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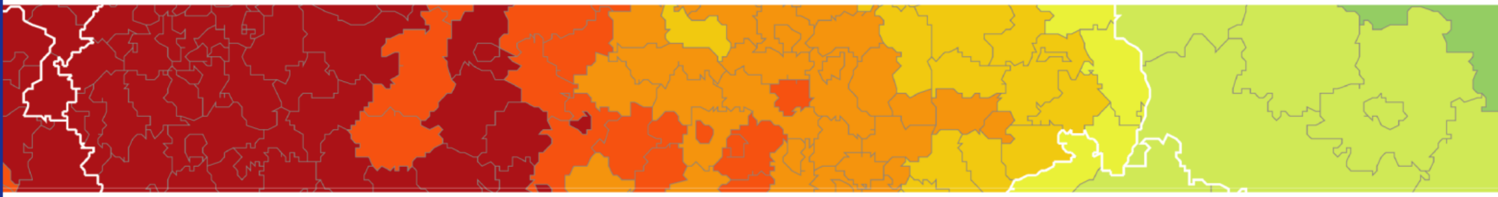
Inspire policy making by territorial evidence



The Geography of New Employment Dynamics in Europe

Applied Research

Annex to Chapter 6

Case Study – MALOPOLSKA (PL)
Final Version

9.3.2018

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The Geography of New Employment Dynamics in Europe

ESPON 2020

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Executive summary

The Małopolska region has been going through a number of rapid changes for several years. This does not refer only to the systemic transformation that the country had experienced since 19891, but also to the inclusion of Poland in the EU, which took place in May 2004. Those ground-breaking events placed Poland and the region back into the developed world and into the system of the global economy. Moreover, EU membership offered regional cohesion policies with associated funding that was scarce before. On top of this, the country went through changes observed in various parts of the world set in the context of globalisation.

Indeed, Poland shifted from a semi-peripheral European state into the core area2, as evidenced by various measures like the Human Development Index (HDI) or the influx of Foreign Direct Investment (FDI). The extent of changes was immense, yet it is difficult to state with precision the main driver: was it joining the global economy, the patterns related to globalisation, or EU policies?

It is fair to expect that all of these factors played a role. As a result the major metropolises in many developed and developing countries started to display the characteristics of global cities.3 Those cities became seats of innovation and knowledge economy, where international business endeavours located their offices and attracted high-profile individuals, both from the country and abroad. The worldwide search for talent generated various specific employment patterns for high-skilled professionals operating in the knowledge-specific and creative industries and supported mobility of those wishing to work in global cities. These changes were aided by local and regional authorities. On the other hand, as Saskia Sassen (1997, 2007, 2012) argues, transnational competition boosts dynamism and innovation but also pushes struggling businesses into the shadow economy. With the growing dynamism of knowledge cities the inflow of high-skilled migrants is witnessed, which in turn attracts a pool of low-skilled individuals working in the domestic sphere. At the same time, some individuals decide to migrate from the knowledge cities looking for new opportunities elsewhere.

In that respect Kraków[4] is not much different to the *exemplary global cities* of Sassen (2007, 2012) as there have been a lot of funds invested in support of the knowledge-based economy and the modern infrastructure which are necessary to attract private investment. Moreover, the innovative and creative industries of Kraków can flourish thanks to the well-educated labour force produced by its university. Also, labour is cheap in Poland compared to the

[1] 1989 marks the end of communism and the start of systemic economic, social and political changes.

[2] The perspective laid down by Immanuel Wallerstein in the world system theory.

[3] For more details please see the concept of global city by Saskia Sassen.

[4] Kraków is referred here with its surroundings, i.e. its larger territory known as Kraków Metropolitan Area (KOM – Krakówski Obszar Metropolitalny).

EU15[5] member states. In addition, the city is considered attractive in the country and in the region and serves as a magnet for attracting high-skilled migrants, who find both employment and comfortable living conditions. At the same time, some traditional industries are also developing in the region; however, they do not employ as many highly skilled individuals and arguably do not attract migration to the region. Hence, there are three types of migration flows: 1) inflows to Kraków from the surrounding regions of Poland, 2) inflows from foreign countries into Kraków and 3) outflows from Kraków to other parts of Poland/foreign countries.

