerable decrease in the total number of enterprises in Timiș County between 2008 and 2011, with a slow recovery from 2012 onwards.

Figure 1.7: Total number of enterprises in West Region Romania and Timiș County (2008 and 2015)



Source: Romanian National Institute of Statistics

A more detailed comparison between the West Region and Timiș County is provided in the table below which provides a breakdown of enterprises by company size in both regions.

²³⁰ Own calculations based on data retrieved from the Romanian National Institute of Statistics database

Timiș holds over 42% of enterprises in the West Region of Romania and 52% of the large companies (in 2015).

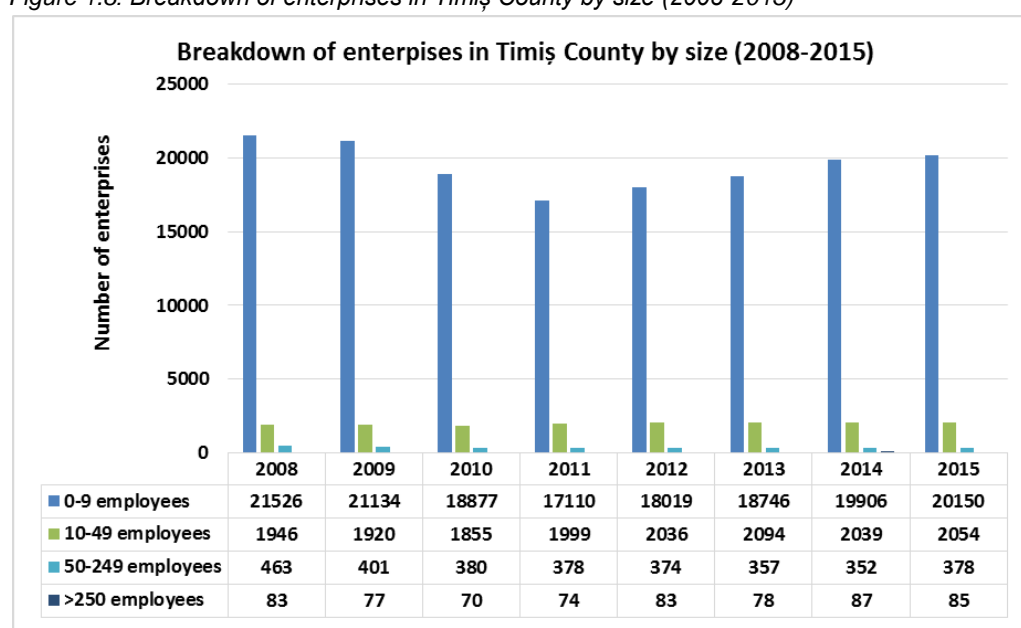
Table 1.3: Breakdown of enterprises in the West Region and Timiș County by company size (2008-2015)

Company size	Region	2008	2009	2010	2011	2012	2013	2014	2015
0-9 persons	WEST	46846	45853	40883	36433	38185	39373	41428	41779
	Timiș	21526	21134	18877	17110	18019	18746	19906	20150
10-49 persons	WEST	4602	4336	4124	4471	4487	4538	4484	4354
	Timiș	1946	1920	1855	1999	2036	2094	2039	2054
50-249 persons	WEST	998	841	820	846	846	809	774	815
	Timiș	463	401	380	378	374	357	352	378
250 persons and more	WEST	175	151	143	154	166	156	174	165
	Timiș	83	77	70	74	83	78	87	85

Source: Romanian National Institute of Statistics

A **breakdown of enterprises by size** (see Figure 1.8) shows that SME represent the highest percentage of enterprises in Timiș County, whereas the number of large companies has remained somehow constant throughout the years and a significant decrease occurred only in the aftermath of the economic crisis. The SME sector in Timiș County is mostly comprised of micro enterprises (0-9 employees) having a share of 89% from the total SME in 2015. Small enterprises (10-49 employees) represented merely 9% of the total SME sector in the Timiș County in 2015, whereas medium represented 2% in the same year. Data from the Romanian National Institute of Statistic from 2015 show that the **survival rate after 3 years** among micro enterprises in Timiș was of 60.01% whereas the survival after 3 years among all enterprises in Timiș County was of 47.93%.

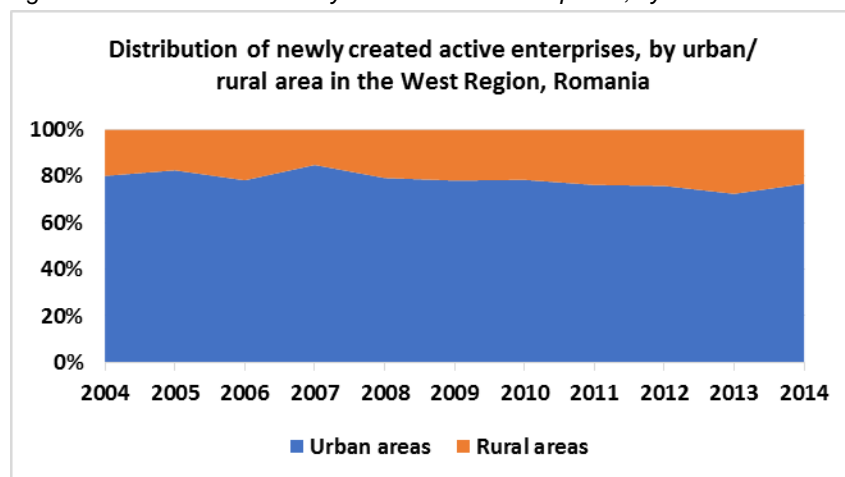
Figure 1.8: Breakdown of enterprises in Timiș County by size (2008-2015)



Source: Romanian National Institute of Statistics

As for the **rural-urban distribution of the newly created active enterprises** in the West Region of Romania, data shows that around 80% are created in the urban area even though in 2016 only 61% of the West Region's population lived in the urban area. The situation has remained somehow constant between 2004 and 2014, with a rather small increase in the rate of newly created active enterprises in the rural area between 2012 and 2013.

Figure 1.9: Distribution of newly created active enterprises, by urban/rural area in the West Region



Source: Romanian National Institute of Statistics

The table below shows that the number of physical persons exceeds the number of family businesses in Timiș County. As of 2015, 37% of the physical persons registered in the West Region were from Timiș and 30.4% of the family businesses in the West Region were located in Timiș:

Table 1.4: Number of family enterprises & physical persons in the West Region and Timiș County²³¹

	Region	2008	2009	2010	2011	2012	2013	2014	2015
Family enterprises	WEST	3899	2178	1418	1349	1947	2030	2139	2078
	Timiș	471	413	307	293	564	518	592	633
Physical persons	WEST	24748	25137	24269	24180	24358	22878	25818	26150
	Timiș	8815	8950	8504	8964	9690	8423	9574	9633

Source: Romanian National Institute of Statistics

In Romania, it is relatively easy to open a business, the process has been simplified throughout the years and it can take between 3 and 5 days. Nonetheless, closing a business represents a much more burdensome procedure.²³²

Moreover, in Romania there are many cases of “ghost firms” (companies with no economic activity or financial transactions).²³³ In 2014, there were 115,965 Romanian companies which

²³¹ From 2008 onwards, data are calculated based on the income statement for these types of units. Prior to 2008, the calculation included all types of units recorded in administrative sources.

²³² <http://www.zf.ro/zf-24/cum-se-inchide-o-firma-in-romania-12640992>

carried out activities without any employees or that have not declared their employees. Most of these companies were activated in the trade sector (37%), professional and scientific activities (14%), and construction (8%). In Romania, companies with no employees can be of three types: companies used by various business persons to carry out certain transactions (without concrete economic activity), companies that prefer to hire externals (mainly in services) and companies that do not declare their employees to avoid paying taxes. Only in 2014, companies with no employees or ghost firms had a turnover of RON 38.2 billion (EUR 8.4 billion), accounting for 3.6% of the total turnover generated by Romanian businesses. Moreover, it has been noticed that the boom of “ghost firms” in Romania occurred in the aftermath of the economic crisis, when in 2012 these accounted for 5.25% of the total turnover.²³⁴ Although this is an issue at national level, it is not clear what the percentage of ghost firms in Timiș County is.

Figure 1.10 provides a description of the situation among enterprises in selected sectors, by NACE Rev. 2. A more thorough breakdown of enterprises in Timiș County by NACE Rev. 2 activities and company size between 2008 and 2015 can be consulted in **Annex 6.1, Breakdown of enterprises in Timiș County by NACE Rev. 2 activities and company size between 2008 and 2015**.

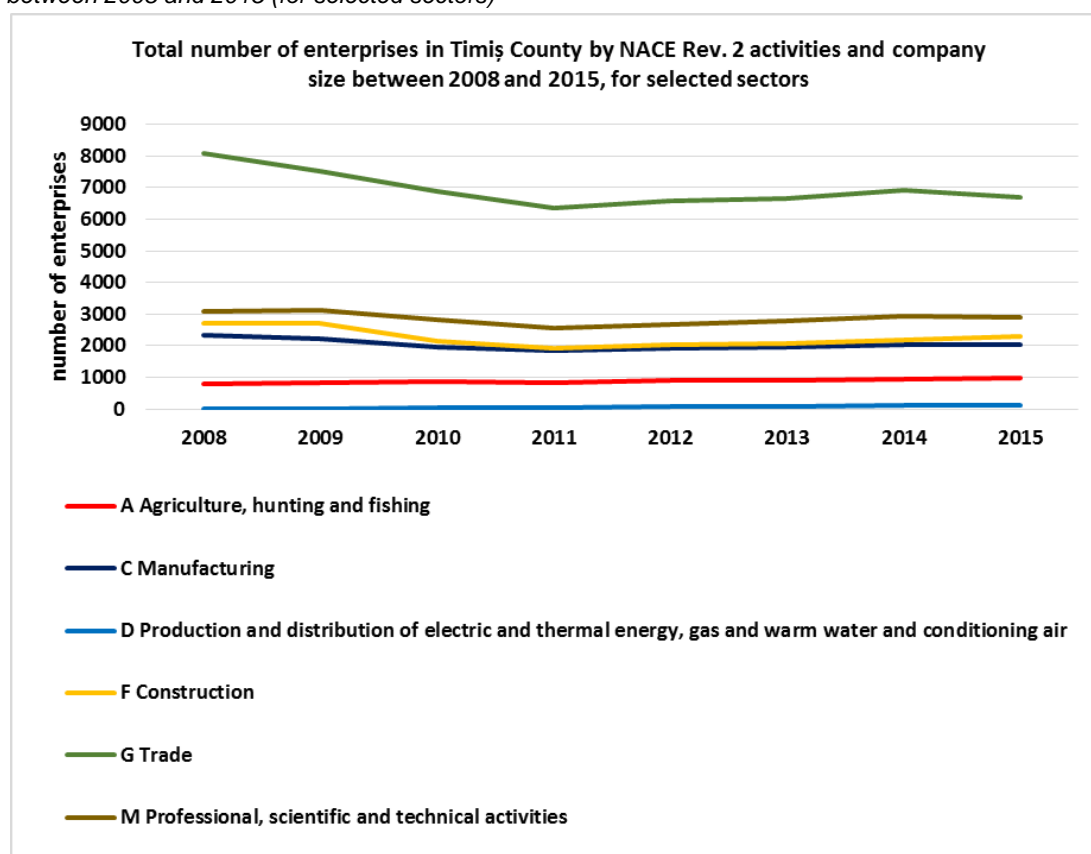
The **trade sector** comprises the biggest number of enterprises in Timiș (6,706 in 2015), followed by **construction** (2,302 in 2015), **professional, scientific and technical activities** (2,912 in 2015) and **manufacturing** (2,037 in 2015). A considerable decrease in the number of enterprises was encountered in the **trade sector**, where the number of companies dropped from 8,080 in 2008 to 6,706 in 2015. Other major sectors such as construction and manufacturing also had a decrease in the number of enterprises, although not as significant as in the trade sector.

On the other hand, the number of companies activating in the **agriculture sector** has increased by 26% in 2015, compared to 2008. It must be considered that Timiș County is the largest and most important agricultural region in Romania, thus an increase in the number of enterprises in the aftermath of the economic crisis shows that the sector has not been massively affected by it. The number of enterprises activating in the **production and distribution of electric and thermal energy, gas and warm water and conditioning air sector**, has increased more than 9 times by 2015, compared to 2008.

²³³ <http://www.digi24.ro/stiri/economie/fiscal-declara-razboi-firmelor-fantoma-evaziunea-la-plata-tva-este-de-17-miliarde-de-euro-pe-an-425294>

²³⁴ <http://www.keysfin.com/#!/Pages/News/NewsDetails&title=romania-tara-firmelor-fantoma-cum-sa-faci-afaceri-de-milioane-cu-firme-fara-niciun-salariat>

Figure 1.10: Total number of enterprises in Timiș County by NACE Rev. 2 activities and company size between 2008 and 2015 (for selected sectors)

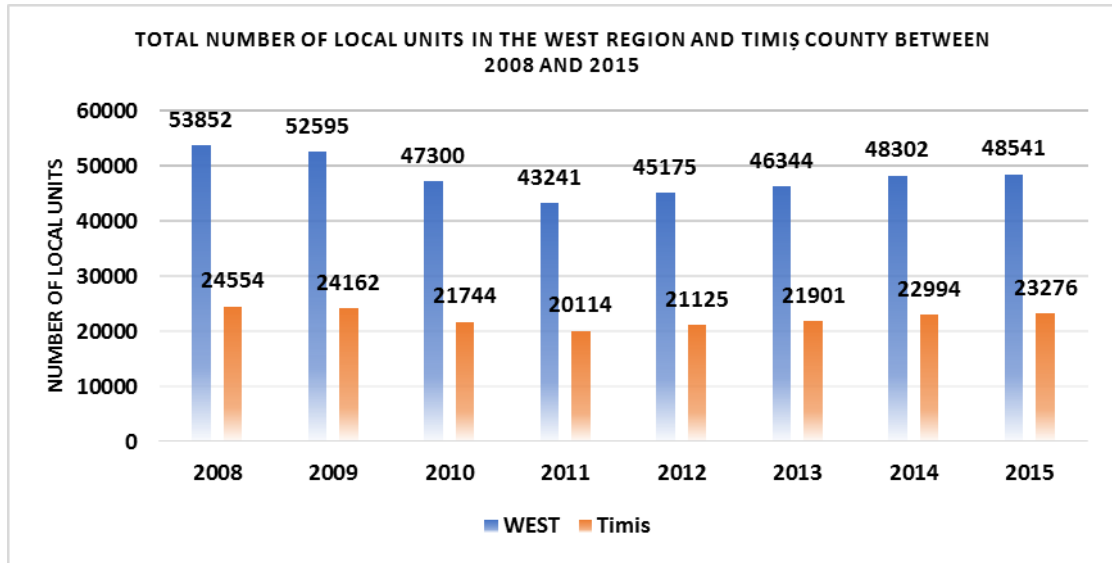


Source: Romanian Institute of Statistics

In terms of **local units**²³⁵, the figure below illustrates the total number in both West Region of Romania and Timiș County between 2008 and 2015. Comparable trends with the number of enterprises are observed in the case of local units; hence Timiș generates over 45% of the total number of local units in the West Region of Romania.

²³⁵ Local unit is defined by the Romanian Statistical Office as an enterprise or part thereof (e.g. workshop, factory, warehouse, office, mine or station) situated in a geographically identified place.

Figure 1.11: Total number of local units in the West Region and Timiș County (2008-2015)



Source: Romanian National Institute of Statistics

A more detailed representation of the situation of the local units in the West Region compared to Timiș County can be seen in the table below, which provides a breakdown of local units by company size between 2008 and 2015.

Table 1.5: Breakdown of local units in the West Region and Timiș County by company size (2008-2015)

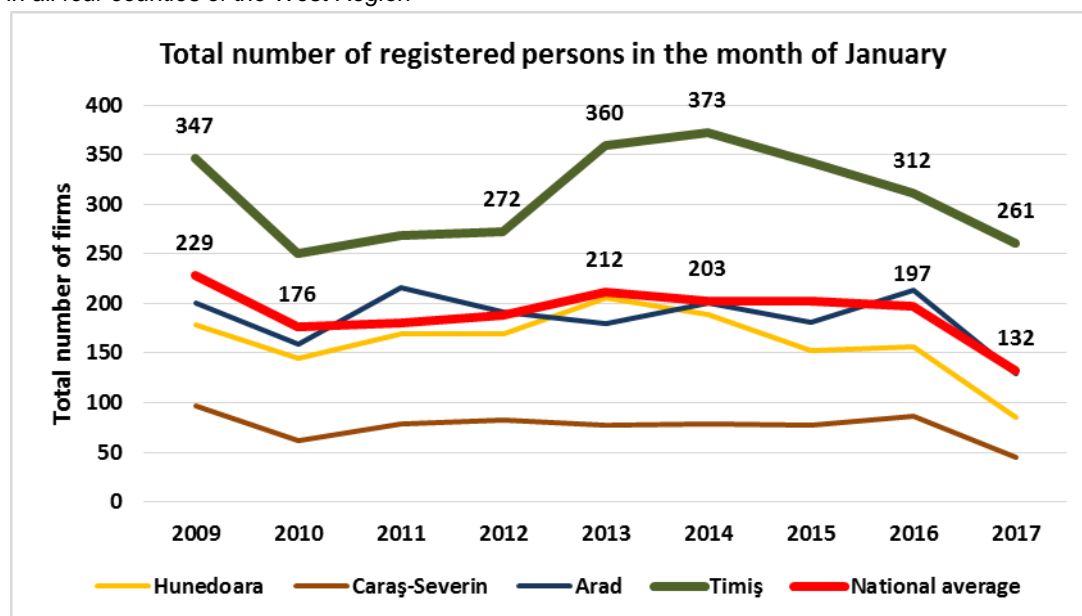
Company size	Region	2008	2009	2010	2011	2012	2013	2014	2015
0-9 persons	WEST	47463	46620	41599	37167	38999	40165	42177	42510
	Timiș	21775	21460	19164	17395	18331	19061	20199	20432
10-49 persons	WEST	5050	4794	4582	4916	4997	5063	5032	4909
	Timiș	2161	2143	2057	2196	2260	2334	2287	2309
50-249 persons	WEST	1120	984	942	972	983	934	899	931
	Timiș	520	469	440	438	439	417	409	438
250 persons and more	WEST	219	197	177	186	196	182	194	191
	Timiș	98	90	83	85	95	89	99	97

Source: Romanian National Institute of Statistics

In terms of economic activity, a more thorough breakdown of local units in Timiș County by NACE Rev. 2 activities and company size between 2008 and 2015 can be found in Annex 6.2.

The graph below provides a glimpse of the overall dynamics in the West Region of Romania, where Timiș County had the highest total number of individual persons registered into the Company Register. Furthermore, the registration rate in Timiș County is well ahead of the national average in the month of January.

Figure 1.12: Total number of individual persons registered between 1st of January and 31st of January in all four counties of the West Region



Source: National Trade Register Office

According to Eurostat data, the total number of persons employed in all NACE activities in Timiș County totalled 318.7 thousand in 2013, nearly half of the West Region's population (42%).

Table 1.6: Total number of employed persons in all NACE activities (thousand)

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Romania	9,267.1	9,330.7	9,364.8	9,365.9	9,181	9,156.1	9,082.2	8,645.3	8,569.4
Vest	827.5	839	838.2	820.4	811.8	795.3	805.3	771.8	762.7
Timiș	334.3	338.6	338.9	334.7	331.1	324.3	337.6	324.9	318.7

Source: Eurostat, series [nama_10r_3empers]

The table below provides a breakdown of the total number of employees in Timiș County by NACE activity. In 2013, most of the active population worked in the industrial sector (except construction), and manufacturing (36% in each sector), followed by wholesale and retail trade; transport; accommodation and food service activities; information and communication (22%) and agriculture, forestry and fishing (20%). On the contrary, only a small percentage of the population were engaged in real estate activities (0.16%), financial and insurance activities (1.13%) and arts, entertainment and recreation; other service activities; activities of household and extra-territorial organizations and bodies (1.9%).

Table 1.7: Total number of employed persons by NACE activity (thousand)

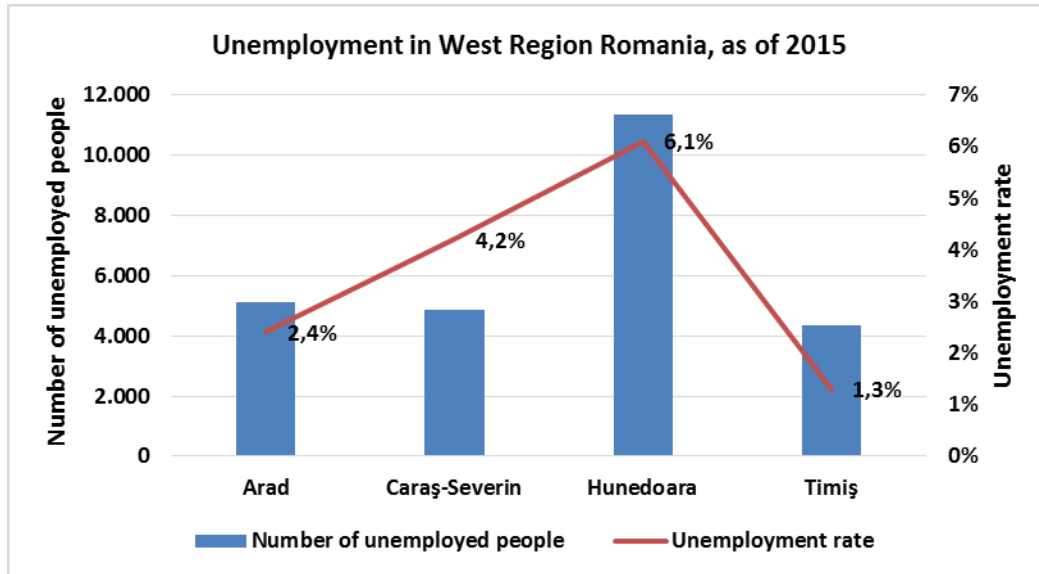
NACE activity	2005	2006	2007	2008	2009	2010	2011	2012	2013
Agriculture, forestry and fishing	65.80	61.90	61.90	54.70	62.00	64.80	60.80	66.90	63.70
Industry (except construction)	116.50	116.70	112.60	120.10	109.80	100.20	113.20	106.90	113.80
Manufacturing	108.90	109.10	105.20	112.60	103.10	93.50	106.20	100.30	106.80
Construction	25.90	27.60	28.40	25.20	24.90	25.00	22.30	23.30	21.30
Wholesale and retail trade; transport; accommodation and food service activities; information and communication	67.70	69.80	71.30	71.40	69.00	70.00	76.50	69.80	68.90
Wholesale and retail trade, transport, accommodation and food service activities	59.20	61.40	62.30	63.80	62.90	63.60	69.00	63.50	62.50
Information and communication	8.50	8.50	9.00	7.70	6.10	6.40	7.50	6.30	6.40
Financial and insurance activities; real estate activities; professional, scientific and technical activities; administrative and support service activities	17.40	18.20	18.70	16.60	17.70	15.90	18.00	16.80	15.50
Financial and insurance activities	2.80	3.10	3.10	3.60	3.50	3.40	3.20	4.30	3.60
Real estate activities	3.40	3.50	3.60	2.50	1.20	1.10	1.80	0.70	0.50
Professional, scientific and technical activities; administrative and support service activities	11.20	11.60	12.00	10.40	12.90	11.40	13.00	11.70	11.50
Public administration and defence; compulsory social security; education; human health and social work activities; arts, entertainment and recreation, repair of household goods and other services	41.00	44.40	46.00	46.60	47.70	48.60	46.70	41.20	35.50
Public administration, defence, education, human health and social work activities	28.70	31.90	33.20	31.50	36.40	39.10	35.40	32.00	29.10
Arts, entertainment and recreation; other service activities; activities of household and extra-territorial organizations and bodies	12.30	12.50	12.80	15.10	11.30	9.50	11.30	9.20	6.30

Source: Eurostat, series [nama_10r_3empers]

One particularity of Timiș County is the low unemployment rate (1.3% in 2015): the lowest in the West Region and Romania (see Figure 1.13). The latest economic forecasts show that by 2020, the unemployment rate in Timiș County will decrease to 1.2%.²³⁶

²³⁶ Comisia Națională de Prognoză (2017), Proiecția principalilor indicatori economico – sociali în PROFIL TERITORIAL până în 2020. Available at: http://www.cnp.ro/user/repository/prognoze/prognoza_profil_teritorial_mai_2017.pdf

Figure 1.13: Unemployment rate in the West Region of Romania in 2015



Source : Direcția Națională de Statistică Timiș (2015)

Higher education is strongly developed in the West Region, totalling 14 higher education units: the 4th in Romania after Bucharest (34 units), North-West (16 units), and North-East (15 units). Most of the universities in the West Region are located in Timiș County (9 universities, out of which 8 are in Timișoara). Research is also developed in the West Region and the sectoral profile varies from one county to another. Nevertheless, Timiș County concentrates most of the research centres in the West Region, encompassing a wide variety of fields (e.g. Chemistry, Construction, Forestry, Testing of ferrous materials, Health, Agriculture, Medicine, Social Sciences).²³⁷

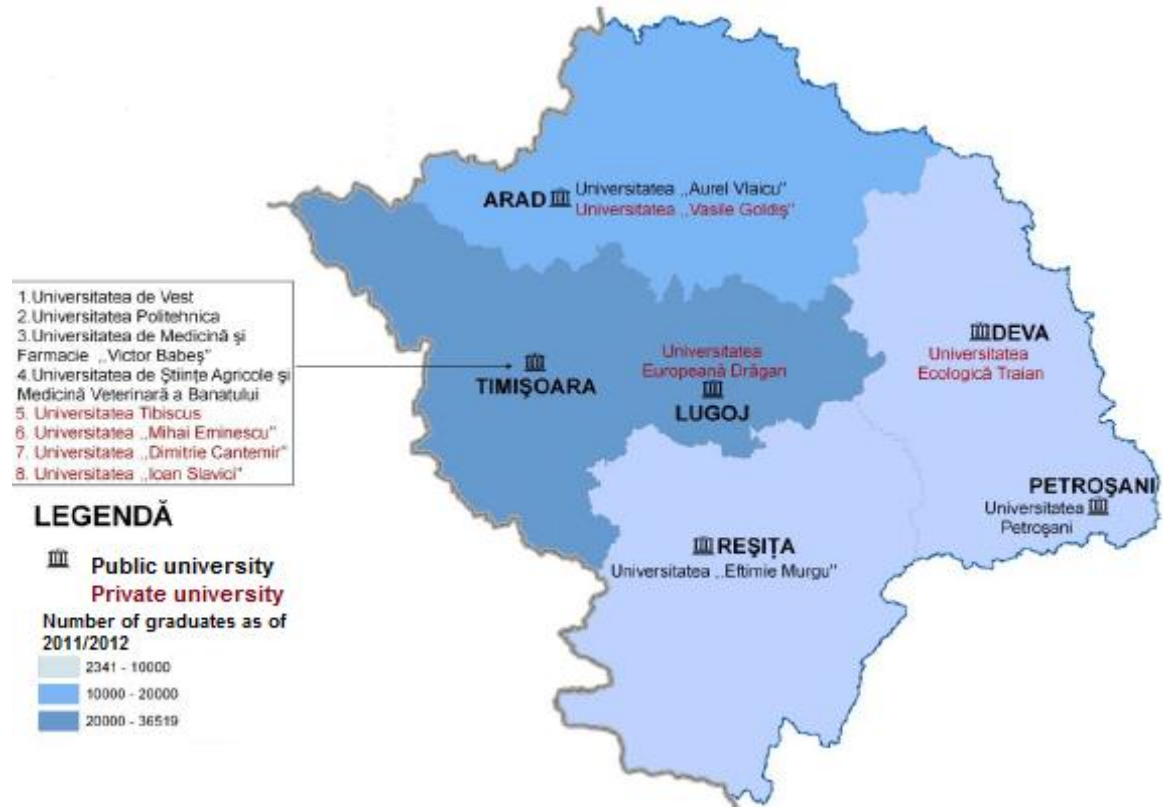
The presence of a strong university centre has a great impact of the low unemployment level in Timiș County. Consequently, Timiș has a high level of qualified workforce. As emphasised by the interviewees, most of the university graduates tend to enter the local labour market.

