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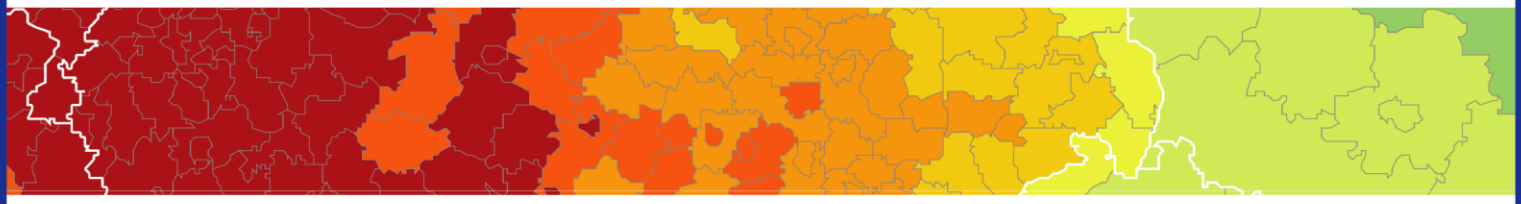

Small and Medium-Sized Enterprises in European Regions and Cities

Applied Research

Final Report

Version 31/01/2018

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Authors

Bernd Schuh, Erich Dallhammer, Martyna Derszniak-Noirjean, Jiannis Kaucic, Stephanie Kirchmayr-Novak, Edith Stifter, Joanne Tordy, ÖIR GmbH (Austria)

Thomas Oberholzner, Christina Enichlmair, Peter Kaufmann, Austrian Institute for SME Research (Austria)

Advisory Group

Project Support Team: Laura De-Dominicis, DG REGIO, Hanna-Maria Urjankangas, TEM Finland

ESPON EGTC: Peter Billing (Senior Project Expert), Laurent Frideres (Head of Unit Evidence and Outreach), Ilona Raugze (Director), Piera Petruzzi (Senior Project Expert, Communication and Capitalisation), Akos Szabo (Financial Expert)

Technical Support

Florian Keringer, Julian Joksch, ÖIR GmbH (maps); Arash Robubi KMFA (IT/database)

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Small and Medium-Sized Enterprises in European Regions and Cities

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Abbreviations

BD	business demography
CF	Cohesion Fund
CoR	Committee of the Regions
COSME	EU programme for the Competitiveness of Enterprises and SMEs
CP	cohesion policy
CPR	Common Provisions Regulation
EACI	Executive Agency for Competitiveness and Innovation
EAFRD	European Agricultural Fund for Rural Development
EASME	Executive Agency for SMEs
EBA	European Banking Authority
EC	European Commission
EFSI	European Fund for Strategic Investments
EIB	European Investment Bank
EIF	European Investment Fund
EMFF	European Maritime and Fisheries Fund
ERDF	European Regional and Development Fund
ESF	European Social Fund
ESPON	European Territorial Observatory Network
EU	European Union
FA	factor analysis
FDI	foreign direct investments
FI	financial instruments
FOG test	forms of governance test
GDP	gross domestic product
GVA	gross value added
ICT	information and communication technologies
ISCED	International Standard Classification of Education
MA	managing authorities
MCA	multicriteria analyses
mn	million
MS	Member States
NACE	Nomenclature generale des activites economiques dans les Communautes Europeennes (statistical classification of economic activities in the European Community)
NUTS	Nomenclature des unites territoriales (Nomenclature of Territorial Units for Statistics)
OECD	Organization for Economic Co-operation and Development
PCA	principal component analysis
PPS	purchasing power standard
R&D	research and development
R&I	research and innovation
RIS3	research and innovation strategies for smart specialisation
S3	smart specialisation strategy
SBA	Small Business Act
SBS	structural business statistics
SEM	structural equation models
SF	supporting factor
SME	small and medium-sized enterprise
SNA	system of national accounts
SU	statistical units
SWOT analysis	qualitative analysis of Strengths, Weaknesses, Opportunities and Threats
S&M	small and medium-sized enterprise with 10-249 persons
TO	thematic objective
ToR	terms of reference

Executive summary

Background

What are the factors determining the development of a region's SME sector, and what are the key drivers or obstacles to SME growth and performance at the regional level? The main objective of the ESPON SME study was to map and analyse the territorial patterns and performance of SMEs 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 SMEs. The study was conducted under the general premise that SMEs are the backbone of the economy and that supporting SMEs is therefore of vital interest for the regions.

The SMEs were analysed in four categories according to size: one-person enterprises (0 persons employed), microenterprises (1-9 persons employed), small and medium-sized enterprises (10-249 persons employed), and large enterprises (250 or more persons employed).

Main findings

In all types of regions, SMEs share certain basic needs across the economic sectors. Regions and cities should consider drivers of SME development identified in this applied research activity with respect to their specific territorial context. These drivers define not only strengths and weaknesses of SME growth, but may also be seen as opportunities or threats. In addition, these territorial circumstances are also different for each region. Key drivers and factors relevant for SME development (with respect to its phase in the life-cycle [start-up or scale-up], and the sector it is operating in) are connected to demography, economic strength, specialisation of the region (for example, existing industries and resources), and available infrastructure, as well as quality of governance.

The study focuses on three specific sectors: knowledge and creative economy, ICT, and low-carbon economy. A high share of knowledge and creative industry goes hand in hand with a high share of or strong increase in SME employment. However, for the ICT sector, such a direct correlation between SME employment and a highly developed knowledge and creative industry cannot be seen in all ESPON countries. In the Nordic countries, Lithuania, large parts of Poland, Switzerland, and Croatia, high shares of employment in SMEs prevail in the carbon-intensive industries.

Overall, predominantly rural and peripheral regions tend to have higher shares of employment in microenterprises (1-9 employed persons) than urban and capital regions. Furthermore, predominantly rural regions tend to have higher shares of employment in SMEs (10-249 employed persons) than intermediate and urban regions. However, in some countries the opposite is the case, e.g. Finland, Italy, France, and Portugal. Very high shares of SMEs are found in the rural regions of Lithuania, Belgium, and Germany.

The key outcomes of the project are the following:

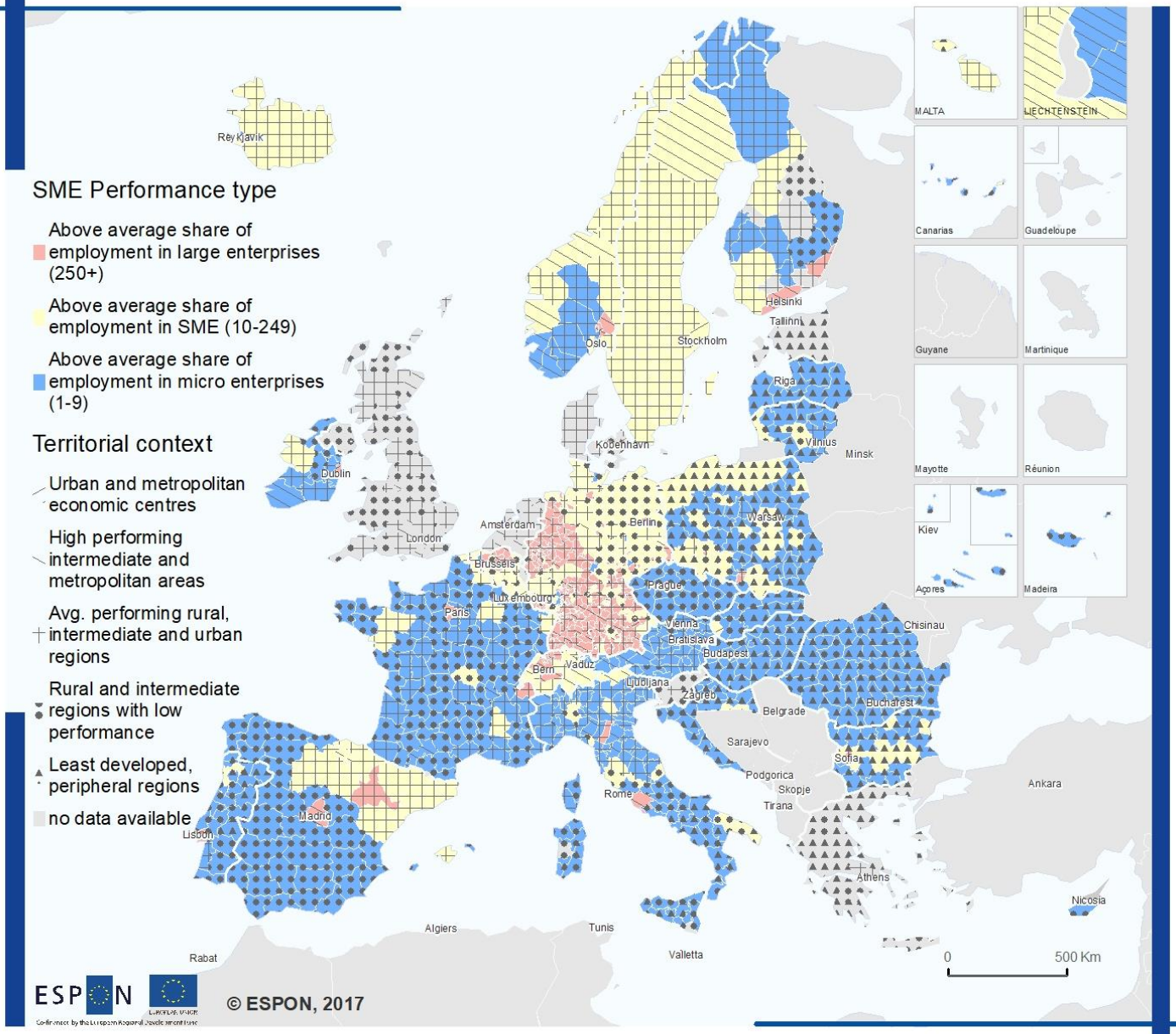
- knowledge of the distribution patterns of SMEs across European regions and cities in terms of size, employment, sectors, location, survival rates, and growth (Chapter 3);
- a complete regionalised dataset of SMEs structural, performance, and context indicators for all ESPON states and – where data could be gathered – also for candidate countries at NUTS 3 level for the period 2008-2014 (see the Scientific Annex);
- a set of maps picturing structural, performance, and context indicators (Chapter 3 and Scientific Annex);
- analysis of the extent and the ways SMEs contribute to business development, job creation, and innovation in European regions and cities (Chapter 4);
- discussion of the particular role of SMEs in the areas of the knowledge and creative economy, ICT, and the low-carbon economy (Chapter 3);
- discussion of specific territorial patterns and identification of key dynamics, drivers, and main opportunities and obstacles to the growth of SMEs, especially after the crisis (Chapter 4);
- a typology of SME regions in Europe (Chapter 4);
- five case studies that explore regional specifics and best practices, with each case study looking at two regions of the same SME region type (Chapter 5 and Scientific Annex);
- conclusions and policy recommendations for targeted investment strategies and policy support options for SME development taking into account the particular role of the public sector and the efficient spending of public money (Chapters 6 and 7).

Based on the territorial context factors, a typology of regions was developed by combining the territorial types identified via cluster analysis with a classification of regions related to employment in SME size classes and sectoral focus.

The study findings demonstrate that general rules on how to support SMEs cannot be simplistically deduced, as variations between regions, SME size, the stage in their life cycle, and their sector are significant. Even regions which would be in the same typology according to quantitative findings can be found in different categories when qualitative findings are taken into account. The case studies revealed that the specific circumstances vary across Europe's regions due to their diversity. Thus, any development strategy for regional SME development needs to be tailor-made.

Therefore, the study could establish certain aspects which have to be taken into account while developing tailor-made development strategies at the various levels of the European multilevel governance system as outlined in the following.

Regional SME Typology: Combination of SME performance and territorial context



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz
CC - UMS RIATE for administrative boundaries

Tailor-made solutions for unique regions

All levels

Tailor-made

‘‘Tailor-made’ is the keyword for any strategy towards SME development on **any level of the European multilevel governance system.** However, critical conditions for SME development, such as education, good governance, and infrastructure, should be addressed at all levels, just as the need for differentiation along the life cycle of SMEs applies.

Transparency

Most importantly, SMEs rely on good governance. In this respect, all governance levels can lead by example by increasing transparency and improving communication. This also implies that improved cooperation between all levels of governance would be beneficial. Levels closer to the citizens, such as local and regional authorities, as well as the Member States should promote the initiatives of the more distant levels, while both the EU and national levels can enable the levels closer to the citizens.

Increase of synergies

Parallel instruments and funding are often a result of uncoordinated use of various measures and lack of sound strategies. The post-2020 cohesion policy should put an emphasis on efficient complementary use of funds without duplicating national measures, with the aim of filling gaps to form a cohesive innovation and/or start-up ecosystem in the region, with support from the national and European levels. On the other hand, Member States and regions should also be encouraged to identify funding gaps and make appropriate investments, and/or occasionally be required to enhance quality standards by formulating ex-ante conditionalities. Financial instruments that can trigger behaviour change should be encouraged.

EU Institutions

More flexibility

The **post-2020 cohesion policy** should continue to promote tailor-made solutions for MS and regions in relation to SME growth and development. More flexibility in the post-2020 framework might be necessary, and more options to enable tailor-made solutions could be provided. In the current framework, there is a lack of differentiation between start-ups and scale-ups even though these are very different regarding their needs. The post-2020 cohesion policy should support the introduction of specific strategies to help and encourage more microenterprises to grow or scale-up, and should further consider that SMEs in different sectors have different needs as well as capacities to innovate. Throughout the study, the valuable impact of the cohesion policy on SMEs was ubiquitous; policymakers are urged to continue promoting tailor-made solutions for MS and regions. Cohesion policy is important for providing not only resources, but also innovative ideas.

Innovative measures

EU institutions should further **promote and support innovative measures** encouraging risk-taking. Measures triggering behavioural change, such as certain financial instruments, have been deemed particularly effective in SME policy. Keeping in mind that the choice of measures should be tailor-made, an inventory of various kinds of measures could be created to inspire relevant regional and national policies as well as strategies.

Business education

To support more effective business education, the cohesion policy can assist MS and regions in engaging in more effective business education through encouraging exchange between regions as well as dissemination of information and good practices. As for direct measures from the EU towards target groups, one promising idea is for regional envoys representing SMEs to offer direct information exchange.

Member States

Overall framework

Different **Member States** have various competencies[1] concerning SME policy. However, regardless of the role of the national level, MS can provide the overall framework and support as well as resources for SME development. The quantitative analysis revealed that this includes investments in relevant infrastructure, such as telecommunication networks, broadband, and public transport, and setting regulations, standards, and norms. MS also need to provide resources for investments in clusters/networking, **research and educational institutions**, and a skilled workforce; MS can and should support the development of an **entrepreneurial culture and open-mindedness** at the national level.

Reduction of burden

Reduction of administrative burdens: Incentives can remain ineffective when administrative burdens are too high. The case studies revealed that there are still many obstacles for SME development caused by administrative burdens; business creation will remain low where the financial costs for births and deaths of enterprises are high. Significant administrative burdens also relate to leasing premises and employing staff (labour and social security law), as well as for business succession.

Quadruple Helix

Encouragement of the Quadruple Helix approach: The MS should focus on fostering collaboration on new and cross-industrial enterprises between academic, private, and public sector representatives in science parks. This Triple Helix approach strengthens cooperation and provides a favourable environment for innovation whilst improving the teaching and education of the future workforce. However, it must also include civil society as many initiatives originate at local or regional levels (NGOs, community groups and associations, etc.). National governments should support and encourage such processes through **active dialogue** with the regions in order to understand and satisfy their needs, by defining themselves as honest brokers of the process. It is important that the MS not only facilitate bottom-up initiatives, but also actively support them. The MS can support and share measures aiming at the creation of a good SME ecosystem and encourage the regions to do so too.

Public procurement

Through public procurement, the Member States can set **standards and demand-led policies for SMEs for innovation.** The role of the public sector for creating demand for innovative products should not be underestimated (e.g. digitalisation of public administration, waste collection and treatment, framework for distributed energy systems), and setting the right incentives at different administrative levels is of utmost importance. In addition to setting standards for new or improved technologies and sectors, public procurement for innovation should be considered to ensure that the conditions are enabling/incentivising for SMEs and not only for large businesses.

[1] With respect to founding regulations, market laws (e.g. labour law, social rights) and consumer rights

Regional

Strengths & weaknesses

At the **regional and city level,** the closest interaction with SMEs comes from the managing authorities. Further SME support can be stimulated by creating a tailor-made favourable economic environment which should be aligned with the interests of the respective region or city. SWOT analyses are a useful tool for regions to understand their position and future possibilities which could indicate the direction for investments. The case studies have identified that cultural factors[2] are very significant in SME development. As these factors have to be considered in developing a strategy, local and regional authorities are in the best position to adapt the strategy to the cultural specificities of the region.

Tailor-made strategies

Any **strategy for SME growth and development** should be carefully chosen. Specialisation strategies should not necessarily follow classic industrial taxonomies, but rather focus on technology and competence fields which can be flexibly applied in different industries. Any specialisation strategy should avoid creating potential dependencies, and the transferability and adaptability of other models should have already been considered when choosing the appropriate strategy. It is important not to simply choose and replicate models from other regions, but to consider the specific context of their region, as well as to consult and interact with different relevant actors and stakeholders. Tools such as foresight/horizon scanning tools may also be useful in relation to future developments. It is also important to consider the links between research and innovation as well as growth and development. For that matter, a national/regional strategy for smart specialisation should be tailored to the regions.

Favourable environment

Creating a favourable economic environment can only be done and sustained through the application of different approaches. First and foremost, this involves high quality governance with transparency and stability, clear and possibly simple regulations based on a tailor-made, collaboratively elaborated strategy, as well as clear communication and a proactive approach from the authorities. Local and regional authorities (LRAs) can facilitate contact and communication between start-ups, SMEs, entrepreneurs, and local bodies. To foster cooperation between public and private stakeholders, LRAs can create and promote a common vision. A shared common vision enhances the cooperation between different kinds of stakeholders and encourages action.

Coordination

Local and regional authorities should engage more in **interregional coordination processes**. This is especially the case for neighbouring regions/cities concerning governance, however more distant regions can also cooperate through the S3 platform[3].

Regional brand

Good **visibility and marketing** can help to attract investments and thereby strengthen the SME environment. Through the implementation of an S3 strategy, regional assets can be further strengthened, which allows for the development of a 'regional brand' in accordance with these strengths, which will then support SMEs.

Infrastructure

Last but not least, all SMEs are dependent on good **infrastructure**, in terms of accessibility as well as in telecommunications and broadband. In cities, the focus should be on intra-regional networks and connections to the hinterlands, while good connections to other European economic centres are important in more rural areas.

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[2] These are soft factors, e.g. how attractively entrepreneurship is seen, the importance of hierarchies, whether SMEs are family owned, etc.

[3] The S3 Platform (set up and run by the EU Commission (http://s3platform.jrc.ec.europa.eu/) provides advice to EU countries and regions for the design and implementation of their Smart Specialisation Strategy (S3): it provides guidance material and good practice examples, informs strategy formation and policy-making, facilitates peer-reviews and mutual learning, supports access to relevant data and trains policy-makers

1 Introduction

1.1 Tasks and main outcomes of the project

The main objective of this research project was to map and analyse the territorial patterns and performance of SMEs 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 SMEs. The main policy instrument in the scope of the study is the cohesion policy, a major part of which has been targeted towards SMEs for quite some time.

The project was structured along five tasks – presented in Chapters 1-6 of this study –, which entailed the successive application of different methods, from literature review, data collection, and data analysis to mapping, case studies, focus groups, and two workshops, all tailored to answer the research questions and produce the main outcomes.

The key outcomes of the project are the following:

- knowledge of the distribution patterns of SMEs across European regions and cities in terms of size, employment, sectors, location, survival rates, and growth (Chapter 3);
- a complete regionalised dataset of SMEs structural, performance, and context indicators for all ESPON states and – where data could be gathered – also for candidate countries at NUTS 3 level for the period 2008-2014 (see the Scientific Annex);
- a set of maps picturing structural, performance, and context indicators (Chapter 3 and Scientific Annex);
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- discussion of specific territorial patterns and identification of key dynamics, drivers, and main opportunities and obstacles to the growth of SMEs, especially after the crisis (Chapter 4);
- a typology of SME regions in Europe (Chapter 4);
- five case studies that explore regional specifics and best practices, with each case study looking at two regions of the same SME region type (Chapter 5 and Scientific Annex);
- conclusions and policy recommendations for targeted investment strategies and policy support options for SME development taking into account the particular role of the public sector and the efficient spending of public money (Chapters 6 and 7).

The geographical coverage of the study encompasses all countries participating in the ESPON 2020 Cooperation Programme, preferably on NUTS 3 or NUTS 2 level. Furthermore, statistical data for EU candidate countries and other countries of the Western Balkans were collected and processed as far as possible (see the Scientific Annex).

1.2 Scope of the study

1.2.1 Classification of SMEs by number of employees

In this study, the four main classes[4] used for presenting the results are:

(a) one-person enterprises with 0 persons employed;

(b) microenterprises with 1-9 persons employed;

(c) small and medium-sized enterprises with 10-249 persons employed;

(d) large enterprises with 250 or more persons employed.

Class (a) represents non-employer firms with no employed persons, while all other classes cover employer firms. The sum of micro, small and medium-sized enterprises (1-249) is in most official sources subsumed under the term 'small and medium-sized enterprises (SMEs)'. For better clarity of this study's results and to clearly delineate the enterprise size classes, the group of small and medium-sized enterprises with 10-249 persons employed is labelled as 'S&M', while the official abbreviation 'SMEs' is used for the total of microenterprises and small and medium-sized enterprises (0/1-249).

1.2.2 Approach towards economic focus sectors

This study focuses on the structures and development of SMEs in general. However, due to the importance of particular sectors for the birth and growth of SMEs, the three sectors of knowledge and creative economy, ICT, and low-carbon economy are analysed specifically. In our analysis, the definitions contained in the Scientific Annex are followed as much as possible. The approach towards the focus sectors had to be adapted in the quantitative analysis (see Chapters 2 and 4) due to the fact that data collection for all regions did not cover all relevant industries of all the sectors[5].

1.3 Structure of the report

This draft final report gives an overview of the methodology applied (Chapter 2) and the results of the research activity. Chapter 3 provides maps and analyses of SMEs in European regions and cities, Chapter 4 describes drivers and processes for SME development (quantitative analysis) and Chapter 5 provides a synthesis of the case study analysis. Chapter 6 distils policy considerations and targeted investment strategies for SMEs in European regions and cities and suggests proposals for potential support by EU cohesion policy. Chapter 7 concludes the report with proposals for future analysis and research on this topic. The Scientific Annex provides an in-depth addition to the report's chapters and elaborates on definitions used and data gathered, as well as mapping of SMEs in European cities and regions, and details the statistical analyses including a description of how the regional typology was set up and case study selection. The 10 case studies are documented in the Case Study Book.

[4] Based on the classification used in central data sources (EUROSTAT, etc.)