This case study demonstrates that favourable conditions in the city of Kraków and in the surrounding region have attracted foreign investors and high-profile employees equipped with skills and experience. The regional and local authorities perform many functions, the most important of which being their role in creating a knowledge-based economy in the area. It is difficult to state the degree to which the cohesion policy in particular can be seen as a main driver for the city's economic vitalisation as there are other processes in play, such as its metropolisation or its Europeisation. No doubt investments made in soft and hard infrastructure are of profound importance and have improved inhabitants' quality of life. In addition, they continually attract individuals and businesses to relocate there and perhaps also reduce outmigration. Again, all of these processes are interacting - and while their interplay is clear, it is difficult to determine which is the most important.

[5] EU 15 – the countries which were a part of the EU before the 2004 accession (so-called 'old member states').

1 Motivation for the selection of this case

Małopolska (PL) – Cluster 3

The Malopolska region was selected as an exemplar case of a “Cluster 3 region”. Within this class fall 110 European regions with medium-to-low levels of competitiveness, but with some potential in the knowledge economy (KE). Poland represents a good example of a country characterised by a high rate of emigration, and Małopolska follows this trend, even though it does not have the highest level of migration compared to other regions. However, it is an interesting case study because it is one of the top Polish regions when it comes to job creation and it is trying to deal with emigration in various ways, mainly via the creation of a comfortable environment for the offshoring services, providing support to entrepreneurship and trying to encourage return migrations by reducing administrative barriers. In particular, the region is characterised by a high potential for the development of the knowledge economy. This is primarily due to the availability of highly skilled workers, thanks to the higher education entities located mainly in Kraków. The Małopolska region ranks third in Poland in terms of number of students, with 33 universities attended by around 212,000 students. The region has a well-developed transport infrastructure, significant socio-economic growth potential and it produces around 7.4% of the national GDP. This is partly thanks to the presence of natural resources and large industrial plants in the region and many businesses located mainly in the metropolitan areas of Kraków. Since the country’s accession to the EU, both Poland and the Małopolska region have been supported with vast amounts of funds from the cohesion policy. The allocations resulted in new infrastructure, including roads and airport support, as well as spending on competitiveness and innovation, including R&D labs, both within academic centres and private entrepreneurship bases.

Hence, the core of the analysis will focus on Kraków, referred to here with its surroundings, i.e., its larger territory known as Kraków Metropolitan Area (KOM – Krakówski Obszar Metropolitalny). Kraków is interesting for various reasons. Firstly, it is dominating in the region of Małopolska, being the largest city and the most developed in economic and social terms. Secondly, it possesses well educated and young labour force. Thirdly, it has a friendly business environment attracting foreign and local investors, creating opportunities for start-ups. Finally, one should mention the pleasant living conditions for inhabitants, which attract the creative classes to relocate there.

2 The hypothesis under analysis

H1. Favourable living and business conditions and the cultural attractiveness of the city attract high-skilled migrants to come and live in Kraków (KOM).

H2: Still, some individuals migrate out of the city and region, in spite of favourable living and business conditions and the cultural attractiveness of the city.

The process under scrutiny may be outlined as follows:

- Self-government units, i.e., at both the local and regional levels, play a vital role in the facilitation, design and implementation of funds within cohesion policy and other EU-funded policies.
- Both local and regional authorities make attempts to create a knowledge-based economy and to attract potential investors and employees, especially the highly skilled.
- The activities of local and regional authorities support the attractiveness of Kraków, both culturally and in terms of its living conditions.
- Policies in play and their effect on employment and migration (mobility) patterns.

3 The profile of the area

3.1 Territory

The Małopolska is located in the south of Poland, neighbouring with Silesia, Podkarpacie and Świętokrzyskie. It covers an area of 15,182 km² and is the twelfth smallest region (out of 16) in the country.