The low level of unemployment can also pose a disadvantage for the region, as SME face difficulties in recruiting personnel. Furthermore, the high presence of multinationals at regional level also has a negative impact on SME ability to recruit employees, as these offer benefits and salaries way above the capabilities of SME.

On the unemployment in Timiș County, a breakdown of registered unemployed people shows out of the total people unemployed in Timiș, 54% do not receive unemployment benefits, 38% are unemployed people with work experience and 8% are unemployed people with no work experience.

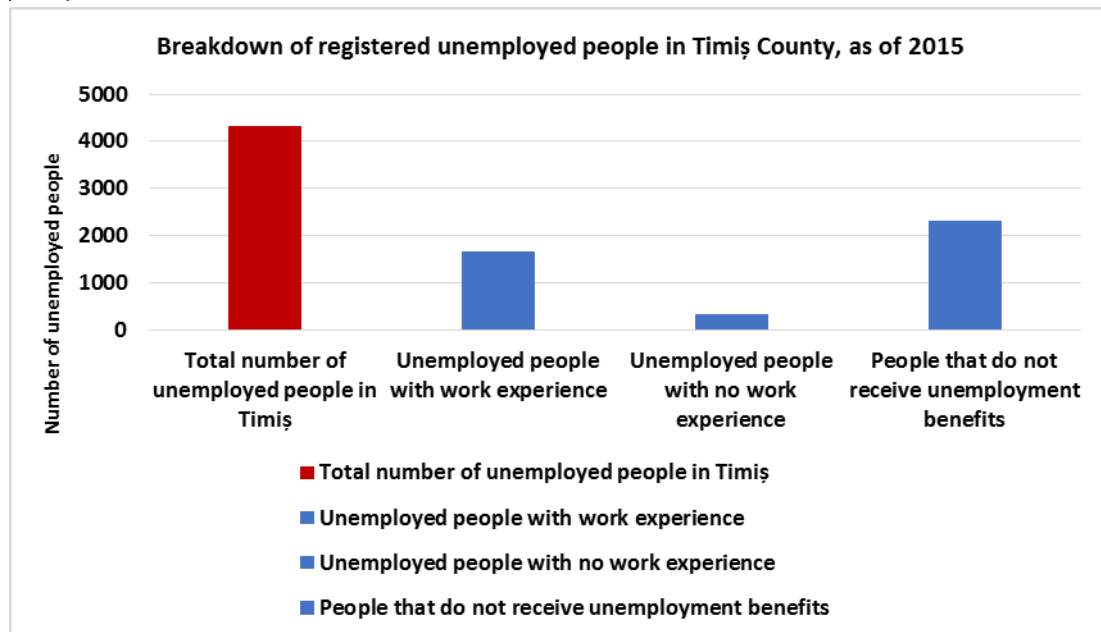
²³⁷ ADR Vest (2013), Planul de Dezvoltare Regională 2014-2020. p. 81

Figure 1.14: Universities in the West Region, as of 2013



Source: ADR Vest (2013), Planul de Dezvoltare Regională 2014-2020

Figure 1.15: Breakdown of registered unemployed people in Timiș County by category and gender (2015)

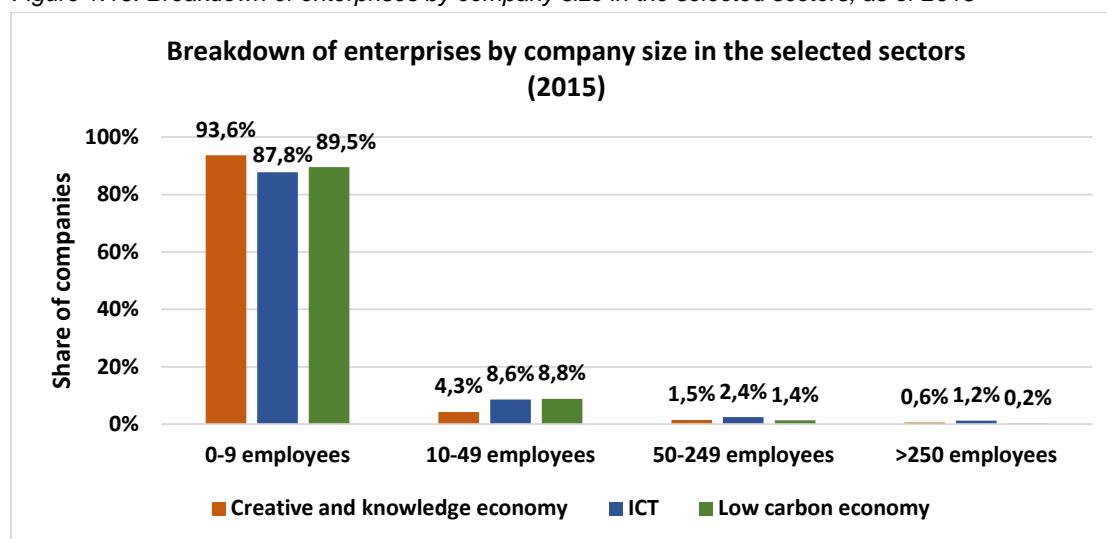


Source : Direcția Națională de Statistică Timiș (2015)

From a sector specialisation point of view, Figure 1.16 provides a breakdown of enterprises by company size in 2015 in the three selected sectors. Similar trends as in the breakdown of the total number of enterprises in Timiș County were identified in all three sectors, where

most of companies have between 0-9 employees. The ICT sector however, totals a higher percentage of medium and large companies (2.4% and 1.2% respectively).

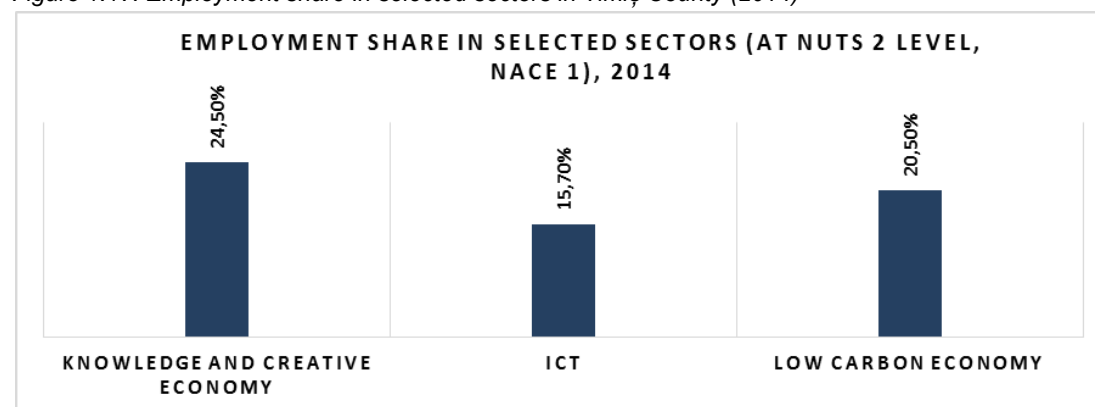
Figure 1.16: Breakdown of enterprises by company size in the selected sectors, as of 2015



Source: Staff's own calculation based on data retrieved from the ORBIS database

As for the employment in the selected sectors, in 2014 most of the active population was engaged in the knowledge and creative economy sector (24.5%), followed by 20.5% in the low carbon economy sector and only 15.7% in the ICT sector.

Figure 1.17: Employment share in selected sectors in Timiș County (2014)



Source: Staff's own calculation based on data retrieved from the Romanian National Institute of Statistics

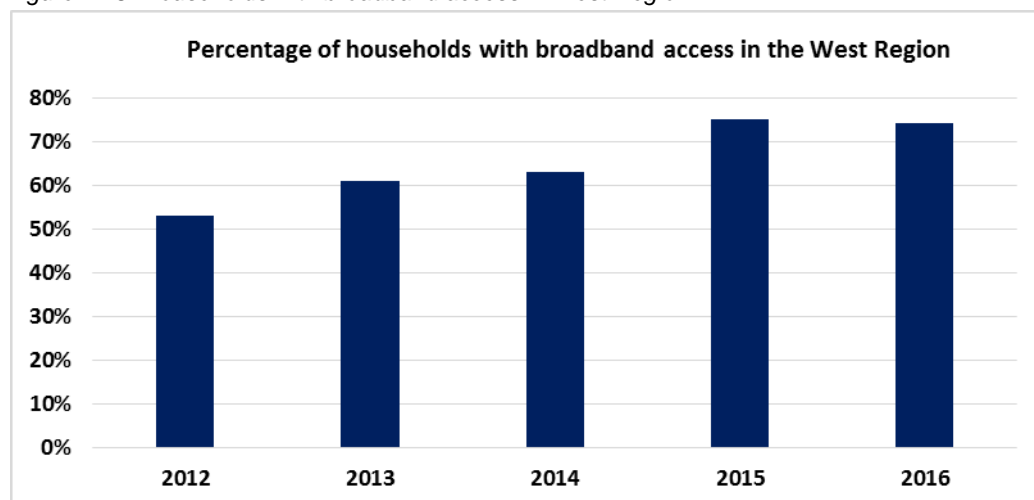
The ICT sector represents one of the few successful knowledge-intensive sectors in the West Region of Romania. One of the main reasons why the ICT sector has undergone such a positive development is the presence of the regional universities which have been an important source of skilled human capital. Unlike the automotive or textile sectors, people working in the ICT sector in the West Region are mainly young companies. In terms of ownership, in 2010

58.9% of companies were local, 32.9% were fully foreign and 8.2% partially foreign.²³⁸ In the period 2008-2010 the sector has doubled its performance in the West Region (from 1.7% to 3.2%). Nonetheless, at national level the region remains a marginal player compared to the North West Region of Romania, where the ICT sector represents a third of the overall exports.²³⁹

Timiș County comprises most of the companies active in the ICT sector in the West Region. There is a strong link between geographical agglomeration of enterprises and the high level of productivity in the Timiș County compared to the other counties in the West Region. Most ICT companies activate in Timișoara, where the ICT sector represents one of the most dynamic sectors in the city due to the presence of specialised universities (e.g. Politehnica University of Timișoara).

The high percentage of households with broadband access in the West Region might be one of the reasons why the ICT sector has had such a positive development. The figure below shows a considerable increase in the percentage of households with broadband access in West Region, from 53% in 2012 to 74% in 2016. Moreover, the percentage in West Region is higher compared to the national level, where 52% of households had broadband access in 2012 and 70% in 2016.

Figure 1.18: Households with broadband access in West Region



Source: Eurostat [isoc_r_broad_h]

²³⁸ World Bank (2013), Romania Western Region Competitiveness Enhancement and Smart Specialisation. Smart Specialization Case Studies Report. P. 73.

²³⁹ Ibid.

2 Factors influencing the dynamics of the region (strengths, weaknesses, opportunities and threats)

Internal factors – factors of competitiveness

Major strengths

The **geographical location** of Timiș County represents a major strength of the region; having border with other European country and also with Serbia has induced economic opportunities for the region. Timiș County and Timișoara are also very well linked with 5 European capitals with less than 500 km distance (Vienna, Budapest, Belgrade, Bucharest and Sofia). Its geographical location has represented also an advantage because the county is better connected to the European infrastructure than other Romanian regions. The infrastructure is in relatively good condition at NUTS 2 level, hence there is a good connection between the four counties of the West Region. This gives the region a competitive advantage, with better access to regional, national and European suppliers or business partners. Timiș County has also a higher level of urbanisation rate compared to the one at national level (60.8% in 2016, compared to 53.8% at national level in the same year).

Being located at the Western border of Romania, Timiș has direct access to the main routes towards the European market. The international Airport Traian Vuia Timișoara is the second largest airport in Romania in terms of frequency of flights and number passengers. Moreover, Timiș has a few rivers with navigability potential and the highest density of railway lines.²⁴⁰

Timiș County consists of two main economic sectors which represents a major strength of the region for two reasons: it attracts investors from various economic areas and it does not depend merely on one industry.

The **ICT sector** represents one of the few successful knowledge-intensive sectors in Timiș County due to high presence of qualified workforce generated by the major universities in the area, as well as the ease to initiate a business in this sector, compared to creative knowledge economy or low carbon economy. There is a tendency among IT students in the region to remain and enter the workforce in Timiș.

The presence of various universities in Timiș County makes the region somehow self-sufficient in filling the need for highly qualified workforce. The vast majority of graduates from Timiș' universities tend to enter the regional labour market rather than migrating towards other regions. On top of this, there is a high number of educational units (e.g. secondary schools or high schools) with courses in various languages such as German, French or English or in the languages of the existing minorities in the county. All these facilities generate skilled workforce at all levels with a higher competitive advantage and higher adaptability to the needs of the labour market compared to other regions in Romania.

²⁴⁰ ADETIM (2015)

Timiș has a good presence of clusters in various economic fields (ICT, automotive, energy and agri-food) as well as a good presence of consultancy companies for the business environment.

Ambiguous factors

The region has one of the lowest unemployment rate in the country and, more importantly, a much lower unemployment rate compared to the adjacent areas (i.e. Voivodina, Serbia with 16% unemployment rate in 2016 and Csongrad, Hungary with 3.9% unemployment rate in the same year). The region also attracts workforce from the neighbouring Romanian counties (i.e. Mehedinți, Olt, Hunedoara, Alba, Bihor) and in the future, it can become attractive also for workforce in the neighbouring countries. Nevertheless, the low unemployment rate does pose difficulties for SME in the region, due to the fact that these have difficulties in recruiting personnel.

Major weaknesses

A major weakness is represented by the low level of entrepreneurship among the region's citizens and a general attitude of "it's better to be an employee". A very small percentage of university graduates in the region tend to initiate a business (according to one of the interviewees, this is below 1%). This attitude is also negatively encouraged by the benefits and high salaries offered by multinationals which is generally a more appealing and less risky alternative to entrepreneurship. There are very few initiatives towards innovation among SME in the Timiș County due to a high degree of risk aversion, but also few R&D and innovation programmes specifically targeting products, processes, technologies and innovative services.

As emphasised by one of the interviewees, it is more difficult to initiate a business in sector such as low carbon economy or creative knowledge economy, rather than the ICT sector. The transfer from the business idea stage to actual implementation is much more difficult to achieve in the low carbon economy sector or some areas of the creative knowledge sector, where the needs in the entry stage are higher. For example, there is a need for materials and technicians, thus a consistent need for capital at an early stage.

There is also a relatively low connectivity between very populated areas and other areas within the West Region such as the lack of connection between the highway and Timișoara that would shorten the distance in time to the city centre.²⁴¹

There is a lack of regional programmes specifically targeting the needs of the West Region and implicitly Timiș County. Besides, there are discrepancies between the public and private sector which generates an incapacity of the governance level to understand the needs of the business environment.

²⁴¹ Ibid.

In terms of training and financing, there are very few support schemes for SME in Timiș County. Moreover, the high level of bureaucracy in the public administration hinders the mobility of SME and their capacity to evolve on the market.

Local actors are unable to develop the low carbon sector. Stakeholders state that they have tried to incentivise the construction sector to promote low carbon practices, but they were unable to succeed. The same with the Regional Operational Programme, which finances energy efficiency, but it does not lead to the emergence of a low-carbon sector, but rather a more efficient resource use.

Other weaknesses – less pronounced

Few Romanian companies have the ability to launch their own products on the market and most SME produce components for products sold by multinationals. Most manufacturing SME produce components for larger companies and very few release finished products. Although some SME producing components are very successful in their activity, there is a need for companies to move towards the end of the value chain (e.g. assembly).

Although Timiș is the largest agricultural region in Romania, participants in the focus group highlighted that 80% of the agricultural activities is foreign-owned, therefore there are not many SME activating in the primary sector and not many opportunities for them to thrive in the sector.

Low carbon economy is not a very developed sector in Timiș County, although it is an area to be further explored in the future. The low level of recyclability in Timiș County represents a weakness, but also an opportunity for SME to further develop and innovate in this area.

External factors – framework conditions

Major opportunities/drivers

European funds represent a major external opportunity for Timiș County, such as European Structural funds, R&D and innovation programmes, Horizon 2020 and cross-border cooperation programmes. After many years of political and economic transition, being in the European Union and implicitly in the Single Market has represented a major opportunity for Romania and the region. This was emphasised by all the interviewees, one of them specifying that major differences can be seen between Timiș County and Voivodina in Serbia, who has been stagnating economically for many years.

One trend emphasised by one of the interviewees is an increased entrepreneurial attitude among experienced professionals who, after a few years working in multinationals and gaining know-how experience decide to open their own business. Moreover, there are more and more informal co-working initiatives which represent a starting point for entrepreneurship activities.

The developed ICT infrastructure in Timiș County provides a favourable environment for developing and exploiting new products and applications.

Major threats/challenges/barriers

The presence of multinationals in such a high number represents a threat for SME in the region as these pose unfair competition in terms of workforce. More exactly, SME cannot offer the same advantages for employees as multinationals.

The low level of internationalisation among Romanian SME and their high dependence on the local and national market represents a major challenge. There is a pronounced need for SME to internationalise and to have a higher degree of risk-taking. Besides, the Romanian market is too small compared to the European one, hence it does not offer the adequate environment to develop and remain competitive at European level.

One major threat lies in the migration of highly qualified workforce towards other European countries.

Other threats/challenges/barriers – less pronounced

The low unemployment rate (1.3%) can also represent a major weakness of the region, making it less attractive for investors. Workforce deficit is observed especially in Timișoara and Sânnicolau Mare, due to a lack of reindustrialisation strategies in Timișoara and its adjacent areas and other intensely populated areas in Timiș County²⁴². Moreover, the low unemployment has also a major impact on SME, who find it difficult to develop their business due to the lack of workforce which cannot be counterbalanced locally. As highlighted by one of the interviewees, this situation is mostly encountered in the **secondary sector** where companies face difficulties in finding workforce, both highly and less skilled. There is also a low level of diversification of training and redeployment of workers towards other activities.

Timiș is an export-oriented region which can also represent a threat in case of economic crisis which could directly affect the economy of the region. This poses a threat especially for SME in the automotive sector, given that there are many SME manufacturing components in the sector.

The high presence of multinationals in the region poses a big challenge to the SME sector and creates unfair competition for two reasons: tax reduction and other incentives that multinationals enjoy from the Romanian government and the incapacity of regional SME to compete with the benefits and high salaries provided by multinationals. This situation is encountered mainly in the manufacturing sector and with low impact on the ICT sector.

Relocation of economic operators towards other regions can also pose a challenge for the economy of Timiș County.

²⁴² ADETIM (2015)

Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others

In terms of support for internationalisation, interviewees pointed out that there is a lack of initiative at governmental level. Moreover, Romanian embassies from other countries should be more proactive in collecting data to help Romanian SME be better informed on the opportunities available on external markets.

3 Governance issues

3.1 Institutions and governance levels

The Regional Operational Programme 2014-2020 succeeds the first Regional Operational Programme in Romania from 2007-2013, representing one of the main programmes through which Romania can access European structural funds from European Regional Development Fund (ERDF).

In terms of management, The Regional Operational Programme 2014-2020 is managed by the Management Authority for the Regional Operational programme within the Romanian Ministry of Regional Development and Public Administration, as adopted by the European Commission on 23rd of June 2015.

According to the National Strategy for Regional Development 2014-2020, The Regional Operational Programme 2014-2020 builds upon the common priorities for development proposed in the Regional Development Plans for 2014-2020. These are devised by each of the eight Regional Development Agencies for: North-East Region, South-East Region, South Region, South-West Region, West Region North-West Region, Centre Region, Bucharest-Ilfov Region.

Other programmes developed at national level for SME were done by The Ministry of Business environment, Commerce and Entrepreneurship through the Department of entrepreneurship and programmes for SME who has territorial offices in each NUTS 2 regions. For the West Region, the ministry has designated a Territorial Office for SME and Cooperation Timișoara.

3.2 Policy strategies in place

Currently, the main programme at national level is the Operational Programme for SME from the Ministry of Regional Development and Public Administration. In addition, the Ministry for Business environment also develops programmes for SME support at national level.

As emphasised by the stakeholders, there are no specific programmes tailored at regional level. There is no relation between the region's specificity and the financing provided. Generally, public administration has only an administrative function, as they do not devise programmes for the entrepreneurial environment in Timiș County.

3.3 Support instruments for SME and the three focus sectors

With a budget of € 100 million, the Operational Programme for SME (Programul Operațional Inițiativa pentru IMM-uri – POIIMM) provides support for Romanian SME by facilitating access to credit and offers a guarantee rate of maximum 80%. The programme was an initiative of the European Council from 2013 through which Member States were encouraged to take this common initiative with the aim to stimulate the access to finance for SME. This programme complements other available national and European programmes for SME support. The estimated impact of this programme is as follows: approximately 2,500 SME are expected to

benefit, a higher success rate among SME request for credit (+ 3%) and an increase in turnover among Romanian SME.²⁴³

The Regional Operational Programme 2007-2013 through the Priority Axis 4, namely the consolidation of the local and regional business environment, aimed at the establishment and development of business structure at local and regional level as well as the rehabilitation of the industrial sites in order to decrease unemployment and foster durable economic growth.²⁴⁴

The Regional Operational Programme 2014-2020 through the Priority Axis 2 aims at improving competitiveness among SME. The programme consists of two parts:

- 2.1 Promoting entrepreneurship through the facilitation of new economic ideas and encouraging the establishment of new enterprises, including business incubators. The main beneficiaries of this programme are SME of minimum 1 year of existence in the urban areas. The financing includes construction/modernisation and extension of production space, including tangible and non-tangible assets. The programme is designed merely for microenterprises in urban areas and has a lump sum budget of € 824.49 million.²⁴⁵
- 2.2 Supporting the creation and extension of advanced production capacities and the development of services. The main beneficiaries are the SME from urban areas as well as non-agricultural SME in the rural areas. The programme finances mainly construction/modernisation and extension of production space for SME, including tangible and non-tangible assets. It also includes, among others, the promotion of products and services and specific activities to support internationalisation (e.g. support for participating in fairs and international exhibitions, investments to enhance adaptation to technological production processes). The programme is designed for SME for both urban and rural areas and has a lump sum budget of €824.49 million.²⁴⁶

In addition to the above-mentioned initiatives through the Regional Operational Programmes, other support programmes for SME are developed by the Ministry of Business Environment, Commerce and Entrepreneurship with an overall budget of RON 676 million (€ 147 million) and focus to stimulate exports, entrepreneurship among women, craftsmanship, commerce, UNCTAD/EMPRETEC programme, SME fair, internationalisation, Start-Up Nation programme. All these programmes are yet to be implemented and therefore no impacts have been observed so far.²⁴⁷

²⁴³ The Regional Operational Programme 2007-2013. Available at: http://ec.europa.eu/regional_policy/ro/atlas/programmes/2014-2020/romania/2015ro16rfsm001

²⁴⁴ http://www.mdrl.ro/_documente/POR/POR_august_07.pdf

²⁴⁵ <http://por2014-2020.adroltenia.ro/2-1-promovarea-spiritului-antreprenorial/>

²⁴⁶ <http://por2014-2020.adroltenia.ro/2-2-sprijinirea-crearii-si-extinderea-capacitatilor-avansate-de-productie-si-dezvoltarea-serviciilor/>

²⁴⁷ <http://www.startupcafe.ro/stiri-finantari-21607658-lista-programe-imm-2017-fonduri-nerambursabile-afaceri-bani-stat.htm>

3.4 Results of the FOG Test

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities steer decisions made over matters related to SME and entrepreneurship support structures and mechanisms in the region in a unilateral manner.	✓	
	Regional authorities exercise their powers mainly providing services and resources, in turn monitoring the achievement of specified objectives with respect to SME development (performance and results oriented)		✓
	Regional authorities collaboratively develop and foster, with key stakeholders, SME and entrepreneurship support structures and mechanisms in the region.		✓
	Regional authorities have delegated powers to other entities or relevant stakeholders as a way to proactively develop and foster SME and entrepreneurship support structures and mechanisms in the region.	✓	
	Practices and actions undertaken		
A1.0	Is the development of an entrepreneurship culture in the region rather organically driven (grassroots movements) or rather stemming from a top down approach (institutionally driven)?	Organically driven (grassroots movements)	
A2.0	Which main actor/s is/are informally driving the promotion and shaping the development of an entrepreneurship culture in the region?	Non-governmental organisations (i.e. regional development agencies), privately funded incubators and co-working spaces, emerging business angels and, to a certain extent universities.	
A3.0	Which main actor/s is/are formally driving the promotion and shaping the development of an entrepreneurship culture in the region?	National government through national strategies such as Smart Specialisation Strategy or EU co-funded actions under operational programmes (e.g. Competitiveness Operational Programme and Regional Operational Programme).	

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities, along with other actors create partnerships to foster an entrepreneurship culture in the region, going beyond the national or European framework/requirements.		✓
	Activities intended to promote an entrepreneurship culture are financially supported and closely monitored to optimise the efficiency, effectiveness and transparency of the actions undertaken by stakeholders receiving support from the regional authorities.		✓

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	A top down approach is adopted by regional authorities when promoting the development of an entrepreneurial culture (e.g. initiatives on the organisations of start-up conferences stem from local authorities)		✓
	Regional authorities are enabling all actors to take on the initiative to promote the development of an entrepreneurship culture in the region (e.g. via advisory services, training)	To a certain the Regional Chambers of Commerce and the Fiscal Authority provide administrative services to entrepreneurs and advice.	✓
B1.0	Which actions are undertaken in the region to develop an entrepreneurial climate and culture?	There is no coordinated measure for the development of the entrepreneurial climate and culture but merely actions that emerge locally to fill a gap created by a lack of public authority involvement. For instance, the Regional Smart Specialisation Strategy devised by ADR Vest or Banat IT who helps companies meet potential foreign investors.	

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities facilitate the creation of business start-up support structures by engaging with a large array of stakeholders themselves.		✓
	Regional authorities directly contribute to increase the business start-up rate by initiating and managing business start-up support structures.		✓
	Networks, incubators, portals and gateways are being developed hand in hand by local authorities and citizens, proactively stepping in to create a start-up friendly environment in the region.	There are only grassroots initiatives where citizens get involved or proactively stepping in to create a start-up friendly environment in the region but without the involvement of local authorities.	✓

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities support the development of start-up support structures by providing the necessary resources to (intermediate) working to boost entrepreneurial skills in the region.		✓
C1.0	According to you, which support structure or practice for start-ups and SME is the most effective and should be further emphasised to ensure the development of entrepreneurial skills in the region?	There are many grassroots initiatives from private or non-governmental or academic actors, but these are not carried out in a coordinated way. To further ensure the development of entrepreneurial skills in the region, there must be a coordinated approach that would create synergies rather than competition between various actors in the region.	