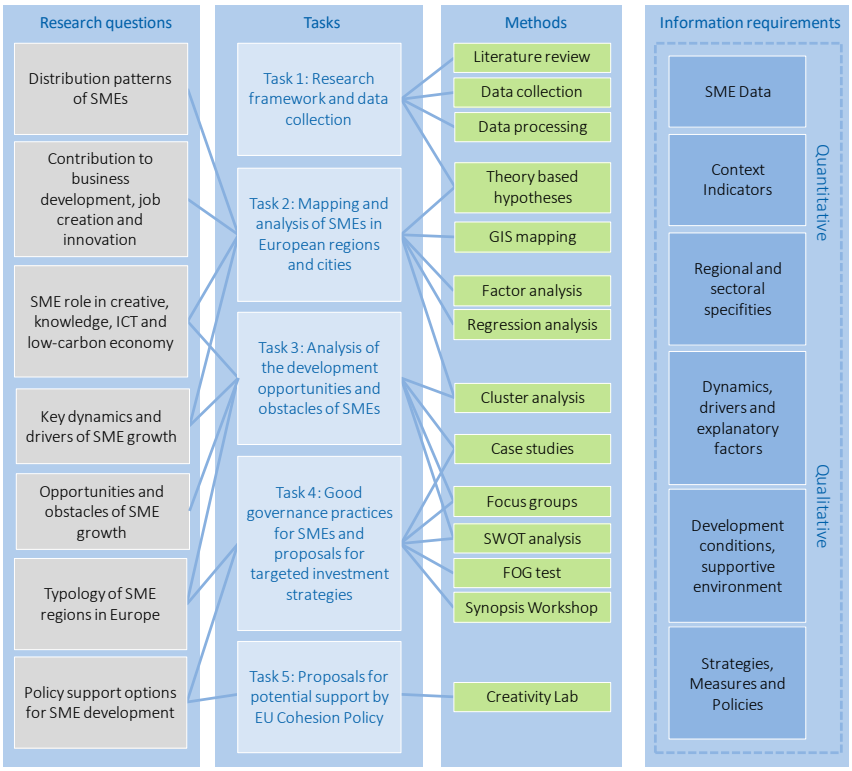
[5] The approach had to be adjusted by sector, as ICT can be statistically isolated more easily from other sectors than the creative/knowledge industries and the low-carbon economy.

2 Methodology and approach

2.1 Conceptual framework

To achieve the objectives laid out in Chapter 1 of this report, a conceptual framework linking research questions, tasks, methods, and data requirements was designed. The approach brought together different analysis steps which required different quantitative and qualitative methodological approaches and information (see figure below).

Figure 2.1: Overview of the conceptual and methodological framework



Source: Consortium, 2016.

2.1.1 Distribution patterns of SMEs and contribution to business development, job creation, and innovation

Knowledge on the distribution patterns of SMEs was derived by collecting, analysing, and mapping harmonized regional statistics on SMEs, afterwards called 'SME data' (number of units, employment, sectors, number of start-ups, etc.). Two databases comprising time series at different NUTS levels (NUTS 0 – NUTS 3) were created to serve as basis for the analyses. One database is a compilation of SME data and the other, a collection of context data (GDP, population densities, education, etc.). The content of both databases was determined by a thorough literature review defining thematically relevant indicators and the availability of harmonized regional data. For an overview of definitions used and data gathered refer to Chapter 3, and for a more detailed description of the challenges faced and solutions found during data collection refer to the Scientific Annex. The distribution patterns of SMEs and their contribution to business development, job creation, and innovation, including the question on SMEs role in the three focus sectors, are analysed and mapped in Chapter 3.

2.1.2 Key dynamics and drivers of SME growth

Main opportunities, drivers, and obstacles for SME growth in regions were identified for all EU regions using SME data and context indicators. Based on the findings of the literature review, the main dynamics, drivers, and explanatory factors of SME development were analysed by combining the data gathered on SMEs with relevant data on context indicators (see Chapter 4). The most important specific methods used are cluster analysis, theory-based hypotheses, principal component analysis (PCA), and regression analysis.

Additional insight on structure and performance as well as development opportunities and obstacles for SMEs was gathered during case studies within 10 case study regions, which tested the mainly quantitative results from task 2 in the field. The case study selection was based on a draft regional typology related to context indicators describing the regional socio-economic environment for SMEs, which was established at the beginning of task 3 by applying a cluster analysis. Combining the results of the quantitative and qualitative analysis of task 3, and therefore adding indicators of SME structure and performance, a final regional typology of SMEs in Europe was set up (see Chapters 4 and 5).

2.1.3 Policy support options for SME development

Within the 10 case study regions, further investigations were performed to identify strategies to support SMEs in different regions/territories as well as to identify the particular role of the public sector. The analysis provided insight into good governance practices using more qualitative methods such as focus groups, SWOT analysis, and a FOG test. Information was gathered on the development conditions and elements of an attractive and supportive environment for SMEs. The case study synopsis (see Chapter 5) forms the basis of recommendations for targeted territorial investment strategies.

Proposals on how policies at various levels of the European multilevel governance system could bring added value to the future development and growth of SMEs in European regions and cities have been developed. Based on the results from the previous tasks and an additional literature review, a creativity lab to develop policy recommendations (Chapter 6) was conducted.

2.2 Definitions

2.2.1 Statistical units for describing structures and development of SMEs

A fundamental requirement in measuring structures and development of businesses concerns the definition of a business itself. Statistical offices will typically define businesses according to their activity within national boundaries, although businesses are also increasingly measured in a global, multinational sense. The definitions used by national statistical offices are

inconsistent across countries[6]. Many businesses (parents) own or control other businesses (subsidiaries) operating within the same economy. Depending on the degree of control and the nature of economic activity, some statistical offices will consolidate parents with subsidiaries while others do not. The rules steering statistical offices' practices largely reflect domestic institutional and administrative arrangements. Not surprisingly, these differ between countries and, therefore, so do the definitions used for businesses[7].

All EU MS maintain business registers for statistical purposes. The BR Regulation[8] establishes a common framework for these registers. As they define standard statistical units, the two most executive international sources are the system of national accounts (2008 SNA)[9] and the International Standard Industrial Classification of All Economic Activities (ISIC Rev. 4)[10]. The BR Regulation makes three statistical units (SUs) mandatory, as these are the main units intended for use in collecting business statistics (see the Scientific Annex for details):[11]

- *Enterprise:* An institutional unit in its capacity as a producer of goods and services is known as an enterprise. An enterprise is an economic transactor with autonomy in respect to financial and investment decision-making, as well as authority and responsibility for allocating resources for the production of goods and services. It may be engaged in one or more productive activities.
- *Enterprise group:* Many enterprises operating within an economy are linked with other enterprises by complete or partial common ownership and a shared management structure to form an enterprise group. Members of an enterprise group are usually engaged in different activities and sometimes in more than one sector.
- *Local unit:* Enterprises often engage in productive activity at more than one location, and for some purposes it may be useful to partition them accordingly. Thus, a local unit is defined as an enterprise or a part of an enterprise (e.g. a workshop, factory, warehouse, office, mine, or depot) which engages in productive activity at or from one location. The definition has only one dimension in that it does not refer to the kind of activity that is carried out.

The various types of SUs are not independent, but are linked to each other forming a statistical unit model. Each *enterprise* has one or more *local units (locations)*. Each local unit is attributed to only one enterprise[12].

All EU and OECD countries are able to produce structural business statistics on these bases (albeit with some differences in practice), often to meet the needs of international organisations (e.g. OECD), and often for their own needs. For example, R&D statistics can only be practically produced at the enterprise (and enterprise group) level or at national accounts,

[6] Work by Eurostat (Herczog, Aimée, Hans van Hooff and Ad Willeboordse (1998), 'The Impact of Diverging Interpretations of the Enterprise Concept") for example, demonstrated that the operational definitions used for enterprises differed considerably for some firm configurations across countries, both conceptually and, more commonly, in practice.
[7] cf. Eurostat – OECD Manual on Business Demography Statistics http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-RA-07-010-EN.pdf.
[8] Business Register (BR) Regulation (EC) No. 177/2008.
[9] http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf.
[10] http://unstats.un.org/unsd/cr/registry/isic-4.asp.
[11] cf. SNA2008 and ISIC Rev. 4 for definitions.
[12] cf. UNECE (2015), Guidelines on Statistical Business Registers http://www.unece.org:8080/fileadmin/DAM/stats/publications/2015/ECE_CES_39_WEB.pdf.

which are typically based on establishment measures. The focus on business demography statistics by statistical offices is also relatively new. Accordingly, the business definitions used across countries differ[13].

The 'OECD Manual on Business Demography Statistics' recommends using the enterprise as statistical unit. However, in relation to SMEs, it establishes the differences between establishment and enterprise based indicators into context: *'The vast majority of enterprises have only one establishment; and this is especially the case for small and medium enterprises (SMEs), where there is considerable policy interest. Large new business are typically opened by a larger enterprise group, whether that be foreign or domestically owned and, so, statistics that compare levels of small business entries are likely to be comparable across countries even if the business definitions differ.'*

2.2.2 Classification of SMEs by number of employees

Describing SMEs in statistical terms is not trivial. The European Commission defines SMEs by having less than 250 persons employed and an annual turnover of up to € 50 million, or a balance sheet total of no more than € 43 million[14]. However, when looking for regional patterns of SMEs in different economic sector, a variety of data sources and definitions exists.

Annual structural business statistics with a breakdown by size class are the main source of data for an analysis of SMEs at the European level, but are only available at the national (NUTS 0) level. A limited set of the standard SBS variables (number of enterprises, turnover, persons employed, value added, etc.) is available mostly down to the three-digit (group) level of the activity classification (NACE), based on criteria that relate to the number of persons employed in each enterprise. The data cover the 'non-financial business economy', which includes industry, construction, trade, and services (NACE Rev. 2 sections B to J, L, M and N), but not enterprises in agriculture, forestry, fisheries, and the largely non-market service sectors such as education and health. The number of size classes available varies according to the activity under consideration. The definition used by structural business statistics does not allow a differentiation of employer or non-employer firms.

The second source for data on SMEs is the regional business demography (BD). BD provides information on the number of active enterprises, number of persons employed in active enterprises, number of employees in active enterprises, enterprise births[15], enterprise birth rate[16], enterprise deaths, enterprise death rate, and survival rate, both at regional and country levels. It is only available for 22 countries[17], and large MS including Denmark and the United Kingdom which are important for data analysis, are not covered. In general, BD covers NACE B-S.

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[13] cf. Eurostat – OECD Manual on Business Demography Statistics http://ec.europa.eu/eurostat/ramon/statmanuals/files/KS-RA-07-010-EN.pdf.

[14] Commission Recommendation of 6 May 2003.

[15] Enterprise births: a birth is when an enterprise starts from scratch and actually starts activity; excluding mergers, break-ups, split-off or restructuring of a set of enterprises.

[16] Birth rate: number of births as a percentage of the population of active enterprises.

[17] BD is not available for BE, CH, DE, EL, IE, IS, LI, NO, SE, UK.

Data are provided at NUTS 3 level and include information either on NACE (one-digit level, groups of one-digits) or on enterprise size. The three available enterprise size categories in regional business demography are 0, 1-9, and 10+ persons employed. Therefore it is not possible to identify SMEs because the size categories of up to 249 and 250+ are missing.

For this study, data from the Eurostat Regional Business Demography (BD) served as a basis, and were combined with national data collections to identify the group of large enterprises (250+ employed persons) in order to calculate the enterprise size classes of interest[18]:

(a) one-person enterprises with 0 persons employed;
(b) microenterprises with 1-9 persons employed;
(c) small and medium-sized enterprises with 10-249 persons employed;
(d) large enterprises with 250 or more persons employed.

For better clarity of this study's results and to clearly delineate the enterprise size classes, the group of small and medium-sized enterprises with 10-249 is labelled as 'S&M', while the official abbreviation 'SMEs' is used for the total of microenterprises and small and medium sized enterprises (0/1-249).

2.3 Overview of data gathered

As a basis for the quantitative analyses conducted in the study, regional data on SME performance and territorial context was collected at NUTS 3 level, covering most of the ESPON space, for the years 2008 and 2014. In general, the *SME data collection* comprised business-related indicators such as[19]:

- number of firms, e.g. enterprises and/or local units;
- employment, e.g. persons employed and/or employees;
- number of firm births and/or birth rate;
- number of firm closures and/or death rate;
- survival rate, i.e. percentage of a certain birth cohort still existing after x years.

Regional data available at Eurostat do not allow the distinction of SMEs, as enterprise size is usually provided only for the following categories: '0', '1-9', and '10+'. Size categories that would make it possible to identify SMEs, i.e. '10-249' and '250+', are not available. Nevertheless, with the help of data gathered from national sources it was possible to recalculate data on 10-249 employees for the indicators 'number of firms' and 'employment' (see the Scientific Annex Chapter 2.2.1 for methodology). For number of firms and employment, a breakdown along a combination of the following categories was achieved:

- NUTS 3 regions, in some cases NUTS 2 regions
- Enterprise size categories: 0, 1-9, 10-49, 50-249, and 250+ employees

[18] In limited cases, data from the structural business statistics was used to fill in data gaps (see the Scientific Annex Chapter 2.2.1 for data estimation techniques).
[19] For definitions used, please refer to the Scientific Annex.

The data restrictions resulted in the provision of the following indicators at NUTS 3 level:

- *Number of SMEs by size:* 27 countries, calculation not possible for BG, DK, NL, SI, or SK due to missing data
- *Employment by size:* 25 countries, calculation not possible for BE, BG, ES, NL, SI, SK, or the UK due to missing data.

The datasets with SME-related data on NUTS 3 level were used for the statistical analyses of development opportunities and obstacles to SMEs (Chapter 4) and for the creation of the regional typology (Chapter 4). For the mapping of SMEs in European regions and cities (Chapter 3), available NUTS 3 data was complemented by NUTS 2 or NUTS 0 data for the countries with missing data on the regional level in order to provide a more complete picture of Europe. In these cases, data from structural business statistics was used and harmonized with regional business demography data by using correction factors, which were calculated by comparing the total employment values of both statistics (SBS only relates to NACE Rev. 2 sections B-N while BD relates to NACE Rev. 2 sections B-S).

It was not possible to differentiate SME size-class by NACE sectors as this data does not exist on NUTS 3 level at a comparable basis. We have worked around this issue by analysing regional labour market structures by NACE sectors and combining this information with the regional SME typology (see Chapter 4).

Apart from SME data, *territorial context indicators* have been defined, picturing the characteristics of regions and external factors. Relevant variables have been collected on the basis of theory-based hypotheses on factors explaining the different regional patterns of SMEs on the one hand, and data availability in European and national databases on the other hand. For more details on the final databases and the process of data collection and data imputations, refer to the Scientific Annex Chapter 2.2.1.

3 Mapping and analysis of SMEs in European regions and cities

This chapter focuses on maps and analyses showing the territorial patterns of SMEs, picturing status quo and development between 2008 and 2014. The distribution patterns and employment in SMEs as well as contributions of SMEs to regional development are analysed, especially in terms of employment, growth, and innovation. Births and deaths are analysed for all active enterprises because data could not be broken down into size classes on a harmonized, pan-European basis. Special attention is given to the areas of knowledge and creative economy, ICT, and low-carbon economy. Nonetheless, the statistical data available did not allow breaking down SME employment by sector in the focus of the study (low-carbon economy, knowledge and creative economy, ICT). Therefore, maps were created combining employment in SMEs with information on the share of the sectors in the overall economy to give an indication of the relevance of the sectors in different regions and cities. Only a selection of the main maps and analyses can be presented in this main report. For definitions, additional maps, and analyses, please refer to the Scientific Annex.

3.1 Number of enterprises by size class

The number of enterprises by size class per 1,000 inhabitants gives an indication on the structure and relative importance of SMEs for the economy. Maps 3.1 and 3.2 below provide an overall perception of the concentration or clustering of SMEs in different regions. One-person enterprises or sole entrepreneurs who run a business without any persons employed are naturally the highest percentage compared to the other enterprise size classes. Up to around 85 enterprises of this size per 1,000 inhabitants can be found in capital city agglomerations (e.g. Prague, Stockholm, Vilnius) and also in tourism regions on the Mediterranean coast in Portugal and France. National differences are also visible: Croatia, Bulgaria, Lithuania, Romania, Hungary, and Norway exhibit comparably low figures of sole entrepreneurs, while on the other end of the spectrum high figures in the Czech Republic, Latvia, Slovakia, Sweden, and the Netherlands indicate a greater entrepreneurship culture. To a certain degree, this could be related to nationally varying legal situations in relation to employment and social security laws and the attribution of enterprises to this specific size class.

The national and regional density of microenterprises with 1-9 persons employed is highest in Greece, Iceland, Switzerland, and large parts of the UK, followed by Estonia, Norway, and parts of Spain. France, Latvia, Lithuania, the Czech Republic, and Romania contain the lowest density of microenterprises.

The density of S&M enterprises with 10-249 persons employed per inhabitant is highest in Sweden and Switzerland. Apart from the national differences, two diverging patterns can be observed: on the one hand, the number of S&M enterprises is higher in agglomerations in some countries (especially in Germany, Poland, Portugal, and the UK, and to a lesser degree

in Hungary, Romania, Italy, and Spain). On the other hand, the figures per 1,000 inhabitants are higher in less densely populated areas in Norway and Sweden.

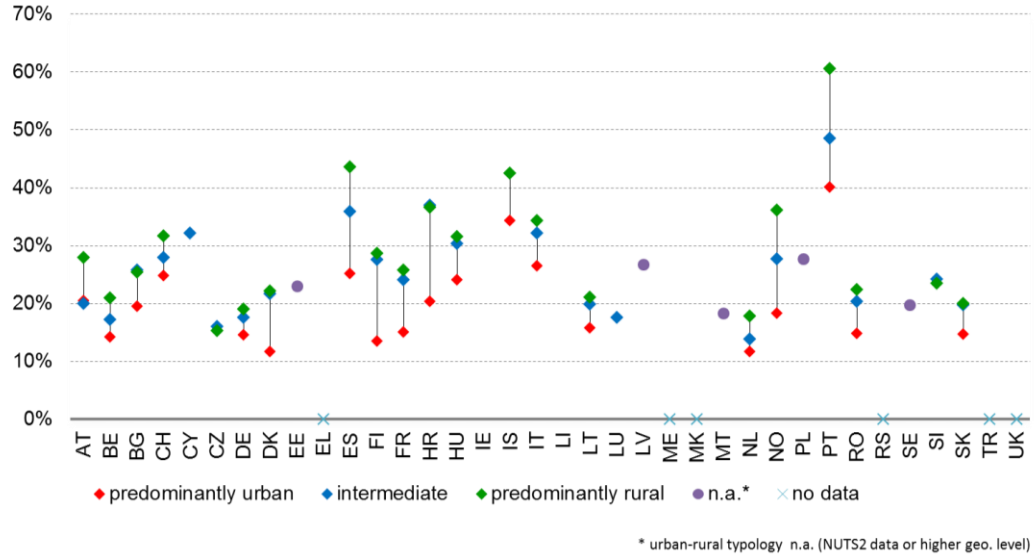
Large enterprises are concentrated in more accessible regions with high population and workforce density, and therefore often found in capital city regions and urban agglomerations. On the European scale, a north-south gradient in terms of concentration of large enterprises can be observed, with a comparably higher number of enterprises with more than 250 persons employed in the northern countries and central Europe and a lower number in southern European MS.

3.2 Share of persons employed in SMEs

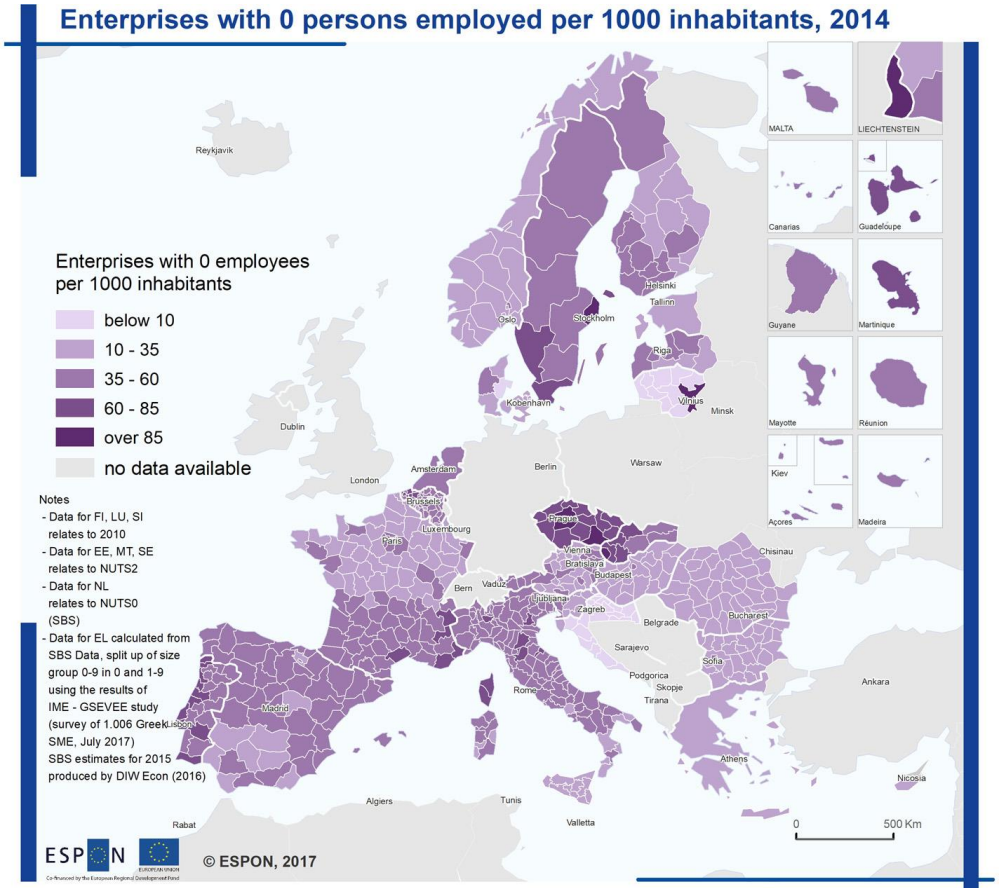
3.2.1 Share of persons employed in microenterprises (1-9 persons employed)

Map 3.5 shows the share of persons employed in microenterprises by total employment in 2014. Notably, the regions in southern Europe as well as in the very north of Europe have the highest share of persons employed in microenterprises, according to the both the latest data and that for 2008 (see Annex). The highest share of persons employed in microenterprises can be seen all over Portugal and in southern Italy. In Spain, the share of employment in microenterprises is generally high with the exception of Madrid (16%), Barcelona (24%), Navarra (24%), and Pais Vasco (22%). Notably, the Spanish Canary Islands and La Palma have high shares of employment in microenterprises (50-60%). In Italy, the southern mainland and Sicily in particular show high levels of employment in microenterprises. In general, predominantly rural regions tend to have higher shares of employment in microenterprises than urban regions. Furthermore, the share of employment in microenterprises is rather low in capital regions, and peripheral regions tend to have higher shares (e.g. Hungary/Dél-Dunántúl or Békés, Romania/Suceava, the north of Norway).