Map 3.1: The location of the Małopolska region (NTS3) in Poland

Source: Wikipedia

The capital of the region, the city of Kraków (Cracow) was the royal seat until the 17th century when Warsaw became the capital of the kingdom. Kraków is the region's major economic, political, social and cultural centre. Kraków attracts the attention of various stakeholders and is a destination for FDI. The second major city in the area is Nowy Sącz, while other cities like Tarnów or Zakopane have been experiencing downgrading trends, e.g. depopulation and businesses moving to Kraków.

Małopolska's population was 3.4 million in 2016, with the majority (52.5%) living in the rural areas. Its population density is the second highest in the country, with 222 individuals per km², just behind Silesia with 372 per km² (UMWM 2016).

The urbanisation trend has shown a decline, from 50.8% in 1995 to 48.5% in 2015, meaning that in Małopolska less than half of the population is concentrated in the cities. This seems rather low when compared with the urbanisation levels in Poland (60.3%), or with its neighbour, Silesia, which is the most urbanized region in the country (77.1%) (UMWM 2016).

The Małopolska region also has an engaging cultural heritage and natural environment. The UNESCO World Heritage lists various Małopolska sites, which act as magnets for short- and long-term tourism. These are the Old Town of Kraków; Wieliczka salt mine; Auschwitz-Birkenau (the former Nazi German concentration camp museum); Bernadine's Monastery and

Pilgrimage Park in Kalwaria Zebrzydowska; and the wooden churches of Southern Małopolska6.

The regional authorities engage in and finance various actions related to the promotion of cultural heritage. Their activities include projects, seminars, discussions, conferences and festivals.

The natural environment is equally interesting, playing host to many species of flora and fauna. The table below shows the various forms of environmental protection in the region.

Table 3.1: Selected forms of environmental protection in the Małopolska region

Form of environmental protection entity	Number	Area legally protected (ha)	Share of the regions area (%)
National park	6	38037	2,5
Landscape park	11	175754	11,6
Areas of protected landscape	10	572241	37,7
Nature reserve	82	3363	0,2
Protected area of Nature 2000 (both protection of birds and of habitat)	99	286582	19,6
Natural-landscape complexes	6	14028	0,92

Source: GUS, RDOS w Krakowie, UMWM 2016.

Promotion of culture and environment arguably impacts the economic position of the city and the region's ability to attract tourists from all over the world. In 2016 the region was visited by 14.9 million tourists, 7% more than in the previous year. More than 3.2 million of those visitors came from abroad (Badanie ruchu turystycznego…..2017, s.15).

The city is well connected via an international airport to major European and American cities as well as to the Polish borders via railways and roads. The network of roads is dense and allows travel across the country. The aforementioned infrastructure has all been financed to a large degree by cohesion and other EU funds.

Nonetheless, one of the major problems of Kraków and the wider region that is a subject of major concern is air pollution, which constitutes a major threat to the health and living conditions of inhabitants. In response, many programmes have been implemented to reverse those negative trends.

3.2 Population and migration

Małopolska's population continues to grow, although at a slowing rate. According to demographic forecasts by the Central Statistical Office (2014-2050), the size of the region's population is expected to grow till 2025. From 2025, the size of the population is projected to decrease.

[6] For more please see: http://www.krakow-info.com/unesco.htm

Table 3.2: Population on 1 January, various years (Total)

	2000	2004	2008	2012	2014	2015	Δ% 2015-2000
EU28	487,250,522	492,555,798	500,297,033	504,060,345	506,944,075	508,450,856	*4,4%*
POLAND	38,253,955	38,173,835	38,135,876	38,533,299	38,478,602	38,437,239	*0,5%*
MAŁOPOLSKA	3,229,139	3,260,201	3,287,136	3,354,077	3,368,336	3,372,618	*4,4%*
KRAKÓW	758,715	757,430	754,624	758,334	761,873	761,069	*0,3%*

Source: Eurostat, GUS

In general the index of natural growth is higher in rural areas than in urban ones, due to a rural birth rate of 10.3 per 1000 inhabitants, compared to the country average of 9.6. On the other hand, the fertility rate (1.32) remained below the replacement rate (2.10-2.15) in Malopolska, though it is still slightly higher than Poland's national rate (1.29).