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities have developed strategies and implement schemes intending to reduce barriers to entry, eliminate obstacles and foster an environment conducive to the development of start-ups and SME.		✓
	Off-the-shelf financing practices as well as the provision of a venture capital environment provide innovative and inclusive sources of financing, which are tailor-made to the needs of the actors in the region.		✓
	The provision of financing support by the region is provided and can be conditional on the achievement of set objectives and result-oriented approaches are favoured by authorities, which encourage a greater ownership of the projects to ensure the success of the action and a return on investment.	Only to the extent to which this is required by the EU co-funded programmes.	✓
	Regional authorities use the synergies developed in networks of stakeholders supporting entrepreneurship. They accordingly facilitate the development of conventional financing bodies as well as participative financing schemes targeting start-ups, SME and project holders from under-represented groups.		✓
	Practices and actions undertaken		
D1.0	Is there a financial gap or a suboptimal investment situation for SME financing in the region?	At national level, a 2016 ex-ante assessment found a € 3.4 billion gap in SME financing, although this was not broken down at regional level. ²⁴⁸ The two proposed financial instruments (Portfolio Risk Sharing Loan and SME	

²⁴⁸ <http://www.fonduri-ue.ro/images/files/documente-relevante/2016/Romania.Ex-ante.aprobat.pdf>

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
		Equity fund) aim to increase SME competitiveness in line with the National Strategy for Competitiveness. This strategy found that Timiș is comparatively more competitive region in terms of exports. ²⁴⁹	
D2.0	What are the most commonly used financial support schemes or means of financing for entrepreneurs and SME?	For traditional sectors, Bank financing is still the most common form of financial support, although for ICT and other knowledge-based industries use non-conventional channels such as crowdfunding and business angels.	
D3.0	How do governance mechanisms contribute to start-up/SME development while making up for the reduced availability of public funding?	Local authorities have delegated business support initiatives to non-governmental bodies such as ADR Vest given the reduced public funding for these initiatives. However, the Local Council took over a such body (ADETIM) in its efforts to harmonise SME development efforts. Nevertheless, there have been no visible results after this action was taken.	
D4.0	Are regional authorities prompt to take economic risks when providing financial support to SME?	Yes, to a certain extent. For example, in Timișoara the city hall has developed IncuBoxx ²⁵⁰ which is a start-up programme providing technical assistance and web hosting to IT entrepreneurs and students. This is only a city-wide initiative therefore there is no coordinated initiative at county level.	
D5.0	Who supports and fosters higher accessibility of the region (physical infrastructure)? How (grants/PPP, etc.)	At national level, through large infrastructure projects such as highways, railways and riverways co-funded by European funds under OP Large Infrastructure. Private actors such as Ryanair and WizzAir improve air accessibility both domestically and internationally through faster and cheaper transport options.	
D6.0	What is done to improve the governance standards at national/regional/local level?		

²⁴⁹ http://www.minind.ro/PROPUNERI_LEGISLATIVE/2014/SNC_2014_2020.pdf

²⁵⁰ <http://www.incuboxx.ro/>

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities ensure the development of an entrepreneurial culture in the region looking at other regions' governance structures and mechanisms to improve their own entrepreneurship and SME policies and create partnerships with other regional authorities to foster innovation as well as the development of synergies.		✓
	Regional authorities are integrated into a multi-level governance system and actively collaborate to identify best practices and challenges solving options beyond regional and national borders.		✓
	Co-funded projects are driving the need for further collaboration between regional authorities and between regions.	✓	
	Developing contacts and partnerships is the spearhead of regional authorities and key actors to make up for potentially limited public intervention (e.g. public funding) and autonomously find solutions to local issues (without recurring to external support).	Only at national level, there are financial support measures for improving networking activities.	Local actors believe that such initiatives should be left to non-public actors.
	Practices and actions undertaken		
E1.0	Have regional clusters developed ties and are collaborating with other clusters at the national/EU level?	Yes, for instance between Cluj and Timișoara ICT clusters.	
E2.0	Which are the regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment?	Regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment emerge mainly from private actors' initiatives. For example, StartUp Week in Timișoara.	

4 Results of the SWOT analysis

Internal factors – factors of competitiveness

Major strengths
The geographical location of Timiș, facilitated by relatively modern infrastructure, connects the region to Western Europe and facilitates the inflow of foreign capital.
The ICT sector represents one of the few successful knowledge-intensive sectors in Timiș County due to high presence of qualified workforce.
Timiș County mainly relies on two industries, namely automotive and IT. Both are doing well, have a high value added, and allow for the development of ancillary support sectors. Comparatively, the region is doing well, while other Romanian regions are mono-industrial.
The presence of various universities in Timiș County makes the region somehow self-sufficient in filling the need for highly qualified workforce. However, local stakeholders identified a competition between private and public universities, which is not constructive.
Good availability of creative hubs, co-working spaces, studios, clusters (ICT, automotive, energy and agri-food), laboratories which encourage experimentation, innovation and entrepreneurship. The vast majority of these are private.
Other strengths – less pronounced
-
Major weaknesses
There is a low level of entrepreneurship among the region's citizens and a general attitude of "it's better to be an employee". A very small percentage of university graduates in the region tend to initiate a business (according to one of the interviewees, this is below 1%). This attitude is also negatively encouraged by the benefits and high salaries offered by multinationals which is generally a more appealing and less risky alternative to entrepreneurship.
There is a lack of implementation of various regional strategies to support SME. Although documents and studies exist, strategies are rarely implemented, or coordinated between them. Implementation and coordination usually occurs at national level, which creates a discrepancy with the local needs.
It is more difficult to initiate a business in sector such as low carbon economy or creative knowledge economy. The transfer from the business idea stage to actual implementation is much more difficult to achieve in low carbon economy sector or some areas of the creative knowledge sector, where the needs in the entry stage are higher (i.e. need for raw materials, technicians).
The high level of bureaucracy in the public administration hinders the mobility of SME and their capacity to evolve on the market.
Other weaknesses – less pronounced
Most manufacturing SME produce components for larger companies and very few release finished products. Although some SME producing components are very successful in their activity, there is a need for companies to move towards the end of the value chain (e.g. assembly).
Local actors are unable to develop the low carbon sector.
Ambiguous factors – represent a strength in some of the businesses/industries, but a weakness in others
-
Neutral factors – represent neither a strength nor a weakness
-

External factors – framework conditions

Major opportunities/drivers
Improved ICT infrastructure, Broadband internet access, high penetration of mobile devices, increasing computing capacities are a favourable environment for developing and exploiting new products and applications.
Informal co-working initiatives represent a good starting point for entrepreneurial activities. Such initiatives, including incubators, have developed significantly over the past years, especially in Timișoara.
European funds and programmes represent a major external opportunity for Timiș County. For instance, cross-border cooperation programmes work well, and EU requirements such as the need for a Smart Specialisation Strategy add more strategical rigour to the region's development plans, such as

structural European funds, R&D and innovation programmes, Horizon 2020 and cross-border cooperation programmes.
Other opportunities/drivers – less pronounced
-
Major threats/challenges/barriers
The low unemployment rate (1.3%) is a major weakness, making it less attractive for investors. The lack of workforce attracts less investors in the area. It also has a major impact on SME, who find it difficult to develop their business due to the lack of workforce which cannot be counterbalanced locally.
The low level of internationalisation among Romanian SME and their high dependence on the local and national market represents a major challenge. There is a pronounced need for SME to internationalise and to have a higher degree of risk-taking.
Migration of highly qualified workforce towards other European countries.
Timiș is an export-oriented region which can also represent a threat in case of economic crisis which could directly affect the economy of the region.
Other threats/challenges/barriers – less pronounced
Relocation of economic operators towards other regions can also pose a challenge for the economy of Timiș County. This has happened, for instance, with the opening of a Mercedes plant in Hungary rather than Timiș County, or the opening of a Hungarian branch of Delphi, a large local manufacturer.
Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others
In terms of support for internationalisation, interviewees pointed out that there is a lack of initiative at governmental level. Moreover, Romanian embassies from other countries should be more proactive in collecting data to help Romanian SME be better informed on the opportunities available on external markets.
Neutral factors – represent neither an opportunity/driver nor a threat/barrier
-

5 Future policy needs

Although Timis County is performing well, there is a need for better support for SME in the region. In terms of regional development, programmes should be tailored more according to the region and not have the same operational programme for all the regions. Moreover, the way of financing should be improved, for instance there is a need and room for niche strategic initiatives.

Currently, the Regional Operational Programme is not itself regional as it does not specifically address the needs of each region. Although it is easy to attract investors in Timisoara due to various advantages (e.g. population, good infrastructure), there is a need for initiatives in other areas of the Timis county to stimulate SME. There are some territorial offices for SME support, but these should be more present in their activity and also more visible to entrepreneurs. There is a need for consulting services on how to write a project and what are the means through which SME can receive funding. There is a rigidity amid public authorities, to which it adds a very burdensome bureaucracy that hinders the mobility of SME on the market.

Moreover, there is no coordinated way to disseminate information about opportunities for SME so people do not know where to look for the information they need (for example StartUp Nation, about which many people do not have a clear picture of what it implies). The public authorities should provide specialised offices that offer free counselling for people who want to access these facilities. Although the Chamber of Commerce offers some sort of counselling, this is mainly for administrative purposes and not for how to increase entrepreneurship among people.

There is a need for more flexible, nonconventional awareness campaigns to increase the level of entrepreneurship.

Romanian legislation for SME is very ambiguous and this has been an ongoing issue in the national business environment. Moreover, SME legislation tends to change with every government and this poses great difficulties for the business environment.

It would be very useful for Romanian SME to have a warning mechanism implemented. Currently, the lack of such mechanism leads to a high number in penalties for entrepreneurs and implicitly to a reluctance among people to initiate businesses. Moreover, as it is impossible for small businesses to take notice of all the existent legislation and the continuous changes, increased promotion could help them increase awareness and better adapt to the national legislation.

At both regional and national level, there is an urgent need for developments in infrastructure (with specific focus on motorways and railways) which facilitates the connection between national regions but also a better connection to the Single Market.

Finally, there is an urgent need for support towards internationalisation among SME and currently there are very few programmes that offer this kind of support. Additionally, Romanian

embassies abroad should have greater role in helping Romanian businesses to internationalise. It has been emphasised that Romanian embassies should be more proactive in collecting data to help Romanian SME be better informed on the opportunities available on the external markets.

6 Annex

6.1 Breakdown of enterprises in Timiș County by NACE Rev. 2 activities and company size between 2008 and 2015

NACE Rev.2 (activity of national economy-sections)	Company size	2008	2009	2010	2011	2012	2013	2014	2015
A Agriculture, hunting and fishing	Total	788	836	854	843	893	907	944	990
	0-9 persons	675	722	740	718	760	774	816	859
	10-49 persons	96	100	101	114	125	126	121	124
	50-249 persons	16	13	12	10	7	6	6	6
	250 persons and more	1	1	1	1	1	1	1	1
B Mining and quarrying	Total	52	53	49	43	43	40	38	33
	0-9 persons	42	37	33	30	27	27	27	20
	10-49 persons	8	14	13	11	13	11	10	12
	50-249 persons	2	1	3	2	3	2	1	1
	250 persons and more		1						
C Manufacturing	Total	2323	2233	1977	1837	1907	1956	2029	2037
	0-9 persons	1647	1592	1375	1231	1295	1346	1439	1452
	10-49 persons	432	431	394	400	409	416	385	372
	50-249 persons	194	164	161	156	148	144	148	163
	250 persons and more	50	46	47	50	55	50	57	50
D Production and distribution of electric and thermal energy, gas and warm water and conditioning air	Total	12	21	39	54	69	96	112	113
	0-9 persons	7	16	34	48	63	88	106	108
	10-49 persons	2	2	3	4	4	6	4	3
	50-249 persons	1	1						
	250 persons and more	2	2	2	2	2	2	2	2
E Water distribution; salubrity, managing of waste, decontaminate activities	Total	66	67	69	79	95	103	113	106
	0-9 persons	47	51	52	62	78	85	93	88

NACE Rev.2 (activity of national economy-sections)	Company size	2008	2009	2010	2011	2012	2013	2014	2015
	10-49 persons	13	11	11	12	12	14	15	14
	50-249 persons	4	3	4	3	3	2	3	2
	250 persons and more	2	2	2	2	2	2	2	2
F Construction	Total	2710	2705	2161	1921	2021	2080	2167	2302
	0-9 persons	2319	2337	1847	1576	1669	1737	1830	1940
	10-49 persons	309	295	262	291	293	293	297	322
	50-249 persons	71	65	49	51	56	48	36	35
	250 persons and more	11	8	3	3	3	2	4	5
G Trade	Total	8080	7509	6880	6352	6567	6654	6903	6706
	0-9 persons	7444	6959	6369	5809	6035	6126	6392	6209
	10-49 persons	555	485	454	486	479	476	459	443
	50-249 persons	77	64	56	55	50	49	48	51
	250 persons and more	4	1	1	2	3	3	4	3
H Transport and storage	Total	1261	1268	1122	1056	1105	1183	1282	1323
	0-9 persons	1146	1146	1004	928	967	1026	1124	1158
	10-49 persons	91	100	94	101	107	124	126	122
	50-249 persons	20	18	20	21	25	28	27	35
	250 persons and more	4	4	4	6	6	5	5	8
I Hotels and restaurants	Total	1168	1271	1198	1092	1142	1185	1239	1213
	0-9 persons	1045	1134	1044	914	962	998	1064	1017
	10-49 persons	109	122	138	164	166	175	163	180
	50-249 persons	13	14	15	13	13	11	11	15
	250 persons and more	1	1	1	1	1	1	1	1
J Information and communication	Total	829	799	734	683	732	778	851	893
	0-9 persons	750	718	658	598	645	689	755	789

NACE Rev.2 (activity of national economy-sections)	Company size	2008	2009	2010	2011	2012	2013	2014	2015
	10-49 persons	58	66	62	67	70	72	71	78
	50-249 persons	17	12	10	14	13	12	20	19
	250 persons and more	4	3	4	4	4	5	5	7
K Financial intermediation and assurance	Total	255	261	236	219	222	242	246	266
	0-9 persons	236	242	218	202	209	228	235	251
	10-49 persons	17	17	17	17	13	14	11	15
	50-249 persons	2	2	1					
L Real estate transaction	Total	1005	1065	954	870	882	946	996	1037
	0-9 persons	969	1028	913	833	850	908	956	999
	10-49 persons	34	34	38	36	31	37	39	37
	50-249 persons	2	2	2	1	1	1	1	1
	250 persons and more		1	1					
M Professional, scientific and technical activities	Total	3079	3115	2825	2544	2680	2771	2941	2912
	0-9 persons	2983	3010	2729	2446	2570	2663	2829	2808
	10-49 persons	82	91	83	84	95	94	98	88
	50-249 persons	14	13	13	14	14	14	13	15
	250 persons and more		1			1		1	1
N Activities of administrative and support services	Total	1091	993	847	816	913	980	1055	1126
	0-9 persons	997	887	721	677	775	827	898	973
	10-49 persons	69	76	95	105	99	114	121	121
	50-249 persons	22	25	28	32	35	34	33	29
	250 persons and more	3	5	3	2	4	5	3	3
P Education	Total	108	116	109	116	134	140	172	207
	0-9 persons	98	99	95	102	118	128	161	193
	10-49 persons	10	17	14	14	16	12	11	14

NACE Rev.2 (activity of national economy-sections)	Company size	2008	2009	2010	2011	2012	2013	2014	2015
Q Health and social work	Total	411	408	416	411	425	446	467	525
	0-9 persons	383	381	380	365	373	391	411	470
	10-49 persons	25	24	31	42	47	48	51	50
	50-249 persons	3	3	5	4	5	6	4	4
	250 persons and more						1	1	1
R Cultural and recreative entertainment activities	Total	197	215	191	181	214	246	283	320
	0-9 persons	186	206	176	162	195	224	261	296
	10-49 persons	7	8	14	18	18	22	22	23
	50-249 persons	4	1	1	1	1			1
S Other service activities	Total	583	597	521	444	468	522	546	558
	0-9 persons	552	569	489	409	428	481	509	520
	10-49 persons	29	27	31	33	39	40	35	36
	50-249 persons	1			1			1	1
	250 persons and more	1	1	1	1	1	1	1	1

Source: Romanian National Institute of Statistics

6.2 Breakdown of local units in Timiș County by NACE Rev. 2 activities and company size between 2008 and 2015

NACE Rev.2 (activity of national economy-sections)	Company size	2008	2009	2010	2011	2012	2013	2014	2015
A Agriculture, hunting and fishing	Total	812	856	879	856	909	924	964	1011
	0-9 persons	681	726	748	721	761	781	824	865
	10-49 persons	112	115	113	121	134	133	127	131
	50-249 persons	16	12	15	12	12	8	12	13
	250 persons and more	3	3	3	2	2	2	1	2
B Mining and quarrying	Total	57	62	56	47	48	46	43	39
	0-9 persons	43	42	36	32	29	30	31	24
	10-49 persons	10	17	16	12	15	13	12	14
	50-249 persons	3	2	3	2	2	2		
	250 persons and more	1	1	1	1	2	1		1
C Manufacturing	Total	2366	2290	2017	1883	1952	1998	2065	2074
	0-9 persons	1663	1612	1391	1251	1314	1363	1452	1462
	10-49 persons	449	456	407	418	426	435	403	394
	50-249 persons	204	173	170	162	154	148	153	168
	250 persons and more	50	49	49	52	58	52	57	50
D Production and distribution of electric and thermal energy, gas and warm water and conditioning air	Total	15	24	42	57	72	99	116	117
	0-9 persons	7	16	34	48	63	88	107	109
	10-49 persons	3	3	4	5	5	7	5	4
	50-249 persons	2	3	1	1	1	1	1	1
	250 persons and more	3	2	3	3	3	3	3	3
E Water distribution; salubrity, managing of waste, decontaminate activities	Total	74	71	74	86	102	111	119	109
	0-9 persons	50	53	55	64	80	88	96	89
	10-49 persons	17	13	13	15	15	18	19	16

NACE Rev.2 (activity of national economy-sections)	Company size	2008	2009	2010	2011	2012	2013	2014	2015
	50-249 persons	5	3	4	5	5	3	2	2
	250 persons and more	2	2	2	2	2	2	2	2
F Construction	Total	2751	2743	2192	1948	2043	2100	2181	2317
	0-9 persons	2331	2348	1856	1580	1675	1742	1833	1945
	10-49 persons	325	307	272	307	303	303	305	329
	50-249 persons	81	79	60	56	61	52	38	36
	250 persons and more	14	9	4	5	4	3	5	7
G Trade	Total	8392	7870	7212	6682	6931	7037	7285	7077
	0-9 persons	7627	7179	6563	6004	6242	6341	6593	6398
	10-49 persons	661	602	574	597	616	622	617	606
	50-249 persons	96	84	72	78	69	71	68	70
	250 persons and more	8	5	3	3	4	3	7	3
H Transport and storage	Total	1287	1298	1143	1079	1137	1220	1319	1362
	0-9 persons	1157	1162	1011	938	981	1040	1142	1176
	10-49 persons	100	107	102	109	118	139	137	135
	50-249 persons	23	22	22	23	28	31	30	38
	250 persons and more	7	7	8	9	10	10	10	13
I Hotels and restaurants	Total	1175	1283	1209	1101	1151	1193	1247	1224
	0-9 persons	1047	1138	1047	918	964	1000	1065	1021
	10-49 persons	114	130	148	170	173	180	169	185
	50-249 persons	14	15	14	13	14	13	13	18
J Information and communication	Total	856	823	758	706	767	803	878	926
	0-9 persons	761	727	671	611	663	698	762	799
	10-49 persons	68	74	66	71	76	79	79	87
	50-249 persons	22	18	16	19	23	21	30	31

NACE Rev.2 (activity of national economy-sections)	Company size	2008	2009	2010	2011	2012	2013	2014	2015
	250 persons and more	5	4	5	5	5	5	7	9
K Financial intermediation and assurance	Total	245	263	243	230	231	251	257	275
	0-9 persons	227	243	225	214	216	236	244	257
	10-49 persons	16	19	17	16	15	15	13	18
	50-249 persons	2	1	1					
L Real estate transaction	Total	1006	1072	957	871	886	948	999	1041
	0-9 persons	970	1034	915	833	853	910	959	1002
	10-49 persons	34	36	39	37	31	37	39	38
	50-249 persons	2	2	2	1	2	1	1	1
	250 persons and more			1					
M Professional, scientific and technical activities	Total	3096	3133	2844	2560	2698	2791	2958	2930
	0-9 persons	2988	3018	2740	2452	2579	2675	2838	2819
	10-49 persons	90	96	87	90	100	98	103	92
	50-249 persons	18	17	17	18	19	18	16	18
	250 persons and more		2					1	1
N Activities of administrative and support services	Total	1112	1021	868	841	943	1011	1083	1147
	0-9 persons	1001	900	727	686	789	839	906	979
	10-49 persons	83	85	104	115	108	125	134	128
	50-249 persons	24	31	34	38	42	41	39	36
	250 persons and more	4	5	3	2	4	6	4	4
P Education	Total	109	117	110	118	136	142	173	207
	0-9 persons	99	100	96	103	119	129	161	193
	10-49 persons	10	17	14	15	17	13	12	14
Q Health and social work	Total	415	415	421	415	429	449	471	530
	0-9 persons	383	382	381	366	374	392	411	472

NACE Rev.2 (activity of national economy-sections)	Company size	2008	2009	2010	2011	2012	2013	2014	2015
	10-49 persons	29	29	34	44	50	50	55	54
	50-249 persons	3	4	6	5	5	6	4	3
	250 persons and more						1	1	1
R Cultural and recreative entertainment activities	Total	201	219	195	188	221	253	286	329
	0-9 persons	187	208	177	164	200	225	261	299
	10-49 persons	10	8	15	20	19	27	24	28
	50-249 persons	4	3	3	4	2	1	1	2
S Other service activities	Total	585	602	524	446	469	525	550	561
	0-9 persons	553	572	491	410	429	484	514	523
	10-49 persons	30	29	32	34	39	40	34	36
	50-249 persons	1			1			1	1
	250 persons and more	1	1	1	1	1	1	1	1

Source: Romanian National Institute of Statistics

6.3 Interview partners

Name	Organisation	Position	Special expertise/years of experience ²⁵¹	Interview Date	Tel/f2f
Adrian Mariciuc	ADR Vest	Head of department	Representatives of regional administration	31/5/2017	Tel
Madalina Istrate	Ministry of Regional Development and Public Administration	Adviser DG POR	Representative of national administration	13/9/2017	Tel
Dan Ratiu	Mediana		Entrepreneur	23/5/2017	Tel
Vlad Stanciu	ROSNEC (The Romanian Sustainable Energy Cluster)	Cluster Manager	Representative of business association, low-carbon economy	3/5/2017	Tel
Sorin Belea	Regional Statistics Office, Timis	Executive Director	Representative of regional administration	6/6/2017	Tel

6.4 Focus Group participants

Name	Organisation	Position	Special expertise/years of experience ²⁵²	Date of workshop	Tel/f2f
Bianca Dramnescu	Banat IT	PR and Communication specialist	ICT sector	19/6/2017	F2f
Gabriela Paraschi	Banat IT		ICT sector	19/6/2017	F2f
Cristian Goția-Crețiu	ADR Vest	Consultant	Representative of regional administration	19/6/2017	F2f
Paul Sîrca	ADR Vest		Representative of regional administration	19/6/2017	F2f
Cristian Boțoc	West University Timișoara	Professor	Researcher	19/6/2017	F2f
Mariana Predișcan	West University Timișoara	Professor	Researcher, specialised in SME innovation and management	19/6/2017	F2f

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²⁵¹ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

²⁵² Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

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Case study report: Split-Dalmatia

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CEPOR – SME & Entrepreneurship Centre

1 Mapping the SME sector in the region

Table 1.1 presents companies in the Split-Dalmatia County through the period 2000-2015. According to the company size, companies are divided into four categories: Micro, Small, Medium and Large. Related categories are associated with data related to the number of employees and added value of the certain company sector.

Table 1.1: Companies in the Split-Dalmatia County through the period 2000-2015

Year	Size	Number of companies	Number of employees	Value added (HRK)
2000	Micro	5,228	12,295	7,120,238,148
	Small	558	14,003	6,530,554,661
	Medium	218	11,871	3,996,325,602
	Large	42	19,134	7,026,607,454
2001	Micro	5,013	12,076	7,484,859,658
	Small	584	12,528	6,398,212,651
	Medium	226	14,395	6,644,082,475
	Large	42	19,162	6,632,768,162
2002	Micro	5,858	13,245	4,748,739,109
	Small	637	12,191	3,122,380,412
	Medium	188	13,359	4,456,810,803
	Large	57	23,605	8,571,195,225
2003	Micro	6,176	13,893	5,007,075,237
	Small	683	12,948	3,594,349,367
	Medium	226	14,899	5,479,557,692
	Large	59	25,030	10,510,400,311
2004	Micro	6,238	13,653	4,849,078,855
	Small	716	13,743	3,603,364,523
	Medium	224	14,761	5,459,956,090
	Large	68	25,407	11,071,667,671
2005	Micro	6,577	14,000	4,864,877,909
	Small	709	14,138	3,443,949,784
	Medium	255	14,498	6,012,187,671
	Large	68	26,279	11,990,075,558
2006	Micro	7,369	15,029	6,491,749,113
	Small	1,004	24,194	8,154,349,609
	Medium	124	14,726	7,294,982,615
	Large	27	19,327	9,132,862,122
2007	Micro	7,999	15,573	7,168,319,227
	Small	1,089	25,353	9,417,730,548
	Medium	119	13,954	6,545,756,259
	Large	32	21,235	11,631,036,826
2008	Micro	8,847	16,817	7,485,955,579
	Small	1,183	29,706	10,315,247,147
	Medium	113	14,894	6,406,344,420
	Large	32	20,205	11,740,851,420

Year	Size	Number of companies	Number of employees	Value added (HRK)
2009	Micro	9,191	17,083	6,584,676,419
	Small	1,106	26,466	8,184,501,811
	Medium	115	13,753	5,760,070,963
	Large	30	17,367	8,810,083,272
2010	Micro	9,745	17,518	6,293,250,169
	Small	1,064	24,995	7,733,882,991
	Medium	116	13,531	5,232,985,899
	Large	27	18,341	9,093,930,289
2011	Micro	10,174	17,677	6,864,883,592
	Small	1,015	23,995	7,485,298,772
	Medium	101	12,818	4,767,742,661
	Large	28	16,811	8,594,392,354
2012	Micro	9,894	17,325	6,620,516,063
	Small	998	23,985	7,542,580,021
	Medium	101	12,282	5,345,522,957
	Large	24	13,780	7,776,432,204
2013	Micro	10,275	18,033	6,874,383,419
	Small	1,033	26,787	7,827,496,119
	Medium	103	11,174	5,406,686,073
	Large	25	13,215	7,970,989,102
2014	Micro	10,561	18,846	7,328,633,464
	Small	1,089	26,747	8,381,684,523
	Medium	92	10,440	5,385,912,126
	Large	24	13,456	8,218,149,771
2015	Micro	10,716	19,303	7,135,363,164
	Small	1,123	26,764	8,706,566,371
	Medium	93	10,723	5,788,440,541
	Large	25	13,708	9,017,760,763

Source: Financial Agency

During the whole observed period, it can be noticed that the largest share in enterprises belongs to the micro enterprises. It is also possible to highlight a positive trend growth of the number of micro enterprises in the mentioned period, as well as a number of employees. The category of small enterprises is the next largest category of companies. Within this category, it is possible to observe a positive trend in the growth of the number of small businesses and the number of employees in the observed period. Medium and large enterprises take the least share in the total number of enterprises. Since 2006, it is possible to notice a slight decline in the number of enterprises and the number of employees within the mentioned categories.

Table 1.2 presents available data about the number of firm births, firm failures/closures and active companies in Split-Dalmatia County in the period 2000-2015. The survival rate, based on the percentage of a certain birth cohort still existing after certain number of years is not available.

Table 1.2: Number of new, deleted and active companies in the Split-Dalmatia County through the period 2000-2015

Year	New	Deleted	Active companies
2000	348	3	2,300
2001	481	1	2,778
2002	583	170	3,360
2003	691	49	3,881
2004	786	34	4,618
2005	1,032	33	5,616
2006	1,159	29	6,742
2007	1,266	26	7,979
2008	1,149	28	9,102
2009	848	36	9,922
2010	768	31	10,654
2011	785	32	11,408
2012	859	1970	12,235
2013	1,465	172	11,730
2014	1,268	736	12,826
2015	1,235	338	13,325

Source: Financial Agency

Data in the table lead to the conclusion that the largest number of active enterprises was registered in 2015, while the largest number of new enterprises was registered in 2013. The largest number of deleted companies was registered in 2012 due to the amendments to the Court Registry Act.

Table 1.3 presents the number of companies, number of employees and added value within ICT sector in the period 2008-2015. Within this sector, it is possible to observe a growing trend of the key indicators in the observed period.