Figure 3.1: Share of persons employed in microenterprises (1-9 persons employed) in % of all employment, 2014; Average by urban rural typology



Map 3.1: Number of one-person enterprises per 1,000 inhabitants (no persons employed) 2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen and Merchants (IME GSEVEE)
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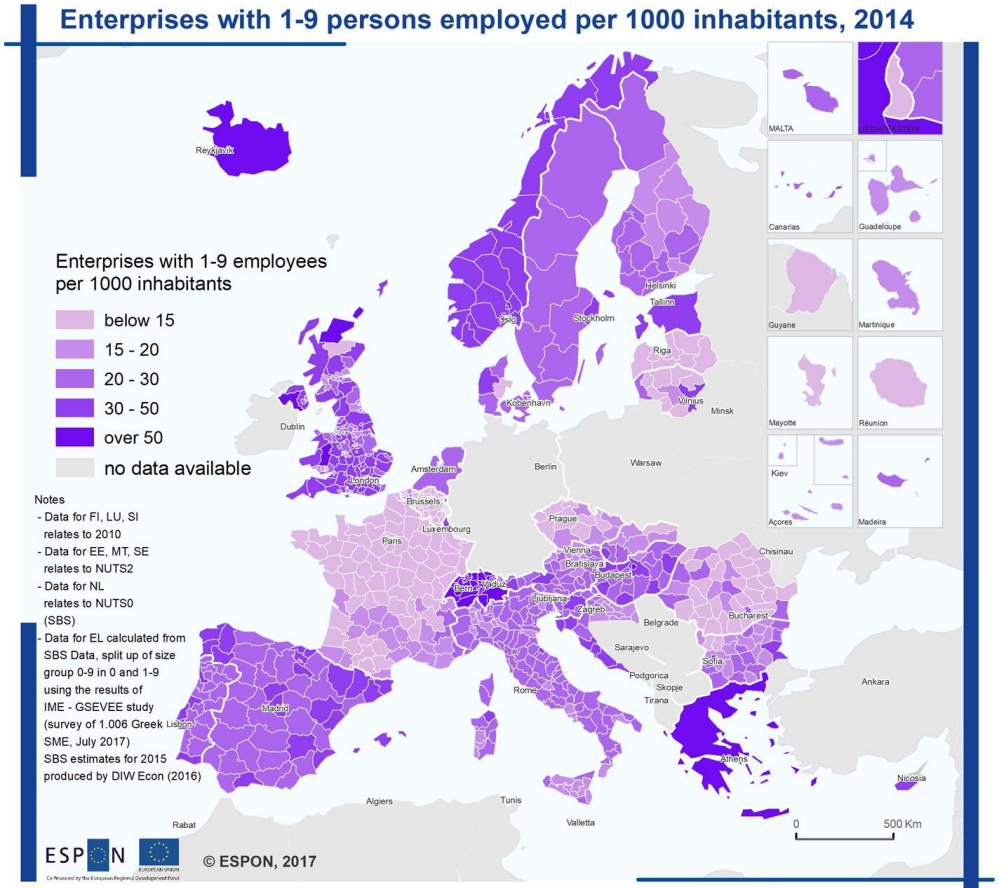
Map 3.2: Number of microenterprises per 1,000 inhabitants (1-9 persons employed) 2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, SBA Factsheet Greece 2016, Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen and Merchants (IME GSEVEE)
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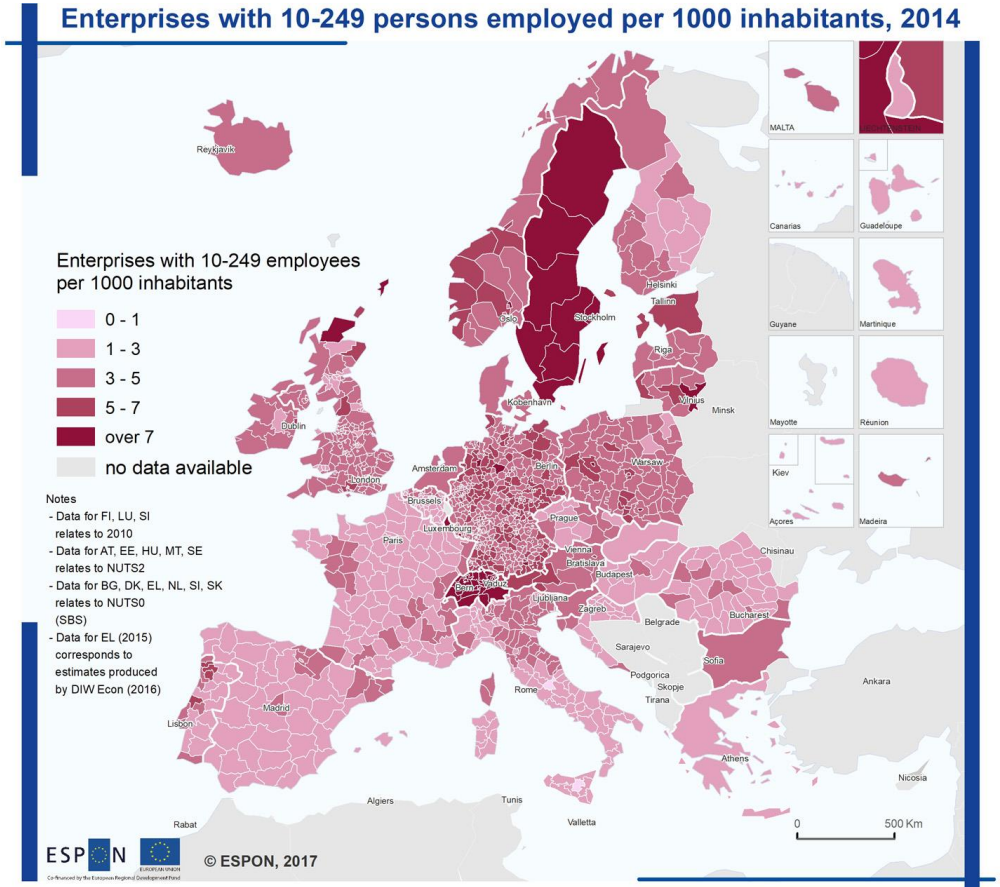
Map 3.3: Number of S&M enterprises per 1,000 inhabitants (10-249 persons employed) 2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, SBA Factsheet Greece 2016
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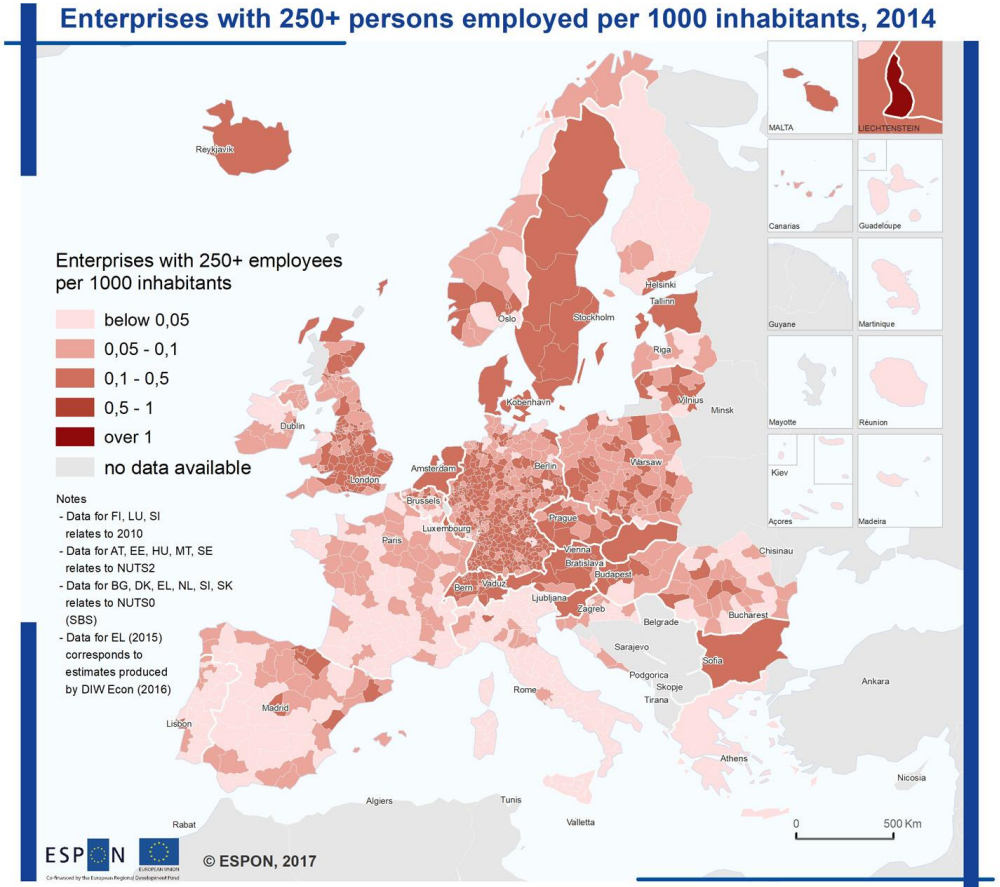
Map 3.4: Number of large enterprises per 1,000 inhabitants (250+ persons employed) 2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, SBA Factsheet Greece 2016
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3.2.2 Development of persons employed in microenterprises

Looking at the annual development from 2008 to 2014 (Map 3.6), the importance of microenterprises as employers has changed in some countries. In Portugal, Spain, the Czech Republic, Bulgaria, Croatia, Finland, and the Baltic States, microenterprises in general gained relative importance, however, the opposite is true for most central European countries, Italy, and Norway.

Although development is nationally shaped in general, there are regional differences in almost every country. In Portugal and Spain (more pronounced in the west) as well as in Italy (more pronounced in the south), there are quite notable differences in regional development and the share of employment in microenterprises. This is particularly evident considering the generally negative employment development in these countries. In Bulgaria, Croatia, the Czech Republic, Slovakia, and Latvia, microenterprises constitute a substantially increasing share of workplaces. However, the rise in significance of microenterprises in the labour market does not necessarily go hand in hand with a rise in the number of people employed.

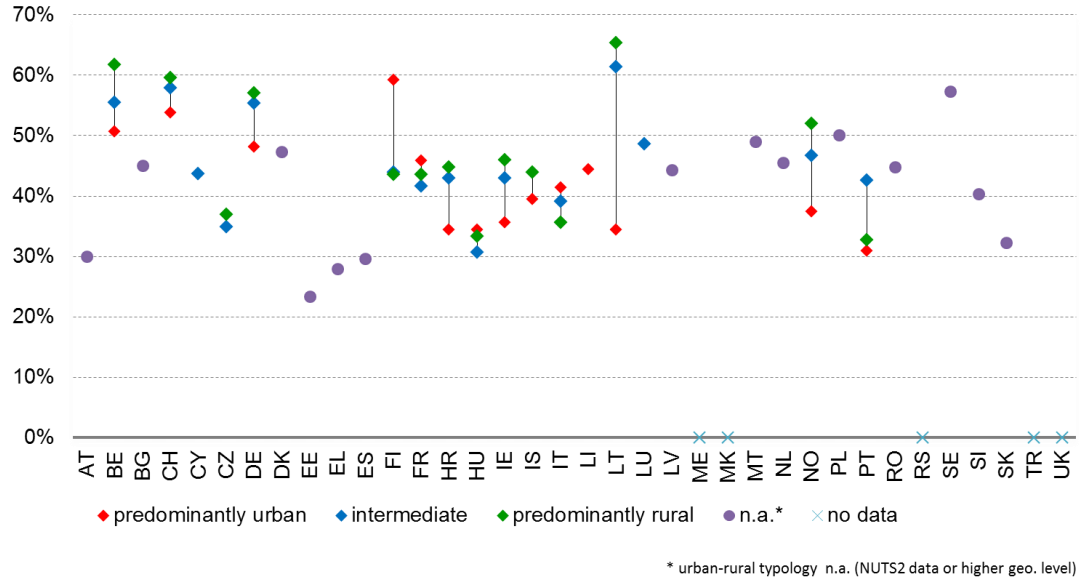
3.2.3 Share of persons employed in small and medium-sized enterprises (10-249 persons employed)

In some respects, the territorial distribution of employment in small and medium-sized enterprises (with 10-249 employees) paints an opposite picture to the maps on employment in microenterprises shown above. Map 3.7 shows the share of persons employed in small and medium sized enterprises.

Particularly in Germany, Switzerland, and the northern and north-eastern countries, small and medium-sized enterprises are important employers – especially when compared to the importance of microenterprises. This can clearly be seen by employment shares above 55% in Sweden, substantial parts of Germany (especially eastern Germany), the north of Poland, and Lithuania (with a very high share of about 70%, excluding the capital Vilnius). In France, small and medium-sized enterprises are of greater importance in the northern regions than in the south, the same is true for Italy with even more pronounced differences between the northern and southern regions. Romania has a large share of small and medium-sized enterprises, particularly in the regions neighbouring Bucharest at a rate of 45-48%. Whereas in other capital regions – such as Prague, Warsaw or Budapest – the picture is inverse.

In general, predominantly rural regions tend to have higher shares of employment in S&M enterprises than intermediate and urban regions. In some countries like Finland, Italy, France, and Portugal, the opposite is the case. Very high shares of S&M enterprises can be found in rural regions of Lithuania, Belgium, and Germany.

Figure 3.2: Share of persons employed in S&M enterprises (10-249 persons employed) in % of all employment, 2014; Average by urban rural typology



3.2.4 Development of persons employed in small and medium-sized enterprises

The development from 2008 to 2014 (Map 3.8) illustrates that the increase in importance of employment in small and medium-sized enterprises was less pronounced than that of micro-enterprises or one-person enterprises. This has to be seen against the backdrop of a general high share of small and medium-sized enterprises, i.e. small relative changes are linked to higher absolute developments.

As the map shows, the number of regions with slightly positive and slightly negative development is quite balanced. Small and medium-sized enterprises gained significant importance in Estonia, some regions of Piedmont and Livorno in Italy, as well as Lozère in France. Further positive development is seen in almost all of Germany, Sweden, and Norway, the north-west and south of Poland, the region neighbouring Bucharest, and several Italian regions. Outliers who exhibit a very strong decline of importance in small and medium-sized enterprises can be found in Slovakia, the very north of Portugal, some regions in Italy (predominately in the south), and in one region in Croatia.

3.2.5 Share of persons employed in SMEs (1-249 persons employed)

The following maps assemble the individual sub-segments of small and medium-sized enterprises (1-9, 10-249) into one picture of employment in SMEs in Europe. The overall total importance of SMEs is indicated in Table 3.1, showing the share of persons employed in SMEs in 2014. At first glance, it appears that SMEs have a greater importance for employment in the more remote regions of Europe than in its central regions, with the exception of the south of Italy.

Notably, Portugal, Iceland, Norway, and the north of Sweden show high shares of SME employment. Furthermore, high levels of SME employment can be found in the very north of

Germany, Lithuania, substantial parts of Poland, south-eastern Romania, and the Mediterranean part of Croatia.

Most interestingly, the share of SME employment is significantly lower in nearly all capital regions than in the rest of the country.

3.2.6 Development of persons employed in SMEs

The maps below show how the importance of SMEs developed after the crisis. The low values of annual change rates must not mislead the picture of overall development, e.g. changes of -2% p.a. go along with a change of -7 percent points from a share of 70% in 2008 to 64% in 2014. In general, development is diverging at the sub-national level in all countries: in more peripheral regions SMEs slightly gained importance, while they show modest losses in more developed areas. The only exception is in France, with a rather strong decline across the country. On the contrary, SMEs gained importance as employers in Croatia, Greece, Germany, western Romania, Finland, Sweden, and regions in Denmark and Norway.

3.2.7 Regional differences of different types of SMEs by regional typology

The importance of the different types of SMEs was analysed using urban rural typology and for metropolitan regions. Table 3.1 shows the average shares of employment in the different types of SMEs differentiated by urban-rural typology. The results show at first that SMEs account for a substantial part of employment in all types of regions. However, they are most important for regional employment in rural areas (75% of total employment). This is not surprising, as large enterprises are generally less attracted to rural areas than to urban and metropolitan areas. Most interestingly, S&M enterprises are strongest in intermediate regions, however the differences across regions are modest. Microenterprises prevail in rural regions, while one-person enterprises have the highest shares of employment in urban areas. It is the *prevalence of SMEs* which may vary significantly between regions. For example, the regional density of SMEs in Poland strongly varies from 33 to 58 SMEs per 1,000 inhabitants[20]. To conclude, the whole spectrum of SMEs is important in all types of regions, regardless of their urbanity. Policy recommendations have thus to be designed along the different structural strengths and weaknesses of these different regions, rather than focusing on a particular type of region.

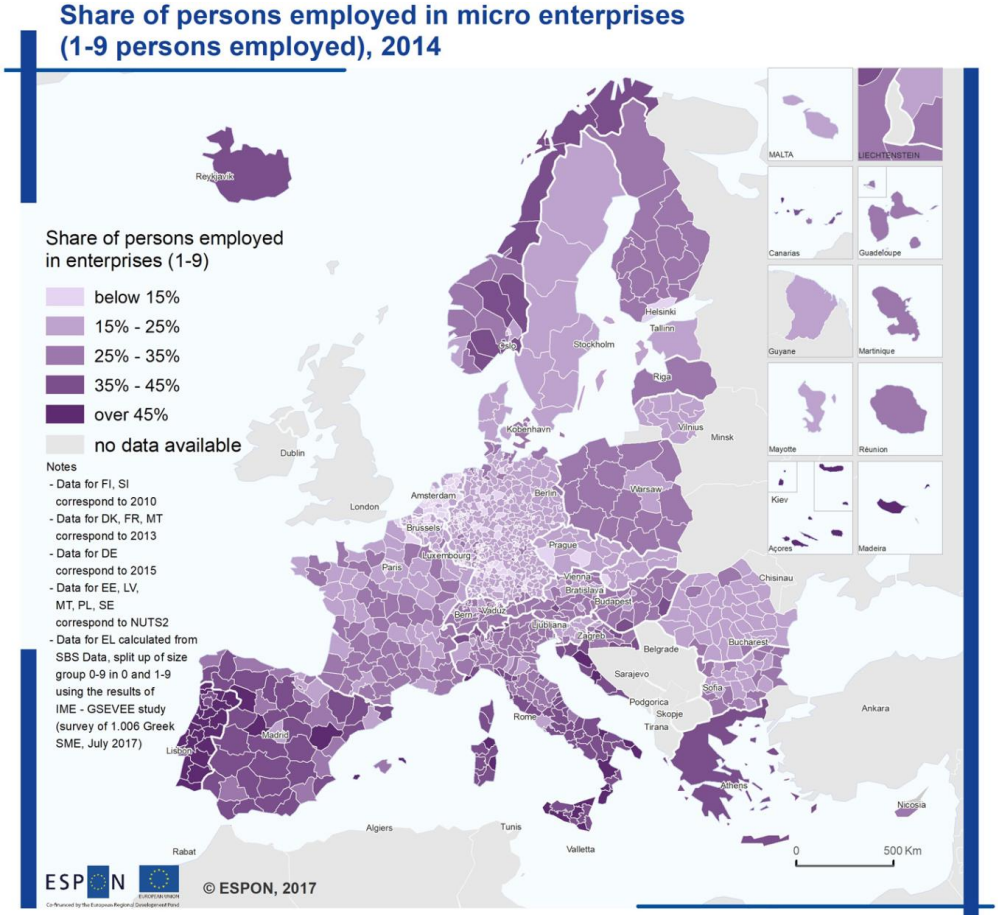
Table 3.1: Average of share of employment by type of SME and regional typology, 2014.

Urban rural typology	one-person enterprises	Microenterprises (1-9 persons employed)	S&M enterprises (10-249 persons employed)	SMEs (1-249 persons employed)
predominantly urban	0.16	0.22	0.48	0.69
intermediate	0.15	0.24	0.51	0.74
predominantly rural	0.14	0.26	0.49	0.75
Metropolitan regions	0.15	0.22	0.51	0.72
Non-metro. region	0.15	0.26	0.47	0.73

Source: Project team.

[20] OECD (2010), Poland: Key Issues and Policies, OECD Publishing, p 48.