The median age in Poland is 39 years, while in Małopolska it is 40. The old-age indicator, the share of people aged 65 and above to those aged 19, has grown in Malopolska from 18.7 in 2002 to 21.7 in 2015, but still remains below the EU28 and the national rate. Moreover, life expectancy has been increasing in both Poland and Małopolska. For men in Poland it was 73.6 years and for women 81.6 in 2015, while in Małopolska average life expectancy was 75.1 and 82.4 respectively (UMWM 2016).

Table 3.3: Old Age Dependency Ratio

	2002	2004	2008	2012	2015
EU28	23.9	24.4	25.5	26.9	28.8
POLAND	18.2	18.6	18.9	19.7	22.2
MAŁOPOLSKA	18.6	19.0	19.1	20.0	21.7

Source: Eurostat

What are the economic implications for the knowledge-based economy? A study released by McKinsey & Company in 2015 forecasted a decline of the prime working-age population (15 to 59) by 2.7 million by 2025, and an increase in the old-age dependency ratio to 42% by 2025 (McKinsey & Company 2015), suggesting labour-supply problems and an increase in social spending at the country level. Some regions like Małopolska might be better off due to their younger age structure, a result of incoming migrants attracted by more favourable living conditions and working opportunities.

Internal migration is high in Małopolska, with 3.8 thousand persons moving in from other parts of Poland on net in 2015, making it the second most attractive region in the country after Mazowsze. Internal migration is mainly composed of students moving to Kraków and choosing to remain after they graduate, according to stakeholders interviewed as part of this case study (UMWM 2017).

Kraków and its metropolitan area (KOM) attracts many people, including highly skilled professionals. The external mobility data provided by the Office of the Foreigners of the Voivodship Office (which grants permits to stay, work etc. for non-EU nationals) confirms that Kraków and Małopolska are attractive places to work and live. The influx of labour immigrants began around 8 years after EU accession in 2012, gaining momentum in 2015 and 2016 (Imigranci zagraniczni 2017):

- In 2016, the number of work permits for citizens from outside the European Union (EU) / European Economic Area (EEA) and Switzerland increased by 111% compared with the year before.
- The number of registered statements expressing an intention to employ a worker from Armenia, Belarus, Georgia, Moldova, Russia and Ukraine for up to 6 months increased by 119%.
- The largest national group coming to Małopolska is Ukrainians, followed by Moldovans, Russians and Belarusians, with more and more immigrants coming from India.
- Finally, the number of EU citizens who registered for a temporary stay in Poland, and who are probably employed, has risen by 6% between 2013 and 2014 (Imigranci zagraniczni…2017).

About 30,800 people registered for permanent residence in Małopolska in 2015, while 27,000 left. The vast majority of mobility takes place within the region or "in the neighbourhood" and involves young people on the threshold of their professional careers (Migracje wewnętrzne 2017).

The highest positive migration balance is recorded by the communities located very closely to the city of Kraków, as well as by neighbouring towns in the region (e.g. Tarnow, Nowy Sącz or Oświęcim), while peripheral areas of the Małopolska region show migratory losses (i.e. the south-eastern part and along the western and northern boundaries of the region (Migracje wewnętrzne. 2017). Motives for migration can be summarised as follows:

- situation in the labour market and a potential for higher earnings;
- a network of contacts, such as support of friends and family;
- personal matters, e.g. a desire to change after difficult life situations;
- situation and quality of life in the receiving region including the possibility of comprehensive development.

Source: Migracje wewnętrzne. 2017

On the other hand, people also migrate out of Kraków. The census data (NSP 2011) show that at the time of the survey, over 2 million Poles had been outside of the country for longer than 3 months, while around 1.56 million had been abroad for over a year. About 73% of those 2 million emigrants left after Poland's accession to the EU in 2004.

Between 2004 and 2014 as many as 20,500 persons migrated from Małopolska. The UK is the most population destination for Polish emigrants, followed by the USA. It is fair to say that most of the migrants residing in both countries work below their qualifications, even when holding a university degree, and that the bulk of Polish emigration can be categorised as low skill.