Table 1.3: ICT Sector in the Split-Dalmatia County through the period 2008-2015

Year	Number of companies	Number of employees	Value added (HRK)
2008	168	903	415,290,914
2009	179	917	406,499,146
2010	204	976	488,469,703
2011	220	1,042	544,155,236
2012	231	1,112	546,641,347
2013	259	1,273	583,399,450
2014	284	1,351	609,234,443
2015	295	1,539	612,075,506

Source: Financial Agency

Table 1.4 presents the number of companies, number of employees and created new value within Creative and Knowledge Economy in the period 2008-2015. It is important to highlight that in 2008 the smallest number of enterprises was registered, but those enterprises employed the largest number of employees and created the largest amount of new value in the observed period.

Table 1.4: Creative and Knowledge Economy in the Split-Dalmatia County through the period 2008-2015

Year	Number of companies	Number of employees	Added value (HRK)
2008	2,152	15,779	4,875,867,239
2009	2,240	14,506	3,943,564,092
2010	2,360	14,560	3,903,162,353
2011	2,467	14,494	4,121,987,235
2012	2,478	13,891	3,581,506,948
2013	2,623	11,855	3,702,478,028
2014	2,756	12,121	4,183,941,233
2015	2,890	12,826	4,655,077,369

Source: Financial Agency

Table 1.5 presents the number of companies, number of employees and created new value within Low Carbon Economy in the period 2002-2015. Within this sector, it is possible to observe growth of the aforementioned indicators throughout the observed period. The huge increase in 2008 is the result of the change of the NACE codes related to defining Low Carbon Economy Sector.²⁵³

Table 1.5: Low Carbon Economy Sector in the Split-Dalmatia County through the period 2000-2015

Year	Number of companies	Number of employees	New value (HRK)
2000	50	5,992	837,837,252
2001	51	6,801	1,260,313,310
2002	61	7,682	707,302,784
2003	67	7,822	745,633,124
2004	70	7,272	729,055,651
2005	73	7,585	575,377,913
2006	76	7,309	826,002,534
2007	95	7,397	884,559,038
2008	2,420	18,765	8,218,826,757
2009	2,545	15,936	5,426,486,810
2010	2,642	16,727	5,678,505,988
2011	2,698	16,110	5,039,951,359
2012	2,619	15,055	4,978,191,297
2013	2,712	14,915	4,958,190,579
2014	2,749	14,922	5,049,570,522
2015	2,782	15,364	5,371,823,420

Source: Financial Agency

In the following section are presented: Total intramural R&D expenditure (GERD), Purchasing Power Standard (PPS) per inhabitant at constant 2005 prices, Total intramural R&D expenditure (GERD) of the region in % of GDP, and Households with broadband access. Given the fact that the Croatian Bureau of Statistics does not collect the required data at NUTS 3 level, all available data are extracted from Eurostat and refer to the Adriatic Croatia (NUTS 2 level).

²⁵³ Through the period 2000 – 2007, NACE Code 2002 was used which defined some economic activities differently to the NACE Codes Rev. 2 (2008 – 2015).

In all the presented data, it is possible to notice a growing trend of the relevant indicators. Furthermore, it is possible to notice that the highest values could be identified in the last years of observed period.

Table 1.6: Total intramural R&D expenditure (GERD) of the Adriatic Croatia

Year	Total intramural R&D expenditure (GERD), Purchasing power standard (PPS) per inhabitant at constant 2005 prices
2008	39,9
2009	36,1
2010	32
2011	40,4
2012	38,3
2013	54,5
2014	47,9

Ec.europa.eu. (n.d.). Total intramural R&D expenditure (GERD) by sectors of performance and NUTS 2 regions – Eurostat. [online] Available at: http://ec.europa.eu/eurostat/web/products-datasets/-/rd_e_gerdreg [Accessed 8 Jun. 2017].

Table 1.7: Total intramural R&D expenditure (GERD) of the Adriatic Croatia in % of GDP

Year	Total intramural R&D expenditure (GERD) of the Adriatic Croatia in % of GDP
2008	0,27
2009	0,27
2010	0,24
2011	0,31
2012	0,3
2013	0,42
2014	0,37

Ec.europa.eu. (n.d.). Total intramural R&D expenditure (GERD) by sectors of performance and NUTS 2 regions – Eurostat. [online] Available at: http://ec.europa.eu/eurostat/web/products-datasets/-/rd_e_gerdreg [Accessed 8 Jun. 2017].

Table 1.8: Total intramural R&D expenditure of the Adriatic Croatia (in Million EUR)

Year	Total intramural R&D expenditure (GERD) in Million EUR
2008	41,806
2009	38,327
2010	34,492
2011	43,27
2012	41,203
2013	58,494
2014	50,919

Ec.europa.eu. (n.d.). Total intramural R&D expenditure (GERD) by sectors of performance and NUTS 2 regions – Eurostat. [online] Available at: http://ec.europa.eu/eurostat/web/products-datasets/-/rd_e_gerdreg [Accessed 8 Jun. 2017].

Table 1.9: Percentage of households with internet access at home in the Adriatic Croatia

Year	Percentage of households with internet access at home
2008	61
2009	78
2010	87
2011	92
2012	91
2013	98
2014	99
2015	99

Source: Ec.europa.eu. (n.d.). Households with broadband access – Eurostat. [online] Available at: http://ec.europa.eu/eurostat/web/products-datasets/-/isoc_r_broad_h [Accessed 8 Jun. 2017].

2 Factors influencing the dynamics of the region (strengths, weaknesses, opportunities and threats)

This section is based on literature, documents, the interviews, and the focus group.

What are the most relevant regional factors (strengths and weaknesses) supporting/hindering?

- SME development in general

Split-Dalmatia County, the largest county by area in Croatia, is geographically located in the central part of the Adriatic Coast, which includes three different areas: islands, coastal area and Dalmatian Hinterland. The geographical location, natural beauty and favourable Mediterranean climate are the main strengths of the Split-Dalmatia County. Good transport links within and outside the County, and the existing transport infrastructure, which includes roads, ports, railways and an airport, are additional strengths. However, although the existing transport infrastructure represents a strength, there is still a lot of room and opportunities for improvement, especially when it comes to connections between the mainland and certain islands.

The University of Split is the second largest university in the Republic of Croatia and, with its scientific infrastructure (scientific and research institutions), research and teaching staff, and the number of students, it represents a strength of the County. Looking at the labour market from the demand side, it can be concluded that certain occupations are in short supply, especially those related to provision of health, as well as to agricultural production. Likewise, although University educates a large percentage of the young population, they are often professionally unprepared for the labour market and the needs of employees. This weakness of the education system indicates a mismatch between educational programmes and the needs of the economy.

Looking at the business support infrastructure available to entrepreneurs, it can be concluded that it is both a strength and a weakness. Additional efforts made to launch entrepreneurial zones and incubators in the County area are certainly a strength, but a deeper analysis of this issue indicates that there are numerous weaknesses. These are mostly related to freezing of substantial amount of public funds in uncompleted and unused business zones, and the mismatch between supply and demand of other forms of support institutions, given the content and type of services they provide to entrepreneurs.

One of the biggest weaknesses of the Split-Dalmatia County is the uneven development of certain parts of the County, the islands and Dalmatian Hinterland. Population in rural areas often do not have information available on incentives, do not have the care and help of support institutions in their area, and is often not sufficiently educated to engage in entrepreneurship. This weakness is accompanied by the above-average population density of the coastline, where the urban agglomeration of Split, which consists of the City of Split and 13

neighbouring local self-government units (Dicmo, Dugi Rat, Dugopolje, Kaštela, Klis, Leće-
vica, Muć, Omiš, Podstrana, Sinj, Solin and Trogir), particularly stands out.

Likewise, unfavourable conditions for financing the economy and entrepreneurial ventures
have been identified as one of the biggest weaknesses of the County. This market is still in-
sufficiently developed and adapted to the needs of entrepreneurs, while traditional (conven-
tional) bank sources of financing, as well as sources of local and county authorities are quite
limited and averse to taking risks.

- The primary sector

Split-Dalmatia County is characterised by highly heterogeneous agricultural production con-
sisting of crop farming, cattle breeding, fruit growing and olive growing, and viticulture and
winemaking. Some of the main strengths that encourage the development of the primary sec-
tor as well as entrepreneurship based on the activities of the primary sector are natural re-
sources, such as soil, Mediterranean mild climate and rich water sources.

Even though there are numerous preconditions for the development of agriculture, the County
is not heavily focused on agricultural production. It represents a labour-intensive activity, for
which the population rarely decides to engage in, compared to alternative opportunities for
income generation. Likewise, fragmentation of agricultural plots is a weakness that prevents
the utilisation of economies of scale in agricultural production. Finally, one of the problems
that affect this sector is a lack of trained agricultural personnel.

Fishery and aquaculture include catching and farming white fish, blue fish (tuna) and shellfish,
and they represent an important, but still insufficiently propulsive economic activity in the
County. In addition to economic importance, this economic activity also has an important
socio-demographic significance, which is reflected in prevention of depopulation of rural
coastal and island areas, and in meeting various needs of the tourist market for sea products
(Ljubaj, Pirgać and Franić, 2015). Excellent natural and climatic conditions are a strength for
the development of mariculture, while the Adriatic Sea represents a significant resource for
the development of economy, as well as an important ecological system. The biggest prob-
lems affecting the fishing industry and its development are underdeveloped coastal and port
infrastructure for unloading of fish and outdated fishing fleet.

- The secondary sector

Manufacturing, construction and shipbuilding are the most significant industrial activities of
the Split-Dalmatia County. The recent economic crisis has particularly affected this sector,
and its negative impact resulted in a reduction of the share of these industries in creating the
gross added value of the County, as well as in a loss of numerous jobs. A decline in ship-
building output has caused a significant drop in revenues from foreign trade of the County's
economy, a decrease in coverage of imports with exports, and a decrease of the County's
share in foreign trade. The construction sector was also not spared, in which many small and

medium-sized enterprises have either been liquidated or have initiated bankruptcy proceedings.

The biggest strengths of this sector are related to a long tradition of shipbuilding and construction activity in the area. Outdated and uncompetitive manufacturing processes and equipment, as well as slow adaptation to market needs and trends in industrial production have been identified as the biggest weaknesses of the secondary sector.

- The tertiary sector

Trade, tourism and catering represent the most important economic activities in the Split-Dalmatia County. Tourism “in itself” is the strength of the entire economy of the County, while trade and catering complement the overall tourist offer. The biggest strengths of these activities are geographical position of the County, favourable climate, and natural and cultural attractions. The biggest weakness of these activities is manifested in significant seasonality, whose consequences are causing a heavy burden on public and municipal infrastructure during periods of peak tourist activity.

- The creative/knowledge economy

The advantages of application of creative/knowledge economy are in its complementarity with tourism and the synergistic effect that can be achieved by combining these two sectors in order to create new enriched tourism products.

The weaknesses of application of this specific industry in the Split-Dalmatia County are insufficient authorities' understanding of the importance of the development of this sector, and insufficient (financial or other) support to stimulate the development of this sector.

- The ICT sector

Factors that represent a strength and encourage the development of the ICT sector in the Split-Dalmatia County are: availability of skilled workforce under favourable financial conditions, thanks to the existence of a university study programme that educates ICT professionals; the existence of an informal cluster of such companies and several leaders who initiate and implement activities that promote ICT in the region (SHIFT conference, DUMP – Young Programmers Association). Furthermore, the Ericsson Nikola Tesla multinational company has been operating in the Split-Dalmatia County for more than 35 years, and represents one of the most successful subsidiaries of this company in the world with more than 500 employees. The ICT community enjoys the support of local and regional authorities, and thanks to the climate and natural conditions, the Split-Dalmatia County provides good living conditions in a situation when business does not depend on the local market and environment.

The weaknesses include the university studies, which are lagging behind in relevant and needed knowledge for the labour market, so that graduated professionals do not have all the necessary knowledge, mobility of ICT professionals, and their departure to other EU countries where they can earn a higher income, and the existence of numerous administrative barriers at the national level, which generally limits entrepreneurial activity.

- The low carbon economy

The main strengths for the development of entrepreneurial initiative in the low carbon economy are natural resources in the Split-Dalmatia County that favour its application.

The greatest weaknesses are the over-regulation of this field, lack of transparency in previous cases of granting concessions for the use of alternative energy sources, low level of co-financing and promotion at the national level, unclear long-term strategy in the application of this technology that would stimulate users to invest in adaptation to new energy sources, and entrepreneurs' poor awareness of the benefits and possibilities of using alternative energy sources in business.

Which overall trends and conditions (opportunities and threats) from outside the region support/hinder

- SME development in general

The biggest threats that hinder the development of entrepreneurial initiatives and the development of the small and medium-sized enterprise sector are linked to inconsistent institutional environment. It is characterised by pronounced unpredictability (uncertainty) of the legal and economic framework for the activity of business entities. Likewise, the environment is characterised by frequent changes in the tax system (as well as of all other parts of the overall economic policy), which raises the level of unpredictability and risk in business decision-making. Unfavourable institutional environment “indirectly” directs economic entities primarily to those activities that enable faster rates of return, and at the same time reduces the attractiveness of investing in research and development with a long-term perspective of return on investment.

Unfavourable institutional environment is accompanied by an uncompetitive business environment that hampers the business of the existing entrepreneurs, but also discourages potential entrepreneurs who are thinking about starting an entrepreneurial venture. It is most often manifested in high fiscal and parafiscal charges, excessive administration that represents an expense for entrepreneurs, over-regulation by the government, and the existence of a broad legislative framework related to business and entrepreneurial activity.

One of the threats to development is the underdeveloped system for combating the shadow economy at the state level.

There are numerous opportunities for development of entrepreneurial activities in Split-Dalmatia County, and the most commonly mentioned are:

- Availability of EU funds intended to encourage entrepreneurial activity and development of entrepreneurial infrastructure (for instance, in tourism, manufacturing industry, rural development) and for development of innovative, fast-growing and high-tech business entities
- Flexibility of the SME sector, which allows faster adaptation of SME operations (compared to large enterprises) to changes in the environment (and/or policy/incentive measures)

- Development of new instruments to encourage entrepreneurship, especially in the sphere of “start-up” projects, development of new technologies and renewable energy sources
- Encouraging cooperation between entrepreneurs and scientific research institutions through the so-called “triple helix” programmes
- Encouraging clustering, both on the thematic and the territorial principle
- Creation of conditions for increased attraction of domestic and foreign investment demand through systematic strengthening of capacities of regional and local self-government
- Creation of human and organisational prerequisites for increased involvement of local/regional entrepreneurs in EU-financed development projects
- Active promotion of the development of less developed areas of the County (hinterland, islands), especially through selective forms of tourism, revitalisation of traditional agricultural production and handicrafts.
- The primary sectors

The agricultural sector is characterised by several adverse trends: the reduction of cultivated land area, the reduction of the number of households involved in agriculture and, accordingly, the depopulation of rural areas. Opposite the mentioned threats are the opportunities based on encouraging the development of ecological agriculture and the supply of ecologically grown agricultural products, encouraging cooperatives as a quality and efficient way of organising small agricultural producers, and encouraging the development of tourism in rural areas through the development of family farms that provide food and accommodation services.

Creating organisational and technical preconditions for the modernisation of agricultural production and retention of young people in the countryside, together with resolving of property relations and encouraging the consolidation of land plots have been recognised as opportunities contributing to the development of agriculture. The modernisation of the fishing fleet and the development of port infrastructure for unloading, reloading and storage of fish represent the biggest opportunities for the development of the fishing industry.

- The secondary sector

Due to the specific nature of the industry, revitalisation of construction primarily depends on the revitalisation of the entire economy of the County, as well as of Croatia, given that the volume of construction works follows the development of other sectors of the economy, which represents an opportunity and a threat at the same time. One of the identified opportunities that could positively affect the development of this sector is focusing on adaptation works with the purpose of raising the energy efficiency of buildings.

Within the manufacturing industry, identified opportunities are recognised in the restructuring of existing industrial facilities with the aim of diverting production (e.g. construction of power plants), cooperation between science and manufacturing industries with the aim of developing innovative products and manufacturing processes, and cooperation between science and manufacturing industry with the aim of educating entrepreneurs and craftsmen about the possibilities of withdrawing funds from EU funds.

An increase in demand for specialised types of (smaller) ships, as well as revitalisation of shipbuilding with the aim of increasing the quality and competitiveness of the sector are highlighted as opportunities in the shipbuilding sector.

- The tertiary sector

Threats to the activities of the tertiary sector are mostly related to over-dependence of the County's economy on tourism and other complementary services that complement the tourist offer.

Development of selective forms of tourism, with a special emphasis on health tourism, encouraging the development of small and family hotels, and encouraging tourism development in the hinterland and the interior of islands have been identified as the most important opportunities for the development of this sector.

- The creative/knowledge economy

The most important threats that “hamper” the development of the creative/knowledge economy are related to the failure of market participants, including various level of government, to recognise the creative industries as a source of competitiveness and economic development. Therefore, in these industries, no significant joint efforts have yet been made by the national, county and local authorities, with the aim of approaching the strategic development of activities of this sector.

Contrary to this threat, there are numerous opportunities which are associated with trends in the behaviour of today's buyers of tourism services, who expect an upgrade to the basic offer, which, in the context of tourism activity, consists of “sun and sea”. With additional amenities that are generated through the interaction of the creative/knowledge economy and tourism, a unique product is created.

- The ICT sector

The ICT sector is a large, perspective and unsaturated market in which there is no competition between local companies, which creates favourable conditions for cooperation. ICT sector has great potential and complementarity of application in all aspects of life, so the further development of the sector is expected. Good living conditions in the Split-Dalmatia County could be attractive to ICT professionals from other countries whose business is not tied to a specific location.

The threat is the great mobility of ICT professionals to other EU and world countries that provide better financial conditions, since it is a scarce occupation at the global level.

- The low carbon economy

Trends of its application in the EU represent the main positive circumstance for the development of the low carbon economy, which should enable greater application in Croatia, and encourage greater involvement of national, regional and local authorities to create a positive

environment and conditions for the development of entrepreneurial activity in the low carbon economy.

The threats are a lack of long-term vision for the development of the low carbon economy at the national level, and low awareness of the population and entrepreneurs who could engage in this activity or apply it in business.

3 Governance issues

3.1 Institutions and governance levels

Which institutions and governance levels are shaping the framework conditions in the region? (SME policy, regional policy, economic policy)? What are their roles? How do different governance levels interact? Assessment of their effectiveness – what influence do they have?

The main institutions of government in the Split-Dalmatia County are the administrative body of the regional self-government unit and the administrative bodies of the local self-government units (cities and municipalities). The County is responsible for activities at the regional level related to education, health, spatial and urban planning, economic development, transport and transport infrastructure, maintenance of public roads, planning and development of the network of educational, health, social and cultural institutions, protection and improvement of the environment, issuance of construction and location permits and other acts related to construction and implementation of spatial planning documents, and other activities in accordance with special laws.

The main bodies of the county administration are: County Prefect, as the executive body, and the County Assembly. In addition to these bodies, the organisational structure of the County consists of seven administrative departments and the Internal Audit Office. The Administrative Department for the Economy, EU Funds and Agriculture performs administrative and other professional tasks, monitors the state of the economy, EU fund programmes, agriculture, rural development, fisheries, hunting, energy and transport, innovation and IT technology. The Department prepares reports, expert documents, proposals and drafts of acts under the jurisdiction of the administrative body. County authorities act in accordance with powers determined by the Local and Regional Self-Government Act and in accordance with the Statute of the Split-Dalmatia County.

The Split-Dalmatia County is divided into 55 units of local self-government (with a total of 364 settlements), of which 16 units of local self-government have the status of a city and 39 units of local self-government have the status of a municipality.

Institutions at the local level implement development policies in their respective areas in accordance with the powers vested in them by the Local and Regional Self-Government Act. Besides the mayor, larger cities and municipalities have an assembly (council), administrative bodies and expert services.

The County provides support to units of local self-government through legal advice and financial support for projects that contribute to local and regional development. The County co-finances the projects of units of local self-government in the field of social activities (co-financing of pre-school education, schools, cultural and sport activities, social protection and health care, fire and civil protection) and economic activities (environmental protection, landfill disposal, development of municipal infrastructure, development of transport infrastructure,

development of tourism infrastructure, preparation of spatial planning documents, construction of entrepreneurial zones, energy development, connecting islands and mainland, etc.

The City of Split is the second largest city in the Republic of Croatia and the largest Croatian city on the eastern Adriatic coast. It is the administrative centre of the Split-Dalmatia County, in which all the functions of regional development are located. City administration is divided into organisational units. It is particularly important to highlight the City's Economy, Tourism, International and European Funds Services, which carries out professional activities in the fields of economy and tourism, proposes and implements measures for the development of small business, tourism, and energy efficiency, coordinates and participates in the drafting of acts, expert documents, plans and studies of essential importance for the economic development of the city, cooperates with professional business organisations and business and tourism support institutions, monitors economic trends, monitors trends and results in the tourism sector, cooperates with institutions and associations for consumer protection, and carries out all the necessary activities for securing funds from international and European funds for the purpose of implementation of city projects.

The remaining public-sector institutions operating in the Split-Dalmatia County are Public Institution RERA S.D. For Coordination and Development of the Split-Dalmatia County, Croatian Chamber of Economy, County Chamber Split, Croatian Chamber of Trades and Crafts, and Croatian Employers' Association.

Public Institution RERA S.D. for Coordination and Development of the Split-Dalmatia County was founded with the aim of establishing effective coordination of regional development programmes and encouraging development projects for balanced and sustainable economic development of all parts of the Split-Dalmatia County. Also, RERA S.D. is the appointed Regional Coordinator for the Split-Dalmatia County and is a part of the system for the management of the regional development of the Republic of Croatia. Within this role, RERA oversees coordinating and participating in the preparation of county development strategy, monitoring and encouraging the implementation of the same, as well as other strategic development documents at the county level (www.rera.hr).

The main activities of the Croatian Chamber of Trades and Crafts, County Chamber Split are: promoting craftsmanship, representing the interests of craftsmen before state authorities in shaping the economic system, giving opinions and suggestions to state authorities when enacting legislation in the field of craftsmanship, establishing commissions for apprentice and master exams, and providing help to craftsmen during the establishment and operation of crafts. CCTC is also active in the organization, co-financing and encouraging appearances of craftsmen at trade fairs in the country and abroad.

“Croatian Employers' Association (CEA), in addition to activities in the field of labour and social legislation and industrial relations, protects private property, promotes the development and regulation of market conditions, strengthening of competitiveness and a favourable entrepreneurial climate. CEA today represents the voice of employers and entrepreneurs with

more than 5,000 members employing 400,000 workers. The CEA Regional Office in Split is the administrative headquarters of the Dalmatian Branch of the Croatian Employers' Association. The Branch comprises four counties: Zadar County, Šibenik-Knin County, Split-Dalmatia County and Dubrovnik-Neretva County.

Based on the research conducted, it was established that cooperation between different levels of government in the Split-Dalmatia County is present, but there is plenty room for improvement. It was also established how often the expertise, but also the personality of individuals in relevant managerial positions contributes to the improvement of cooperation between institutions at all levels. One of the potential problems that prevents cooperation is the political affiliation of members of representative bodies and the fact that the influence of partial interests overcomes awareness of the need for synergistic action for the benefit of the community.

3.2 Policy strategies in place

What are the main regional policy strategies relevant for SME? Assessment of these strategies.

The County Development Strategy 2011-2013 of the Split-Dalmatia County is the still valid basic strategic planning document of the Split-Dalmatia County, which determines the goals and priorities of development for the area of this County, with a special emphasis on the role of large cities and County seats in encouraging development and on the development of less developed areas. The role of regional coordinator, i.e., the coordinator of preparation, implementation and reporting about the County Development Strategy of the Split-Dalmatia County 2011-2013 was taken over by RERA S.D.

The County Development Strategy 2011-2013 is still in force, and has been extended on several occasions following the recommendation of the Ministry of Regional Development and EU Funds, since according to the Act on Regional Development of the Republic of Croatia, all county development strategies must be aligned with the Regional Development Strategy of the Republic of Croatia. National development strategy for the period after 2013 has not been adopted.

“According to the vision of the County Development Strategy 2011-2013, the Split-Dalmatia County is a highly developed, dynamically developing, maritime oriented, open European – Mediterranean region: with a competitive economy, based on knowledge and high quality human resources; recognisable and attractive due to high quality of life, preserved environment, culture and tradition; oriented towards sustainable development of all its parts, and integrated with its wider environment in the transport and development sense; based on strong partnership and communication among development stakeholders.” (www.rera.hr)

The strategy also defines the strategic goals of the County: a competitive economy, infrastructure development, nature and environment protection, human resources development

and enhancing the quality of life, improving development management and strengthening the County's recognisability.

In addition to the basic county development strategy, regulatory development framework includes the following county development programmes:

- Strategy for Economic Development of the Split-Dalmatia County for the Period until 2015 (2004)
- Tourism Development Master Plan (2007)
- Cultural Tourism Development Plan of the Split-Dalmatia County (2009)
- Study Action Plan for the Development of Nautical Tourism of the Split-Dalmatia County (2015)
- Human Resources Development Strategy of the Split-Dalmatia County 2014-2020 (2015)
- Rural Tourism Development Strategy of the Split-Dalmatia County (2009)
- Strategic Branding Plan of the Split-Dalmatia County
- Spatial Plan of the Split-Dalmatia County, 2002, Amendments to the Spatial Plan of the Split-Dalmatia County (last update 2013)
- Environmental Protection Programme of the Split-Dalmatia County (2008)
- Plan for Irrigation of Agricultural Land of the Split-Dalmatia County (2006)
- Ethno-eco Village Programme (2008)
- Waste Management Plan 2007-2015
- Economic Zone Development Programme in the Split-Dalmatia County 2017-2020
- Mobility Master Plan of the Split-Dalmatia County, concept for preparation (2015)

From the list of development plans and programmes, it can be concluded that most of these are outdated programmes that need to be updated and adapted to new development and budget policies of the Republic of Croatia and the European Union.

Some of the units of local self-government have elaborated plans for the overall development of the municipality or city, but there is no accurate information about which of the units of local self-government possess elaborated strategic development documents, and the extent to which they apply them, which indicates a lack of strategic planning and coordination of strategic development through cooperation with the county and neighbouring units of local self-government.

The Act on Regional Development of the Republic of Croatia introduced the obligation to adopt the Urban Area Development Strategy. Urban areas are established as urban agglomerations, larger urban areas and smaller urban areas. Accordingly, a draft of the Development Strategy of the Urban Agglomeration Split, which consists of the City of Split and 13 neighbouring units of local self-government has been prepared. It is expected that this Strategy will greatly influence the development of the entire county.

One of the strategic documents essential for managing development is the Spatial Plan of the Split-Dalmatia County and spatial plans of cities and municipalities, which define development guidelines and rules for the allocation and use of space. Some of the key drawbacks of the existing system of spatial planning are outdated cadastre and land registries, unresolved land ownership issues, neglected socio-economic values, the practice of making plans that do not

provide a long-term vision, and the existing status is often established and legalised, which is why spatial plans are not a means of supporting and implementing strategy development, but serve only for spatial administration. Such a situation of mismatched title deeds and possessory titles (land registry and cadastre) confuses and discourages property buyers and investors (www.rera.hr).

It is possible to conclude that the county regional framework includes the existence of numerous strategies and development programmes. Due to their number, but also the stakeholders involved in the implementation of these plans, programmes and strategies, certain problems occur. One of the problems is the lack of a system for monitoring and evaluation of results of the implemented development programmes and projects, based on which measures for further planning of projects would be proposed.

The County does not have a unique systemised database that would serve as a basis for future planning and decision making, and a great deal of development strategies and plans are sectoral, rather than integral (www.rera.hr).

Also, one of the problems is the undefined methodological framework for the preparation of strategic documents of units of local self-government, resulting in different quality of documents, as well as in questionable alignment with the strategic documents at the county and national level. This indicates a high degree of incoordination in the system of making strategic development plans, which results in the adoption of strategies just to comply with the procedure and, consequently, in flawed implementation thereof.

Which supra-regional policy strategies have an important influence on the region?

Assessment of these strategies.

- Legal framework for regional development management

Regional development management of the Republic of Croatia is covered by six laws. Five laws apply only to certain areas (regional laws), and the sixth law regulates management itself and applies to the entire territory of the Republic of Croatia.