Map 3.5: Share of persons employed in microenterprises (1-9 persons employed) 2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017

Origin of data: Eurostat Business demography,Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen and Merchants (IME GSEVEE)
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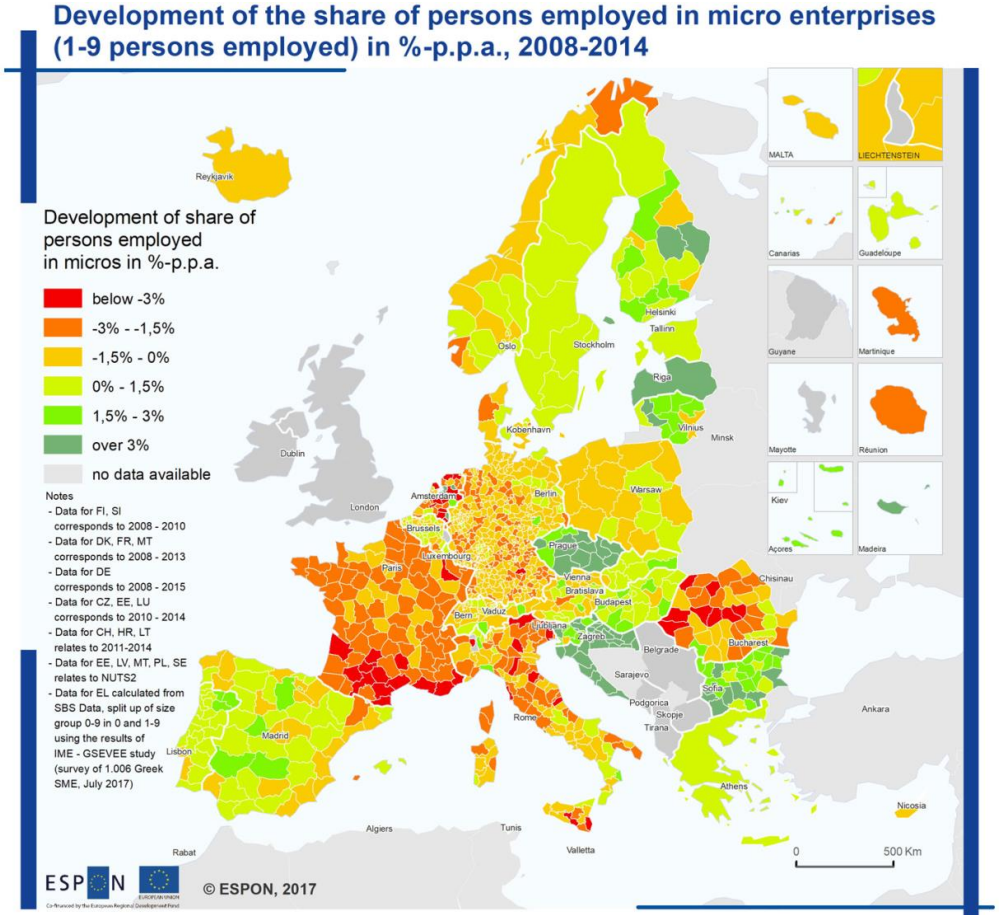
Map 3.6: Development of the share of persons employed in microenterprises (1-9 persons employed), in percent p.a. 2008-2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017

Origin of data: Eurostat Business demography, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen and Merchants (IME GSEVEE)
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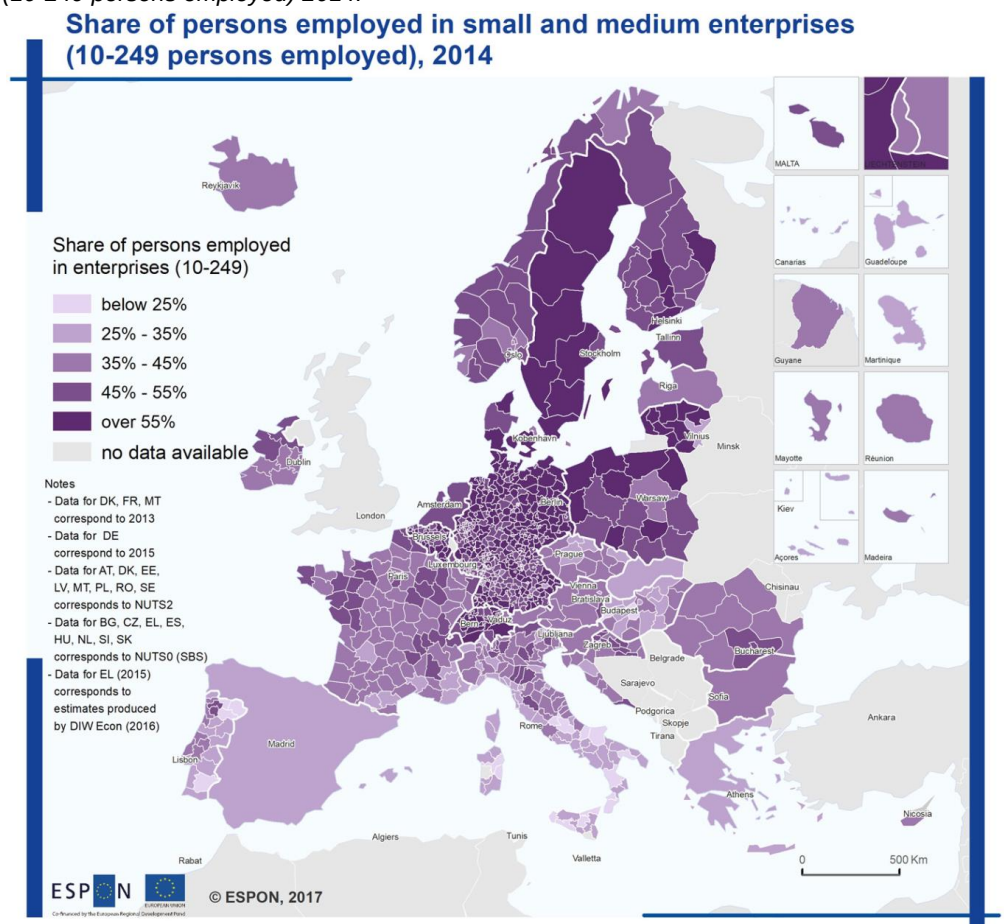
Map 3.7: Share of persons employed in small and medium enterprises (10-249 persons employed) 2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017

Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, SBA Factsheet Greece 2016
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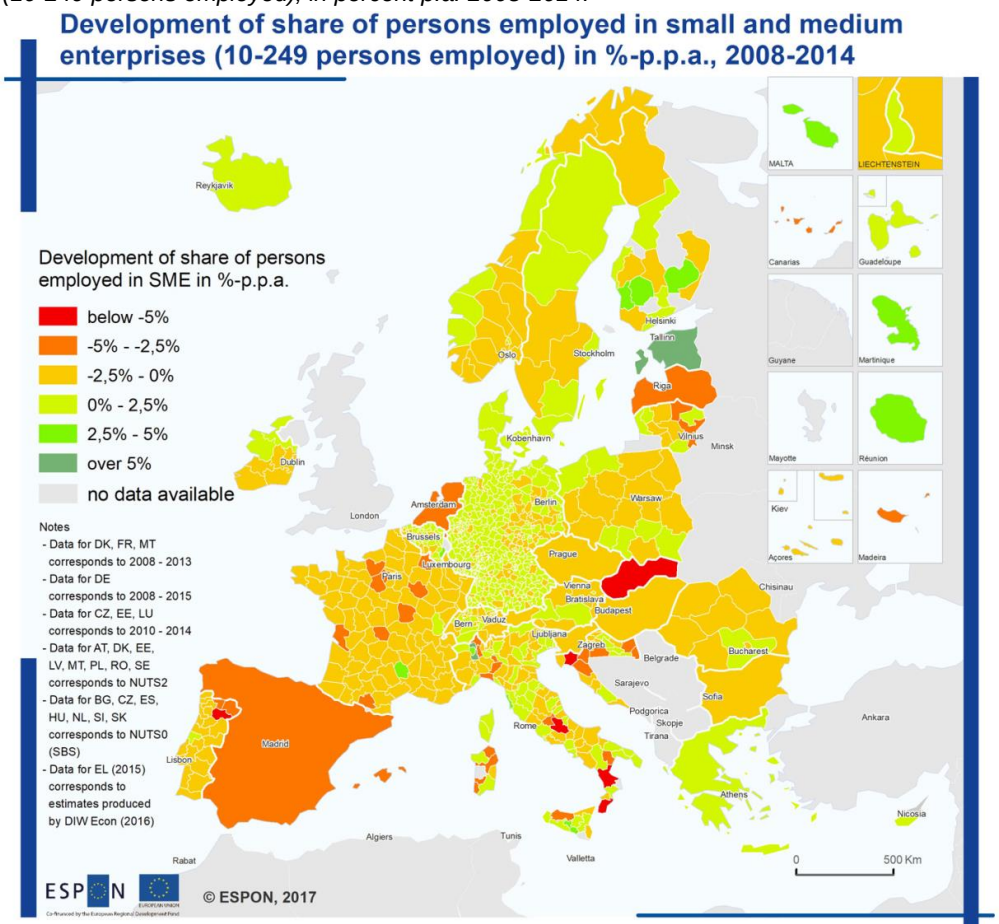
Map 3.8: Development of the share of persons employed in small and medium enterprises (10-249 persons employed), in percent p.a. 2008-2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017

Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, SBA Factsheet Greece 2016
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3.3 Development of SME employment and focus sector employment

A major drawback for the study is that statistical data is not available at the regional scale on enterprise size in combination with economic activity (NACE codes). In order to give an overview on the territorial dimension of the share of SME employment and employment in certain economic sectors, two-dimensional maps have been produced that provide cross information on both characteristics. More precisely, these maps show how the share of SME employment differs from the EU average (below average, average, above average) per region and whether the share of regional employment in a particular sector is above, below, or about the EU average. However, these maps depict neither causalities, nor do they show whether the first component influences the second or the other way round. The chapter allows only for mapping regional differences of two components at the same time and can thus help to understand the results of the regression analysis and to select regions for the case studies.

3.3.1 SME employment and employment in the knowledge and creative economy

Map 3.9 shows the share of employment in SMEs in 2014 combined with the share of employment in the knowledge and creative economy in 2014. More precisely, it shows how the regions perform compared to the EU average in these two dimensions.

High shares in the knowledge and creative economy can be found in the south of Norway, Finland, and Sweden; the regions of Rhône-Alpes and Lorraine in France; southern and western Germany; the regions of Piedmont and Emilia Romagna in Italy, Styria in Austria, and Dolnoslaskie in southern Poland; the Czech Republic, the Netherlands, and the region around Bucharest (Sud-Muntenia).

Notably, a high share the of knowledge and creative economy goes hand in hand with a high or at least average share of SME employment.

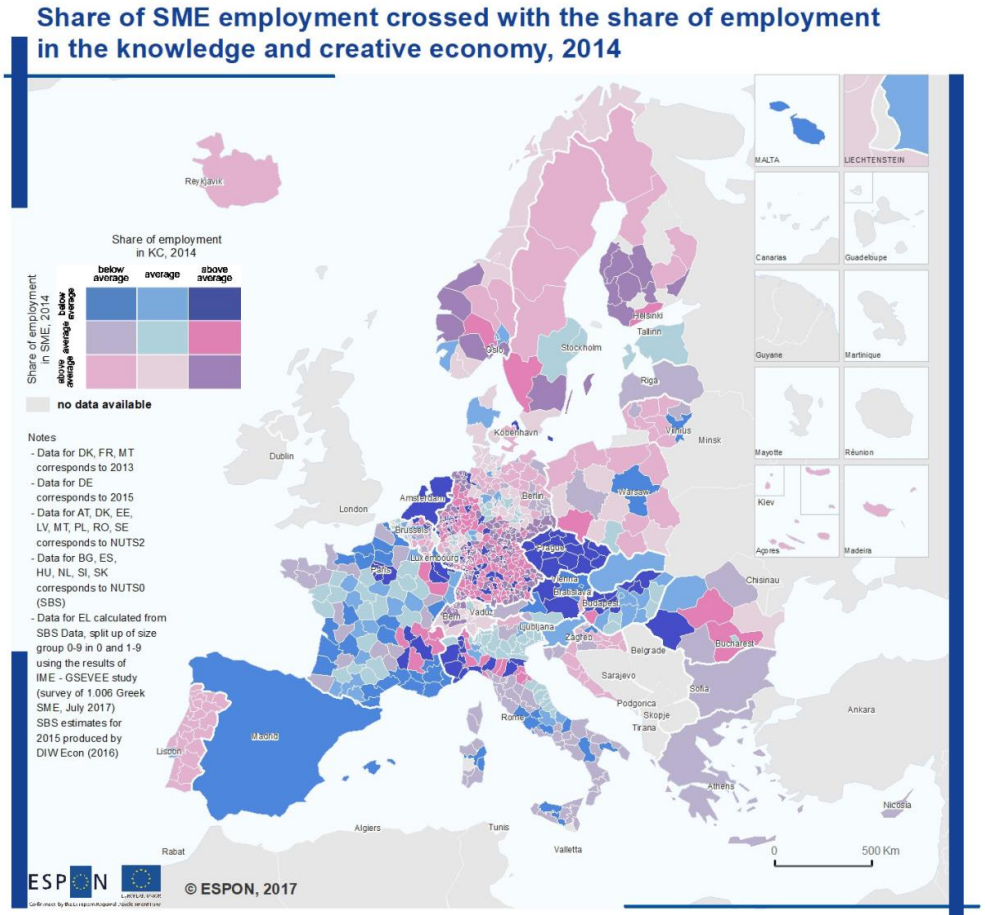
Furthermore, a high share of knowledge and creative economy is not necessarily connected with a high or at least average share of SME employment, as the examples of Czech Republic, the Netherlands, and Styria show. However, including the dynamic dimension of annual change in SME employment (Map 3.10), it becomes obvious that a high share of employment in the knowledge and creative industries led to a rise of SME employment in the period of 2008-2014. Only Italy and the west of Romania do not support this conclusion.

3.3.2 SME employment and employment in the ICT sector

Research shows that urban and metropolitan regions are much more specialised in knowledge-intensive businesses, e.g. in the ICT industry[21]. Sectoral specialisations have an impact on overall size structures as the average firm size differs between industries.

[21] Enichlmair, C. & T. Oberholzner (2016), Salzburg 2025: Szenarien regionaler Wirtschaftsentwicklung und gesellschaftlicher Rahmenbedingungen, Kapitel Wirtschaftlicher Strukturwandel, pp 157-212.

Map 3.9: Share of SME employment 2014 crossed with the share of employment in the knowledge and creative economy, 2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, SBA Factsheet Greece 2016, Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen and Merchants (IME GSEVEE)
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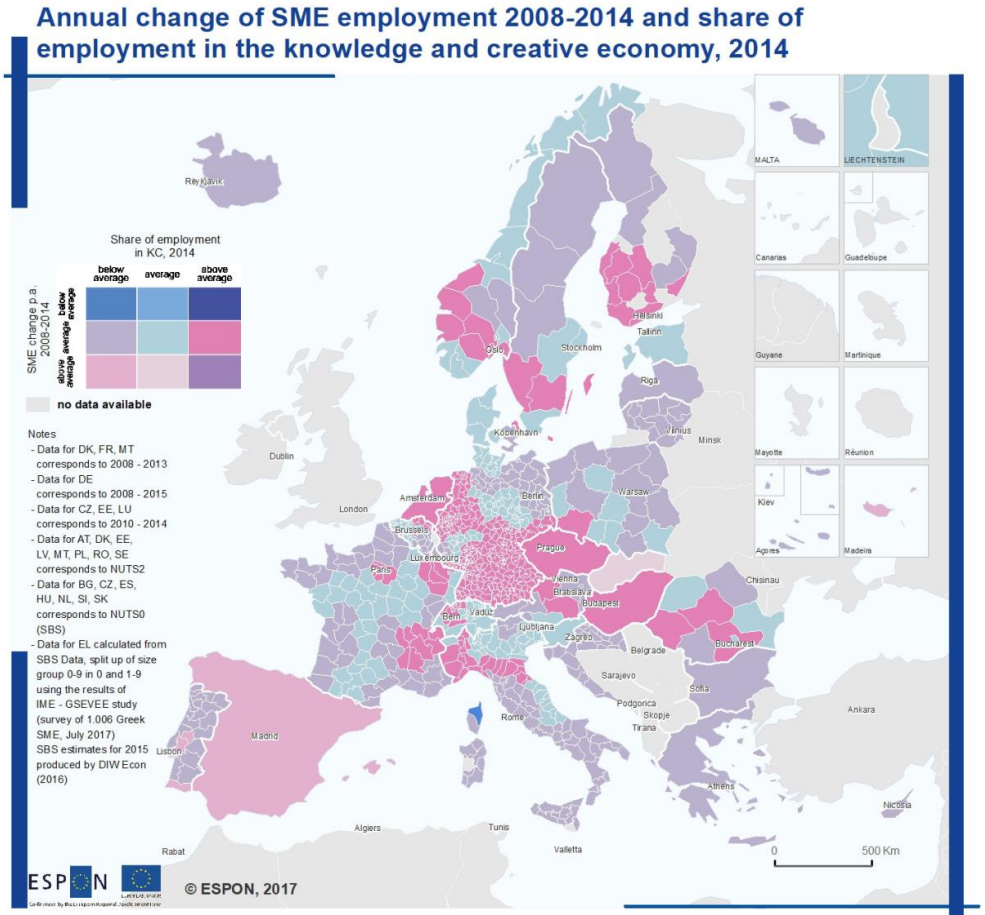
Map 3.10: Annual change of SME employment 2008-2014 crossed with the share of employment in the knowledge and creative economy, 2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, SBA Factsheet Greece 2016, Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen and Merchants (IME GSEVEE)
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Map 3.11 shows the share of employment in SMEs in the year 2014 and the share of employment in the ICT sector in 2014. More precisely, it shows how the regions perform compared to the EU average in these two dimensions.

The share of employment in ICT is high in the northern region of Sweden (Norrbotten) and Gothenburg, the metropolitan regions of Helsinki, Paris, Rome, Munich, Frankfurt and their neighbouring university regions, the Italian region of Piedmont, as well as in the central regions of the Czech Republic, the south-west of Poland, and a substantial part of Romania.

Focussing on the comparison of annual change rates in SME employment from 2008-2014 and share of ICT employment in 2014 (Map 3.12), one can see that a substantial number of the regions named above, which have high shares of employment in the ICT sector, performed at least averagely regarding SME growth, i.e. Bavaria, around Frankfurt/Main and the neighbouring university regions as well as Leipzig/Dresden, Paris, Bucharest, Gothenburg, Norrbotten, and Dolnoslanskie and Slaskie in Poland.

3.3.3 SME employment and employment in the carbon-intensive economy

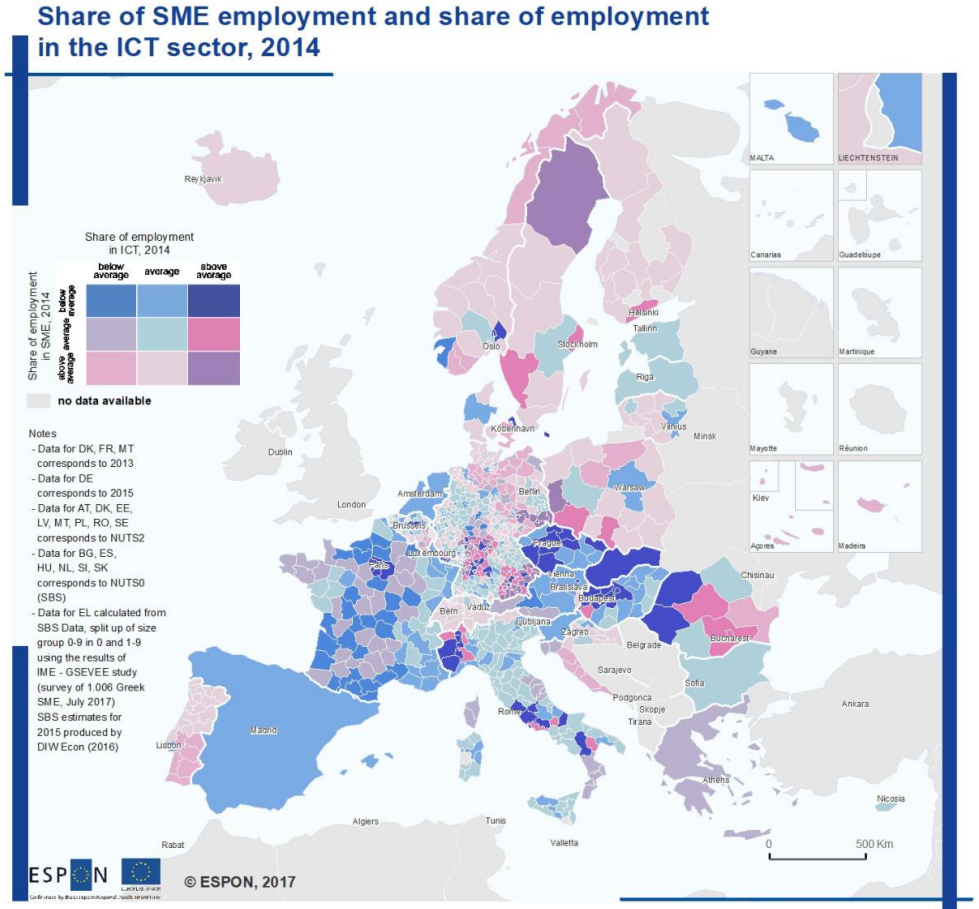
Due to its cross-cutting nature, the data available by NACE sections/divisions does not adequately cover the concept of the low-carbon economy (see the Scientific Annex, Chapter 2.1.3.3). Even though all sections/divisions contain SMEs in the low-carbon economy, statistical analysis based on these selected economic activities is not suitable to deliver specific statements on ‘low carbon SMEs’, but rather on industries that will be affected by the low-carbon economy (i.e. carbon-intensive branches).

Map 3.13 shows the share of employment in SMEs crossed with the share of employment in the carbon-intensive sectors in 2014. More precisely, it shows how the regions performed compared to the EU average in these two dimensions.

The share of both recent SME employment and employment in the carbon-intensive economy is high in the northern countries, Lithuania, large parts of Poland, Switzerland, and Croatia. Below average employment in SMEs but a high share in the carbon intensive economy can be found a substantial number of French regions, the Czech Republic, Austria, Slovenia, Denmark, and the south of Italy. On the contrary, both factors are weak in Germany and several metropolitan areas. The map further illustrates that the importance of employment in the carbon-intensive industry prevails in Norway, Sweden, the Baltic Countries, Poland, Czech Republic, Austria, Croatia, Romania, and France.

Looking at the annual change rates of SMEs and the share of employment in the carbon-intensive industry (Map 3.14), most regions with an above average share of employment in the carbon-intensive industry show little increase in the share of employment in SMEs.

Map 3.11: Share of SME employment crossed with the share of employment in the ICT sector, 2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
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Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, SBA Factsheet Greece 2016, Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen and Merchants (IME GSEVEE)
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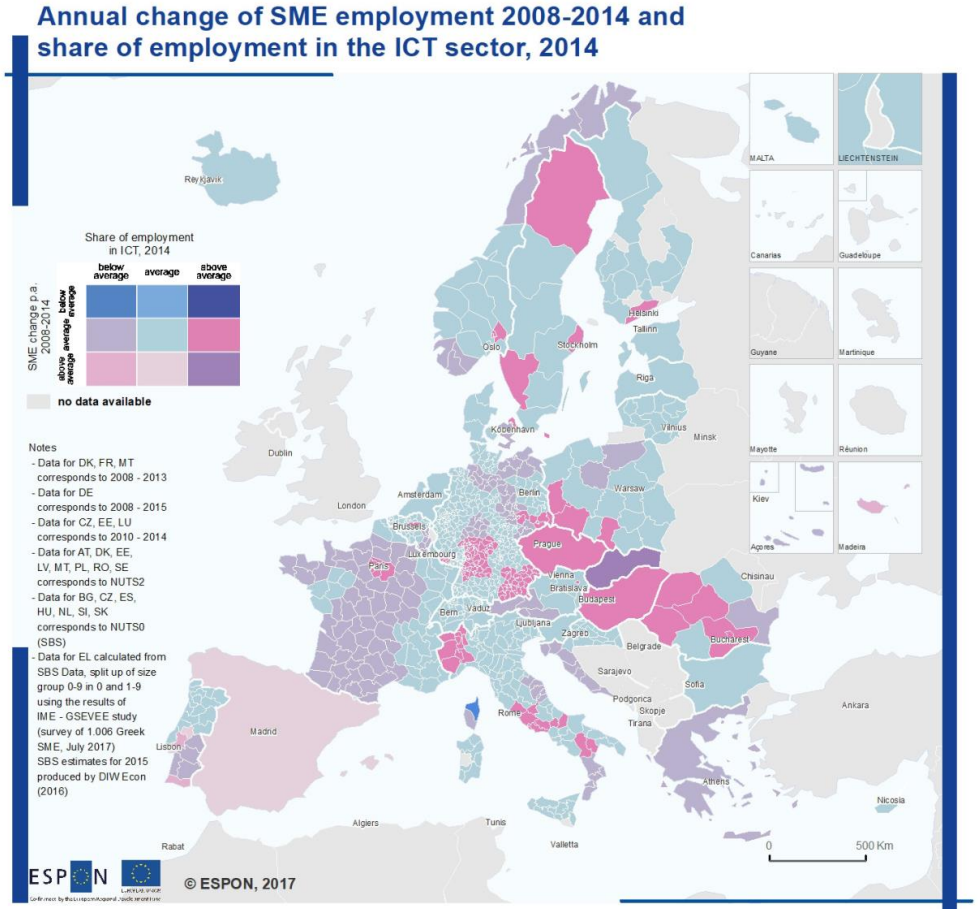
Map 3.12: Annual change of SME employment 2008-2014 crossed with the share of employment in the ICT sector, 2014.