Table 3.4: Top 5 countries where migrants from Małopolska reside (2011)

Country	Number of temporary migrants from Małopolska (persons)	Structure of temporary migrants from Małopolska (%)	Share of temporary migrants from Poland in a given country (%)
United Kingdom	49 589	26.4	8.1
USA	42 265	24.7	21.1
Germany	15 903	8.5	3.7
Ireland	13 240	7.1	10.3
Italy	12 221	6.5	13.3

Source: Emigracja,2017

3.3 Economy and labour market

Poland’s GDP growth continues and remains among the fastest in the European Union. Gross domestic product (GDP) at current market prices (PPS per inhabitant) increased from 9 300 euro (2000) to 19 800 (2015). For Małopolska the figures stand at 8 400 euro and 17 800 euro, respectively.

Table 3.5: GDP per capita

	2002	2004	2008	2012	2015	Δ% 2015-2002
EU28	21,300	22,500	26,100	26,600	28,900	46.0%
POLAND	10,100	11,300	14,500	17,800	19,800	112.9%
MAŁOPOLSKA	9,000	10,000	13,000	15,700	17,800	111.9%

Source: Eurostat

Within Poland, Małopolska is considered to have one of the highest levels of potential for future growth (GDP in current prices was 133,974 million pln in 2014, making it 5th in the country, UMWM 2016).

The Polish Investment and Trade Agency (PAIH) lists the following aspects as driving the attractiveness of the country:

a) ambitious and hard-working individuals;

b) a diversified economy – from manufacturing and service to agriculture. Sectors like automotive, aviation, food processing, electronics and finance are all well developed;

c) macroeconomic stability;

d) quality of goods and services;

e) a number of new business opportunities deriving from unique infrastructural modernisation, such as the road and rail transportation, or energy infrastructure;

f) a large internal market (over 38 million people) and free access to the European market;

g) price competitiveness.

There are two paths that various sectors follow to assure competitiveness. The most advanced and competitive sectors compete based on innovation and branding, while less advanced sectors compete on costs. The main drivers of growth from the perspective of industry are the following:

- Service industries – such as business process services, legal, business consulting, financial services and telecommunication -- all a part of the offshoring and outsourcing activity located in Poland and in Kraków in particular (11% of GDP).
- Process manufacturing – most manufacturing outside cutting-edge, technology-intensive categories such as motor vehicles, furniture, textiles, chemicals (11% of GDP).
- Technology-intensive industries – the most advanced like pharmaceuticals, medical and optical equipment and most advanced machinery (ca. 2% of the national GDP, but the outlook for this sector is positive).
- Basic materials industries, covering mainly mining and manufacturing of minerals (4% GDP); this sector suffers from large productivity gaps that need to be closed to assure its competitiveness.
- Local industries – meaning agriculature, energy, transport, retail and wholesale trade. These contribute the most to the country's GDP (71%). Its internally fueled growth is large and does not have much global exposure.

It is therefore not surprising that major investments are being made in the country and in the region. Poland recorded 167 billion euro of FDI stock at the end of 2016 (NBP 2016).

The EY's European Attractiveness Survey 2016 places Poland as the most attractive FDI destination in Central and Eastern Europe and the 5th most attractive in Europe. Higher scores in the survey were given only to Germany, UK, France and the Netherlands (PAIH 2016).

Małopolska participates in all of the sectors listed above and is one of the service industry's national leaders. Subsidiaries of major BPO and KPO companies are located in Kraków and rely heavily on its affordable and well-educated labour supply (McKinsey & Company, 2015).

Moreover, Tholons Globalisation Services Index 2017 placed Poland in ninth position among the most digital nations in the world, making it number one in Europe, followed by Ireland, the Czech Republic and the United Kingdom. In addition, Kraków was ranked the eighth most digital city in the world by the same report, with Dublin being the only European city to chart higher (seventh place). The report emphasised a talented workforce, labour costs and innovation.