Of the regional laws, the Act on Areas of Special State Concern, the Islands Act, the Act on Hilly and Mountainous Areas and the Act on Ratification of the Protocol on Integrated Coastal Zone Management should be singled out.

By adopting the Act on Regional Development of the Republic of Croatia, a systematic process of strategic planning of regional development at the national level was launched, as well as the process of strategic planning of development at the county level in the Republic of Croatia. This Act regulates the objectives and principles of regional development management of the Republic of Croatia, planning documents of the regional development policy, bodies responsible for regional development management, assessment of the degree of development of units of local and regional self-government, method of identifying urban and assisted areas, encouraging the development of assisted areas, implementation, monitoring and

reporting on the implementation of the regional development policy, in order to make the most efficient use of European Union funds www.rera.hr.

- Strategic framework for regional development management at the national level

The Regional Development Strategy of the Republic of Croatia 2011-2013, which identifies three strategic goals: the development of counties and statistical regions, the development of assisted areas, and the development of border areas, was adopted in May 2010. At the time of writing of this report, Regional Development Strategy of the Republic of Croatia for the current programming period 2014-2020 has not yet been adopted.

Many sectoral **strategies** at the national level have also been adopted, which define development guidelines in individual sectors, and have an impact on regional development:

- Industrial Strategy of the Republic of Croatia 2014-2020 (2014)
- Strategy for Innovation Encouragement of the Republic of Croatia 2014-2020 (2014)
- Smart Specialisation Strategy of the Republic of Croatia 2016-2020 (2016)
- Maritime Development and Integrated Maritime Policy Strategy of the Republic of Croatia 2014-2020 (2014)
- Transport Development Strategy of the Republic of Croatia 2014-2030 (2014)
- Tourism Development Strategy of the Republic of Croatia until 2020 (2013)
- Strategy for Development of Entrepreneurship in the Republic of Croatia 2013-2020 (2013)
- Strategy of Women Entrepreneurship Development in the Republic of Croatia 2014-2020 (2014)
- National Health Care Strategy 2012-2020 (2012)
- Energy Strategy of the Republic of Croatia until 2020 (2009)
- Strategy of Education, Science and Technology (2014)
- Cluster Development Strategy in of the Republic of Croatia 2011-2020 (2011)
- Strategy for Broadband Development in the Republic of Croatia 2012-2015 (2011)
- Strategy for Combating Poverty and Social Exclusion in the Republic of Croatia 2014-2020 (2014)

However, most strategic documents are not fully aligned with each other. When implementing documents, the general impression is that strategies “end up in drawers”, which is also an obstacle when motivating stakeholders to create new strategic documents.

3.3 Support instruments for SME and the three focus sectors

overview of support instruments, and their assessment. What are good practices? Which initiatives and programmes were effective and have resulted in SME creation and development?

Promotion of small and medium entrepreneurship of the Split-Dalmatia County is carried out through the following programmes:

Programme for the promotion of small and medium entrepreneurship

Programme for the promotion of small and medium entrepreneurship includes the following projects:

With loan to success 2014: Measure 1 – With loan to competitiveness

In cooperation with the Ministry of Economy, Entrepreneurship and Crafts and commercial banks, the Split-Dalmatia County subsidises interest rates on approved loans. The maximum loan size is EUR 666.666, and the interest rate for subsidy beneficiaries ranges from 0.6% to 2.6%. The beneficiaries of this measure are micro, small and medium-sized entrepreneurs investing in the area of the Split-Dalmatia County²⁵⁴. According to the Report on the promotion of small and medium entrepreneurship in the Split-Dalmatia County, 26 loans in the amount of EUR 10,860,476.80 were disbursed in 2016. As many as half of the loans were disbursed within the ship and boat building activity²⁵⁵.

According to the Report on the state of economy in the Split-Dalmatia County in 2015, 188 loans in the amount of EUR 50,571,023.22 were disbursed in the 2010-2015 lending period²⁵⁶.

Support programme for the establishment and development of small business in the Split-Dalmatia County 2014-2017

Small business support programme includes supports for equipping business premises, marketing preparation of products, education, introduction and acquisition of standards. Support includes granting of dedicated, non-refundable funds from the county's budget in order to encourage the establishment and development of micro, small and medium-sized enterprises in majority private ownership. The target group are women entrepreneurs, young people and beginners in entrepreneurship.

In 2016, 87 projects of economic entities were implemented, and the amount of grants awarded was EUR 179,742.35. Within the project, 192 employees were employed (Report on the promotion of small and medium entrepreneurship in the Split-Dalmatia County in 2016).

Programme to encourage the construction of entrepreneurial zones in the Split-Dalmatia County for the 2017-2020 period

Programme envisages encouraging the development of entrepreneurial zones in units of local self-government in the Split-Dalmatia County, through construction, equipping and development of infrastructurally equipped areas defined by spatial plans, intended for the performance of certain types of entrepreneurial, that is, economic activities²⁵⁷.

²⁵⁴ Competition for the Programme „With loan to success 2014“ Measure 1 – „With loan to competitiveness“ for 2015

²⁵⁵ Report on the promotion of small and medium entrepreneurship in the Split-Dalmatia County in 2016

²⁵⁶ Report on the state of economy in the Split-Dalmatia County in 2015

²⁵⁷ Programme for the promotion of construction of entrepreneurial zones in the Split-Dalmatia County for the 2017 – 2020 period

Beneficiaries of this Programme are all cities and municipalities in the Split-Dalmatia County that have taken a decision to establish entrepreneurial zones, for new zones, or a decision on the continuation of activities for the already established zones.

Table 3.1: Overview of investment in entrepreneurial zones 2004-2016, in EUR

FINANCING SOURCES	2004-2015	2016	TOTAL
Split-Dalmatia County	5,296,711.73	608,000.00	5,904,711.73
Ministry of Economy, Entrepreneurship and Crafts	6,764,000.00	-	6,764,000.00
Regional Development Fund of the Republic of Croatia	1,027,333.33	-	1,027,333.33
Total	13,088,045.06	608,000.00	13,696,045,06

Source: Report on the promotion of small and medium entrepreneurship in the Split-Dalmatia County in 2016

Lifelong learning programme

Lifelong Learning Programme 2014-2017 is aimed at improving skills and competencies of the workforce, enhancing the relevance of education and training systems, and enhancing partnerships between universities/faculties, scientific and technological centres and enterprises²⁵⁸.

The Programme includes the following measures:

- Measure 1. Co-financing support institutions(encouraging the establishment and work of support institutions: business incubators and entrepreneurial centres)
- Measure 2. Co-financing international conferences and symposiums on the topic of key contemporary technologies, which are being held in the County
- Measure 3. Local partnership for employment

In 2016, 25 grants in the amount of EUR 112,000.00 were awarded within this Programme.

Technological development, research and application of innovation programme

The Technological Development, Research and Application of Innovation Programme 2014-2017 includes the following measures:

- Measure 1. Co-financing research and development projects
- Measure 2. Co-financing the preparation and work on development projects through EU funds
- Measure 3. Co-financing innovation

In 2016, 15 projects were approved within the Programme, with the total grant amount of EUR 120,000.00. These projects were implemented in cooperation with the most prominent research groups from several components of the University of Split (Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Science, School of Medicine) and in cooperation with several business entities from the Split-Dalmatia County, inclined to apply new technologies and knowledge.

²⁵⁸ Report on the promotion of small and medium entrepreneurship in the Split-Dalmatia County in 2016

Besides these programmes, within the development programmes of the Split-Dalmatia County, there are programmes that indirectly affect the entrepreneurial environment and entrepreneurial climate, such as the Systematic Energy Management Programme and the Agriculture and Rural Development Support Programme.

Systematic energy management programme in the Split-Dalmatia county 2014-2017

The Programme is defined through the following projects:

- Project 1: Encouraging the use of renewable energy sources in family houses
- Project 2: Encouraging the improvement of energy efficiency of family houses
- Project 3: Encouraging the reduction of energy consumption and light pollution of street lighting

Beneficiaries of these measures are natural persons residing in the Split-Dalmatia County at the address of the building on which the project is being implemented, and whose property on which the project is being implemented is located in the Split-Dalmatia County, and who invest their own funds in the projects for which the grants are intended (measures 1 and 2), and municipalities and cities in the Split-Dalmatia County, which invest their own funds in the said projects.

Agriculture and rural development support programme in the Split-Dalmatia county 2017-2020

The Programme is implemented through the following measures and activities:

- Measure 1. Consolidation of agricultural holdings and arrangement of agricultural land
- Measure 2. Application of manure and implementation of Nitrates Directive
- Measure 3. Special aid measures for the livestock sector
- Measure 4. Legalisation of facilities for performing primary production of agricultural products at a farm
- Measure 5. Support for the construction of simple accumulations in agriculture
- Measure 6. Support for insurance in agriculture
- Measure 7. Supporting the work of agricultural associations
- Measure 8. Supporting the work of local action groups
- Measure 9. Support for the development of competitive agricultural production
- Measure 10. Guarantee Loan Fund for Green Entrepreneurship
- Measure 11. Restoration of the existing neglected field paths in the hinterland, coastal areas and islands in the Split-Dalmatia County
- Measure 12. Support for co-financing the procurement of planting material in the Split-Dalmatia County

Beneficiaries of the measures are, in accordance with their specifics defined by the Programme, owners or members of family farms or farms, registered associations of agricultural producers and processors from the Split-Dalmatia County, local action groups in the county area accredited by the Ministry of Agriculture, and units of local self-government from the county.

Analysis of the region's OPs of the 2007-2013 and the 2014-2020 programming periods: What expenditures are used to support SME over time? Have they selected Thematic Objec-

tive 3 “Enhancing the competitiveness of small and medium-sized enterprises (SME)” within their priority axes?

What justifications were made, what kind of actions/sub-measures were supported and how much money was allocated? Have other thematic objectives been used for SME support?

In the first observed period, as an EU candidate country Croatia used the funds from IPARD (Instrument for Pre-Accession Assistance in Rural Development), the Pre-Accession Program of the European Union for the period 2007-2013.

Table 3.2 shows the measures used within the IPARD programme for the programmatic period 2007-2013. Within the IPARD programme in the mentioned period, beneficiaries in the area of Split-Dalmatia County were paid the total grant amount of EUR 9,033,525.82, of which EUR 6,788,548.68 are paid EU grants.

Table 3.2: Measures used within the IPARD programme 2007-2013 in the Split-Dalmatia County

Measure	Description of the measure	Amount of grant paid (EUR)	Paid EU grant, from the total amount of grant paid (EUR)
101_Investments in agricultural holdings to restructure and to upgrade to Community standards	Investments in the dairy sector, beef sector, pig sector, poultry sector, egg sector, fruit and vegetable sector, grains and oil crops sector	EUR 788,912.84	EUR 591,684.63
103_Investments in the processing and marketing of agriculture and fishery products to restructure those activities and to upgrade them to Community standards	Investments in the milk and dairy sector, meat processing sector, fisheries sector, fruit and vegetable processing sector, wine sector, olive oil sector	EUR 6,870,990	EUR 5,153,242.52
202_preparation and implementation of local rural development strategies	Connecting all the sectors, civil, economic and public, and joint development of strategic goals and priorities of individual rural areas, i.e., decentralisation of decision-making and accountability to this level, has been initiated in rural areas through the LEADER approach, i.e. the creation of local action groups (LAG) within a specific micro-region	EUR 268,086.71	EUR 214,469.34
301_Improvement and development of rural infrastructure	Investment in sewerage systems and wastewater treatment, local unclassified roads, heating plants, fire prevention passages with elements of forest roads	EUR 862,570.12	EUR 646,927.59
302_Diversification and development of rural economic activities	Investment in the sector of rural tourism, sector of traditional crafts, sector of direct marketing, sector of freshwater aquaculture, sector of services, sector of on-farm processing plants, sector of renewable energy sources	EUR 242,966.15	EUR 182,224.6

Source: Ministry of Regional Development and EU Funds of the Republic of Croatia

In the same period, Croatia used funds under the operational program Regional Competitiveness within the European Regional Development Fund. Table 3.3 presents the list of measures and beneficiaries within the operational program Regional Competitiveness relevant for Split-Dalmatia County.

Table 3.3: European Fund for Regional Development 2007-2013

Operational programme	Measure	Beneficiaries
Regional Competitiveness	Development of the business climate and the competitiveness of the small and medium-sized enterprises	Small and medium-sized enterprises
	Research, development and technology transfer	Public higher education institutions and public research organisations
	Business infrastructure support	Units of local and regional self-government and regional/local public institutions or associations, public companies owned by bodies of self-government
Transport	Preparation of transport infrastructure projects for the next programmatic period	Hrvatske ceste Ltd., HŽ Infrastruktura Ltd., HŽ Putnički prijevoz Ltd.

Source: Ministry of Regional Development and EU Funds of the Republic of Croatia

Within the European Fund for Regional Development in the 2007-2013 period, beneficiaries in the Split-Dalmatia County were awarded grant funds in the amount of EUR 16,112,994.70.

For the next programming period, i.e., for the period 2014-2020, it was very difficult to gather data at the county level. In the following section are presented relevant measures, sub-measures and beneficiaries at the national level.

Table 3.4: European Agricultural Fund for Rural Development (EAFRD) period 2014-2020

Measure	Sub-measure	Beneficiaries
M3 – Quality schemes for agricultural products and foodstuffs	Support for new participation in quality schemes	Active farmers registered in the Register of Agricultural Holdings who are involved in an EU or national quality scheme; associations of organic agricultural producers.
	Support for information and promotion activities implemented by groups of producers in the internal market	Producer groups (associations) participating in EU or national quality schemes; associations of organic agricultural producers whose members participate in an organic production scheme.
M4 – Investments in physical assets	Support for investments in agricultural holdings	Natural and legal persons registered in the Register of Agricultural Holdings (except natural and legal persons whose economic size is less than EUR 6,000 if they invest in fruit, vegetable and flowers sector and less than EUR 8,000 for investments in other sectors) Producer groups/organisations
	Support for investments in processing/marketing and/or development of agricultural products	Natural and legal persons that deal with or intend to deal with processing of products
	Support for investments in infrastructure related to development, modernisation or adaptation of agriculture and forestry	Regional self-government units

Measure	Sub-measure	Beneficiaries
	Support for non-productive investments linked to the achievement of agri-environment and climate objectives	Agriculture holdings registered in the Register of Agricultural Holdings Public institutions and bodies, including public institutions for the management of protected areas (state, regional and local public institutions) Local self-government units and civil associations involved in the protection and promotion of cultural values and environmental protection.
M5 – Restoring agricultural production potential damaged by natural disasters and catastrophic events and introduction of appropriate prevention actions	Support for investments for the restoration of agricultural land and production potential damaged by natural disasters, adverse climatic events and catastrophic events	Farmers or groups of farmers registered in the Register of Agricultural Holdings Regional self-government units
M6 – Farm and business development	Support for young farmers	Persons who are older than 18 and younger than 40 years of age, who possess the appropriate professional skills and knowledge of agriculture, and who are setting-up for the first time as a head of an agricultural holding.
	Business start-up aid for non-agricultural activities in rural areas	Agricultural holdings registered in the Register of Agricultural Holdings in the range of micro and small business entities, Natural persons as head or members of family agricultural holding that start a new non-agricultural activity in rural areas.
	Business start-up aid for the development of small farms	Small agricultural holdings, whose economic size is between EUR 2,000 and 7,999
	Investments in development of non-agricultural activities in rural areas	Agricultural holdings registered in the Register of Agricultural Holdings in the range of micro and small business entities, Natural persons as head or members of family agricultural holding.
M8 – Investments in forest area development and improvement of the viability of forests	Support for investments improving the resilience and environmental value of forest ecosystems	Private and public forest holders Companies and other legal persons who, in accordance with the Forest Act, manage forests and forest land owned by the Republic of Croatia Associations of private forest holders Civil society associations and bodies active in nature protection
	Support for investments in forestry technologies and in processing, mobilising and marketing of forest products	Private forest holders Associations of private forest holders Crafts, micro, small and medium-sized enterprises, registered for wood processing activities Local government and self-government units and their associations
M9 – Setting-up producer groups and organisations	Setting up of producer groups and organisations in the agriculture and forestry sectors	Producer organisations officially recognised in the period from 1st January 2014 to 31st December 2020 in any sector of agricultural production in the range of micro, small and medium enterprises
M17 – Risk management	Crop, animal and plant insurance premium	Natural or legal persons, or groups of natural or legal persons registered in the Register of Agricultural Holdings

Source: Rural Development Programme of the Republic of Croatia for the Period 2014-2020.

According to the latest available Contract Status for Split-Dalmatia County (30th April 2017), relevant measures from this programme for Split-Dalmatia County are: Investments in physical assets (M04), Restoring agricultural production potential damaged by natural disasters and catastrophic events and introduction of appropriate prevention actions (M05), Farm and business development (M06), Basic services and village renewal in rural areas (M07) and Support for LEADER local development (M19).

Table 3.5 presents structured allocation of EU funds according to the specific objectives. Total allocation of EU funds within TO3 – Competitiveness for SME for the period 2014 -2020 is 970.000.000 EUR.

Table 3.5: Overview of priorities and specific goals of the Operational Programme Competitiveness and Cohesion 2014-2020

Investment priorities	Specific goal	Allocation of funds in EUR
Promoting entrepreneurship, in particular by facilitating the economic exploitation of new ideas and fostering the creation of new firms, including through business incubators	Facilitating the access to finance for small and medium-sized enterprises (SME), including start-ups	EUR 250,000,000
	Favourable environment for entrepreneurship development	EUR 280,000,000
Supporting the capacity of SME for growth and innovation processes	Improving SME' results and growth	EUR 260,000,000
	Enhancing SME' innovativeness	EUR 180,000,000

Source: Ministry of Regional Development and EU Funds of the Republic of Croatia

According to the latest available Contract Status for Split-Dalmatia County (30th April 2017), there are two specific goals:

1st specific goal: Improving results and growth of SME where the grants are allocated for

- Improving the competitiveness and efficiency of SME in areas with developmental particularities through information and communication technologies and
- Supporting the development of SME in tourism by increasing the quality and additional hotel amenities

2nd specific goal: Enhanced innovativeness of small and medium-sized enterprises where the grants are allocated for *Innovations of newly established SME*.

Table 3.6: ESI funding relevant for SME support in the region in thousand EUR (000)

	Period 2007-2013	Period 2014-2020
a) EU FP: Cooperative Research		
Project 1..		
Project 2..		
(Or all projects in total, if available).		
b) EU FP: Research for SME		
COSME	-	Services in Support for Business and Innovation in Croatia 1.397.300 EUR
Horizon 2020	-	<u>Include Ltd</u> 50.000 EUR <u>University of Split</u> 637.560 EUR

	Period 2007-2013	Period 2014-2020
		Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split (FESB) 380.000 EUR Institute of Oceanography and Fisheries 526.593 EUR
Please indicate the themes of the FP research projects below		
InnovFin SME Guarantee. http://www.eif.org/what_we_do/guarantees/single_eu_debt_instrument/innovfin-guarantee-facility/		
InnovFin SME Venture Capital http://www.eif.org/what_we_do/equity/single_eu_equity_instrument/innovfin-sme-vc/index.htm		
d) National/regional funding		
e) Private funds/investments		

Table 3.7 presents the list of the projects funded by HORIZON2020 Program with participating partners from Split Dalmatia County. Based on the disposable data, it can be concluded that only one company from Split Dalmatia County participated in HORIZON2020 Program (Include Ltd – Project: Steora-next step to a smart city). University of Split participated in 5 projects, where two of them were related to the Priority Industrial leadership, Innovation in SME.

Table 3.7: List of projects funded by HORIZON2020 Program in Split Dalmatia County

ORGANIZATION	PROJECT	PILLAR	OBJECTIVE	EC CONTRIBUTION
Include Ltd	Steora-next step to a smart city	Societal Challenges	Secure, clean and efficient energy	50.000 EUR
University in Split	Methods in Research on Research	Excellent Science	Marie Skłodowska-Curie actions	495.522 EUR
University in Split	HEIRRI (Higher Education Institutions and Responsible Research and Innovation)	Science with and for Society	Make scientific and technological careers attractive for young people	97.650 EUR
University in Split	Services for enhancing the innovation management capacity of Croatian SME's through the Enterprise Europe Network	Industrial Leadership	Innovation in SME	24.771 EUR
University in Split	CRO-EU-REKA! Research For Innovation, Innovation For People	Excellent Science	Marie Skłodowska-Curie actions	14.250 EUR
University in Split	Establishing services enhancing the innovation management capacity of Croatian SME's through the Enterprise Europe Network	Industrial Leadership	Innovation in SME	5.367 EUR
Faculty of Electrical Engineering, Mechanical Engineering and Naval	Giantleap Improves Automation of Non-polluting Transportation with Lifetime Extension of Automotive PEM fuel cells	Societal Challenges	Smart, green and integrated transport	296.250 EUR

ORGANIZATION	PROJECT	PILLAR	OBJECTIVE	EC CONTRIBUTION
Architecture in Split (FESB)				
Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split (FESB)	AUTomotive deRivative Energy system	Societal Challenges	Secure, clean and efficient energy	83.750 EUR
Institute of Oceanography and Fisheries	Advanced Tools and Research Strategies for Parasite Control in European farmed fish	Societal Challenges	Food security, sustainable agriculture and forestry, marine and maritime and inland water research	314.780 EUR
Institute of Oceanography and Fisheries	BLUEMED	Societal Challenges	Food security, sustainable agriculture and forestry, marine and maritime and inland water research	170.000 EUR
Institute of Oceanography and Fisheries	SeaDataCloud – Further developing the pan-European infrastructure for marine and ocean data management	Excellent Science	Research infrastructures	41.813 EUR

Source: H2020viz.vinnova.se.

Table 3.8 presents the list of the projects funded by COSME Program related to the development of SME sector. Among others, one of the participating partners on those projects was University of Split. However, there are not disposable data on the SME from Split Dalmatia County that were participating in COSME Program.

Table 3.8: List of projects funded by COSME Program

PROJECT	PROJECT OBJECTIVE	TOPIC	PARTICIPANTS	TOTAL BUDGET	EU CONTRIBUTION
Services in Support for Business and Innovation in Croatia 2015/2016	Access to markets	Enterprise Europe Network	Croatian Agency for SME, Innovations and Investments (HAMAG-BICRO) Technology park Varaždin Ltd TERA Tehnopolis Ltd The Science and Technology Park of the University of Rijeka (Step Ri) Croatian Chamber of Economy University of Split	1.196.742 EUR	698.656 EUR
Services in Support for Business and Innovation in Croatia 2017/2018	Access to markets Croatian and European SME.	Enterprise Europe Network	Croatian Agency for SME, Innovations and Investments (HAMAG-BICRO) Technology park Varaždin Ltd TERA Tehnopolis Ltd The Science and Technology Park of the University of Rijeka (Step Ri) Croatian Chamber of Economy University of Split	1.204.561 EUR	698.644 EUR

Source: Croatian Agency for SME, Innovations and Investments

Which support instruments exist for SME in the three focus sectors ICT, creative/knowledge economy, low carbon economy? What is their leverage? If possible, please describe also quantitatively.

There is no information about special incentives for small and medium-sized enterprises within the three sectors observed. Entrepreneurs have equal opportunity to use the aforementioned programmes and measures, regardless of the sector or activity. Within the mentioned programmes, the “Technology development, Research and Application of Innovation” Programme, whose activities are intended to encourage the ICT sector, can be especially emphasised.

Within the “Technology development, Research and Application of Innovation²⁵⁹” Programme, the Split-Dalmatia County provides grants to users. Grant and co-financing activities are contained in the following measures:

Measure 1. Co-financing research and development projects

This Measure co-finances product development in key technologies, development of equipment, systems and software solutions, services of scientific and research institutions in new product development, and prototype creation.

Measure 2. Co-financing the preparation and work on development projects through EU funds

The Measure co-finances activities of preparation and implementation of research and development projects in the field of advanced technologies, preparation of projects that create basic preconditions for the improvement of infrastructure for scientific and research focus, and technology and knowledge transfer.

These activities are implemented through cooperation with domestic and foreign partners, within EU programmes and through EU Structural Funds.

Measure 3. Co-financing innovation

To improve the innovative capacity of the economy of the Split-Dalmatia County, this Measure co-finances entrepreneurial ideas with high innovation potential, through the activities of development, promotion and commercialisation of innovations; improvement of innovative concept of existing companies; checking the innovative concept, determining technical characteristics and potential of innovation; verification and protection of intellectual property; prototype creation, and establishment of new innovative (start-up) enterprises.

Beneficiaries of all three measures are centres of excellence, technology parks, technology transfer offices, university, faculties and institutes, and small and medium-sized enterprises focused on the application of key advanced technologies and innovations located in the Split-Dalmatia County.

²⁵⁹ Public call for applications for grants from the "Technology Development, Research and Application of Innovation" Programme for 2017

Several set goals have been achieved through the implementation of this Programme²⁶⁰:

- Establishment of the Triple Helix Model (cooperation between public sector, scientific-development research sector and business sector)
- Research work at the university and in the economic sector was encouraged
- Know-how transfer towards the economic sector was conducted
- High factor of multiplication of public funds (>10) was achieved
- Retention and employability of the best young experts at faculties, research and development institutions and in the business sector has been enabled

According to the Report on the promotion of small and medium entrepreneurship in the Split-Dalmatia County, 24 applications were approved within this Programme in 2015, with the total grant amount of EUR 350,000 in the 2014-2017 period. The total involved funds of all the partners (Triple Helix Model) amount to EUR 4.25 million.

In accordance with the achieved results, it is recommended to continue and strengthen efforts to encourage technological development, research and application of innovation.

Which legislative frameworks and regulations influence SME development?