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
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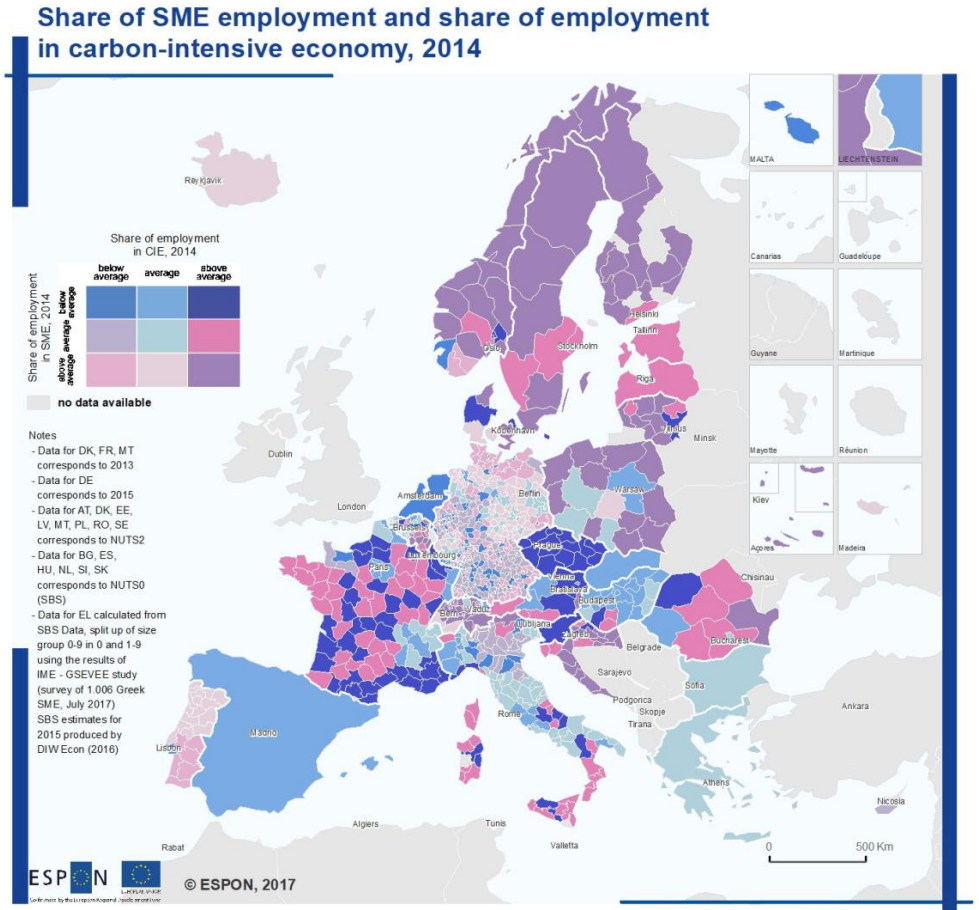
Map 3.13: Share of SME employment crossed with the share of employment in carbon-intensive economy, 2014



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
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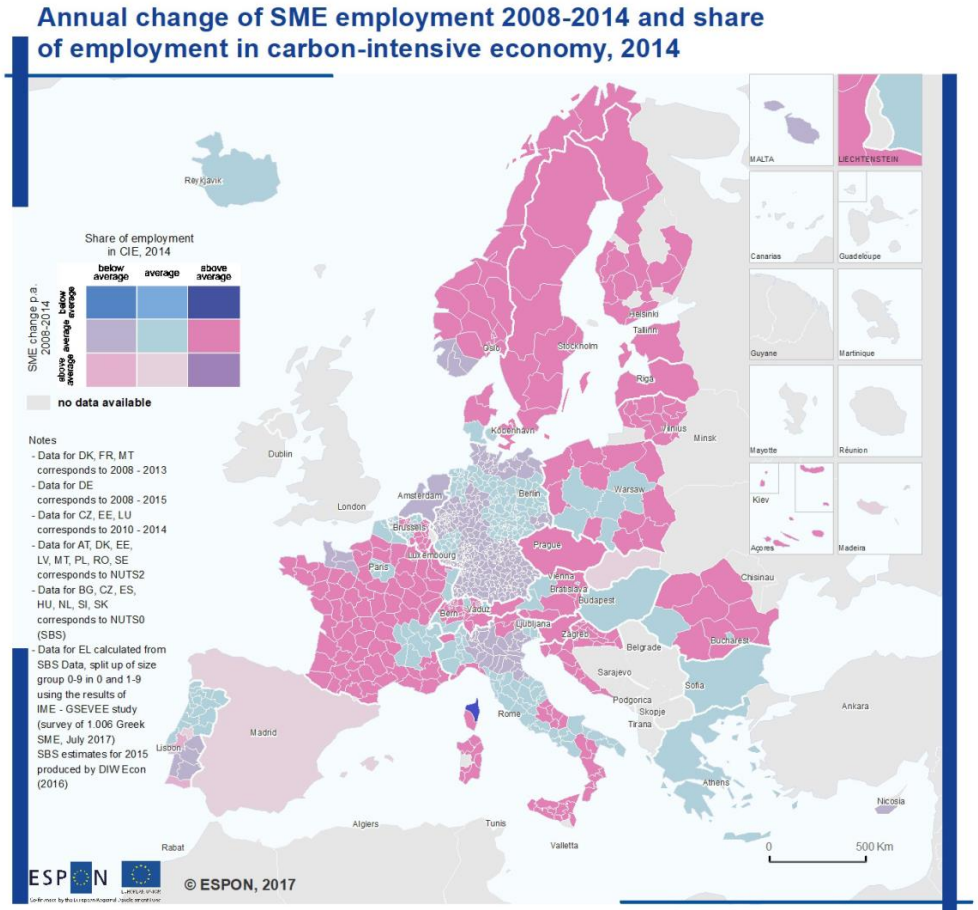
Map 3.14: Annual change of SME employment 2008-2014 crossed with the share of employment in the low carbon-intensive economy, 2014



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
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4 Analysis of the development opportunities and obstacles of SMEs

This chapter focuses on investigating factors influencing the patterns and development of the SME sector at the regional level. The guiding question is: what factors determine the development of a region's SME sector and act as key drivers or, conversely, obstacles to SME growth and performance at the regional level? First, based on a review of literature and relevant theories, possible factors that could explain different regional patterns of SMEs and, in particular, differences in SME performance between regions were identified (See the Scientific Annex). The identified factors were then translated, as far as possible, into empirically measurable indicators based on available data at regional level. These reflect potential explanatory factors – and therefore potential drivers – for the different regional development of SMEs. Statistical analyses were then used to investigate the actual significance and effect of the potential explanatory variables (territorial factors) for regional SME development.

Furthermore, a typology of regions based on territorial factors was developed by using a cluster analysis, displaying different development conditions for SMEs. The typology was also used to select and allocate a set of regions as in-depth case studies to investigate in more detail the dynamics, conditions, and policies at work in different kinds of European regions.

Main results:

- The PCA revealed five independent components which are potentially relevant for describing territorial context of SMEs: urban vs. rural, accessibility, unemployment and self-employment, employment and population (density), governance quality, access to finance, taxation, market dominance, and cluster development.
- The independent variables GDP, share of population with tertiary education, gender balance in employment, innovative SME collaboration, and patent applications are potentially relevant singular variables for describing the territorial context of SMEs.
- The regression analyses reveal that education is the most important driver for the performance of microenterprises in all types of regions, i.e. in rural, intermediate, and urban regions.
- The results for S&M enterprises point to the regional conditions which need to be in place to allow and support firms to grow: in particular good governance systems, high accessibility, and a high education level of the population.
- Accessibility (urbanisation) and governance quality drive enterprise birth rates.
- The main drivers for the knowledge and creative industries are component accessibility and governance quality.
- The education level of the local population – next to component accessibility and patent activity – seems to constitute an important driver for the ICT sector.

4.1 Regional drivers of SME performance – a statistical analysis

4.1.1 Step 1: Indicators on potential determinants and drivers

For the set of factors which possibly explain regional differences in SME performance (as found in the literature review), corresponding indicators were identified and defined using the regional data collected as part of the 'territorial context database' (see the Scientific Annex, Chapter 4.2). European databases have been complemented by additional data collection from national sources and imputations for missing data to attain the most complete territorial coverage possible. For each indicator, the value of the latest year available (usually 2014) and its development (between 2008-2014) were used. The final selection of indicators of potential determinants and drivers is presented in the Scientific Annex[22].

4.1.2 Step 2: Principal component analysis (PCA)

In order to reduce the number of indicators for determinants (explanatory factors) a *principal component analysis (PCA)* was applied to the set of variables identified above. The PCA discovers which variables/indicators form coherent subsets (components) that are relatively independent of one another. First, the selected indicators/variables were grouped into sets of variables that are thematically linked – e.g. transport, governance, economy, labour market. A series of PCAs were then conducted with SPSS software to test if the grouped variables are consistent with each other and result in homogeneous components (for more information on the methodology, see the Scientific Annex).

After eliminating unfitting indicator variables, five PCAs were conducted using 19 'status' variables (i.e. indicator values for years 2014 or 2013 in case of missing values) from the pool of territorial context indicators. The process led to the extraction of a total of five components, each alone explaining over 70% of the variance of variables used. Variables with high factor loadings describe the characteristics of the common components; negative factor loadings indicate reverse correlation of the particular variable with the other variables loading on the component (see tables in the Scientific Annex).

The interpretation of factor loadings reveals the following components composed of different positively (+) or negatively (-) correlating variables for status and development of context indicators[23]:

- Component 1: urban vs. rural;
- Component 2: level of accessibility;
- Component 3: level of unemployment and self-employment;
- Component 5: concentration of employment and population (density);

[22] In some cases only data at the national (NUTS 0) level is available, e.g. in the field of governance quality or regulation.

[23] Components 4 (regional income and GDP) and 6 (knowledge and innovation) were eliminated from the PCA due to missing data. For the further regression and cluster analysis, the variables GDP, share of population with tertiary education, gender balance in employment (RCI 2016), innovative SME collaboration (RCI 2016) and patent applications were included as single variables. Regional income and GERD were excluded due to high amounts of missing data.

- Component 7: level of governance quality, access to finance, taxation, market dominance and cluster development.

These components represent potential determinants or drivers – or, in statistical terms, possible explanatory factors – influencing regional SME performance.

4.1.3 Step 3: Regression analyses

In the previous work steps, a set of variables has been defined for European regions which reflect *potential* explanatory factors – and therefore *potential* determinants or drivers – for regional SME performance. In the next step, it was statistically investigated whether, and to what extent, the identified factors (as independent variables) actually influence and determine different aspects of regional SME development and performance (as dependent variables). When looking at 'SME performance' it is useful to distinguish between different broad size categories and also look at different indicators of performance. This allows for a more detailed and qualified picture of the interrelations at work. To uncover and assess the determinants and drivers, we applied a series of (linear) regressions with step-wise inclusion of variables. As independent explanatory factors we use the five components obtained through the PCA as well as additional single indicators (such as the regional education level), which are not part of any of the components.

What determines the expansion of microenterprise employment?

The first aspect we looked at is employment growth in microenterprises (firms with fewer than 10 persons employed) by NUTS 3 regions, and more specifically the annual percentage growth in the period from 2008-2014 (the period observed deviates slightly in some countries/NUTS 3 regions depending on data availability). The regression model shown in the Scientific Annex reveals that the influence of regional characteristics is relatively small. The education level and the component *governance quality* have to some extent a (significant) positive effect and work as drivers for employment in microenterprises. Many other factors do not seem be very relevant (e.g. component accessibility and urbanisation) in this respect.

In fact, *education* is the most important driver for the performance of microenterprises in all types of regions, i.e. in rural, intermediate, and urban regions.

What determines the expansion of small and medium-sized enterprises?

For small and medium-sized enterprises (10-249 persons employed) the situation is quite different. The development of that size category at the NUTS 3 level – measured in terms of employment growth mostly in the 2008-2014 period – is much more dependent on the regional factors investigated here. The regression model depicted in the Scientific Annex informs that the component *governance quality* plays a major role in the growth of small and medium-sized enterprises. In addition, the component *urbanisation* (the opposite of rurality and highly correlated with *accessibility*) is also a driver for this category of enterprises.

We must note, however, that a large part of the governance variables forming the governance component relate to the NUTS 0 level, therefore strongly reflecting country conditions rather

than regional conditions. Furthermore, governance quality is strongly correlated with many other regional factors and thus potentially obscuring their role as drivers. We therefore present another regression model in the Scientific Annex which excludes the governance variable. This model indicates that a the component *accessibility* of the region[24] has a positive impact on employment growth in the small and medium-sized enterprise segment, and the positive effect of the education level also becomes slightly more prominent in this model.

Small and medium-sized enterprises are usually former microenterprises which have experienced significant growth. Overall, the results therefore point to the regional conditions which need to be in place to allow and support firms to grow, in particular *good governance systems*, high *accessibility*, and a high education level of the population. While rural regions consequently seem to be at a disadvantage as far as the growth potential of small and medium-sized firms is concerned, it is basically still the same 'success factors' which are at work in these regions: governance quality, accessibility, and education.

What determines enterprise birth rates?

High enterprise birth rates may be seen as an indicator or condition for a thriving SME sector. We examined which factors would impact a region's birth rate in the latest available year (often 2014). According to the regression model in the Scientific Annex, it is mainly the components *accessibility* (urbanisation) and *governance quality* which drive enterprise birth rates. Interestingly, high unemployment rates hardly influence (or drive) birth rates.

Higher enterprise birth rates do indeed have a small but significant positive impact on employment growth in SMEs. However, this is to some extent sham correlation rather than causality, as both birth rates and SME employment growth are prompted by the same regional factors.

What determines net birth rates (births minus closures)?

There is not much relation between (gross) birth rates as discussed above and net birth rates (births minus closures). This means that high birth rates usually go hand in hand with high closure rates. The main determinants for high net birth rates are similar to the drivers of gross birth rates (components *accessibility* and *governance quality*), however the education level of the regional population is a more important factor here, as the regression analysis in the Scientific Annex shows. This is especially true for rural and intermediate regions, where the impact of education on net birth rates is even greater than in urban regions.

However, high net birth rates in a region have only a very weak positive impact on employment expansion in the overall SME sector. The reason is that – at least in the short or medium term – employment growth primarily comes from the dynamics of the relatively few companies in the small and medium-sized enterprise segment.

[24] Accessibility is highly correlated with urbanization.

What determines the prevalence of the knowledge and creative industries and the ICT sector?

Lastly, we investigated which regional factors/characteristics influence the relative prevalence of the knowledge and creative industries and the ICT sector, measured by their shares in total regional employment. Sector employment here refers to all size categories, not only to SMEs. As the Scientific Annex shows, the main drivers for the knowledge and creative industries are the components *accessibility* and *governance quality,* and the single indicator *patent activity* (which may be an indicator for research and innovation activity, but could also be understood as a result rather than an explanation). Interestingly, education level has not been identified as a significant factor for these industries. The reason for this might be that several sub-sectors are included, which need varying sets of skills and education levels as preconditions for development.

Conversely, the education level of the local population – next to the component *accessibility* and *patent activity* – seems to constitute an important driver for the ICT sector. By contrast, governance quality seems to be a less crucial factor in the case of the ICT sector. Also in rural regions with low accessibility, it is the education level and research and innovation activity which are conducive for a strong ICT sector.

4.2 Setting up a draft regional typology

As a basis for the selection of case study regions, a draft regional typology covering the ESPON space was created by clustering regions based on context indicators identified as relevant for displaying different development conditions for SMEs (see the Scientific Annex for details).

4.3 Selection of case study regions

The unit of analysis was defined as a type of region according to similarities related to territorial context indicators which were defined in the statistical analyses. For each cluster, the relative 'best performing' regions were identified by assessing their features in terms of employment in SMEs, focus on the knowledge and creative economy (KC), ICT, or low-carbon (LC) sectors, and birth and survival rates of enterprises. The methodological approach taken was to generate a ranking of all elements (i.e. NUTS 3 regions) within each cluster, based on an overall score for 'SME performance' consisting of individual scores of SME performance indicators (see the Scientific Annex for details). All in all, we analysed ten NUTS 3 regions in the form of case studies, each representing a specific combination of factors.

Or to put it in another way, in each of the five initial clusters, two regions have been analysed in order to gain more empirical evidence on potential repeated patterns and impact chains. These clusters were defined using available quantitative data.

4.4 Final regional SME typology

After testing the quantitative results of the PCA, regression analysis, and cluster analysis in the field by conducting case studies and two internal workshops (see Chapter 5), a final regional typology using SME context and performance indicators was created. The preliminary findings in terms of SME development opportunities and obstacles have been comprehensively analysed to finally develop a typology of SME regions which combines territorial context factors as well as SME status and development and sectoral focus (see the Scientific Annex, Chapter 4.5).

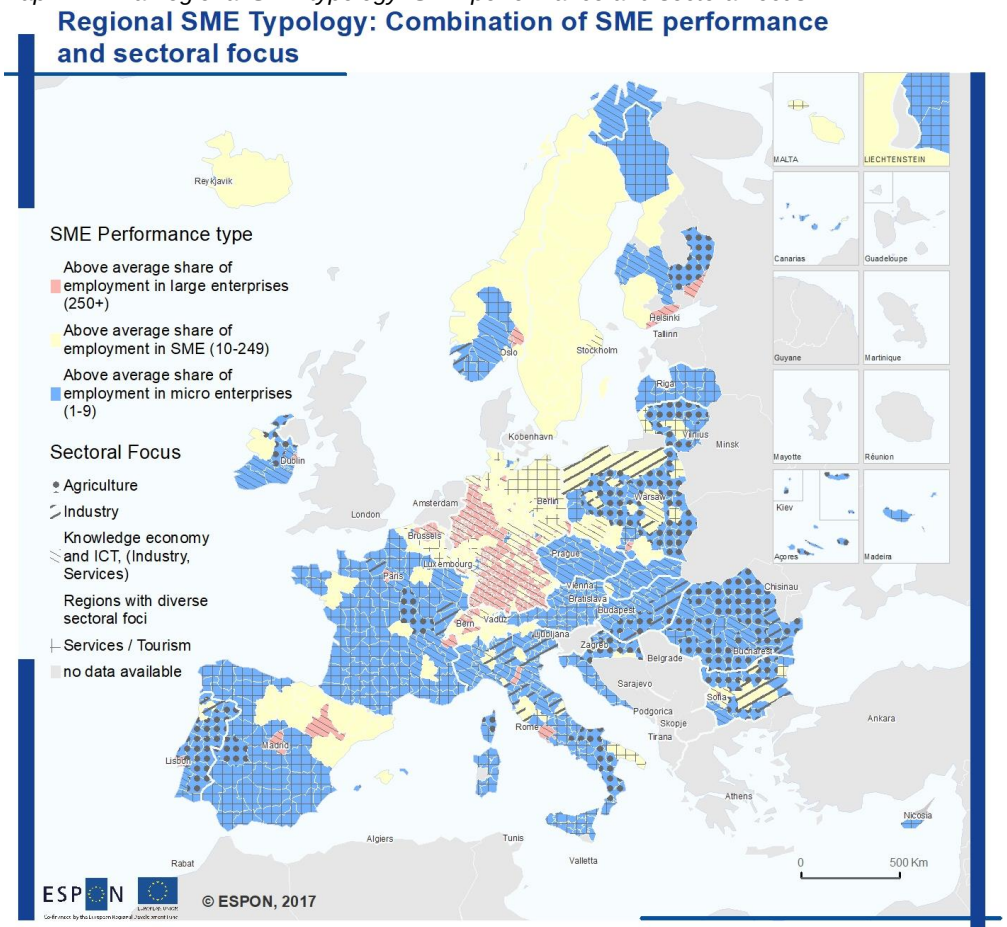
The regional typology combines the following three elements, with SME performance type being the structuring factor, while sectoral focus and territorial type further differentiate the six performance types (see the Scientific Annex for details and a complete matrix of NUTS 3 regions and types of regions):

- SME performance type (three classes, descending in their SME performance)
- Sectoral focus (five classes)
- Territorial type (five classes, descending in their territorial endowment).

Map 4.1 and Map 4.2 show the three SME performance types in combination with sectoral focus and territorial context.

- SME performance type 1 regions with an above average share of employment in large enterprises also show positive development of employment in S&M enterprises (not shown in the maps). Capital city regions (e.g. Madrid, Rome, Helsinki, Oslo, Brussels, Zürich, and Paris) and regions in southern and western Germany belong to this type. As seen in Map 4.1, these regions have a sectoral focus on the knowledge economy and ICT. According to Map 4.2, they belong to the territorial type of high performing intermediate and metropolitan areas.
- SME performance type 2 regions with an above average share of employment in S&M enterprises (10-249) include northern and central European regions with diverse sectoral foci and specialisation in the knowledge economy and ICT as well as regions in northern Poland, central Bulgaria, eastern Spain, and parts of Italy. However, some regions in Poland and central Bulgaria show negative development of employment in S&M enterprises between 2008-2014. This type also represents average-performing rural, intermediate, and urban regions in Iceland, Sweden, and parts of Spain and also high-performing intermediate and metropolitan areas in Norway, Sweden, and northern Italy.
- Regions with thriving microenterprises are found all over Europe, with sectoral foci in services, tourism (Austria, France, Spain, Finland, and Estonia) or knowledge economy and ICT (Slovakia, the Czech Republic, parts of Hungary, Croatia, and Romania). The different sectoral foci of microenterprises in new and old EU Member States is revealed by this typology. Regions with struggling economies as well as a struggling SME sector can be found in areas with high unemployment or high shares of agriculture and/or old industries (parts of Poland, Portugal, Italy, Ireland, Southern Hungary, Romania, and Bulgaria).