The positions of Kraków and Poland are confirmed by additional factors, e.g. the stable development of the outsourcing sector. More than 150 centres operate in Kraków and its metropolitan area (KOM), employing ca. 60 000 individuals. Employment in Kraków accounts for more than 35% of the total "outsourcing" sector in Poland. Many companies have decided to locate their branches there, including State Street, UBS, Cathay Pacific, LowCostTravel Group and Zurich Insurance, creating about 29 new work places every day. More than 29% of passengers surveyed at Kraków's local airport said they travelled there for business purposes (Outsourcing strategy, 2016). Yet, the large quantities of talented workers and low labour costs[7] are not the only factors encouraging investors to relocate their outsourcing services there. Other important factors include lower turnover rates, cultural and physical proximity, language skills and time-zone similarity with the USA and Western Europe relative to other outsourcing hotspots (McKinsey & Company 2015).

Process manufacturing is another sector requiring technologically advanced activities, e.g. motor vehicles, computing, electrical equipment, chemicals, fabricated metals. Poland is also seen as a preferred location for some less advanced manufacturing, e.g. furniture, textiles, apparel, leather. Their production takes place in Małopolska, like the manufacturing of shoes.

Moreover, as a part of the strategic planning activity financed by the EU, the regional and national authorities promote innovation and R&D activities. As a result, **Kraków is seen as a core area where super-competitive and innovative pharma-clusters are located** (McKinsey & Company 2015).

Moreover, some companies also see Kraków as a preferred place for their operation, as the city hosts several **start-up centres** (like HUBRAUM or T-Mobile). Also Kraków is a place where the **new industry focusing on games** and their development is located and where the last edition of the Digital Dragon's round was organised. Funds have been allocated to aid transfer of knowledge between universities and businesses (see e.g. SPIN project). Finally, outsourcing/offshoring companies increasingly engage in R&D activity, i.e. they do not focus purely on Business Process Outsourcing (BPO) anymore, instead engaging in R&D and employing workers from all over the world to help in this pursuit (UMWM 2017, WUP 2017).

Whatever potential the country's economy and industry has, it must be remembered that Poland is a "stingy" spender when it comes to innovation and R&D. However, the amount spent on innovation as a percentage of GDP increased dramatically between 2002 and 2014 (data Eurostat).

Table 3.6: Total intramural R&D Expenditure (GERD) as % of GDP

	2002	2004	2008	2012	2014	Δ% 2014-2002
EU28	1.79	1.75	1.84	2.01	2.04	15.3%
POLAND	0.56	0.55	0.60	0.88	0.94	46.9%
MAŁOPOLSKA	0.82	1	0.91	1.31	1.38	76.9%

Source: Eurostat, GUS

The different regions have different levels of R&D expenditure. In 2014 the Małopolska region was listed 9th in the country for spending on innovation-based activity, measured as

[7] Informatively it is worth to note that the average salary in Poland amounts to 4277,32 pln (2016) which is ca. 1000 euro, depending upon the exchange rate.

expenditure by companies per professionally active person. Kraków is regarded as one of the most vibrant places in terms of research and development (R&D) activity.

The table below also shows a high percentage of people in Małopolska are employed in science and technology, much higher than the EU28 and only slightly lower than in Poland.

Table 3.7: Persons employed in science and technology (% on active population)

	2005	2008	2012	2015	Δ% 2015-2005
EU28	26.5	27.8	30.2	31.5	18,9%
POLAND	29.6	33.4	37.7	41.6	40,5%
MAŁOPOLSKA	25	31.3	36	40.1	60,4%

Source: Eurostat, GUS

Labour market

At present Poland has one of the lowest unemployment levels in the EU. This was not the case in the early years of the millennium. In fact, in the year of EU accession (2004) the unemployment rate in Poland was 19%, and 17.2% in Małopolska. In 2015 the unemployment rate oscillated around 10% at the EU28 level, an increase of 2.2% on 2004, while the unemployment rates in Małopolska and Poland hit a low of 7%, approximately 2 p.p. below the EU28 rate.