Development of the small and medium enterprise sector and entrepreneurship in Croatia is guided through the following national policies and programs:

Strategy for Development of Entrepreneurship in the Republic of Croatia 2013-2020, from 2013, whose aim is to increase the competitiveness of small and medium enterprises in Croatia by improving economic performance, improving access to finance, promoting entrepreneurship, improving entrepreneurial skills and improving the business environment;

Strategic Plan of the Ministry of Entrepreneurship and Crafts for the period 2015-2017, from 2014, which is based on the Strategy for Development of Entrepreneurship in the Republic of Croatia 2013-2020, specifies the programs for increasing the competitiveness of small and medium enterprises in Croatia;

Program to Encourage Entrepreneurship and Crafts – Entrepreneurial Impulse 2015, from 2015;

Strategy of Women Entrepreneurship Development in the Republic of Croatia 2014-2020, from 2014, whose aim is to achieve the coherence and interconnectedness of policies, to improve systemic support for women entrepreneurship through the entire institutional structure, and to promote women entrepreneurship. For implementing the Strategy, the Action Plan for Implementation of the Strategy of Women Entrepreneurship Development in the Republic of Croatia 2014-2020 was defined in 2014;

Cluster Development Strategy in the Republic of Croatia 2011-2020, from 2011, whose aim is to improve the management of Croatian cluster policy, strengthen clusters and cluster associations, to promote innovation and transfer of new technologies, conquer new markets and

²⁶⁰ Report on the promotion of small and medium entrepreneurship in the Split-Dalmatia County in 2016

internationalization of clusters, and strengthen the knowledge and skills for cluster development;

Strategy for Innovation Encouragement of the Republic of Croatia 2014-2020, from 2014, which aims to build an efficient innovation system and improve the legal and fiscal framework, establish a means of communication and models of cooperation between the public, scientific research and the business sector in order to develop new products, services, business processes and technologies, and the manner of applying the results of scientific research in the economy and society as a whole;

2014-2015 Export Support Action Plan, from 2014, which was developed by the Government's Commission for Internationalization of Croatia's Economy, whose purpose is to consolidate and display in one place all activities and measures that must be taken by the appropriate state bodies and institutions to ensure systematic and sustained support for Croatian exporters and to facilitate the placement of Croatian goods and services to foreign markets;

Action Plan for Reducing the Administrative Burden on the Economy, from August 2015, with which it is planned to reduce administrative burden by 20% in six regulatory areas relevant for the economy, and defining a model for horizontal coordination of measures for measuring and reducing the administrative burden on the economy;

The regulatory framework within which small and medium enterprises in Croatia operate is defined by a series of acts, which regulate different aspects of their operation:

- Act on Improving Entrepreneurial Infrastructure (Official Gazette, NN 93/13, 41/14)
- Small Business Development Promotion Act (Official Gazette, NN 29/02, 63/07, 53/12, 56/13, 121/16)
- State Aid Act (Official Gazette, NN 47/14)
- Companies Act (Official Gazette, NN 111/93, 34/99, 118/03, 107/07, 146/08, 137/09, 152/11, 111/12, 68/13, 110/15)
- Ownership and Other Proprietary Rights Act (Official Gazette, NN 91/96, 137/99, 22/00, 73/00, 114/01, 79/06, 141/06, 146/08, 38/09, 153/09, 143/12, 152/14, 81/15)
- Act on Investment Promotion (Official Gazette, NN102/15)
- Foreign Exchange Act (Official Gazette, NN 96/03, 140/05, 132/06, 153/09, 145/10, 76/13)
- National Payment System Act (Official Gazette, NN 133/09, 136/12)
- Concessions Act (Official Gazette, NN 143/12)
- Capital Market Act (Official Gazette, NN 88/08, 146/08, 74/09, 54/13, 159/13, 18/15, 110/15, 123/16)
- Alternative Investment Funds Act (Official Gazette, NN 16/13, 143/14)
- Crafts Act (Official Gazette, NN 143/13)
- Trade Act (Official Gazette, NN 87/08, 116/08, 76/09, 114/11, 68/13, 30/14)
- Court Register Act (Official Gazette, NN 1/95, 57/96, 45/99, 54/05, 40/07, 91/10, 90/11, 148/13, 93/14, 110/15)
- Act on Services (Official Gazette, NN 80/11)
- Act on Public-Private Partnership (Official Gazette, NN 78/12, 152/14)
- Accounting Act (Official Gazette, NN 109/07, 54/13, 78/15, 134/15, 120/16)
- Competition Act (Official Gazette, NN 79/09, 80/13)

- Public Procurement Act (Official Gazette, NN 90/11, 83/13, 143/13, 13/14, 120/16)
- Environmental Protection Act (NN 80/13, 78/15)
- Physical Planning and Building Act (Official Gazette, NN 76/07, 38/09, 55/11, 90/11, 50/12)
- Labor Act (Official Gazette, NN 93/14)
- Consumer Protection Act (Official Gazette, NN 41/14, 110/15)
- Bankruptcy Act (Official Gazette, NN 71/15)
- Enforcement Act (Official Gazette, NN 112/12, 93/14)

Tax system legislation consists of the following acts:

- General Tax Act (NN 147/08, 18/11, 78/12, 136/12, 73/13, 26/15, 115/16)
- Contributions Act (NN 84/08, 152/08, 94/09, 18/11, 22/12, 144/12, 148/13, 41/14, 143/14, 115/16)
- Profit Tax Act (NN 177/04, 90/05, 57/06, 146/08, 80/10, 22/12, 148/13, 143/14, 50/16, 115/16)
- Income Tax Act (NN 177/04, 73/08, 80/10, 114/11, 22/12, 144/12, 120/13, 125/13, 148/13, 83/14, 143/14, 136/15, 115/16)
- Value Added Tax (NN 73/13, 148/13, 153/13, 143/14, 115/16)
- Real Estate Transfer Tax Act (NN 69/97, 26/00, 153/02, 22/11, 143/14, 115/16)
- Excise Duties Act (NN 22/13, 32/13, 81/13, 100/15, 120/15, 115/16)

3.4 Results of the FOG Test

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities steer decisions made over matters related to SME and entrepreneurship support structures and mechanisms in the region in a unilateral manner.		
	Regional authorities exercise their powers mainly providing services and resources, in turn monitoring the achievement of specified objectives with respect to SME development (performance and results oriented)	✓	
	Regional authorities collaboratively develop and foster, with key stakeholders, SME and entrepreneurship support structures and mechanisms in the region.		✓
	Regional authorities have delegated powers to other entities or relevant stakeholders as a way to proactively develop and foster SME and entrepreneurship support structures and mechanisms in the region.		
	Practices and actions undertaken		
A1.0	Is the development of an entrepreneurship culture in the region rather organically driven (grassroots movements) or rather stemming from a top down approach (institutionally driven)?	Bottom up driven	
A2.0	Which main actor/s is/are informally driving the promotion and shaping the development of an entrepreneurship culture in the region?	Groups/associations of young entrepreneurs	
A3.0	Which main actor/s is/are formally driving the promotion and shaping the development of an entrepreneurship culture in the region?	Regional authority	

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities, along with other actors create partnerships to foster an entrepreneurship culture in the region, going beyond the national or European framework/requirements.		✓
	Activities intended to promote an entrepreneurship culture are financially supported and closely monitored to optimise the efficiency, effectiveness and transparency of the actions undertaken by stakeholders receiving support from the regional authorities.		
	A top down approach is adopted by regional authorities when promoting the development of an entrepreneurial culture (e.g. initiatives on the organisations of start-up conferences stem from local authorities)		

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities are enabling all actors to take on the initiative to promote the development of an entrepreneurship culture in the region (e.g. via advisory services, training)	✓	
B1.0	Which actions are undertaken in the region to develop an entrepreneurial climate and culture?	Entrepreneurship courses for unemployed persons	

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities facilitate the creation of business start-up support structures by engaging with a large array of stakeholders themselves.	✓	
	Regional authorities directly contribute to increase the business start-up rate by initiating and managing business start-up support structures.		
	Networks, incubators, portals and gateways are being developed hand in hand by local authorities and citizens, proactively stepping in to create a start-up friendly environment in the region.		✓
	Regional authorities support the development of start-up support structures by providing the necessary resources to (intermediate) working to boost entrepreneurial skills in the region.		
C1.0	According to you, which support structure or practice for start-ups and SME is the most effective and should be further emphasised to ensure the development of entrepreneurial skills in the region?	Incubators	

	Bloc Perception: Opportunities (Please tick one option for reality and one option for „how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities have developed strategies and implement schemes intending to reduce barriers to entry, eliminate obstacles and foster an environment conducive to the development of start-ups and SME.	✓	
	Off-the-shelf financing practices as well as the provision of a venture capital environment provide innovative and inclusive sources of financing, which are tailor-made to the needs of the actors in the region.		✓
	The provision of financing support by the region is provided and can be conditional on the achievement of set objectives and result-oriented approaches are favoured by authorities, which encourage a greater ownership of the projects to ensure the success of the action and a return on investment.		

	Bloc Perception: Opportunities (Please tick one option for reality and one option for „how it should be“)	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities use the synergies developed in networks of stakeholders supporting entrepreneurship. They accordingly facilitate the development of conventional financing bodies as well as participative financing schemes targeting start-ups, SME and project holders from under-represented groups.		
	Practices and actions undertaken		
D1.0	Is there a financial gap or a suboptimal investment situation for SME financing in the region?	Yes	
D2.0	What are the most commonly used financial support schemes or means of financing for entrepreneurs and SME?	Financial instruments (loans, guarantees, etc.) from financial intermediaries	
D3.0	How do governance mechanisms contribute to start-up/SME development while making up for the reduced availability of public funding?	Facilitation of communication between key factors, i.e. organisation or sponsoring of conference to increase SME visibility and marketing	
D4.0	Are regional authorities prompt to take economic risks when providing financial support to SME?	Not really. The authorities' propensity for risk-taking is rated as 1 (0=No risk taken, 5=high risk taken)	
D5.0	Who supports and fosters higher accessibility of the region (physical infrastructure)? How (grants/PPP, etc.)	National institutions	
D6.0	What is done to improve the governance standards at national/regional/local level?	Initiatives do ease the legal requirements to start and run a business and speed up business starts	

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities ensure the development of an entrepreneurial culture in the region looking at other regions' governance structures and mechanisms to improve their own entrepreneurship and SME policies and create partnerships with other regional authorities to foster innovation as well as the development of synergies.	✓	
	Regional authorities are integrated into a multi-level governance system and actively collaborate to identify best practices and challenges solving options beyond regional and national borders.		✓
	Co-funded projects are driving the need for further collaboration between regional authorities and between regions.		

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Developing contacts and partnerships is the spearhead of regional authorities and key actors to make up for potentially limited public intervention (e.g. public funding) and autonomously find solutions to local issues (without recurring to external support).		
	Practices and actions undertaken		
E1.0	Have regional clusters developed ties and are collaborating with other clusters at the national/EU level?	No	
E2.0	Which are the regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment?	Project cooperation with various other EU regions	

4 Results of the SWOT analysis

Internal factors – factors of competitiveness

Major strengths
<p>Landscape and natural endowment</p> <p>Split-Dalmatia County is located in the Mediterranean area with extremely favourable climatic conditions, a large number of sunny days, an indented coastline with many islands and peninsulas, and natural beauty and historical heritage, which are excellent preconditions for tourism and other activities.</p>
<p>Knowledge and innovation potential</p> <p>The University of Split has a long tradition and a large number of study programmes, and is the second largest university in Croatia.</p>
<p>Development of ICT sector</p> <p>Thanks to the <u>Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split (FESB)</u> and several young entrepreneurs who have developed businesses with over 100 employees from start-up companies, and started several initiatives to strengthen the ICT scene, the ICT sector in the Split-Dalmatia County is extremely propulsive and brings together talented young IT experts, of which there are around 6,000 in the County.</p>
Other strengths – less pronounced
<p>International accessibility of the region by high-way, roads and airplane</p> <p>Regional (public) physical infrastructure (transportation and ICT)</p>
<p>Informal business cluster among ICT companies</p> <p>Given that this is a younger population of entrepreneurs, most of whom are students of the same faculty (Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split – FESB), and given that they do not compete with each other – there is good connection and cooperation between ICT companies in the Split-Dalmatia County.</p>
Major weaknesses
<p>Education and skills of the workforce</p> <p>Reduction of working population with the necessary qualifications, especially in rural areas of the County and in healthcare.</p>
<p>Fragmentation of estates</p> <p>Inheriting estates from generation to generation has resulted in reduction of the size of estates, which have become unprofitable for agricultural production.</p>
<p>Uneven development of certain parts of the Split-Dalmatia County</p> <p>Depopulation of a large area of the County due to economic underdevelopment and poor quality of support infrastructure (healthcare, kindergartens, connections, etc.)</p>
<p>Governance quality</p> <p>Lack of cooperation between regional and local self-government because of belonging to different political options; Insufficient capacity and development strategies in place to implement EU projects.</p>
<p>Almost exclusive reliance on tourism as a source of income</p> <p>Excessive dependence on the tourism industry, which has a highly seasonal character</p> <p>In high season, the physical infrastructure does not meet the needs of the increased number of people staying in Split, the seat of the County. Most people are renting apartments, and few work in creative industries that enhance the quality of tourism product.</p>
Other weaknesses – less pronounced
<p>A large share of shadow economy in the economy</p> <p>Tourism-related activities (catering, accommodation rental, etc.) have a significant share of shadow economy, for which an efficient control system at the national level has not been developed.</p>
<p>Sectoral specialisation vs. sectoral diversity</p> <p>Inadequate development of creative industries as upgrades to the basic tourism product</p>
Ambiguous factors – represent a strength in some of the businesses/industries, but a weakness in others
<p>Quality of business networks and associations</p> <p>In ICT industry inter-firm linkages exist, there are several charismatic entrepreneurs that are initi-</p>

ating and leading projects that involve other entrepreneurs. In other industries there is no evidence of similar level of cooperation or linkages.
Low level of workforce mobility Competitive workers, like ICT experts are mobile and look for the opportunities in their career development, while less skilled workers that are not competitive in the labour market are not mobile.
Neutral factors – represent neither a strength nor a weakness
Presence of the entrepreneurial zones and other infrastructure Although there are entrepreneurship supporting organisations, like entrepreneurial zones in Split-Dalmatia County, they do not operate according to their mission and do not provide quality support to entrepreneurs.

External factors – framework conditions

Major opportunities/drivers
Revitalisation of agricultural production on ecological basis Thanks to its Mediterranean climate and its unpolluted soil and water, the Split-Dalmatia County is able to produce organic agricultural products.
Production of energy from renewable sources Thanks to the extremely favourable natural conditions – a large number of sunny days in a year and windy areas in the County's hinterland.
Development of selective forms of tourism Climatic preconditions for the development of health, sports, congress and other types of tourism.
Other opportunities/drivers – less pronounced
Availability of EU funds for the development of entrepreneurial activity and infrastructure Due to insufficient administrative capacity and lack of strategic thinking, opportunities for withdrawal of EU funds have not been successfully exploited so far.
Harmonisation of educational programmes with the needs of the labour market Currently, there is insufficient harmonisation of formal education with the needs of the economy, and the education system is too rigid to change.
Demographic and economic revitalisation of the less developed areas of the Split-Dalmatia County Significant potential of the Split-Dalmatia County is insufficiently utilised for the purpose of developing the entire County, which has good natural preconditions for development.
Major threats/challenges/barriers
Security conditions in the wider region Given the great reliance of the Split-Dalmatia County on tourism, there is a possibility of losing a significant source of income in the event of terrorist attacks in the immediate vicinity.
Unfavourable institutional and regulatory environment for economic development Excessive fiscal and parafiscal charges, inflexibility of the Labour Act, over-regulation by the government.
Lack of strategic thinking about regional development at the national level Lack of strategic thinking continually and in the long run reduces the competitiveness of the Split-Dalmatia County in tourism and other activities.
Other threats/challenges/barriers – less pronounced
Underdevelopment of non-traditional sources of financing entrepreneurial activity Focus on banking financial products, and lack of alternative sources of financing for the SME sector. For financing entrepreneurial projects, it is not difficult to get loan from the bank, but there are no other non-traditional ways of funding available for more risky phases of development of entrepreneurial venture.
Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others
Mismatched supply and demand of advisory services for entrepreneurs Poor quality and development of institutional infrastructure for entrepreneurs may represent an opportunity for the development of private initiative in the field of providing high-quality advisory services for entrepreneurs.
Neutral factors – represent neither an opportunity/driver nor a threat/barrier
-

5 Future policy needs

Based on the literature, the interviews, and in particular based on the Focus Group, please describe:

What is needed to increase the potential of SME development?

In order to increase the development potential of the SME sector, it is necessary to ensure better access to financing, which will suit the needs of different stages of development of SME. To this end, it is necessary to adapt the existing instruments and create new instruments.

It is necessary to further develop entrepreneurial environment with an emphasis on support institutions that will provide advisory services and training, i.e., access to information and knowledge for entrepreneurs.

What are successful SME-support structures that should be further strengthened?

The Technological Development, Research and Application of Innovation Programme, which co-financed research and development projects, proved to be a particularly successful support programme in the Split-Dalmatia County. In 2016, 15 projects were approved within the Programme, with the total grant amount of EUR 120,000.00. In these projects, cooperation was achieved between the SME sector, inclined to apply new technologies and knowledge, with researchers from several components of the University of Split (Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Faculty of Science, School of Medicine), supported by funding from the Split-Dalmatia County.

What role could European Cohesion Policy and European funding play, especially through the ERDF?

European Cohesion Policy and European funding should permanently ensure easier access to financing for the SME sector, as well as access to information and knowledge.

Furthermore, it is necessary to enable equalisation (approximation) of subsidised financing conditions for entrepreneurs in EU countries, since they are presently different, which does not put entrepreneurs from EU countries in the same position.

In encouraging the development of infrastructural projects, it is important to broadly define the term infrastructure, in a way that it includes both physical and virtual infrastructure (for example, creation of an online matching platform for buying and selling micro enterprises – REEM-PRESA in Spain was made possible through the ERDF fund, while the relevant ministry was not ready to support a similar initiative in Croatia because it did not fit the definition of infrastructure in the narrow sense).

What should be organised at national or regional level? How could the interaction of different governance levels be improved?

It is important to enable strengthening the capacity of people who work on implementation of measures and programmes, and to encourage promotion and sharing of good practices of use of EU funds to encourage similar good and successful projects in other areas.

Summarizing, which framework conditions and regional factors need to be improved and how?

- at the regional level

At the regional level, it is important to develop support services and institutions for SME, which will provide access to information and knowledge for SME.

- at the national

At the national level, it is important to encourage cooperation between knowledge & research institutions and SME in order to enable the transfer of knowledge from universities to the economy. Through formal requirements for the advancement of researchers at universities, it is necessary to make research activities at universities more socially useful.

Furthermore, it is important to ensure coordination and continuity in the implementation of measures for uniformity of development at the national (and then regional) level, and the pre-condition for this is to create a strategic approach, in the sense of bringing together all relevant stakeholders in the development of a regional development strategy, which is currently not adopted at the national level.

It is necessary to ensure harmonisation of legal regulations, which currently, due to their inconsistency at different levels, prevent cooperation and implementation of projects.

- at the European level

At the EU level, it is important to further emphasise custom-made programmes, measures and instruments (ne one-size all solutions) at the level of states and regions. It is also important to provide equal business conditions for entrepreneurs in all areas of the EU through funding conditions.

It is of crucial importance to equally support challenges SME are facing in different phases of lifecycle (not exclusively focusing on start-up as it is in the last decade throughout EU programmes) and address accordingly different needs SME are facing in those phases with custom-made programmes (start-up, growth, exit phase). In all programmes it is important to emphasize the potential and advantages of operating on the single EU market (e.g.stimulating crossborder cooperation in defining entry, growth and exit entrepreneurial strategies).

6 Annex

6.1 Interview partners

Name	Organisation	Position	Special expertise/years of experience ²⁶¹	Interview Date	Tel/f2f
Vesna Ivić-Šimetin	CEA – Croatian Employers' Association	Director of the Regional Office in Split	20	7/6/2017	Tel
Boško Ljubenkov	University of Split Technology Transfer Office	Professional Associate for Technology Transfer	4	7/6/2017	Tel
Marina Lovrinčević	University of Split, Faculty of Economics	Associate Professor	15	9/6/2017/	Tel
Vicencije Biuk	Split-Dalmatia County-Administrative Department of Economy, EU funds and Agriculture	Vice of Head of Administrative Department	30	9/6/2017	Tel
An entrepreneur (requires staying anonymous)	ICT company	Owner and director	9	9/6/2017	Tel
An entrepreneur (requires staying anonymous)	Creative industry company	Owner and director	15	8/6/2017	Tel

6.2 Focus Group participants

Name	Organisation	Position	Special expertise/years of experience ²⁶²	Date of workshop	Tel/f2f
Goran Ljubičić	Croatian Chamber of Trades and Crafts – Split	Head of Finance	5	13/6/2017	f2f
Žana Plazibat	CEA Croatian Employers' Association – Split-Dalmatia County	Expert Associate for Legal Affairs	17	13/6/2017	f2f
Vinko Muštra	University of Split, Faculty of Economics	Assistant professor	11	13/6/2017	f2f
Boško Ljubenkov	University of Split Technology Transfer Office	Professional Associate for Technology Transfer	4	7/6/2017	f2f
Mario Lipovac	IT company; Association and Atelier Vasko Lipovac	Director	20	13/6/2017	f2f

²⁶¹ Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

²⁶² Representatives of business association, entrepreneurs, ICT, creative/knowledge economy, low-carbon economy, labour market representatives, researchers, representatives of regional administration, etc. Please add information on the years of experience of the participant for being able to judge on their expertise.

Name	Organisation	Position	Special expertise/years of experience ²⁶²	Date of workshop	Tel/f2f
Vicencije Biuk	Split-Dalmatia County-Administrative Department of Economy, EU funds and Agriculture	Vice of Head of Administrative Department	30	13/6/2017	f2f
Josipa Simunic	The City of Split	Legal Advisor	7	13/6/2017	f2f
Vesna Friedl	The Croatian Chamber of Economy_Split-Dalmatia County	Director	24	13/6/2017	f2f
Ana Buličić Krespi	Public Institution RERA S.D. for Coordination and Development of Split-Dalmatia County -Department for Small and Medium Enterprises	Senior Expert Associate	13	13/6/2017	f2f

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Case study report: Ostroleka

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1 Mapping the SME sector in the region

General information

Ostroleka subregion is a north-east part of the biggest, most populated and fastest developing Polish region – Mazowieckie. Yet, the subregion itself faces serious developmental challenges, which are strictly related to its geographical (inner periphery) and socio-economic peripherality.

Table 1.1: Ostroleka subregion (NUTS-3) factsheet; 2016

Population	387 523
Area (km²)	6 504
Population density (per km²)	60
Urban population (% of total)	36,3
Unemployment rate (%)	12,5

Source: Central Statistics Office.

Although further analysis is made at subregional level (NUTS-3), it is important to underline that the region is internally diverse in many aspects. Firstly the economic structure of the powiats is divergent and this causes uneven economic development. Ostrowski and wyszkowski powiats are less developed than regional median level, but they do develop faster in comparison to the regional median (convergence trend). Ostrołęka land powiat, however, is more developed than regional median, but its actual economic growth is weaker. Three remaining powiats: ostrolecki, makowski and przasnyski are less developed than regional median and their current situation is stagnant (Agrotec 2012).

Secondly, transport accessibility is highly diverse: Ostrowski and Wyszowski powiats benefits from the vicinity and good road connection with Warsaw (S8), and Ostroleka, Makow and Przasnysz face serious challenges of peripheral location: limited road and train connections as well as low accessibility from the capital (Warsaw) and other parts of the subregion.

Thus, Ostroleka subregion has two important characteristics in relation to both internal functional organization and the relation to Warsaw – socio-economic centre of the Mazowieckie region. Firstly, the process of functional and spatial integration of Ostroleka subregion takes place. Secondly the role of Ostroleka subregion in polycentric structure of Mazowieckie is forming just now. Interestingly, economic interaction of the subregion with Warsaw remains suspended between cooperation and conflict (MBPR, 2013).

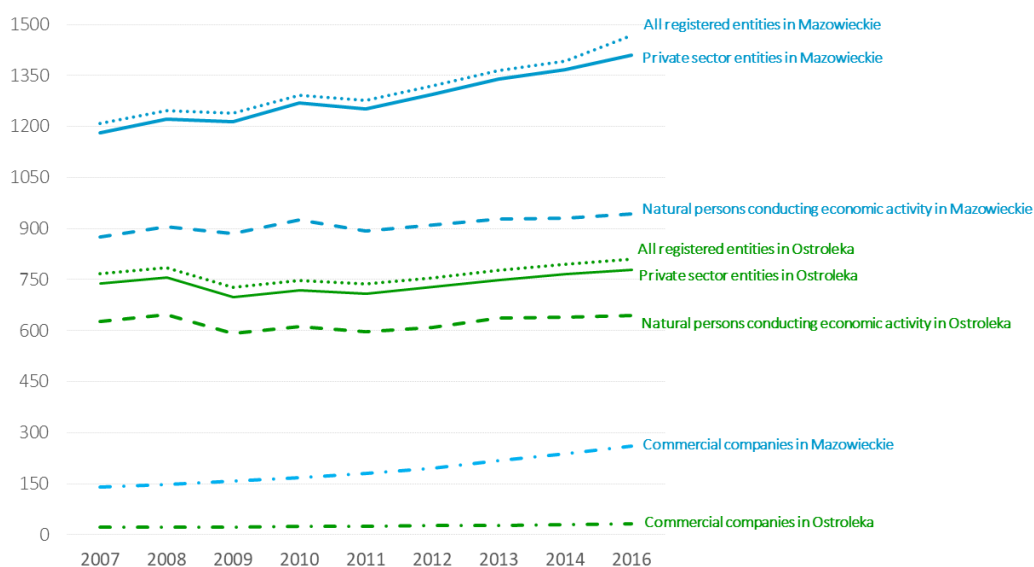
Business sector – dominant enterprises types

The business sector in the case study region is relatively weak. Moreover, negative tendencies have been observed with regard to the dynamics of the enterprises' development in the Mazowieckie region background since 2008. The total number of all registered entities of the

national economy²⁶³ in the Ostroleka sub-region in 2016 reached 31,384, which is 4.0% of all entities in Mazowieckie Region (Voivodship). The number of entities increased by 6,7% in the 2007-2016 period, however, this growth was definitely much lower than the one observed in the region as a whole (25.6%). It resulted in the slight decrease in the percentage of entities registered in the sub-region in the overall number of entities in Mazowieckie (from 4.7% in 2007 to 4.0% in 2016).

The analysis of the relative values confirm and strengthen these findings. Apparently, low levels of entrepreneurship and untapped human capital potential in the region remain the main problems hampering SME development. In 2016 the number of private sector entities per 10,000 inhabitants reached 779, while in the Mazowieckie region it was almost twice as high (1410). Moreover while in the region as a whole this indicator increased in the period 2007-2016 by more than 19%, it was not the case in the Ostroleka sub-region, where just a limited growth (5.6%) with some fluctuation between particular years was observed

Figure 1.1: Changes in the number of registered entities²⁶⁴ per 10,000 inhabitants



Source: Own elaboration based on data from Central Statistics Office of Poland²⁶⁵.

The natural persons entrepreneur is the dominant form of the business entities in the Ostroleka sub-region. This category accounted for 82.6% of all private sector entities registered in the subregion. This indicator was higher by almost 16 percentage points in comparison to

²⁶³ Broad category of entities (includes also such types as social economy co-operatives or associations conducting economic activity).

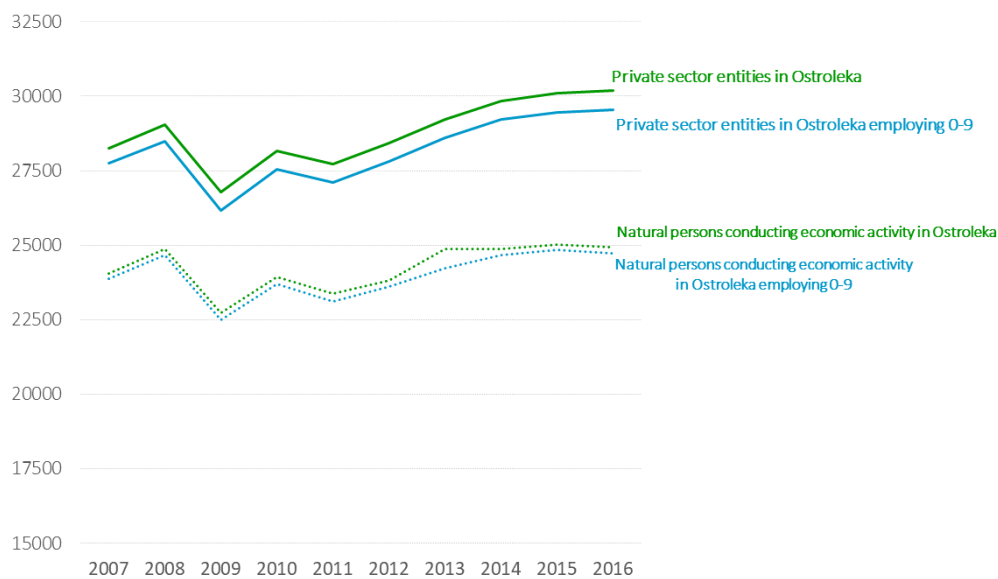
²⁶⁴ 'Entities' refer to a legal person, an organizational entity without legal personality and a natural person conducting economic activity. It is broader concept than "firm" or "entrepreneur".

²⁶⁵ Data used for calculations came from the yearly reports "Structural changes of groups of the national economy entities entered in the REGON register" published by the Central Statistical Office of Poland.

the regional average (67%). The commercial companies²⁶⁶, in comparison, accounted for only 4.3% of all private sector entities registered in the subregion, which was lower by more than 14 percentage points in comparison to the regional average (18.6%).

This is naturally related to the structure of business sector regarding the firm size classes. The micro-enterprises category prevails. In 2016 97.9% out of 30,189 private firms operating in the Ostroleka sub-region employed from 1 to 9 employees. The share of micro companies in subregion was higher than in the Mazowieckie region by 1.3 percentage points.