Map 4.1: Final regional SME typology: SME performance and sectoral focus



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz
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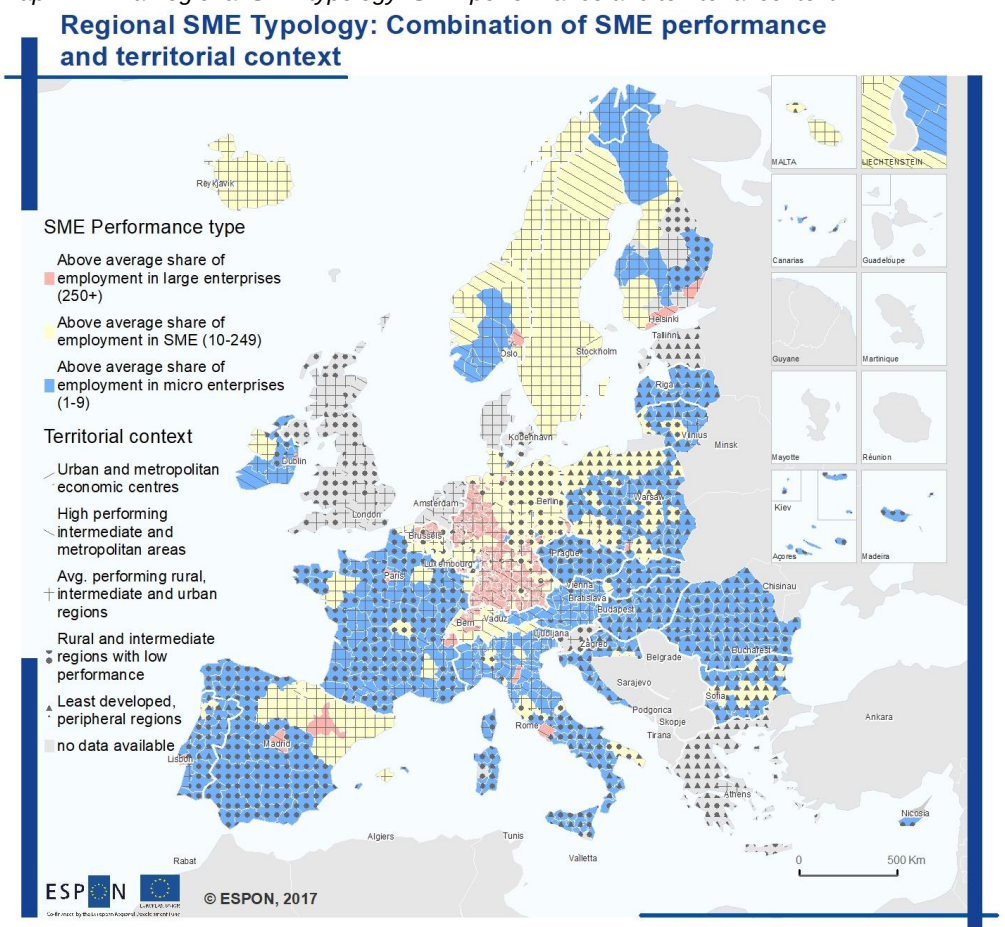
Map 4.2: Final regional SME typology: SME performance and territorial context



Regional level: NUTS 3 / NUTS 2 / NUTS 0 (version 2013)
Source: ESPON SME, 2017
Origin of data: Eurostat Business demography, Structural Business Statistics, Statistics Austria national SBS, Statistics Belgium Demografie Ondernemingen, ORBIS, Beschäftigtenstatistik Bundesagentur, national SBS, Statistics Finland national BD, Insee. Direction des statistiques démographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Norway national BD, Central Statistical Office Poland national BD, Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz
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4.5 Preliminary conclusions from the quantitative analyses

From the statistical analyses, we can draw some preliminary *conclusions* related to regional policy strategies aiming to foster the development and job creation of SMEs. Firstly, in regions with significantly expanding overall SME employment, most of the growth can be attributed to the small and medium-sized segment and only a small part to a growing microenterprise segment. This would suggest – at least in the short to medium term – *supporting significant growth paths of existing SMEs* can result in a higher overall employment impact than strategies mainly focusing on an increase of the micro segment. This is also confirmed by the fact that even high net birth rates have only a relatively weak effect on overall SME employment growth in a region.

This is not meant to neglect *microenterprises* though. Microenterprises, because of their relative ubiquity, form a robust basis of a regional business population and are a seedbed for entities possibly developing into larger companies. Our analyses have shown that high accessibility of a region and urbanization does not necessarily constitute a precondition or decisive factor for the micro segment to develop positively. The expansion of the regional microenterprise sector (and its employment) can be driven and fostered, even in rural and peripheral territories, mainly by creating an ecosystem of *good education levels* and *good governance frameworks* (access to finance, incentives etc.). However, our analyses show also that it is not necessarily higher survival rates, which lead to a growing SME sector in terms of employment.

Policies focusing on the expansion of the *small and medium-sized enterprise* segment may have a stronger employment impact. However, that enterprise segment seems to be more sensitive to framework conditions. Good *governance frameworks* are obviously an even more important locational factor for small and medium-sized enterprises than for microenterprises. Furthermore, small and medium enterprises thrive better in more urbanized regions and require *good accessibility* conditions, which makes policy strategies promoting a medium-sized segment more challenging for rural areas.

Particular sectors may require different framework conditions and ecosystems to flourish. For example, the knowledge and creative industries are mainly driven by good regional accessibility and high regional research and innovation activity. For the ICT sector, the regional education level is more important as a driver than accessibility and the regional research and innovation environment. This certainly means that regional policies need to be strategically adapted to the sector in question, but more importantly that policy should pick focus sectors whose requirements in terms of ecosystem match, as far as possible, the prevalent conditions of a region.

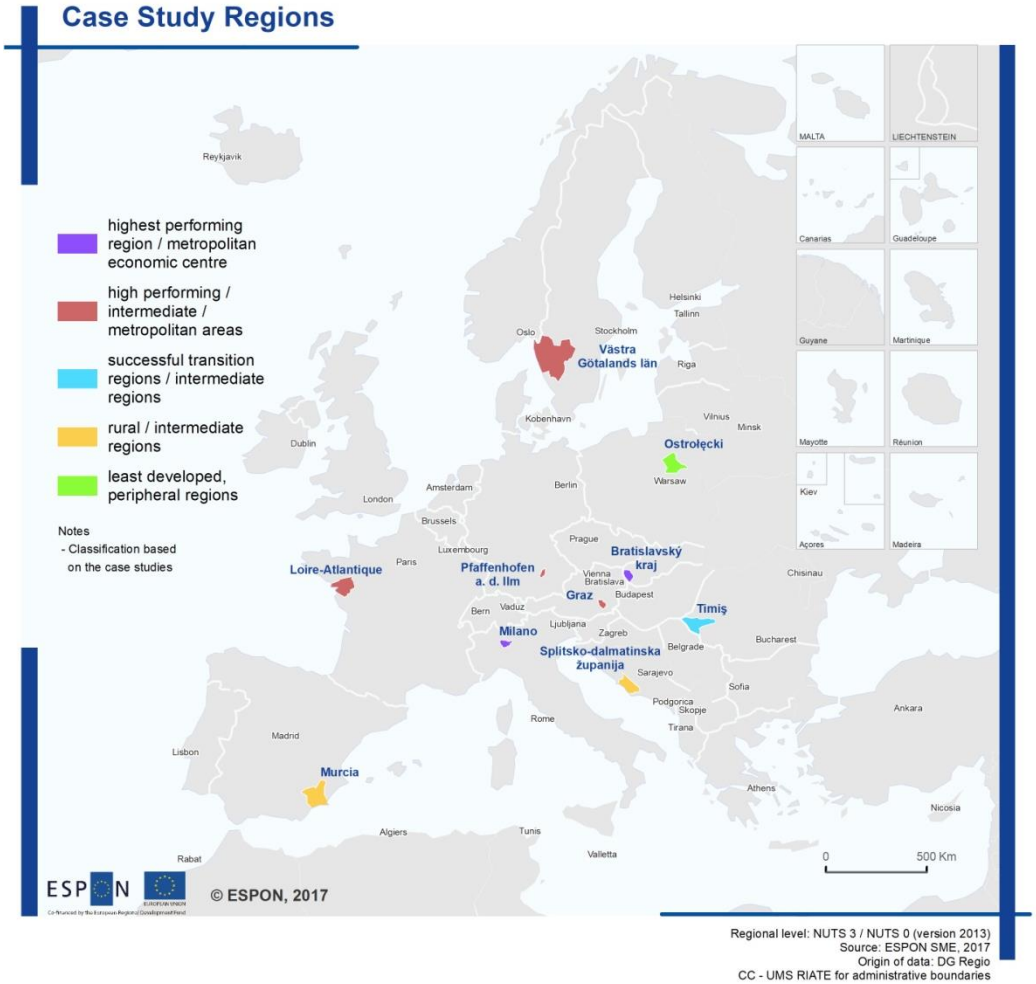
5 Synthesis of the case study analysis

This chapter builds on the analyses of the previous sections by using a case study approach to investigate in detail the status quo of the existing SME support structures which have an impact on different types of regions. Hereby, the two main general foci of the case studies are:

- What are the development opportunities, drivers and the obstacles for SMEs in the case study region?
- What are the good governance practices for SMEs (at various levels) and proposals for targeted investment strategies (policies), drawing on the lessons from these regions?

To keep this report concise, only the case studies' main results are presented in Chapters 5 and 6. In our case, the unit of analysis is defined as a type of region according to similarities related to territorial context indicators, 'performance' regarding their features in terms of employment in SMEs, and their focus on different economic sectors. The methodological approach of case study selection and implementation, their respective summaries, and the results can be found in the Scientific Annex. The entire case studies are presented in the Case Study Book. The interested reader is advised to read at least the case study summaries.

Map 5.1: Case study regions selected by territorial type



5.1 Reflection on strengths, weaknesses, opportunities, and threats

With regards to the case study regions in the Case Study Book, a discussion of the particular strengths/weaknesses and opportunities/threats of different types of regions is presented. The additional, detailed information from the regional case studies allowed for a deeper analysis of regional contexts, governance, and economic structures, which raised several issues for a somewhat refined typology of regions that would be more tailored to the realities in the regions, but cannot be depicted by only using quantitative and/or centrally available data.

The SWOT analysis of the first regional type looks at Milan (IT) a highest-performing urban region where all the centripetal forces of a metropolitan economic centre are at work, although there are weaknesses in the governance structures. Bratislava (SK) is also classified in this category by using quantitative indicators from available databases. This is based on its economic success over recent decades which stems mainly from high levels of FDI and the ability to meet the accompanying educational challenge to begin positive development, and then to further broaden the economic and institutional base for more endogenous development. All in all, the case study findings reveal that the examined regions have been grouped under specific categories based on different reasons. The following comprehensive SWOT illustrates and summarises those similarities and differences.

Table 5.1: SWOT analysis on highest performing region/metropolitan economic centres (Milan, IT and Bratislava, SK)

Strengths	**Weaknesses**
Accessibility and infrastructure Economies of agglomeration and related factors A large number of business entities – both SME and large enterprises Sectoral specialisation and at the same time sectoral diversity in the region, business clusters High purchasing power Education and skills of the regional workforce SK: high concentration of foreign direct investments and foreign companies Esp. IT, but also in SK to some extent: elaborate network of thematic clusters and networks combining relevant stakeholders in a Triple Helix model, resulting in highly connected enterprises within and across industries IT: big international events (fashion & design weeks, exposition area) Intense development of the tertiary sector IT: strong knowledge and creative economy IT: ICT (and somewhat low-carbon economy) are already developed but can still be improved SK: ICT as one of the main drivers	Transport infrastructure (and resulting pollution) increasingly seen as a bottleneck IT: complex set of regulations (labour regulations and for business start-ups), fiscal system and administrative burden Governance quality (IT: fragmented & partly informal, SK: no central information on SME support available) SK: mismatch of educational supply and demand (for parts of the focus sectors and even for low-knowledge sectors) IT: access to finance for SMEs is seen as an ambiguous factor (represents a strength in some industries and a weakness in others) Esp. SK: low-carbon economy is not developing.
Opportunities	**Threats**
New national regulation in support of innovative SMEs EU commitment and push for combating climate change IT: change in consumer behaviour (low-carbon economy) IT: foreign direct investment (knowledge and creative economy) Industry 4.0 Public governance quality should be improved SK: Social economy	No simplification of the regulatory and administrative environment IT: competition from other large cities in Europe in specific sectors/start-up ecosystems (international attractiveness vs. national)

The SWOT analysis of the second regional type describes economically successful regions in an agglomerate or at least densely populated setting. They benefit from the well-known strengths of advanced regions. Here it is also worth highlighting the role of governance quality for coordinating the integration of different visions, strategies, and action plans including following up on them. This is especially important for building up new sectors, where the role of the public sector for creating demand for innovative products should not be underestimated (digitalisation of public administration, waste collection and treatment, biomass and solar industry, etc.) and setting the right incentives at different administrative levels (Triple Helix structure to explore new R&D developments, framework for distributed energy systems, lessen the hurdles for SMEs to participate in public procurement processes, etc.).

Table 5.2: SWOT analysis on high performing/intermediate/metropolitan areas (Graz, AT, Pfaffenhofen an der Ilm, DE, Västra Götaland, SE, and Loire-Atlantique, FR)

Strengths	**Weaknesses**
Good accessibility and infrastructure Broad variety of industries Educational and training facilities (engineering/technical), partly meeting the needs of the economy by an explicit supporting attitude Relatively high R&D intensity (not so much in FR) of a mix of large and smaller enterprises Elaborate network of thematic clusters and networks combining relevant stakeholders in a Triple Helix model, highly connected enterprises ICT, knowledge and creative economy and low-carbon economy are already relatively developed and are getting stronger (e.g. all three in SE & DE, and esp. the latter two also in AT & FR) Governance quality (relative to other less successful regions), supporting attitude by key stakeholders to collaborate and support SMEs Quality of life	Transport infrastructure (and resulting pollution) increasingly seen as a bottleneck Skills shortages for technical professions/lack of labour with the right skills/matching labour supply and demand esp. for high qualification jobs Complex set of regulations and administrative burdens
Opportunities	**Threats**
Smart regional specialisation is at the core of strategies Creative milieu forming a flexible and adaptable ecosystem where start-ups and SMEs can flourish Growing demand for tourism EU commitment and push for combating climate change. Regional commitments to shift to a fossil-free energy system provide new business opportunities for SMEs (low-carbon economy) Governmental initiatives focusing on the digitalisation of the public sector provide new business opportunities for SMEs (ICT, care) Change of consumer behaviour creates demand for esp. low-carbon economy Public procurement for innovation as an impulse, however the administration can be complicated and very time consuming (excludes SMEs) Regional innovation platforms to spread the adoption of emerging technologies (FR)	Relative higher attractiveness of large cities close by (brain drain) Lack of business successions Aging of society

The following SWOT analysis looks at Timis (RO), a relatively successful transitional region from a new Member State with structural weaknesses, where the economic crisis had a relatively severe and long impact but has now rebounded. Although with somewhat different framework conditions and currently at a different stage of development, it seems to follow a

similar development path as Slovakian regions with high shares of FDI matched with local educational achievements which support the industrial base (here partly also the ICT sector).

Table 5.3: SWOT analysis on successful transition regions/intermediate regions (Timis, RO)

Strengths	**Weaknesses**
Relative to other national regions, good accessibility Diversified economy Concentration of the majority of relevant institutions and organizations High levels of FDI (lower labour costs) ICT sector is one of the few successful knowledge-intensive sectors due to high presence of a qualified workforce Presence of various universities makes the region somewhat self-sufficient in filling the need for a highly qualified workforce Availability of (mostly private) creative hubs, co-working spaces, studios, clusters (ICT, automotive, energy and agri-food), laboratories	Low level of entrepreneurship (also through higher salaries offered by multinationals) Law enforcement, corruption Access to finance for SMEs Governance system (lack of implementation/coordination of various regional strategies to support SME, implementation and coordination usually occurs at national level, which creates a discrepancy with the local needs) High level of bureaucracy hinders the mobility of SMEs and their capacity to evolve in the markets Low-carbon economy and knowledge and creative economy are not developing.
Opportunities	**Threats**
Improved ICT infrastructure, broadband internet access, high penetration of mobile devices Informal co-working initiatives, incl. incubators, as starting points for entrepreneurial activities European funds Knowledge economy and low-carbon economy are less of a priority now, but could become one in the future?	Migration of highly qualified workforce towards other European countries/low unemployment rates make the region less attractive for investors Decline in FDI Lack of confidence/SME internationalisation Lack of clarity in support structures

The following regional type looks at rural and intermediate regions in Spain (Murcia) and Croatia (Split) where somewhat lower accessibility and economic performance, a strong reliance on leading sectors, and a national and regional entrepreneurship and innovation system still in need of development can be observed. This makes them more vulnerable, as their development through the crisis showed.

Table 5. 4: SWOT analysis on rural/intermediate regions (Murcia, ES and Split, HR)

Strengths	**Weaknesses**
Fairly good accessibility Some diversification of economic sectors, though there are strong leading sectors Existence of all necessary educational facilities, but which are only partly meeting the needs (HR: ICT) Progress on some RDTI system facilities, but weakened through the crisis (ES)	Educational levels (mismatch of educational supply and demand for the focus sectors, even for low knowledge sectors) Lack of commitment for innovation Risk aversion: lack of entrepreneurial spirit Governance: lack of coordination/cooperation thus EU-financing programmes are not effective Law enforcement, corruption Low knowledge intensity of strong sectors (e.g. agriculture/tourism) – low business concentration in high added value sectors Low-carbon economy is not developing even though environmental problems are increasing No one-stop shop for relevant information (incl. on business succession possibilities, public support)

Opportunities	Threats
Cultural and natural heritage, climate for tourism and cultural businesses Thematic clusters and networks and creative hubs partly exist already and are partly in development (if they are private initiatives, they work fine, if they are a public initiative, they partially do not meet the needs so far) Better coordination of EU funds due to smart specialisation strategies (should be more strategically rigorous) Demand for ICT services is growing, which is partly also true for the knowledge economy High potential for solar energy, biomass, and energy savings The low-carbon economy and in part the knowledge economy need coherent public support to develop (e.g. demand needs partly created by the public sector) Low labour costs Changing consumer behaviour (local, healthy, organic, and prepared food)	Inability to meet educational demands High pressure on natural resources Reverse impact of climate change on primary sector Inability by the public sector to provide for the coherent support necessary (e.g. so far local actors were unable to develop the low-carbon sector, no impulse from consumers) Funding shortage Threats would lead to a lack of competitiveness Aging of population is seen to be ambiguous Brexit (SE: tourism and agro-food exports); Increasing dependence on national and European funds

The final regional type shows the characteristic properties of a peripheral rural region in Poland (Ostroleka), which has rather weak infrastructure despite its proximity to the capital.

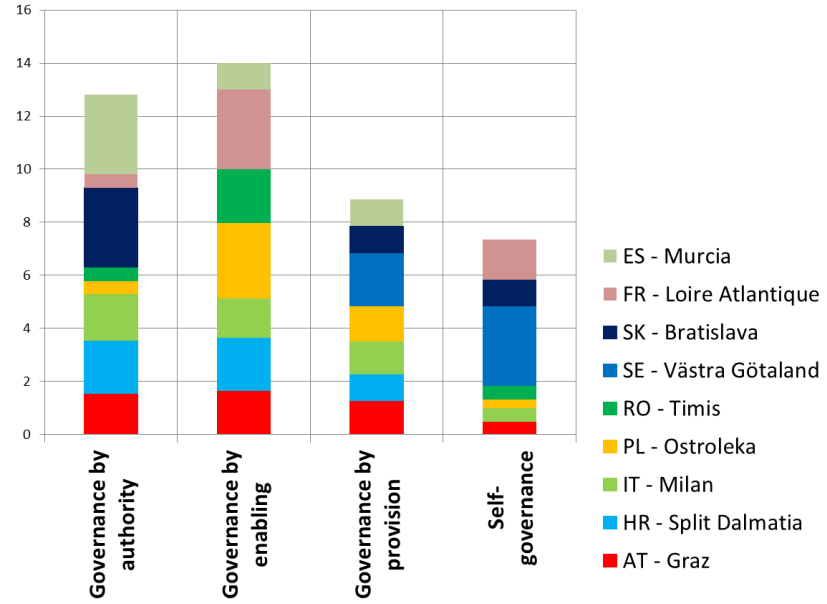
Table 5.5: SWOT analysis on least developed, peripheral regions (Ostroleka, PL)

Strengths	Weaknesses
No major strengths Landscape and natural endowments Cultural heritage Stable demographic situation Resources of social infrastructure in cities	Poorly developed transport infrastructure of supra-local importance Low knowledge intensity/low added value of products Deficits in the local innovation environment Low entrepreneurship potential (education/skills/attitude) ICT, knowledge and creative economy, low-carbon economy are not developing Low knowledge of available funding Lack of governance (inadequate mechanisms of cooperation between local government and entrepreneurs)
Opportunities	**Threats**
Strengths could serve as a basis for the development of modern forms of tourism, recreation, leisure and design-based economy, e.g. professionalising tourism through increasing attractiveness and higher productivity Increasing the accessibility of the region Building on agricultural products e.g. organic products (for export/for local use incl. tourism), dairy for Chinese market Energy sector (investments for local companies, low carbon)	Unfavourable environment (legislation, financing, administration) Unfavourable impacts on the main current industries (transport, agriculture/wood products) Social dumping by large (little knowledge intensive) enterprises in the region Suspension of large investments in the pipeline Problems with the use of EU funds due to the concerns of local entrepreneurs associated with the form of support (level of co-financing, administrative burden)

5.2 Investigating governance structures

To identify patterns that are relevant in each case study region, a FOG test (forms of governance) was conducted. It is based on the theory that regional governance systems are determined by different cultural layers: individual goals, tradition, social ties, leadership, plans and programs, competitiveness, solidarity, global nets, and shared responsibility[25]. The regional authorities and stakeholders have been consulted to judge on their prevalent forms of governance with respect to SME support. The questionnaire is designed in order to assess whether one of four types of governance is dominant in the respective region.

Figure 5.1: FOG test results of the present situation over all dimensions



According to the results (Figure 5.1)[26], the dominant forms of governance appear to be *governance by enabling* and *governance by authority*. It comes as a surprise that the historical modes of governance in the respective MS do not seem to dominate the present, as governance by authority (which would be expected in the 'newer' eastern European MS) seems to not just be more prominent in Bratislava, but also in Milan, Graz, and Murcia. On the other hand, governance by enabling – a more 'modern' governance approach – seems well established in Romania and Poland. The loosest form of governance – i.e. self-governance – is the least established and best represented in Götaland reflecting the 'Scandinavian' governance approach.

[25] Underlying this heuristic approach are a number of scientific theories stemming from psychological development – see e.g. Abraham Maslow and his pyramid of needs (Maslow A., 1970): Motivation and personality; 2. ed. New York, NY [u.a.], Harper & Row) or Claire W. Graves level-theory of the development of personalities (see http://www.graves-systeme.de). The application of models, which are oriented upon this heuristic in the field of (business or policy) consulting is known under the term 'spiral dynamics" and is described by Beck et al. (2007: 40). Originally it is the tool's objective to identify the interrelationship of partnerships, needs, and the socio-cultural environment at the local level (see Katona-Kovacs et al. 2011: 227).

[26] The results of the case study of Pfaffenhofen a.d. Ilm were not conclusive enough to be integrated in the FOG test.

When separating the overall results of the current regional situations into the different aspects of how regions may support SMEs, and once again examining which forms of governance are actually in place in the regions, the following key findings may be presented:

As for the dimension of the (decision) power of the regions: regional authority regarding policies in SME development are made top-down in Bratislava and Timis; collaborative decision making is prevalent in Graz, Milan, and to some extent in Loire-Atlantique and Ostroleka; governance by provision is strongest in Split and Murcia, while self-governance prevails in Västra Götaland. Overall the empowerment of the regions with respect to SME development seems to be equally split between the more supportive forms of governance (enabling, providing, and even self-governance) thus emphasising the importance of shared responsibility, solidarity, and social ties in SME support rather than a top-down authoritative steering of this policy.

In terms of SME motivation throughout the regions, the following observations may be seen: top-down approaches in Bratislava and Murcia; governance by enabling prevails in Split, Timis, and Loire-Atlantique and is overall the dominant form of governance in this aspect, as can also be observed in Milan and Graz; monitoring (and financing) by the regional authorities is strong in Milan and Ostroleka, and strong partnerships are to be found in Västra Götaland.

With respect to skills, business start-up support structures are directly initiated by regional authorities in Milan and Graz. The inclusion of stakeholders into the creation of business start-ups is strong in Split Dalmatia, Ostroleka, and Murcia as well as in Loire-Atlantique. Again, the dimension of governance by enabling is the dominant form of governance overall within this aspect. This means that in the present situation, motivation and skill provision are evidently best supported by governance by enabling thus emphasising the partnership characteristics of these aspects of SME support. Money and other resources to develop support structures are important in Graz and Ostroleka. Networks are developed hand in hand with citizens and entrepreneurs in Västra Götaland and Bratislava.