Figure 1.2: Number of all entities and natural persons employing 0-9 in relation to all private sector and all natural persons conducting economic activity in Ostroleka

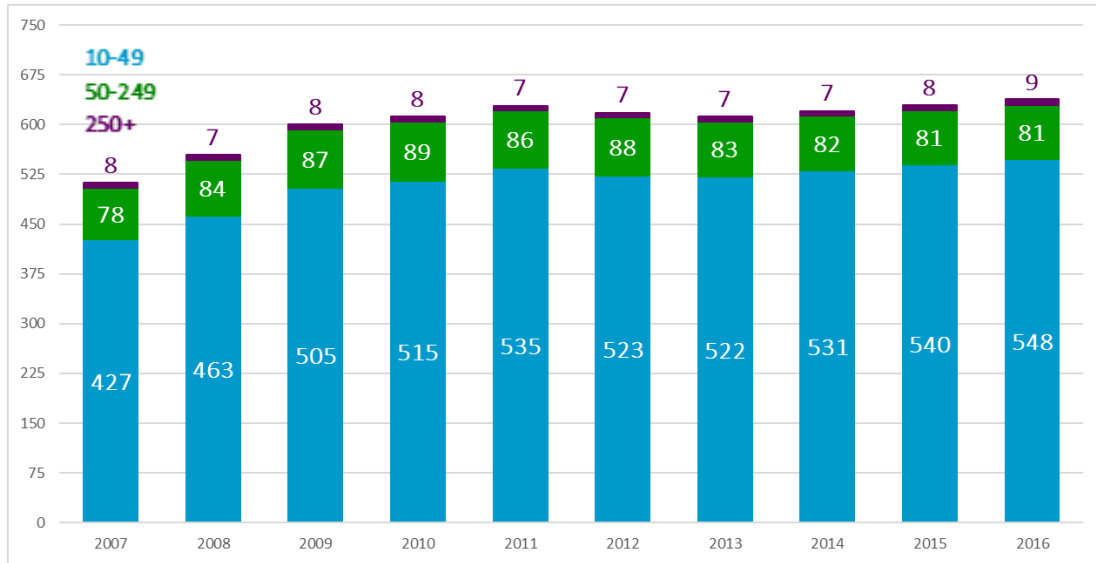


Source: Own elaboration based on data from Central Statistics Office of Poland

From the other side, the number of large enterprises, which might be considered as potentially activating factor for the SME sector formation, is not satisfactory. There were only 8 enterprises with more than 250 employees in 2008 and in the 2016 this number increased only to.

²⁶⁶ Commercial companies definition by the Central Statistics Office of Poland: “a company for which the establishment, organization, functioning, winding – up, merger, division and transformation is regulated by Code of Commercial Companies regulations. The commercial companies include: partnerships, professional partnerships, limited partnerships, limited joint – stock partnerships) and companies (joint stocks, limited liabilities). The commercial companies are obliged to be registered in the National Court Register.”

Figure 1.3: Number of private sector firms with 10-49, 50-249 and 250+ employees in case study region

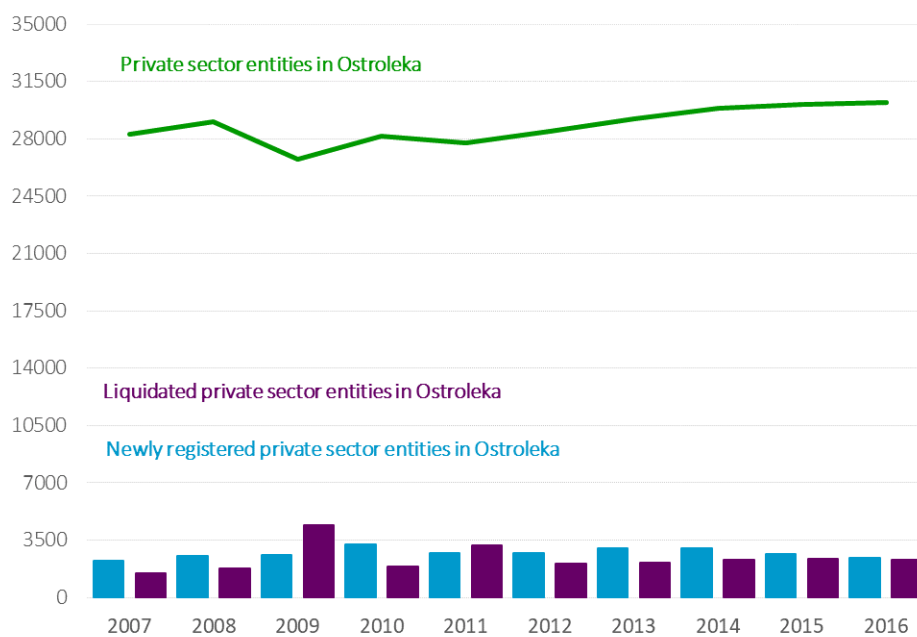


Source: Own elaboration based on data from Central Statistics Office of Poland.

Business sector demographic trends (birth/closure)

During 2007-2016 the number of newly registered firms in private sector was higher than the number of liquidated firms, except from 2009 and 2011. Significant shift in the number of private firms closed in 2009 was mainly the result of methodological changes introduced by the Statistical Office and accompanying data cleaning procedures, which consisted of removing non-active entities from the registry. The number of firms liquidated in 2011 could be partially attributed to the impact of global economic downturn which was observed within the whole Polish private sector (PARP 2013). The last two years of the analysed period end up with the balance between the number of newly registered and liquidated companies in the region

Figure 1.4: Firms birth and closure in Ostroleka Subregion



Source: Own elaboration based on data from Central Statistics Office of Poland.

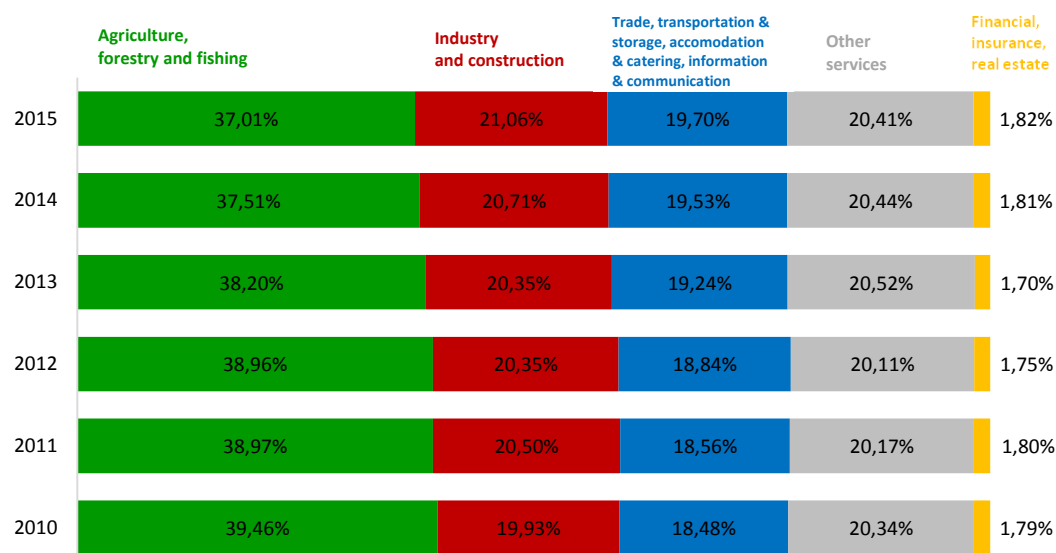
The net value of firms birth rate²⁶⁷ in the studied period was mostly positive, with only two negative exceptions, namely 2009 (-6,9%) and 2011 (-1,6%). Nevertheless, in recent years slight but constant decrease of this indicator is observed (from 2,9% in 2013 to 0,5% in 2016). The same trend is observed in the whole Mazowieckie region (from 3,4% in 2013 to 0,4% in 2016).

Business sector – structure

Sectoral structure of the case study region economy is stable in the analysed period. Primary sector dominates – 37% of enterprises operates within agriculture. A distinct specialization can be pointed out in some specific parts of the region. For instance agro-food processing in the field of dairying (according to SRWM) and wood processing (according to RIS) in the poviats of Ostroleka.

Since 2008 the share of primary sector has decreased by 3.5 percentage points. This is the result of the slight increase of the industry and trade sectors in the Ostroleka sub-region economy in the years 2008-2015 (each of the sectors by more than one percentage point). Industry and construction became the second important sector in 2015 with the share of 21%. Other services sector remains on the stable level of 20%, trade transportation and storage, accommodation at comparable level of 19.7%. Financial, real estate and insurance stood at the level of 1.8% remains the least important sector in the case study region (Figure 1.5).

Figure 1.5: Sectoral structure of the case study region economy



Source: Own elaboration based on data from Central Statistics Office of Poland

The interviewees underlined the agricultural character of the region and the deficiency of the creative economy, ICT and low-emission enterprises. In the classification of poviats according

²⁶⁷ Difference between newly registered entities and liquidated entities in relation to all registered private sector entities in a given year.

to concentration of high- and medium-high technology of industrial processing and knowledge-based services (LQ) on the basis of revenues from the total activity in 2015, the poviat of Ostrołęka was not taken into account due to the lack of such activities (Warsaw Statistical Office 2017).

There are some examples of this kind of businesses but on a very low scale. Private higher schools (e.g. Higher School of Public Administration in Ostroleka) are relatively weak in terms of their relation to the region, for instance. Personnel comes from the outside of the region (commuting from Warsaw), thus the research activities are all but absent. The good example of the research activity is Higher School of Social and Economic Sciences participating in the EU project, which aims to provide easy recognition of skills and qualifications on the labour market²⁶⁸. Moreover, the proposed curricula are feebly related to the regional economy. The sector struggle with the high competitiveness pressure from other educational centres located in the close distance (Warsaw, Bialystok – medical university, Olsztyn – agricultural studies, and Łomża higher education sector), general negative demographic trends and also, specific for the sub-region, lack of interest in studying. The last trend relates mostly to the administration staff that is reluctant to raise their managerial competencies²⁶⁹.

ICT sector consists of dispersed small scale enterprises dealing with services related to ICT infrastructure. The sector also suffers from the lack of internal demand.

²⁶⁸ <http://www.wses.edu.pl/en-erasmus.html>

²⁶⁹ based on the informal discussion with the Rector of Higher School of Public Administration in Ostroleka

2 Factors influencing the dynamics of the region (strengths, weaknesses, opportunities and threats)

The central issue addressed in the following section is the identification of strengths, weaknesses, opportunities and threats that could either support or hinder entrepreneurship development in the region. Desk research and fieldwork research in Ostroleka subregion revealed overall difficult conditions for subregional SME sector development. Although strategic documents of local authorities point out some strengths of the region, i.e. natural and landscape potential (Narew, Omulew, Bug, Puszcza Biała, Puszcza Zielona) and areas of regional cultural heritage (Kurpiowszczyzna) which could serve as a basis for the development of modern forms of tourism, recreation, leisure and design-based economy, both interviews and focus group interviews (FGI) findings questioned this view.

The majority of evidence relates to important barriers to SME development. First of all, **entrepreneurship potential of local population is very low**. Ostroleka subregion marks out from other subregions of the Mazowieckie by the lowest values of indicators of economic entities in Mazovia (e.g. newly registered units per 10,000 population, natural persons conducting business activity per 100 persons of working age). This is partly related to the high employment in the agricultural sector, which is characterized by low level of innovativeness of farms. This, in turn, inhibits development of the SME sector, which provides innovative products and services for agriculture, e.g. in robotics and automation. Apart from this, other important subregional sectors transport, such as commerce, simple services for the population (cosmetics, hairdressing), construction, and basic repair sector are characterised by the low added value. This stems from the low-cost competitiveness in these sectors.

Moreover, **serious weaknesses related to the knowledge and skills of entrepreneurs** were identified. The vast majority of people who set up and run their businesses are possessed of modest knowledge on business planning, management, added value creation, developing long-lasting relationships with clients and business partners, the labour market and available sources of funding. As a result the “garage” model of business that never goes beyond a small scale of action dominates. The shortages in knowledge about modern tools and instruments supporting SME development available outside the local environment seems to be pervasive. People are not familiar with such forms as venture capital, business angels, accelerators, incubators as well as don't recognise the external financing options.

In addition to that, interviewees underlined **low level of innovation and creativity of local entrepreneurs**. This could be broken down into the two intervened components. Firstly, mental barriers consist of the belief that lowest-price competitive advantage is the key to success. Secondly, the low level of acceptable risk which results in the reluctance to seek for external partners derived from the fear of a theft of the ideas. It is important to underline that this cultural roots of entrepreneurial behaviours and attitudes are not distinctive only for the case study sub-region. Šimić Banović (2016) notes that high level of uncertainty avoidance is spread among CEE and Mediterranean countries and correlates with lower level of business

friendliness (measured by the Doing Business Indicators). Entrepreneurship mindset barriers are reinforced by **severe financial gap** (low level of financial resources available for development investment in enterprises).

Furthermore, the broader **institutional settings** within which entrepreneurs make business decisions **are unfavourable**, especially for the three sectors in case: ICT, low-emission and knowledge. Few factors play a role here. The scattered institutional network is crucial. The academic sector present in the subregion is scarce and consists only from feeble non-public universities strongly oriented to education and not able to undertake research, build strong connections with the local market and take a role of regional leaders. These institutions suffer from the lack of in-house personnel and avail themselves of staff from outside the region. Moreover there is absence of research institutions, and lack of local institutions supporting innovation processes in enterprises. The weak endogenous institutional potential cannot be supplemented by external resources, due to the unawareness of the possibilities of seeking support outside the place of business. The result is visible in the lowest share of newly registered creative sector entities in the number of newly registered entities in Mazovia.

Likewise, local public institutions – in majority – have serious difficulties in thinking out of the box about SME support. There is clear **lack of local leaders** (both from public, business and NGO sectors) initiating and giving a boost to the cooperation networks. **Business organisations are scarce and weak**; many of them are in decline. To some extent this is a result of strong internal competitiveness mechanisms in the local environment, high level of distrust towards other entities operating in the same industry reducing the possibility of cooperation.

Another identified unfavourable factor is inadequate **mechanisms of cooperation between local government and entrepreneurs**, which do not reflect the type and scale of challenges of the SME sector. The low level of cooperation between local government and enterprises creates difficulties in establishing and deepening relations. Among activities of the local government the routine, traditional activity dominates (e.g. the arming of investment areas), while the creative thinking is lacking (e.g. traditional craftwork as a basis for modern design).

There are also other – less pronounced – weaknesses which are mostly related to the **communication accessibility** of a large part of the sub-region. In particular poorly developed transport infrastructure of a supra-local importance hinders the development of business on a larger scale. The problematic infrastructure includes: poor condition of the railway network on the Warszawa-Wyszków-Ostrołęka line, low standard of roads connecting urban centres in the sub-region, especially Wyszków-Ostrołęka and bridges requiring modernization (e.g. Ostrołęka).

The functioning of the **Special Economic Zones** in the sub-region was identified as ambiguous factor, which means that it can either represents a strength in some of the businesses/industries, and a weakness in others. This stems from the fact the Special Economic Zones might of course create the opportunity for new investments in the sub-region. How-

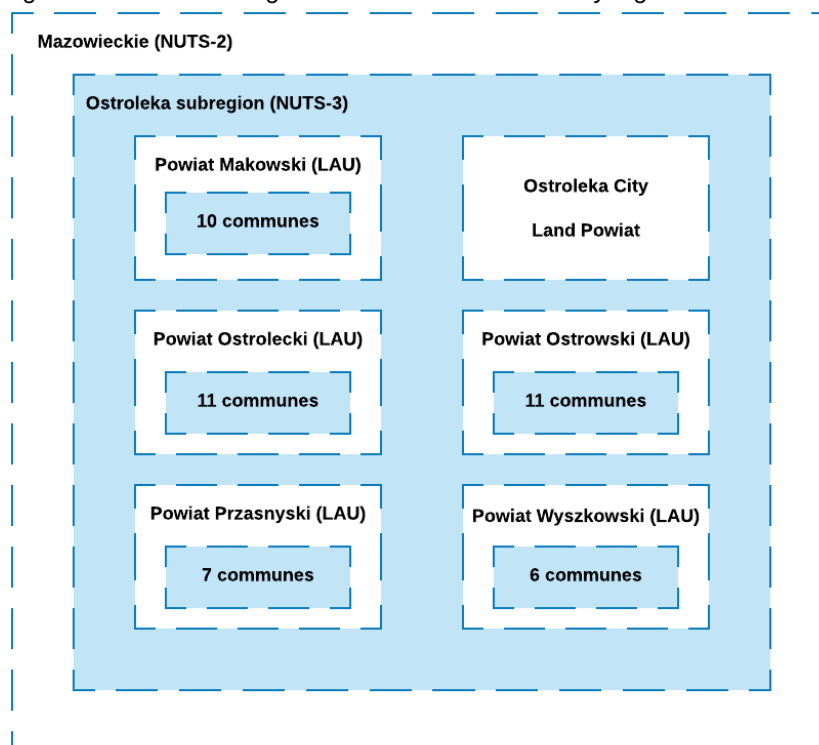
ever, they might also cause the distortion of competitiveness on the local market. This is related to the tax exemptions for new companies perceived as unjustified by entrepreneurs working for years, especially in case of businesses operating in similar areas. Additionally, the new companies can absorb local workers, which is – in particular – the case of larger (international) companies developing at the expense of smaller ones.

3 Governance issues

3.1 Institutions and governance levels

Poland is the unitary country which regional governance system could be divided into 3 main subnational levels: 16 regional governments (*pl: samorząd wojewódzki*), intermediary level (380 subregional governments PL: *samorząd powiatowy*) and municipal level (2478 communes – *PL: samorząd gminny*) (OECD 2016). Figure 3.1 shows the institutional setting of the case study region.

Figure 3.1: Sub-national governance levels in case study region



Source: Own elaboration

Each of the above mentioned governance structures has different responsibilities with regard to regional, economic and entrepreneurship development. Regional government is responsible for (Noworól 2014):

- supporting favorable conditions for economic development (and regional labor market in particular);
- maintaining and developing the regional infrastructure (both technical and social);
- acquiring and merging both public and private financial resources to deliver public services;
- fostering citizens education level;
- shaping regional natural resources in accordance with sustainable development principles;
- supporting development of the regional science sector, fostering cooperation between business and science, advocating for innovation and technological progress;
- supporting culture development, as well as preserving and promoting regional cultural heritage;

- promoting regional economy;
- improving social inclusion.

Since 2007-2013 programming period regional governments have been tasked with managing Regional Operational Programs (ROP), while previously regions acted as intermediary bodies. This has led to consolidation of the strategic and executive roles of regional government within the regional development policy domain. To perform its functions regional government engages in various policy networks by cooperation with European Commission and National Government (to manage and implement ROP), national government and its agencies (to manage sectoral policies), sub-regional and local actors (to coordinate development policy) and stakeholders (to increase legitimation and effectiveness of undertaken actions).

Currently, interaction and consultations between regional government and local authorities became a standard practice of regional governance in Poland. It has been visible in all key strategic processes in recent years: elaboration of Regional Operational Program 2014-2020, formulation of Regional Innovation Strategy, and preparation of Regional Territorial Investment strategies.

Apart from the ERDF, Regional Operational Program regional authorities support entrepreneurship development through activities of its agency, namely the Mazovia Development Agency Plc (ARMSA). The role of the agency is to promote regional economy (both to attract foreign investors to invest in Mazowsze and to help regional SME in internationalization of their activities). The Agency provides investor services (Investor and Exporter Service Centre), issues guidelines, organizes marketing campaigns, trade fairs, and provides technical assistance and training for regional entrepreneurs (e.g. on different aspects of export activity). ARMSA actively collaborate with subregional and local authorities in terms of exchanging information, building networks and initiating new projects.

At the intermediary level, poviats authorities, have no direct legal obligations to support business activities. This level in Polish governance system acts as supportive in creating favorable environment (by activating labor market, steering local educational system or investing in transport infrastructure) and usually does not undertake direct activities related to SME development, except from territorial marketing campaigns. Poviats authorities are also responsible for subregional road infrastructure maintenance.

At the lowest territorial level, i.e. commune/municipality level, local authorities may use much broader catalogue of tools to strengthen entrepreneurship development. In general within Polish legal and administrative system local authorities (gminas) can:

- use financial instruments (tax reductions, subsidies) to support SME development;
- use planning instruments (steering spatial development of economic activity within local community);
- use investment instruments (expanding technical and social infrastructure) to provide basic resources for SME;
- promote local economy and attract external investors;
- acquire and mobilize external financial resources;

- create and develop institutional setting facilitating SME development.

Several Polish studies have revealed that this level of governance is relatively weak in terms of steering local development. In widely discussed expert report Hausner et al. (2013) have drawn public attention to several structural deficits of local governments. Local administration in Poland has very weak capacity to stimulate socio-economic development, also in relation to SME support. Additionally, available EU funding is used without clear alignment to strategic vision and objectives. These findings also apply to the case study region. Local support for SME is basically limited to very few tools.

Formulation of local tax policy is the main financial tool available for local authorities. Each commune can either adopt tax rates at the statutory level determined by the Ministry of Finance or reduce rates to adjust their levels to local conditions. Tax reductions are frequently used to support SME development by lowering operational costs (i.e. real estate tax (land, buildings and constructions) and motor vehicle tax for all vehicles above 3,5 ton and below 12 ton).

Apart from maintaining business friendly local tax policy, authorities focus on spatial planning and infrastructural investments which are regarded as most efficient way to support economic development of the local area. In recent years in the case study region local authorities with the support of EU funding, established both Economic Activity Zones (separate and prepared for development areas meeting the needs of potential investors) and Investment Areas located within Special Economic Zones. The biggest investment zone in Przasnysz Poviát (more than 300 ha of investment grounds with direct access to small local airport (mainly for small sport aircrafts) is the example of the former, while investment grounds (2.5 ha) in Olszewo-Borki commune used by food producer Melvit, Korona Hotel and cellular concrete producer – Ostbruk) is the example of the latter.

3.2 Policy strategies in place

The following section gives a brief description of policy strategies addressing development challenges within case study region. The Polish system of strategic planning is rather complex. Institutions representing each sub-national governance level have to prepare, revise and update obligatory strategies and plans which scope is defined by legal acts (Noworól 2014). The regional government is obliged to elaborate 9 strategic documents and 31 operational programs, none of which is entirely devoted to entrepreneurship development, as oppose to other sectoral policies, e.g. social policy – 11 documents, education policy – 2 documents, natural environment protection – 10 documents, etc. Broader strategic plans related to regional development as a whole describe, among others, entrepreneurship development issues.

The **Development Strategy for Central Poland** (towards 2030) is the basic document on **supra-regional level**. Conceptual base for this document was jointly developed by two regions: Mazowieckie and Łódzkie (their regional planning offices) and refined to final version

by the Ministry for Infrastructure and Development. The Strategy directly refers to the sectors under study. First and third strategic targets aim at creating integrated space for knowledge and innovation, as well as investing in hi-tech medical technology sectors. Second strategic objective foresees development of favourable conditions for artists and designers (i.e. creative economy). Yet, the case study region is basically omitted in this strategy which focuses on the Warszawa-Łódź nexus and promotes development of clusters in above mentioned sectors around this nexus. Thus, Ostroleka subregion is left behind with its peripheral status.

As far as **regional strategies** are concerned, two documents are significant for the study: **Mazowieckie Voivodship Development Strategy towards 2030: Innovative Mazovia (SRWM)** and **Regional Innovation Strategy (RIS)**²⁷⁰. Both strategies' geographical coverage is NUTS2 region.

SRWM is constructed around the "innovativeness and competitiveness" nexus. Key policy goals refer to strengthening innovativeness of regional economy through: support for R&D activity (especially within Bio-Tech-Med, nanotechnologies, photonics, ICT, space technologies), facilitating co-operation between science and business, increasing accessibility to broadband Internet and e-services, developing both metropolitan functions (Warsaw) and subregional towns as local centers for innovation and development.

Several strategic actions relate to SME support: increasing SME innovativeness, development of favorable economic environment for SME, offering additional funding schemes for SME development (loans and guarantees), offering support for the patenting process.

In addition to thematic goals, the SRWM strategy includes territorial instruments to address specific territorial challenges. The Ostroleka Subregion was categorized as a lagging (problem) area which demands additional support from national and regional level. These additional actions should include, among other, improving road and train (both passengers and cargo) connectivity, support for regional industries (energy, paper, wood), establishment of public HEI in Ostroleka, fostering agricultural productivity (supporting cooperation with HEI and clusters of food producers).

Furthermore, diagnostic part of RIS provides important insights into possible development of three focus sectors. Firstly, RIS underlines that innovative and entrepreneurship activities are highly concentrated in Warsaw. Nevertheless, Ostroleka subregion, among others, could play complementary role as subregional innovative centres. Secondly, RIS explicitly says that due to high concentration of creative economy in Warsaw and very weak creative potential outside Warsaw Functional Area, there are no evidence-based premises to support creative sectors development outside Warsaw. Thirdly, it underlines that natural base for developing low carbon economy SME in Ostroleka Subregion exists (i.e. biomass sector).

²⁷⁰ Regional Operational Programmes were excluded from this analysis as they are focal point of analysis in the 3.3. section (Support instruments for SME).

Overall, analysis of both regional strategies supports the argument that Ostrołęka Subregion is the inner-periphery within Mazowieckie, which has important consequences for SME support policies, especially in the three focus sectors. More advanced support targets mainly Warsaw business sector and already well-performing SME have easier access to various support instruments.

Moving now to the subregional level, it's useful to highlight that Local Authority Units (Powiat) must elaborate 22 obligatory documents, none of which focuses on entrepreneurship development. At the lowest governance level communes are required to elaborate 24 strategic documents. Likewise, entrepreneurship development is only included in broader local development strategies, with no single document devoted only to this policy domain.

As a result, the following analysis covers 11 strategic documents:

- 1 Integrated Territorial Investment Plan for Ostrołęka Subregion (RIT strategy);
- 5 local authority unit strategies (makowski, ostrolecki, wyszkowski, przasnyski, ostrowski);
- 5 communes local development strategies (Ostrołęka, Makow, Wyszkwow, Przasnysz, Ostrow).

Review of these documents allow to formulate the following findings. Firstly, overall low conceptual quality of the existing strategies needs to be underlined. The diagnostic parts lack analytical depth and robust evidence. Rich data on development situation is frequently missing. Instead, common-knowledge opinions are used to support diagnoses. As a result, it is extremely difficult to say, how does the real socio-economic situation looks like and which of the formulated statements are only presumptions. In consequence, strategies seem to rather duplicate common knowledge on economic development factors (building on myths rather than facts). Therefore, strategies neither advance understanding of barriers and challenges that local entrepreneurs face, nor serve as the tool of creative reflection about development challenges of the local community. Those written policy documents serve as purely administrative tool and have limited usefulness in drawing strategic directions for the SME support.

Secondly, the intervention logic (theory of change model) is oversimplified and lack the clear, justified connection between premises, targets, actions and resources, as well as expected outcomes. This is also reflected in the design and structure of the monitoring systems foreseen in strategies. Most indicators are either narrow, product-type, which allow only to track the activity level or the opposite – indicators are broad, capturing more complex phenomena (e.g. overall unemployment rate), which does not allow to match actions with their possible outcomes. Additionally, this flawed logic is visible in parts, where important barriers identified at the diagnostic stage are not addressed by activities foreseen by the strategy.

Thirdly, strategies reveals a significant knowledge and vision gap as far as entrepreneurship support is concerned. Although all strategies have almost one explicit policy goal related to entrepreneurship development and they reassure that local authorities are fully committed to SME support, simple, not-innovative, clichéd solutions dominate. All strategies claim that

spatial planning and preparing investment parcels, along with stable tax policies and territorial marketing actions are key activities that could help local entrepreneurs to strengthen their competitiveness. Local strategies do not refer to more complex, innovative support schemes for SME sector (e.g. only two local strategies assume creation and development of business incubators). In many cases ambitious strategic declarations on policy aims are not followed by adequate actions (e.g. international and regional promotion of local economy is reduced to maintenance of the website).

Moreover, none of the local strategies refer to the three focus sectors. Knowledge based economy is only generally recalled without any specific reference to the SME sector in the region. Only one strategy acknowledges the need to build citizen's skills in relation to innovativeness and creativity, but foreseen actions relate only to educational programs at primary and intermediary education levels.

Analysis of sub-regional strategies demonstrate difficulties of local authorities with formulating accurate diagnoses and creating adequate solutions, in particular more complex, non-financial, but rather organizational solutions (e.g. how to use non-investment tools to strengthen entrepreneurship, how to increase the networking and collaboration among local entrepreneurs, or large companies potential for spurring SME sector).

To conclude, its worth mentioning that overall weak quality and limited usefulness of local strategic documents are not distinctive only to the Ostroleka subregion. Polish researches and experts observe that majority of the local development strategies are dummy and do not substantially support development processes (Hausner et al. 2013).

3.3 Support instruments for SME and the three focus sectors

The past decade of SME support has seen the unprecedented development which was caused by the availability of EU Funding within Regional Operational Programs. The following table shows the allocation of SME targeted support in 2007-2013 and 2014-2020 periods:

Table 3.1: Allocation of ESIF funding for SME support by the entities in the Mazowieckie in thousand EUR (000)

	Period 2007-2013 ²⁷¹			Period 2014-2020 ²⁷²		
	EU expenditure	National expenditure	Private expenditure	EU expenditure	National expenditure	Private expenditure
1.2. Fostering cooperation between science and business	6 375	1 125	15 000	-	-	-
1.5. Development of entrepreneurship	165 537.5	29 212.5	279 000	-	-	-
1.7. Business promotion	46 962	8 287.5	2 500	-	-	-
1.8. Support for enterprises in the implementation of best available techniques (BAT)	7 962.2	1 405	14 051	-	-	-
2.3. ICT for Small and Medium Enterprises	7 900	1 394.1	13 941.2	-	-	-
6.2. Tourism	77 350	13 650	80 625	-	-	-
Priority Investment 1b Promoting business investment in R&I, developing links and synergies between enterprises, research and development centres and the higher education sector	-	-	-	153 019 421	78 236 432	77 736 432
Priority Investment 3a Promoting entrepreneurship, in particular by facilitating the economic exploitation of new ideas and fostering the creation of new firms, including through business incubators	-	-	-	72 083 927	18 020 982	7 826 101
Priority Investment 3b Developing and implementing new business models for SME, in particular with regard to internationalization	-	-	-	33 159 967	8 289 992	6 869 840
Priority Investment 3c. Supporting the creation and the extension of advanced capacities for product and service development.	-	-	-	108 125 892	88 466 639	88 466 639
Priority Investment 4a Promoting the production and distribution of energy derived from renewable sources.	-	-	-	37 707 260	13 711 731	6 170 279

²⁷¹ Data covers allocation for Investment Priorities, based on Final Report on ROP WM 2007-2013 implementation, document available at: www.rpo.mazowia.eu

²⁷² Data covers allocation for Investment Priorities, based on "Detailed description of investment priorities of the ROP WM 2014-2020" as of 13/06/2017, document available at: www.funduszedlamazowska.eu

In addition to initial allocation, implementation data is used to investigate what was the actual absorption level of EU Funding in the SME in the case study subregion. During 2007-2013 period, SME from the Ostroleka-Subregion implemented EU funded projects within the following Priority axes of the Regional Operational Programme for Mazowieckie:

- 1.2. Fostering cooperation between science and business – 2 projects (one of the beneficiaries, Evertec Solutions from Przasnysz, used EU funding to develop new technologies in the low carbon economy sector, i.e. develop new solutions for solar installations);
- 1.5. Development of entrepreneurship –89 projects (most of which were focused on purchase and implementation of new equipment);
- 1.7. Business promotion – 2 projects (both beneficiaries used financing to attend international industrial fair);
- 1.8. Support for enterprises in the implementation of best available techniques (BAT) – 4 projects;
- 2.3. ICT for Small and Medium Enterprises – 3 projects (purchase and implementation of information or CRM systems);
- 4.3. Land protection – 1 project;
- 6.2. Tourism – 18 projects.

Table 3.2: Absorption of ESIF funding for SME support by the entities in the Ostroleka subregion in thousand EUR (000)

	Period 2007-2013 ²⁷³			Period 2014-2020 ²⁷⁴		
	EU expenditure	National expenditure	Private expenditure	EU expenditure	National expenditure	Private expenditure
<i>1.2. Fostering cooperation between science and business</i>	854.8	150.9	1664.9	-	-	-
<i>1.5. Development of entrepreneurship</i>	13783.2	2432.3	26817.1	-	-	-
<i>1.7. Business promotion</i>	20.5	3.6	38.5	-	-	-
<i>1.8. Support for enterprises in the implementation of best available techniques (BAT)</i>	474.6	83.8	891.7	-	-	-
<i>2.3. ICT for Small and Medium Enterprises</i>	192.9	34.0	420.8	-	-	-
<i>4.3. Land protection</i>	489.9	86.5	986.5	-	-	-
<i>6.2. Tourism</i>	252.9	44.6	266.5	-	-	-
	<i>1.2 Increasing R&D activities of enterprises</i>			23.3	14.9	

²⁷³ Data covers SME funding absorption in the case study region (NUTS-3). Own elaboration based on data from National Monitoring System (KSI SIMIK) available at European Funds Portal: <https://www.funduszeuropejskie.2007-2013.gov.pl/>. Data as of 31/05/2017.

²⁷⁴ Data covers SME funding absorption in the case study region (NUTS-3). Own elaboration based on data from 'EU Grants Map' database available at: <http://www.mapadotacji.gov.pl/en>. Data as of 31/05/2017.

Available data on the use of EU funding in the Ostroleka Subregion confirms findings from in-depth interviews: very few enterprises were interested in building cooperation networks with science institutions (only 2 projects implemented). Also, activities that could be directly linked to the development of the three focus sectors, e.g. creative and knowledge economy are scarce.

Mid-term evaluation commissioned by the Managing Authority (based on survey and interviews, without statistical modeling of possible impact) showed that opinions of entrepreneurs on support for entrepreneurship in Mazowieckie were predominantly positive. Respondents underlined positive impact of implemented project on their firms competitive advantages (Biostat 2012).

Unfortunately, also ex-post evaluation of the ROP does not provide robust quantitative evidence on SME support effectiveness neither for the Mazowieckie nor for Ostroleka subregion. Yet, authors of the study summarize: *“The efficiency analysis showed that in the case of aid granted to entrepreneurs, who represented the largest group of beneficiaries (in particular in Priority Axis 1), mechanisms were introduced to ensure cost effectiveness (...) A more in-depth comparison of effectiveness between the Axes is problematic due to the absence of common indicators for specific Axes. By comparing the indicator concerning the number of jobs created, it is possible to determine that a relatively high effectiveness was achieved in axis 1 (...) The results of quantitative studies concerning the usefulness of projects implemented under ROP MV 2007-2013 show that 91.6% of ROP MV 2007-2013 beneficiaries participating in the study is of an opinion that the results of a project being implemented by these beneficiaries satisfied important needs and/or solved the problems faced by recipients/target group/local community and/or the region, whereas 60% believes that this occurred in a decisive manner.”* (ECORYS 2017, p.10-11).

During the focus group interview (FGI), experts clearly contested that view and said that some of the tools used to support entrepreneurship are not effective and their value is minimal. Small subsidies schemes to start business for unemployed people exemplify ineffectiveness of the existing tools. The tool was highly popular among unemployed citizens of Ostroleka Subregion, but there is an agreement that it did not contribute to SME development in the region as the majority of established companies were by no mean innovative.

Moreover, the absorption pace of funding available for SME in 2014-2020 programming period is very low. Only one project is currently being implemented by an SME from the case study region. Importantly, this project can relate to the focus sectors. Firstly, the project has a large R&D component (development of new electrical and navigation solutions for electric vehicles in cooperation with two technical universities from Warsaw and Gdansk (knowledge economy). Secondly, it includes industrial design work undertaken with the Academy of Fine Arts to increase functionality of the final products (creative economy).

In addition to that it is also important to underline that SME from the Ostroleka Subregion did not use any other type of ESI funding relevant for SME support in the region. Database

search yield no results from SME, only one large international firm from the region – Stora Enso Narew – operating within paper industry is currently involved in one of the Horizon 2020 projects as a partner.

Table 3.3: ESI funding relevant for SME support in the region in thousand EUR (000)

	Period 2007-2013	Period 2014-2020
a) EU FP: Cooperative Research	0 ²⁷⁵	-
b) EU FP: Research for SME	0	-
COSME	0	0 ²⁷⁶
Horizon 2020	-	Horizon 2020 SME Instrument – 0
Please indicate the themes of the FP research projects below	-	Horizon 2020 Environment and Resources – 0 (SME), 1 project partner (large 250+) in Raw materials partnerships topic Horizon 2020 InnoSup – 0 ²⁷⁷ Horizon 2020 Energy Efficiency – 0 ²⁷⁸
InnovFin SME Guarantee. http://www.eif.org/what_we_do/guarantees/single_eu_debt_instrument/innovfin-guarantee-facility/	-	0
InnovFin SME Venture Capital http://www.eif.org/what_we_do/equity/single_eu_equity_instrument/innovfin-sme-vc/index.htm	-	0
d) National/regional funding	nda	nda
e) Private funds/investments	nda	nda

Information gathered from European projects databases complement and support findings from interviews, in which informants referred to the lack of knowledge of local companies about SME support possibilities available in broader institutional contexts, as well as to the reluctance to risky financial instruments (as opposite to direct, non-refundable subsidies).

²⁷⁵ Based on CORDIS database, as of date 05/06/2017

²⁷⁶ Based on COSME Data Hub, as of date 07/04/2017

²⁷⁷ Based on Horizon Data Hub, as of date 02/04/2017

²⁷⁸ Based on Horizon Data Hub, as of date 16/06/2017

3.4 Results of the FOG Test

	Bloc Perception: Powers of the regions (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities steer decisions made over matters related to SME and entrepreneurship support structures and mechanisms in the region in a unilateral manner.	-	-
	Regional authorities exercise their powers mainly providing services and resources, in turn monitoring the achievement of specified objectives with respect to SME development (performance and results oriented)	PARTLY	-
	Regional authorities collaboratively develop and foster, with key stakeholders, SME and entrepreneurship support structures and mechanisms in the region.	PARTLY	YES – more partners from peripheral regions should be included in consultation apart from local authorities
	Regional authorities have delegated powers to other entities or relevant stakeholders as a way to proactively develop and foster SME and entrepreneurship support structures and mechanisms in the region.	PARTLY	-
	Practices and actions undertaken	<ul style="list-style-type: none"> • Wide consultations with stakeholders during elaboration of the 2014-2020 Regional Operational Programme (but some respondents claim that these process is dominated by the local authorities voices); • Consultations during preparatory phase of the Regional Territorial Investments • Certification of the Business Environment Institutions by the Marshal Office; • Activity of the Business Environment Institutions Forum; • Mazovian Innovation Council; 	
A1.0	Is the development of an entrepreneurship culture in the region rather organically driven (grassroots movements) or rather stemming from a top down approach (institutionally driven)?	As noted in the SWOT analysis, there are serious problems with networking culture among SME in the studied region – grassroots movement are scarce and weak – top-down approach (institutionally driven) is more visible.	
A2.0	Which main actor/s is/are informally driving the promotion and shaping the development of an entrepreneurship culture in the region?	There are no major actors (leaders) at NUTS2 level, at the NUTS3 level there is dense network of actors	
A3.0	Which main actor/s is/are formally driving the promotion and shaping the development of an entrepreneurship culture in the region?	Mazowieckie Marshall Office – Managing Authority of the Regional Operational Programme; Local authorities – municipalities	

	Bloc Perception: Motivation (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities, along with other actors create partnerships to foster an entrepreneurship culture in the region, going beyond the national or European framework/requirements.	YES	-
	Activities intended to promote an entrepreneurship culture are financially supported and closely monitored to optimise the efficiency, effectiveness and transparency of the actions undertaken by stakeholders receiving support from the regional authorities.	Partly – activities undertaken during 2007-2013 perspective were monitored in terms of physical progress (product/direct result measures) but there is a lack of robust evidence on impact of actions on SME development	-
	A top down approach is adopted by regional authorities when promoting the development of an entrepreneurial culture (e.g. initiatives on the organisations of start-up conferences stem from local authorities)	GENERALLY YES, WITH SOME EXEPTIONS	-
	Regional authorities are enabling all actors to take on the initiative to promote the development of an entrepreneurship culture in the region (e.g. via advisory services, training)	-	YES
B1.0	Which actions are undertaken in the region to develop an entrepreneurial climate and culture?	At the regional level (NUTS2) there are several conferences, discussion fora, etc. but the participation of actors from subregion is very limited. At the subregional level (NUTS2) there are just scarce initiatives (fairs of construction industry sector in Wysz-kow, transport sector conference in Ostroleka)	

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities facilitate the creation of business start-up support structures by engaging with a large array of stakeholders themselves.	YES, but mainly outside the case study region	
	Regional authorities directly contribute to increase the business start-up rate by initiating and managing business start-up support structures.	-	-
	Networks, incubators, portals and gateways are being developed hand in hand by local authorities and citizens, proactively stepping in to create a start-up friendly environment in the region.	Partly, outside the case study region	YES

	Bloc Perception: Skills (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities support the development of start-up support structures by providing the necessary resources to (intermediate) working to boost entrepreneurial skills in the region.	YES, but mainly outside the case study region	
C1.0	According to you, which support structure or practice for start-ups and SME is the most effective and should be further emphasised to ensure the development of entrepreneurial skills in the region?	At the NUTS3 level – none	

	Bloc Perception: Opportunities (Please tick one option for reality and one option for "how it should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities have developed strategies and implement schemes intending to reduce barriers to entry, eliminate obstacles and foster an environment conducive to the development of start-ups and SME.	In the Ostrołęka Sub-region (NUTS-3) – NO	-
	Off-the-shelf financing practices as well as the provision of a venture capital environment provide innovative and inclusive sources of financing, which are tailor-made to the needs of the actors in the region.	PARTLY	-
	The provision of financing support by the region is provided and can be conditional on the achievement of set objectives and result-oriented approaches are favoured by authorities, which encourage a greater ownership of the projects to ensure the success of the action and a return on investment.	-	YES
	Regional authorities use the synergies developed in networks of stakeholders supporting entrepreneurship. They accordingly facilitate the development of conventional financing bodies as well as participative financing schemes targeting start-ups, SME and project holders from under-represented groups.	-	YES
	Practices and actions undertaken		
D1.0	Is there a financial gap or a suboptimal investment situation for SME financing in the region?	In the Ostrołęka Sub-region (NUTS-3) – NO (apart from transport sector)	
D2.0	What are the most commonly used financial support schemes or means of financing for entrepreneurs and SME?	At the NUTS2 level: At the NUTS3 level:	
D3.0	How do governance mechanisms contribute to start-up/SME development while making up for the reduced availability of public funding?	In the Ostrołęka Sub-region (NUTS-3) – NO	
D4.0	Are regional authorities prompt to take economic risks when providing financial support to SME?	PARTLY	
D5.0	Who supports and fosters higher accessibility of the region (physical infrastructure)? How (grants/PPP, etc.)	Infrastructure in Poland is built with public funds (limited use of PPP), each governance level has its responsibilities in regard to certain type of infrastructure	
D6.0	What is done to improve the governance standards at national/regional/local level?		

	Bloc Perception: Connectedness (Please tick one option for reality and one option for "should be")	The statement is accurate and reflects the reality of the situation in the region	The statement reflects what should be the situation in the region
	Regional authorities ensure the development of an entrepreneurial culture in the region looking at other regions' governance structures and mechanisms to improve their own entrepreneurship and SME policies and create partnerships with other regional authorities to foster innovation as well as the development of synergies.	In the Ostrołęka Sub-region (NUTS-3) – NO	YES
	Regional authorities are integrated into a multi-level governance system and actively collaborate to identify best practices and challenges solving options beyond regional and national borders.	PARTLY	-
	Co-funded projects are driving the need for further collaboration between regional authorities and between regions.	-	YES
	Developing contacts and partnerships is the spearhead of regional authorities and key actors to make up for potentially limited public intervention (e.g. public funding) and autonomously find solutions to local issues (without recurring to external support).	-	YES
	Practices and actions undertaken	Bilateral and multilateral conferences, info-days	
E1.0	Have regional clusters developed ties and are collaborating with other clusters at the national/EU level?	At the subregional level – NO	
E2.0	Which are the regional interventions intending to promote the region as an attractive and dynamic SME-friendly environment?	Several actions undertaken at the regional level (NUTS2): <ul style="list-style-type: none"> • Made in Mazovia (web platform) • Participation in international trade fairs • Trainings and information days for entrepreneurs 	

4 Results of the SWOT analysis

Internal factors – factors of competitiveness

Major strengths
None
Other strengths – less pronounced
Natural and landscape potential (Narew, Omulew, Bug, Puszcza Biała, Puszcza Zielona) and areas of regional cultural heritage (Kurpiowszczyzna) which could serve as a basis for the development of modern forms of tourism, recreation, leisure and design-based economy.
Resources of social infrastructure (primarily in urban areas).
Stable demographic situation (especially in the area of Ostrołęka District, Ostrołęka City and Wyszaków District).
Major weaknesses
<p>Low entrepreneurship potential of the inhabitants of the sub-region:</p> <ul style="list-style-type: none"> – beside the Ciechanów sub-region, the lowest values of indicators of economic entities in Mazovia (e.g. newly registered units per 10 thousand population, natural persons conducting business activity per 100 persons of working age); – high employment in the agricultural sector (additionally – low level of innovativeness of farms, inhibiting the potential development of the SME sector that serves agriculture, e.g. in robotics and automation); – low added value businesses, such as transport, commerce and simple services for the population (cosmetics, hairdressing), as well as the construction and repair companies sector, are predominant; – the vast majority of people who set up and run businesses have little knowledge of planning for business development, management, building the added value, creating and developing lasting relationships with clients and business partners, the labour market and available sources of funding – the “garage” model of business that never goes beyond a small scale of action dominates.
<p>Low potential of innovation and creativity of local entrepreneurs, which consists of:</p> <ul style="list-style-type: none"> – gaps in knowledge (lack of knowledge of tools and instruments available outside the immediate environment); – mental barriers (the belief that price competitiveness is the key to success and the low level of acceptable risk, the reluctance to seek external partners for the fear of theft of the ideas); – financial barriers (the low level of financial resources available for development investment in enterprises concurrent with the lack of knowledge about the possibility of external financing and ignorance of such forms as venture capital, business angels, accelerators, incubators); – deficits in the local innovation environment (lack of a dense network of academic institutions – few and weak universities oriented strongly to education and not research, employing staff from outside the region and not connected with the local market, absence of research institutions, lack of local institutions supporting innovation processes in enterprises) concurrent with the ignorance of the possibility of seeking support outside the place of business; – the lowest share of newly registered creative sector entities in the number of newly registered entities in Mazovia.
<p>Atrophy of the institutions and the mechanisms of cooperation of enterprises (associations, economic self – government) with the exception of transport:</p> <ul style="list-style-type: none"> – lack of local leaders initiating and giving a boost to the cooperation networks, – discontinuing or reducing the activity of business organizations working for the development of the industries or SME sector in general; – strong competition mechanisms in the local environment, high level of distrust towards other entities operating in the same industry reducing the possibility of cooperation.
<p>Inadequate to the type and scale of challenges mechanisms of cooperation between local government and entrepreneurs:</p> <ul style="list-style-type: none"> – low level of cooperation; difficulties in establishing and deepening relations between local government and enterprises; – domination of routine, traditional activity (e.g. the arming of investment areas).
Other weaknesses – less pronounced
<p>Limited communication accessibility of a large part of the sub-region, poorly developed transport infrastructure of a supra-local importance, hindering the development of business on a larger scale, including:</p> <ul style="list-style-type: none"> – poor condition of the railway network on the Warszawa-Wyszaków-Ostrołęka line; – low standard of roads connecting urban centres in the sub-region, especially Wyszaków-Ostrołęka;

– bridges requiring modernization (e.g. Ostrołęka).
Ambiguous factors – represent a strength in some of the businesses/industries, but a weakness in others
The functioning of the Special Economic Zones in the sub-region – on the one hand, the opportunity for new investments in the sub-region; on the other hand, the distortion of competitiveness in the local market (e.g. tax exemptions for new companies perceived as unjustified by entrepreneurs working for years, especially in similar areas), absorption of workers by larger entities at the expense of smaller ones.
Neutral factors – represent neither a strength nor a weakness
None

External factors – framework conditions

Major opportunities/drivers
Improvement of sub-region transport accessibility and intra-regional connectivity through investments under the 2014-2020 budget perspective.
Construction of the Ostrołęka C power unit by ENERGA and ENEA: – boosting of the infrastructure investments (railway connection, river crossing) – development of the auxiliary services market during the investment in the power plant and after the start of the block.
Other opportunities/drivers – less pronounced
Realization of the projects envisaged within the framework of the strategic documents of the region (Mazovian Development Strategy, Regional Innovation Strategy) financed under the Regional Operational Program.
The implementation of projects aimed at changing the thinking about tourism products and services (departure from traditional, routine way of looking at the resources and passive waiting for tourists, to generate innovative products and services using the natural and ethnographic resources of the region, and also using modern forms of promotion).
External trends in agriculture, e.g. development of organic products or the development of dairy products exports of to the Chinese market (as a factor supporting the modernization of agricultural production processes in the sub-region and the greater inclusion of businesses serving farms).
Implementation of investment projects within the framework of low carbon economy schemes co-financed by European funds, as a potential factor supporting the development of technology companies providing services in this branch.
Major threats/challenges/barriers
Suspension of the investments of the largest companies in the region (e.g. suspension of expansion projects of paper mills in Ostrołęka).
Deterioration of operating conditions for transport companies in the face of unstable geopolitical situation in the East and reduced competitiveness.
Other threats/challenges/barriers – less pronounced
Problems with the use of EU funds from the perspective of 2014-2020 due to the concerns of local entrepreneurs associated with the form of support (return instruments), the level of co-financing, administrative burdens.
Employees pushed out of the labour market as a result of the combined effects of social support and change in family-oriented policy (500+).
The activity of large enterprises (including international ones) and large-scale traders in the long run is causing negative phenomena: – Threat to the functioning of smaller local businesses operating in the same sector (in the case of trade); – subordination of a significant part of the labour market and education to one type of qualification (not always innovative); – preferring cooperation with external partners (under agreements in larger spatial scale), using local businesses only in low added value sectors (e.g. cleaning, transport); – with the consolidation of dominant position in the local market, there is a tendency to lower the standards of jobs offered.
Ambiguous factors – represent an opportunity for some of the businesses/industries, but a threat or barrier for others
Impact of Warsaw on the sub-regional system: – Positive: access of local companies to the large customer market in the enterprise sector in Warsaw; settlement of people from Warsaw in some parts of the sub-region (e.g.. Wyszaków) due to

<p>competitive housing and land prices (positive impact on the purchasing power of the population);</p> <ul style="list-style-type: none"> - Negative: the sucking of the brightest young people to study and work in Warsaw companies (brain drain), but also the potential reinforcement of the local labour market with management (now visible in large companies);
<p>The reform of the vocational education supporting the modernization of technological infrastructure of schools and adapting the directions to the needs of the economy (however: there is a risk of leaving of the graduates to the companies operating in Warsaw).</p>
<p>Neutral factors – represent neither an opportunity/driver nor a threat/barrier</p>
<p>The influx of the workers from Ukraine allowing to reduce the impact of demographic and migration trends on labour resources in the sub-region while simultaneously petrifying the suboptimal competitive strategies of local businesses (e.g. price rather than innovation rivalry, labour cost reduction, lack of investment in human capital).</p>

5 Future policy needs

What is needed to increase the potential of SME development?

- changing attitude:
- change of the local community attitude towards the future growth possibilities of the region;
- the attitude tailored made for specific peripheral region, with general low level of trust, and firms capacity not only to innovate, but to absorb innovations (and imitate).
- knowledge needs:
- deep reflection of the local administration on the business sector potential, preceded by solid examination of the SME sector situation, firms needs and demand;
- easy and costless access to knowledge relating to the financial and non-financial support for SME.
- financial support:
- intensification of the measures/interventions related to the modern knowledge-based sectors, possibly based on the reach and unique heritage of the region (handicraft, e.g. paper cutting);
- institutions and networks:
- business support institutions (i.e. business incubators)
- use the potential of the large companies for building network of collaboration (the examples might be domestic bicycle factory KROSS and foreign corporation ABB in Przasnysz)(Olechnicka 2015);
- activate the role of cultural institutions in rising the potential for SME development (i.e. Museum of Kurpie Culture in Ostrołęka where the craftsman's heritage of the region as well as unique handicraft are preserved).

What are successful SME-support structures that should be further strengthened?

This question seems to be difficult to answer because reliable evidence on structure/tools effectiveness is missing. At the regional level (NUTS2) entrepreneurship and innovative policies are supported by the ERDF funds allocated to Regional Operational Programme. Yet, enterprises from the case study region have used the money to the limited extent (96 entities implemented projects in the region where more than 30000 private enterprises operate). To some extent this is caused by the divergent development levels of Mazowieckie. Warsaw Functional Area is one of the key economic markets in CEE region and is becoming more and more visible in the global economy (e.g. the rapidly growing BPO sector), while Ostrołęka sub-region remains as a clearly lagging territory. As a result, it is very difficult for local SME to engage into funding schemes providing support for R&D use, internalization of products and services.

Also, the effectiveness of most expensive local government initiatives, namely establishing investment zones, is not fully examined in scientific, rigorous way. Interviewees claimed, that these zones are rather externally oriented (to attract big external companies, rather to support local SME sector).

Thirdly, information and capacity building activities offered to sub regional SME sector are very scarce and they are not organised in one coherent scheme, but rather form a kind of

chaotic catalogue, which does not support long, structured and comprehensive learning and skills building of local entrepreneurs.

What role could European Cohesion Policy and European funding play, especially through the ERDF?

- the support have to be effect- not allocation-oriented, it need to be reflected in the project selection criteria;
- reorientation of the European funds towards the developmental priorities instead of quality of life (Salański 2014; Gorzelak 2014).

What should be organised at national or regional level? How could the interaction of different governance levels be improved?

- changes in the educational policy in a direction towards building entrepreneurial skills, and creativity,
- management training for administration related to the creative thinking about local development,
- improvement of evaluation skills to release learning processes in administration (Olejniczak 2012). Accordingly to studies conducted in the Mazowieckie Region, less than half of local governments has assessed the efficiency of their interventions and 12% does not see the need for such an effort.
- higher activity in the non-standard activities of the local administration, i.e. labour market, where standard bunch of measures used by the poviats labour offices need to be supplemented by more innovative instruments.

Summarizing, which framework conditions and regional factors need to be improved and how?

at the regional level

- more place-based approach toward SME development needed for lagging sub-regions. Structural differences of local markets and enterprise structures need to be more comprehensively recognized by the funding agencies;
- limit one-off trainings and replace them with more integrated, long-lasting training schemes for selected entrepreneurs.

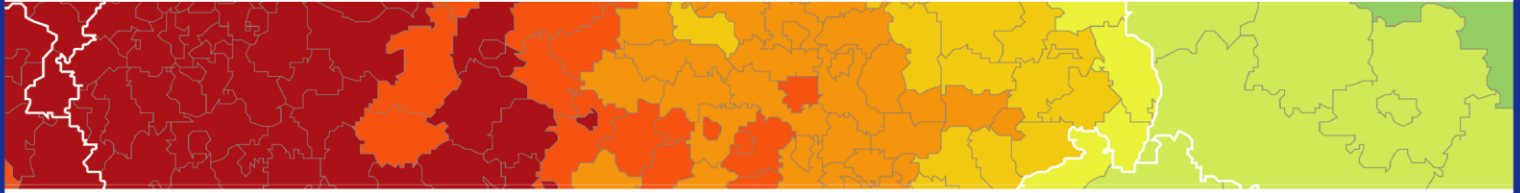
at the national

- national labour market regulations need to be oriented towards employed rather than unemployed, its irrelevant to the needs of the contemporary labour market; employed people are better prepared to start their own business than those absent (sometime for a long time) on the labour market, however the support is envisaged for the latter group;
- the labour costs burden need to be diminished as they influence negatively on the SME development.
- the educational policy should be change in a way to strengthen vocational training.

6 Annex

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