The dimension of opportunity creation through governance shows that strategies to enhance business opportunities are developed by regional authorities in Split, Graz, Milan, Loire-Atlantique, and Murcia. It seems remarkable that this aspect is dominated by governance by authority, which implies that the regions see the creation of opportunities for SMEs rather as a top-down job with only limited influences of shared responsibilities or even self-governance. Regional authorities use networks to enable and facilitate financial bodies and participative financing schemes (mostly in Ostroleka). The provision of financing support is conditional on the achievement of a set of objectives in Bratislava, Västra Götaland, Milan, and Graz. Self-governance is not an option for the actual creation of opportunities.

Last but not least, the dimension of connectedness shows that the connection of the region's business ecosystem with other regions is in the hands of the regional authorities in Split Dalmatia, Bratislava, and Murcia, and partly in Graz and Milan. Again, similar to the creation of opportunities, connectedness is mainly seen to be best governed through authority – i.e. in less of a cooperative way. The integration of the regional authorities into a multi-governance

system actively collaborating with other regions is seen in Ostroleka and Timis. Co-funded projects are the drivers of collaborations with other regions in Västra Götaland. Developing contacts and partnerships is done by regional authorities and key actors to make up for potentially limited public intervention in Milan and Loire-Atlantique, and partly in Graz.

Overall it seems that a mix between governance by enabling and governance by authority is deemed to be most successful with a strong emphasis on motivation and skills, while top-down, authoritarian governance seems to prevail for creation of opportunities as well as connectedness. This implies that, while motivation in the sense of establishing an entrepreneurial culture as well as the acquisition of skills is deemed to be best developed in a cooperative way while maintaining a strong influence from the public sector, the creation of opportunities and the establishment of links is deemed to best be governed in a top-down way with the main responsibility on the policy side (EU, national, regional, and local authorities). This contradicts to some extent the Schumpeterian idea of entrepreneurship with its attitude of self-responsibility and creativity to determine opportunities and connection entirely by market signals, which will best be handled by the economic actors themselves.

Such an approach would best be represented by self-governance or governance by provision. All in all the EU policy tradition of playing a strong formative role in literally all field of life seems also to penetrate strongly SME policy. However there is no clear best practice as to which style of governance and policy intervention will lead to unambiguously positive results with respect to SME creation and survival.

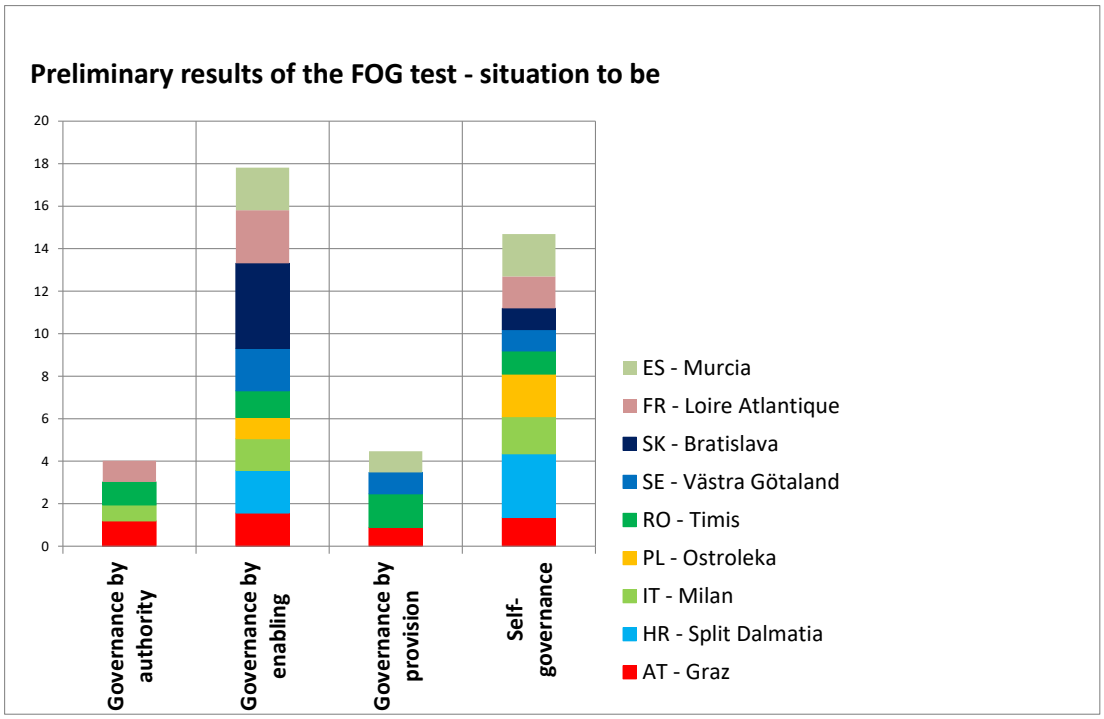
Moreover, these details confirm the overall findings that no clear connotation of territorial specificities, SME performance, or specific forms of governance seem to be identifiable. It appears that in the different dimensions of regional governance, the regional authorities pick different styles from the different dimensions – thus creating the image that aspects such as motivation, skills, opportunities, and connectedness are to be tackled in different ways to support SMEs.

If we compare these findings of how the situation is perceived in the regions in practice with the perception as of how it should be, the following findings emerge.

Figure 5.2 shows the results of the classifications by all stakeholders how the governance style supporting SMEs should look like over all dimensions.

The most obvious and striking result is the clear substitution of the importance of governance by authority with self-governance. All regions, to almost the same extent (only in Dalmatia this share is above average), consider self-governance as a good example for SME support. The second striking finding is the dominance of governance by enabling as the highest ranked governance style with respect to SME support. This means that it builds a perfect match to the dominant style as it is practiced in reality.

Figure 5.2: FOG test results of the situation as it should be over all dimensions



What is also remarkable is that Bratislava, Ostroleka, and Split Dalmatia deem both governance by authority and governance by provision to not be an appropriate way to support SME development in any dimension. This means that, unlike in the real-world application, there seems to be a dislike of both the more authoritarian and the 'night watchman' state in the new Member States.

In other words, what becomes apparent is the "governance expander" of SME support policies showing a potential shift from governance by authority to self-governance, as this is seen as the "ideal" form. It still maintains a strong influence from authorities (EU, national, regional and local) through governance by enabling, however with a clear bottom-up component.

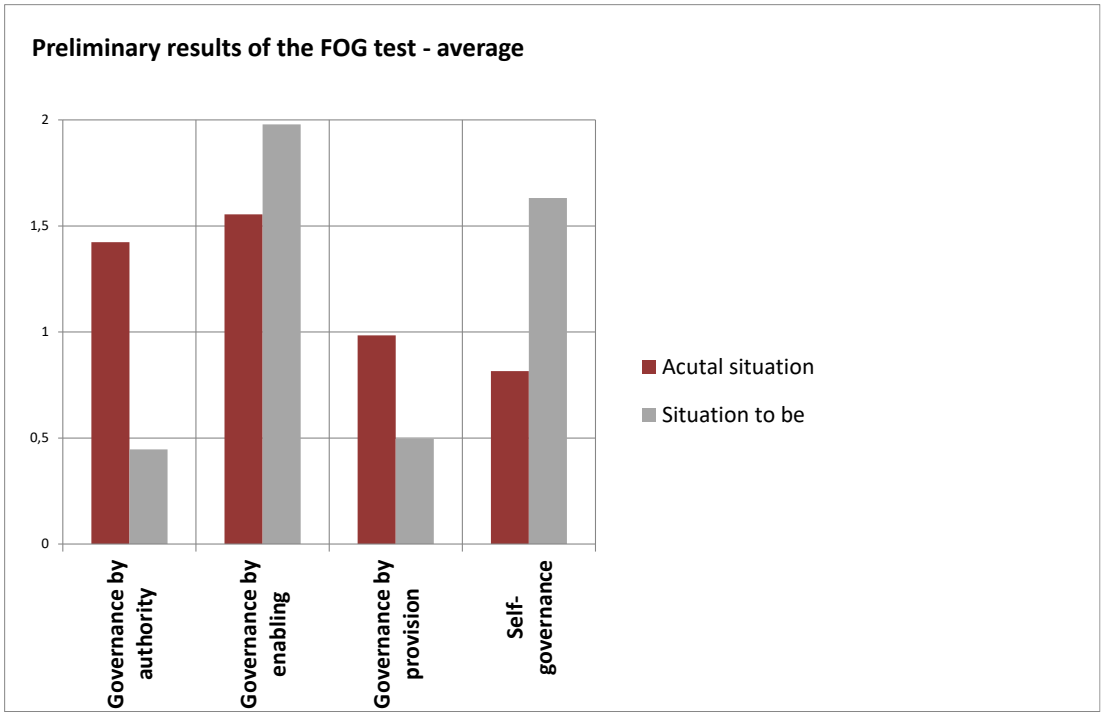
Apparently the self-perception of regions with respect to "good governance" is differing from the more desirable "ideal".

The following graph shows in an overview the main overall differences between the situation as it is in all regions compared to the situation as it should be.

As pointed out above, there seems to be a clear discrepancy between the current situation in the regions and the form of governance which is deemed as more appropriate; we could describe this gap as *SME governance expander.* Apparently there is a tendency to regard more self-governance at the expense of governance by authority as a better option for SME policy support. This tendency holds true for all dimensions, but especially for motivation, skills, and connectedness. A second overall observation is the fact that governance by enabling is still the dominant form of governance and emphasises what was said above, that in terms of extremes the 'night watchman' state is not deemed as an appropriate means to support SME development. All in all, the regional perspective is that a balance has to be found between

bottom up approaches actively involving SMEs and their own responsibility to navigate market forces, and the steering and supporting interference of the public sector establishing fair and secure market conditions and supporting structures (education, dispute settlement, intellectual property rights, etc.).

Figure 5.3: FOG test results of all regions: comparison actual situation and situation as it should be



5.3 Synthesis

First of all, the detailed analysis of the cases (see the Scientific Annex) made it necessary to refine the initial typology of the regions because qualitative information, which cannot be found in central databases, made an important difference to the performance of regions. Therefore the grouping in the SWOT analyses above isn't consistent with the initial typology and also not with the final typology in Chapter 4.3.1.

It can be concluded as an overall assessment across all regions, that *limited access to finance* was a rather pervasive issue raised by most regions to hinder the further development of SMEs, which has been discovered by numerous other European analyses in the past. This is of course the case to varying degrees, as different forms of financing are needed to supplement the local circumstances, especially as measures exist mostly at national levels and sometimes also at regional levels. In highly developed regions, this argument has to be differentiated somewhat, where a fine line needs to be drawn between an assumed lack of venture capital while public support instruments exist, but they nevertheless report a lack of requests. This can also vary considerably between industries, depending on the risk attitudes of the local banking scene.

Infrastructural challenges are still important – though in very different shades across the regions. While well-developed, urban regions are more exposed to bottlenecks in their transport network caused by their very success, others feel more pressure from a wider definition of infrastructure such as availability of central information (business succession possibilities, SME/start-up vs. EU/national/regional support ecosystem), or thematic networking structures (clusters, etc.), and again others still lack transport infrastructure of supra-local importance. This all should be aligned with national foci and followed through via the recently elaborated smart specialisation strategies, though one can still observe some reluctance in regions with less governance quality on whether the regional/national governance structures will really follow up on this, based on non-favourable experiences.

Governance procedures as a prerequisite to improve SME development: This does not necessarily mean to lessen the quality standards, but it definitely means to reduce the time SME managers have to deal with bureaucratic procedures.

It is also not very surprising that the strategic development of focus areas and consequently mastering the *educational* challenge coming with it is a very decisive factor for success. This could be achieved in the case study regions in varying degrees. At top-end regions, this is very much intertwined with the regional research and development agenda, and it was also enormously influential for catching up regions lagging only slightly behind (e.g. in Bratislava and Timis on ICT, and on very specific topics also in other regions). Regions at the lower end of the development scale are still struggling with this issue and hinder the economic development as a whole, not only for SMEs. There is much to indicate also from our case studies that mastering the educational challenge is a policy field with particular added value.

The more a region moves up the development scale, the more important a sufficiently *diversified economic base* becomes, while still maintaining its focus areas. We can observe a rather successful strategy for catching up regions based on drawing in high levels of FDI while meeting its educational challenges to foster positive development, and then building on this to broaden the economic and institutional base for more endogenous development. Thus, the public focus is first on education and location policies to draw in FDI, resulting in the building up of a more sophisticated institutional structure. In these cases, we have to be aware that developments in the public sector will always lag behind private market developments.

Concerning the development state of the *three focus sectors,* the state of play varies. Basically, the low-carbon economy often shows the highest numbers of businesses if the construction sector is included, the knowledge and creative sectors mostly show the second highest numbers, and the ICT sector the relatively lowest (with exceptions), also because this sector is more narrowly defined in comparison. Considering the dynamics of the three sectors, it is strictly the other way round. ICT is already rather well developed in more advanced regions (e.g. Västra Götaland, Pfaffenhofen an der Ilm, Loire-Atlantique, Graz, Milan) and in successful transitional regions with a heavy ICT focus due to foreign direct investment and mastering the educational challenge locally (Bratislava, Milan, beginning in Split). The development

stage of the knowledge and creative economy is, in comparison, often lagging behind, but this varies regionally depending on the state of economic development, which is closely linked to the development stage of the knowledge economy (predominantly in Italy, but also in Loire-Atlantique, Västra Götaland, etc.). There is hardly any potential seen in the most lagging regions because of a lack of demand (e.g. Poland). The low-carbon economy is only relatively dynamic/well-developed in the most advanced regions based on a coherent governance model and high investment in RDTI, and it is supported by changing consumer behaviour in the meantime. All the other regions lack any coherent governance on the low-carbon economy, although they all seem to have rather high potential for the future, independent from their state of development. Particularly in this sector, the role of the public governance system is decisive in kick-starting and maintaining development dynamics. One reason is that it is more difficult to initiate a business in sectors such as the low-carbon economy or the knowledge and creative economy than in ICT. The transfer from the business idea stage to actual implementation is more capital intensive and demanding in terms of meeting standards and other requirements. A second reason exists if one looks into who the customer is: while the demand for ICT is very broadly distributed (although here the public sector occasionally plays an important role through their changes towards e-government in advanced regions), this is somewhat less the case for the knowledge and creative economy and the low-carbon economy, where the public sector becomes increasingly important for kick-starting some of the subsectors. This is, importantly, also done by setting standards at the national levels, e.g. for low-carbon buildings, transportation, and the energy sector.

The role of governance quality for coordinating the integration of different visions, strategies, and action plans and following up on them is decisive as a whole. In particular for building up new sectors, where the role of the public sector for creating demand for innovative products may not be underestimated (digitalisation of public administration, waste collection and treatment, biomass and solar industry, etc.), setting the right incentives at different administrative levels (Triple Helix structure to explore new R&D developments, framework for distributed energy systems), and public procurement for innovation, which needs to ensure that the conditions are set to be enabling/incentivising for SMEs.

6 Policy strategies for SME

How to better support SMEs has been the overall question of this study. To develop proposals for better targeted investment strategies for SME development, their needs are recalled and an overview on the existing support framework is given. While this overview derives from literature, the needs have been extracted from the case studies and literature. Against the backdrop of the needs and the existing support framework, policy recommendations on how to better support SME development have been elaborated based on the findings from the quantitative analyses and the case studies.

This study reveals that while certain similarities can be found across different regions, even in our preselected case study regions neither through quantitative nor through qualitative research could repeating patterns be identified, which could constitute potential 'region templates'. The thorough examination of the case studies indicated that different territorial development strategies are only successful if they take into account the regions' particular strengths and opportunities. The current smart specialisation approach is a promising tool to strengthen SMEs in different regions, if certain prerequisites are observed.

6.1 SME development needs

The first step on developing policy considerations and proposals is a compilation of development needs of SMEs[27]. There are manifold determinants and explanatory factors for SME patterns and performance, shaped by the location, historically shaped structures and institutional environment, just to name a few. Previous chapters showed that some of these factors, such as governance quality, have been more influential than others. Also, a classical urban-rural typology is too inaccurate to grasp the development of SMEs in urban and rural regions. Furthermore, the development needs of SMEs also depend on their *life cycles.* In other words, the needs can be differentiated for start-ups, scale-ups and other development stages of SMEs. Additionally, SMEs share common needs according to their *size* or their business *sector.*

Nevertheless, many needs of SMEs are shared insofar as they require a favourable SME ecosystem. The term ecosystem refers to the local business environment, in particular to a network of (potential) supporting institutions such as research and education institutions, providers of financial services and investors, business associations, government agencies, infrastructure providers, etc. Such ecosystems should primarily entail the following:

- Supportive governance and a clear and tailored regulatory framework.
- Tailor-made financial support systems (including financial instruments) and better access to finance.

[27] Please refer to Chapter 6.3 of the Scientific Annex for the identified needs of SMEs.

Grants and financial instruments are available as financial support measures for many SMEs. The added-value of financial instruments supplementary to grants has been more widely recognized and their use has been increasing. Nevertheless, the importance of tailor-made designs of a variety of financial instruments in each region and the flexible application of such instruments is recognized.

- Involvement of SME support entities:

SME support entities[28] can have an important role in the different life cycles of enterprises; they vary in terms of financing and status (public or private) as well as which services they offer.

- Good infrastructure, within the region as well as connections to (other) economic centres:

This includes roads and railway connections, electric grids, telecommunications, and broadband infrastructure.

- Skilled workforce and the corresponding quality of educational institutions, including SME-relevant training programmes.
- Investments in innovation and R&D.
- Good coordination between all relevant actors and stakeholders.

6.1.1 Different needs in different sectors

The *three focus sectors* examined in this study show different needs. While businesses in the ICT sector develop on the basis of well-educated people and a growing demand from various participants in the economy (business, public, private), this is different for parts of the knowledge and creative economy and for the low-carbon sector.

The *ICT sector* has grown considerably in well-established regions and others where ICT has been defined as a strategic focus sector. In the latter case, the two main challenges have been the elevation of the *education* attainment level and the attraction of *FDI,* which later presents a good basis for developing a start-up ecosystem around the core elements of educational institutions and some large businesses training talented people on the job, who can (later) start new businesses. In economically more advanced regions, the public sector has partly supported the development of ICT enterprises by creating demand for e-government solutions. A further advantage of such business start-ups is the relatively low capital needs involved. Regions with below average labour costs can benefit particularly from this strategy.

[28] Support entities are:
- o Networking/clustering services establish networks for innovation and knowledge transfer, supporting internationalization as well as access to EU standards, regulations, and projects. Availability and support of exchange and cooperation networks and platforms is crucial for SME growth and development;
- o Business representative associations representing private sectors;
- o Financial institutions for which public authorities are responsible for offering access to finance for SMEs;
- o Business support organisations which offer operational support for SMEs through knowledge and technology transfer.

The *knowledge and creative economy,* again part of the overall growing tertiary sector, also shows an overall positive development and prospects except in the least developed, peripheral regions because there is hardly any *demand.* This sector develops best in regions with already good economic development/high accessibility. The potential of the knowledge economy is rather closely linked to the state of economic development because its sub-sectors (business and financial services, architects, entities in the field of innovation R&D, recreation, arts, media, telecom, etc.), depend significantly on the state of the economic development in the region, i.e. its development potential is more limited in remote regions.

The *low-carbon economy* shows comparatively high investment costs for start-ups and therefore relies to a certain extent on the public sector as a client and by framing the demand from the private sector through setting standards. Thus, there is an imperative for strong public support for developing the low-carbon economy. Importantly, this should be done by setting standards at the national levels, e.g. for low-carbon buildings, (sustainable) transportation, and the energy sector, in addition to the normal set of public interventions to support new technologies (start-up platforms, clusters, etc.). Additionally, there is potential for public procurement for innovation which can be implemented to be SME-friendly (however it is often not) and thus can support SMEs, i.e. on completely new themes as well as start-ups and potential scale-ups. All case study regions saw potential in the low-carbon economy, which is somewhat in contrast to ICT and the knowledge economy (a minimal amount in the lesser developed regions with low skills). This can be explained by the fact that energy, water, transportation, waste, and construction are omnipresent topics permeating the whole economy and society. Thus, every region would be able to identify potentials through specialisation.

SMEs in the *modern/future oriented sub-sectors* within the broader categories of low-carbon economy[29], knowledge and creative economy, and ICT showed a higher resilience during the last economic crisis; the ICT sector in particular has even been dynamic.

For these modern/future oriented sub-sectors, a densely networked Triple Helix structure is essential to make the most of the upcoming potentials and also to share the risks of innovation and R&D. This is especially true for ICT and the knowledge and creative economy, but also for some sub-sectors of the low-carbon economy.

6.2 Approaches to support SMEs on European, regional, and national levels and the role of European cohesion policy

Acknowledging the importance of SMEs for the creation of wealth and jobs as well as the challenges they face, the European Union, Member States, and regions have created a broad set of policies supporting and promoting SMEs for quite some time.

[29] If one looks into the modern/future-oriented sub-sectors and leaves out traditional ones like the construction sector (e.g. the Spanish case).

In the European multi-level governance system, all levels can and do support SMEs to a different extent. However, for SMEs who often do not have the means to interact with public actors, they generally cannot afford a legal department and lack the time to actively engage on a regular basis.

6.2.1 General EU SME policy

The overarching framework for the EU policy on SMEs is the *Small Business Act (SBA),* launched in 2008. Various other initiatives and instruments within the framework of *Horizon 2020,* the *cohesion policy,* and the *Investment Plan for Europe* comprise a wide-ranging support framework from which SMEs can benefit in various ways. EU policies set the framework and are a role model as well as reference for measures at the national, regional, or local levels. How SMEs are supported from the European Union is elaborated in more detail in Chapter 6.1 in the Scientific Annex of the ESPON SME study.

6.2.2 The importance of regional governance for SMEs

This study demonstrates – what is already widely recognised – that effective SME policy design should be region-specific or adjusted to the region, i.e. the strengths, weaknesses, and needs of a region should be taken into account.

Local and regional governance practices may have a significant impact on the performance and development of SMEs. First of all, local/regional governance approaches differ in terms of the degree of autonomy which regions or cities have vis-à-vis the central level. Different types of autonomy can be distinguished, for instance policy autonomy, budget autonomy, or output autonomy. This underlines the importance of the interplay between different governance levels and how this is organised. Secondly, the structure (and therefore priorities) of regional government expenditure and investment – for example the shares of funds devoted to economic affairs – may differ significantly between regions.[30]

Regional and local governance levels can play a role in entrepreneurship training/skills and developing a culture of entrepreneurship and risk-taking as well as in developing effective networks and partnerships among business and with universities, development agencies, and knowledge organisations, etc.

Local economic governance and leadership is increasingly becoming a joint public-private venture. Financing of SMEs remains a key area of support for local and regional authorities and comprises various forms of funding from loans to venture capital and business angels.

Another important feature of local/regional governance practices is participation and ownership. In this context, this refers in particular to the involvement of SME representatives such as business associations into the policy design and implementation process[31].

[30] OECD (2016), Regions at a Glance 2016, pp 98-105.
[31] European Commission (2012), Guide to Research and Innovation Strategies for Smart Specialisations (RIS 3), p 50.

Based on the case studies, several *good practices* in different regions can be identified:

- Development of a start-up ecosystem (Milan, Västra Götaland).
- Collaborative decision making (Graz, Loire-Atlantique).
- Public role of sole enabler of industrial (private) cluster initiatives (the Jules Verne manufacturing valley in Loire-Atlantique). Supporting environment: large enterprises consult start-ups, etc.
- Small ERDF subsidies for start-ups and microenterprises (Bratislava).
- Educational achievements combined with low (labour) costs (coding, ICT) are followed by inward investments (Bratislava, Timis, partly Split).
- Visibility of support structures:
  - one-stop shop for online information for support measures (Västra Götaland, Loire-Atlantique, Graz, Milan);
  - One-stop shop for business support (by merger – Pfaffenhofen an der Ilm);
  - One-stop shop for business succession opportunities (quite widespread but not everywhere, especially in the less developed regions).
- Advisory boards with local stakeholders coming together to support local start-ups (and partly existing businesses) to provide all kinds of support – whatever the start-up might need (Pfaffenhofen an der Ilm, Murcia etc.: access to networks, ideas, knowledge, capital, training, property market, etc.).
- Triple Helix model: good collaboration between academic, private, and public sectors in science parks etc. on new and cross-industrial technologies and enterprises (ICT – Pfaffenhofen an der Ilm, Västra Götaland, Bratislava, Timis, partly Split; knowledge economy – Milan, Loire-Atlantique, Västra Götaland, Graz, Pfaffenhofen an der Ilm; low carbon – Västra Götaland, Graz, Loire-Atlantique, Pfaffenhofen an der Ilm).
- Internationalisation support for strategic foreign markets (Timis).

The overall weak quality and limited usefulness of local strategic documents was seen to be quite pervasive in already lagging regions. Researchers and experts observed for example in the case of Poland that the majority of the local development strategies were empty packages and do not substantially support development processes[32]. This argument can be repeated for other case study regions with lower development levels. The overall smart specialisation strategy, therefore, should improve the situation by adapting the use of measures to the different development needs of the regions. However, certain reluctance by local stakeholders needs first to be overcome due to less favourable past experiences in such regions, where strategy development was not followed up by equivalent actions.

6.2.3 SMEs and smart specialisation

The *research and innovation strategies for smart specialisation (RIS3),* or the *smart specialisation strategy (S3),* concept was originally developed against the backdrop of the financial and economic crisis of 2008 to increase Europe's overall innovation and competition capabili-

[32] Hausner, J. (2013) Narastające dysfunkcje, zasadnicze dylematy, konieczne działania. Raport o stanie samorządności w Polsce. Kraków: MSAP.

ties[33]. S3 was designed to become a powerful tool to channel the cohesion policy more effectively and to support regions in strengthening their potentials and competitive advantage, also for regional policy integration. The S3 is an *ex ante* conditionality for the cohesion policy, for TO1 on R&I and TO 2 on ICT in particular, which are of key relevance for SMEs. The Commission further developed the smart specialisation concept in 2017[34], and wants to put stronger emphasis on cross-regional and cross-border cooperation. Also, synergies between the cohesion policy, the Investment Plan for Europe and the Horizon 2020 should be further enhanced.

Regional conditions for entrepreneurship and SMEs constitute a key element for self-assessment in S3 – a self-assessment jointly done by regional authorities, regional entrepreneurs, and regional researchers. Moreover, an 'innovation friendly business environments for SME' is among the major approaches suggested for S3: '…it is important to provide, at the regional level, the right mix of financial and nonfinancial support to assist entrepreneurs to create new firms and existing enterprises to innovate' and 'SMEs are thus at the core of cohesion policy'[35].

Regional authorities are encouraged to 'focus on the content of the SBA and ensure its implementation at regional level'[36]. Once the comparative advantage of a specific region is identified, innovation strategies are adapted to support the region's key sectors and to further increase this advantage. The overall goal of S3 is to ensure that regions don't all invest in the same strategies, regardless of whether they are suitable for a specific region or not. S3 requires collaborative governance and brings entrepreneurship and SMEs centre stage in cohesion policy[37].

The Smart Specialisation Platform assists regional and national policy-makers to develop, implement, and review their S3. The platform is an advice and connection hub for EU regions applying an S3 and using the Technical Assistance of Structural Funds programmes or other financial resources. The S3 platform offers various tools for regions, i.e. a 'competitors and regional competiveness scoreboard', 'ICT monitoring', and many more which help regions to develop their S3 and to connect intra-regionally and internationally.

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[33] The S3 itself builds on previous strategies like RIS, STRIDE, and PRAIS. Their weaknesses, being the lack of an international and trans-regional perspective and their lack of alignment with the region's strengths and weaknesses, were taken into account and improved. Also, previous strategies comparable to S3 entailed a 'picking winner's syndrome' and a copying of the best performing regions without consideration to the particularities of individual regions. (See the European Commission (2012), Guide to Research and Innovation Strategies for Smart Specialisations (RIS 3), p 11).
[34] COM(2017) 376 final.
[35]European Commission (2012), Guide to Research and Innovation Strategies for Smart Specialisations (RIS 3), p 70.
[36]European Commission (2012), Guide to Research and Innovation Strategies for Smart Specialisations (RIS 3), p 71.
[37]McCann, P. & Ortega-Argiles, R. (2016), Smart specialisation, entrepreneurship and SME: issues and challenges for a results-oriented EU regional policy. In: Small Business Economics 46:537-552.

6.3 Policy considerations and proposals for targeted investment strategies for SMEs in Member States, regions, and cities

Depending on the structure and distribution of powers between national, regional, and local levels, decision makers on each level have different levers to influence SME development. Regardless of the political constellation, MS usually provide the overall framework and resources while regions apply the strategies being either more or less involved in the decision making. Nevertheless, regions can provide various support measures within their territories and also bring relevant actors together. They also know their contexts best, which puts them in the paramount position to tailor their own strategies.

6.3.1 Policy considerations and proposals for targeted investments: SMEs in post-2020 cohesion policy

National and regional levels are able to absorb incentives and opportunities provided at the EU level, especially if they are receptive and open to them. The cohesion policy is important for providing not only resources but also innovative ideas fostering SME growth. As such, the cohesion policy can push forward innovative measures and ideas which Member States can turn to for resources as well as inspiration on tapping into their strengths, using their opportunities, and overcoming threats and weaknesses. Based on our study results, the following specific recommendations for the post-2020 policy can be given:

Continue to promote tailor-made solutions for Member States and regions in relation to SME growth and development: The focus on tailor-made solutions should be present also in the post-2020 cohesion policy to understand and tap into the specific potentials of regions or countries. The keyword 'tailor-made' is often used, however it can easily be construed as abstract or vague. It should be recognized that when choosing and developing tailor-made solutions, the valuable role of other actors such as research and educational institutions should be supported, but in an overall structured process.

Target start-ups and scale-ups separately: An important observation in this study (in particular in the case studies) has been that enterprise size categories differ to some extent in terms of their needs and drivers. A strong regional employment impact can only be achieved by helping microenterprises grow (into small and medium-sized enterprises). However, many policies and measures at all levels do not address the different needs SMEs have in different business life cycle stages. For example, there is no differentiation between start-ups and scale-ups even though these are very different in terms of their needs. The most important differentiation in SME policy, that the CP and the S3 should recognize, is between start-ups and scale-ups. It is self-understood that these options need, again, be tailored to the already existing local and national support infrastructure. Scale-ups in different sectors might again have slightly different needs, which necessitates a flexible structure of support.

At any rate, the CP should support the introduction of specific strategies which help and encourage (more) very small companies to grow or scale-up.

Promote and encourage innovative measures: There is evidence that innovative measures as well as measures encouraging risk-taking should be supported, in addition to effective traditional measures. In particular measures triggering behavioural change, such as some financial instruments, have been deemed effective in SME policy, given that they contribute to new ways of operating among SME actors. The post-2020 CP can take the lead in encouraging and promoting new kinds of measures. Keeping in mind that the choice of measures should be tailor-made, an inventory of various kinds of measures could be created to inspire relevant regional and national policies and strategies.

Support more effective business education: This study revealed that education is a key determinant for success, especially of the microenterprise segment. The CP can assist MS and regions in engaging into more effective business education through encouraging exchange between regions as well as dissemination of information and good practices. As for direct measures from the EU towards target groups, a promising idea seems to be the SME regional envoys that offer a direct information exchange and learning to final beneficiaries of CP funds.

Ensure that the funds complement existing support structures: Parallel instruments and funding is often a result of uncoordinated use of various measures and lack of sound strategy. More often than not it causes inefficient use of these instruments. Therefore, the post-2020 cohesion policy should place an emphasis on efficient complementary use of its funds without duplicating national measures. The aim is to fill gaps to form a cohesive innovation and/or start-up ecosystem in the region, with support at the national level and the European level. CP funding and support measures should complement national or regional strategies. On the other hand, MS and regions should also be encouraged to identify funding gaps and make appropriate investments, and/or should sometimes also be forced to enhance quality standards by formulating *ex ante* conditionalities.

Differentiate the needs of SMEs in different sectors: The post-2020 cohesion policy should consider that SMEs in different sectors have different needs as well as capacities to innovate. This entails that the sectoral development pathways look quite different and need different ways of support, which should be differentiated in regional and S3 strategies.

6.3.2 Policy considerations and proposals for Member States

Stating the obvious, different MS have various competences concerning SME policy, as centralized states have more decision-making power relevant for regional levels than federal states. Nevertheless, general policy considerations and proposals for Member States can be provided. Regardless of the role of the national level, MS can provide the overall framework and support as well as resources for SME development. This includes first and foremost investments in relevant infrastructure, such as telecommunication networks, broadband, and public transport, as well as setting regulations, standards, and norms.

According to the study results, providing a favourable overall framework and resources includes several aspects such as education, good governance, the reduction of administrative

burden, the avoidance of parallel measures, the promotion of measures from the EU-level, and active dialogue, etc.

Education: SMEs need a strong workforce. In many regional case studies in this project, education and skills proved to be either an important driver or a bottleneck for SME development. To provide for adequately skilled labour, national and regional authorities have to ensure that educational institutions provide quality training adjusted to the needs of SMEs. Also, assistance with matching jobs and jobseekers could be useful. For more remote and rural regions, it is important to take measures to limit brain drain as much as possible.

MS also need to provide resources for investments in clusters/networking, *research and educational institutions,* and also for a skilled workforce; MS can and should support the development of an *entrepreneurial culture and open-mindedness* at the national level.

Tailor-made education and training to meet the needs of the business sector and of SMEs in particular is a constant challenge. While advanced regions have more difficulties to find highly-skilled people to fill demanding (technical) positions in cutting-edge enterprises, the educational/training challenge in somewhat less developed regions lies more on the basic alignment of educational institutions towards the current needs of businesses and the matching of talent with business.

Good governance: National governance reflects highly on regional governance (see Chapter 4.5). National governments can lead by example in both federalist and centralized states. Showing good example starts with good quality and transparent governance as well as a proactive approach to be encouraged also at the regional and local levels. There are also a number of incentives and measures that can be undertaken at the national level in order to both support and encourage regions to engage with SMEs. These include spending on research and investment in educational institutions and clusters/networks, active promotion of SME strategies, and communication measures.

Reduction of administrative burdens: Incentives can remain ineffective when administrative burdens are too high. The case studies revealed that there are still many obstacles for SMEs resulting from administrative burdens: business creation will remain low where the costs for birth and deaths of enterprises are high. Significant administrative burdens also relate to leasing of premises, employing staff (labour and social security law), and business succession.

Avoiding parallel measures: Parallel measures are often a result of poor coordination of measures on various levels and can lead to confusion and inefficient use of funds. In many case studies, low information levels and confusion of entrepreneurs about support offers have been mentioned. This problem is particularly evident for microenterprises. A need was seen to improve the clarity of the whole portfolio of support offered at different administrative levels. It is therefore important to coordinate measures on various levels and make sure that different funds have different but complementary aims and tasks. Financial Instruments triggering behavioural change should be encouraged because they show particular added value. Monitor-

ing and evaluation of existing instruments, measures, and strategies is here of utmost importance, but it is still not fully implemented all over Europe.

Promotion of measures from the EU level: Member States are often intermediaries between the EU and their regions. Therefore, they are in the best position to promote the measures undertaken at the EU level that can help SMEs as well as encourage participation in various EU programmes.

Outreach to regions and encourage bottom-up processes: As the case studies have shown, many initiatives originate from local or regional levels. National governments should support and encourage such processes through *active dialogue* with the regions in order to understand and satisfy their needs, by defining themselves as moderators of the process. It is important that MS ensure not to hinder natural bottom-up initiatives and make certain that they actually support them. MS can support and share the aforementioned measures aiming at creation of a good SME ecosystem and encourage the regions to do so. MS should further support the development of S3 strategies in regions with consideration of their specificities and contexts. The MS should further focus on fostering good collaboration between academic, private, and public sector representatives in science parks on new and cross-industrial enterprises, and also between civil society. The *Quadruple Helix approach* strengthens cooperation and creativity, therefore providing a favourable environment for innovation as well as improving the teaching/education of the future workforce.

Setting standards and demand-led policies for SMEs and public procurement for innovation: The role of the public sector for creating demand for innovative products may not be underestimated in building up new sectors (e.g. digitalisation of public administration, waste collection and treatment, framework for distributed energy systems), and setting the right incentives at different administrative levels is of utmost importance. Besides setting standards for new or improved technologies and sectors and public procurement for innovation, an increasingly applied measure in more mature innovation systems comes into focus. This needs to ensure that conditions are set to be enabling/incentivising for SMEs and not only for large businesses. The latter also extends to administrations at the regional level.

6.3.3 Policy considerations and proposals for European regions and cities

Regions and cities are very important actors in SME policy. As managing authorities they interact closely with citizens and consequently with SMEs and have developed an understanding of SMEs as well as of the contexts in which they operate. Regions and cities can understand and use their opportunities better in order to develop an attractive and business-friendly ecosystem[38] according to the respective region's needs.

[38] Committee of the Regions, How to improve regional and local governance of SME and entrepreneurship policy, February 2017.

Regions and cities should consider drivers of SME development identified in this project in respect to their specific context. These define not only strengths and weaknesses of SME growth, but may also be found as opportunities or threats; they are also different for each region. *SWOT analyses* are a useful tool for regions to understand their position and future possibilities that should indicate the direction of investments. Such drivers and factors relevant for SMEs are connected to demography, economic strength, specialisation of the region (e.g. existing industries and resources), and available infrastructure, as well as quality of governance.

Create a favourable economic environment: In the case studies, a bad, intransparent government and an unfavourable business environment have been connected. There are many aspects of a good SME ecosystem:

- First and foremost, this involves high quality *governance* with transparency and stability, clear and possibly simple regulations based on a tailor-made, collaboratively elaborated SME and start-up growth strategy, as well as clear communication and pro-active approach from the authorities.
- The case studies further revealed that sometimes SME weren't aware of existing support mechanisms. Local and regional authorities can facilitate contact and *communication* between start-ups, SMEs, entrepreneurs, and local bodies. Clear communication, which makes available tools visible and offers support from public authorities, is conducive to SME growth.
- *Clusters* as well as the facilitation of *networking* have proven to be equally important elements of a favourable economic environment. With support and incentives from the authorities, clusters and networks can develop to be strong drivers of SMEs and can thereby effectively contribute to SME growth. Their presence may further contribute to the creation of hubs and incubators.
- Support *research* as well as the role of *educational institutions* that contribute to the development of innovation and to training a skilled workforce. Incentivise universities to engage – they can be a major facilitator for strategy elaboration and implementation, establishing a start-up ecosystem, and supporting new industries. This will be more difficult and less obvious for a rural region; nevertheless this means that the potential benefits would be even higher for rural regions. In particular, incentivising and facilitating the interaction between academia and business sector – especially the smallest firms – is crucial for many regions.
- *Encourage more indirect forms of support:* It is important to complement direct SME support with indirect forms of support such as consulting, provision of infrastructure, and information campaigns, as well as making the SME support visible, e.g. as 'one-stop shops'. This helps to not only promote SME policy but also to give guidelines on how to benefit from it, which is a necessary element of such policies.
- All of the above should contribute to supporting the development of an *entrepreneurial culture,* which further reinforces and stimulates SME growth. Entrepreneurial culture involves providing entrepreneurial education as well as support measures, raising awareness about various possibilities, promoting open-mindedness, risk-taking, and investments, mutual trust, support and cooperation (not only between private actors but also between private and public). The regional governance structures can contribute through the provision of structures and institutions both for start-ups and SMEs as well as good communication.

The case studies have identified *cultural factors*[39] to be very significant in SME development. While these have to be considered in developing a strategy, local and regional authorities are in the best position to adapt these to cultural specificities of the region. Given the importance of ecosystems for SME growth, tailor-made solutions are best developed by actors who know the specific context of SME functioning in the region and, thus, can harness the potentials.

Foster cooperation between public and private stakeholders

- To do so, create and promote a *common vision.* A shared common vision enhances the cooperation between different kinds of stakeholders and encourages action. Regions and cities have to engage in an interactive strategy elaboration process.
- This also involves good communication and support to create *trust* between public and private actors. An important element of this is also a clear definition of competences and sharing of tasks. For example, an *advisory board with local stakeholders* can be created to support local businesses.

Access to finance is a key element of any economic environment. Not only virtual availability of funding is necessary; the funding also has to be accessible in appropriate ways through loans, grants, and financial instruments, which in turn have to be designed properly.

A favourable economic environment should also include *differentiation* between policies and instruments for *start-ups and scale-ups* in particular, though also the needs of more mature SMEs and business succession should not be forgotten.

All SMEs are dependent on good *infrastructure.* This can be in terms of accessibility as well as in terms of telecommunications and broadband. While cities have an advantage in terms of clustering, infrastructure and environmental issues become an increasing bottleneck. Also, cities' infrastructure plans need to be developed in close cooperation with the surrounding regions. In cities, the focus should be therefore on intra-regional networks and connections to the hinterlands. In more rural areas, good connections to other European economic centres are important.

Cooperate with other regions and cities: Cities are particularly dependent on their surrounding regions. The case studies revealed that this applies in terms of infrastructure and also in terms of workforce. Regions, on the other hand, can benefit from a city nearby. This implies that an interregional coordination process between neighbouring regions/cities concerning governance is highly relevant. This is particularly challenging for regions, which are not in the same MS, however, cross-border cooperations are fruitful and have already proven to increase the potential of participating regions.

However, regions and cities which are not geographically close, but experience similar challenges can also be valuable partners. Rural areas in particular can benefit from such cooperation – the S3 platform is a useful tool to find regions which apply fitting S3.

[39] These are soft factors, e.g. how enterpreneurship's attractiveness is seen, the importance of hierarchies, whether SMEs are family owned, etc.

Balance between specialisation and diversity: In many case study regions, industrial diversity has been underlined as a major success factor for the development of the SME sector. Nevertheless, specialisation strategies are often pursued by the regions. However, they should not necessarily follow classic industrial taxonomies, but rather focus on technology and competence fields which can be flexibly applied in many different industries. Any specialisation strategy should avoid creating potential dependencies.

Choose the most fitting strategy and adapt it: Having a strategy for SME growth and development is important; however such strategies should be carefully chosen. The transferability and adaptability of other models should have already been considered already upon choosing the right strategy. It is important for authorities not to simply choose and replicate models from other regions, but to consider the specific context of their region as well as to consult different relevant actors and stakeholders. Tools such as foresight/horizon scanning tools may also be useful in relation to future developments. It is also important to consider the links between research and innovation as well as growth and development. For that matter, a national/regional strategy for smart specialisation should be tailored to the region as well. A focus on internationalization and diversification will often be considered.

Improve marketing of location/visibility: Good visibility and marketing can help to attract investments and thereby strengthen the SME environment. Through the implementation of an S3 strategy, regional assets can be further strengthened which allows for the development of a 'regional brand' in accordance with these strengths.

7 Proposals for future analysis and research on this topic

The data on enterprises available from EU and national sources show various gaps which impede a comprehensive and accurate analysis of the structure and development of firms across Europe. This is particularly obvious where a disaggregation along enterprise size categories *and* sectors *and* detailed NUTS regions is required. It might be worthwhile to consider a specific methodological investigation to explore ways of how Eurostat's system (and those of the NSIs) in the field of enterprise statistics could be further improved to enable deeper and quality regional analyses of the business sector in the future.

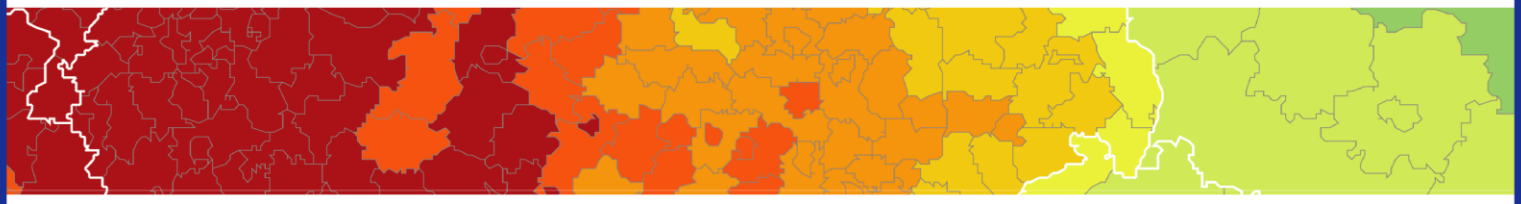
There is evidence that some countries have a high level of one-person enterprises who are persons working as subcontractors of other enterprises; case studies have also shown that different kinds of contracts are used. It seems that employers often prefer 'assignment contracts' over the usual kinds of contracts. This phenomenon should be studied in respect to what are its reasons as well as its consequences.

Similarly, the results of case studies in particular have shown that development and structure of start-ups and scale-ups is influenced by labour laws and social security systems. A further study is needed on how these impact SMEs, what are the negative and positive influences on SME development, and what kind of changes would be needed in order to mitigate any negative effects.

In smaller rural or intermediate regions, a few large firms can have a significant impact on the local SME sector depending on whether or not they develop important linkages to these SMEs, or alternatively to companies outside the region. Understanding the nature of such linkage patterns, how they develop, and how they can be influenced could be important for regional policy making and useful to be studied in-depth.

Sectoral agglomeration and accessibility needs include factors such as accessibility, agglomeration, and urbanization which are important drivers of regional SME growth. More remote regions are at a disadvantage in this respect. For example, we have seen that different sectors require good accessibility to different degrees, and strong ICT sectors can also develop outside of large agglomerations. Deeper knowledge about specific 'accessibility needs' of different sectors could be helpful for regional policy makers to devise their specialisation strategies.

Access to finance is crucial, however, there is a lack of qualitative research on the reasons of why such access might be denied. The case studies have revealed that SMEs are sometimes discouraged from applying for a loan or that especially young entrepreneurs have to rely on capital from friends and family or that they even never found their company. The reasons for that might reveal gaps in support policies.



ESPON 2020 – More information

ESPON EGTC
4 rue Erasme, L-1468 Luxembourg - Grand Duchy of Luxembourg
Phone: +352 20 600 280
Email: **info@espon.eu**
www.espon.eu, **Twitter**, **LinkedIn**, **YouTube**

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