Table 3.8: Unemployment rates (overall)

	2004	2008	2012	2015	Δ% 2015-2004
EU28	9,2	7	10,5	9,4	2,2%
POLAND	19,0	7,1	10,1	7,5	-60,7%
MAŁOPOLSKA	17,2	6,2	10,4	7,2	-57,7%

Source: Eurostat, GUS

In 2017, Małopolska's unemployment rate is 6.7%, which is 1.5 p.p. above the national average. By comparison, the unemployment rate in the city of Kraków is 3.6%. The unemployment rate in the region is the lowest in 20 years (Dlaczego spada… 2016).

It is also worth emphasising that Kraków and its metropolitan area (KOM) are attractive. Since 2012 more and more foreigners are coming, particularly Ukrainians. They either come for short-term physical work (construction or domestic work) or as highly skilled professionals (Ibidem 2016). Offshoring and outsourcing companies especially show interest in highly skilled Ukrainian migrants, e.g. IT specialists and engineers (WUP 2017, UMWM 2017).

At the start of the period under analysis, youth unemployment in Poland was well above EU28 levels. However, between 2005 and 2015, unemployment rates fell by a stunning 43% in both Poland and Małopolska. As of 2017, youth unemployment in Małopolska and Poland has converged with the EU28 rate.

Table 3.9: Unemployment rates (15-24)

	2005	2008	2012	2015	Δ% 2015-2005
EU28	18.8	15.7	23.3	20.4	8,5%
POLAND	36.9	17.3	26.5	20.8	-43,6%
MAŁOPOLSKA	36.7	19	27.7	20.9	-43,1%

Source: Eurostat, GUS

However, Poland's long-term unemployment rate has not improved as significantly. The proportion of the labour force which has been out of work for longer than a year remains well above the EU28 rate. In addition, the long-term unemployment rate in Małopolska is even higher than the national rate, suggesting that while the region is a land of success for some, it is not without its failures.

Table 3.10: Long-term unemployment rate (12 months and more)

	2004	2008	2012	2015	Δ% 2015-2004
EU28 - European Union	4.1	2.6	4.7	4.5	9.8%
POLAND	47.9	29.0	34.6	32.0	-33.2%
MAŁOPOLSKA	60.1	33.3	38.4	36.7	-38.9%

Source: Eurostat, GUS

3.4 Education

Tertiary education[8] data cast Małopolska in a very favourable light compared with other regions of the country. In the academic year 2015/2016, as many as 173 700 students studied in the region; however, that is 6 700 fewer than in the previous year (3.7%). Table 3.11 shows that most students in Małopolska's tertiary education system study full time and in public universities.

Table 3.11. Tertiary education in Małopolska

Type of education	2004	2010	2015	Δ% 2015-2004
Total	190,821	211,938	176,698	
Full –time	106,917	125,057	127,630	
Extramurial	79,969	86,881	49,068	
Public education	152,572	163,092	150,142	
Private education	38,249	48,846	26,556	

Source: GUS, UMWM 2016

The number of students is falling nationwide due to a major demographic change. Yet the situation in Małopolska is not as severe as in other regions, since it is an exceptionally strong academic centre. Małopolska has more students per 10 000 of the population than anywhere else in the country, equal to 524 in 2015 (UMWM 2016).

[8] The educational system in Poland consists of 4 educational cycles, i.e. primary education (6 yrs.+1), lower secondary education (4 yrs.), secondary education (3 up to 4 yrs.), tertiary education (5 years or split into bachelor and master degrees of 3 + 2 years). This system is under a major systemic reform, taking place in the school year of 2015/2016. As a result the reverse to the old system is observed, with primary education (8 yrs.) and secondary education (3-5 yrs.).

A quick look at the population aged 30-34 shows a high level of tertiary education attainment. Both Poland and Małopolska have high levels in comparison to the EU28 rate, exceeding it by ca. 5 p.p. This is related to a rush by the young to read for a degree, which used to be considered key to successful labour market entry.

Table 3.12: Percentage of population aged 30-34 with a tertiary education

	2004	2008	2012	2015	Δ% 2015-2004
EU28	28.1	32.3	36.0	38.7	37.7%
POLAND	22.7	32.8	39.1	43.4	91.2%
MAŁOPOLSKA	NA	NA	39.9	42.7	-

Source: Eurostat, GUS

Interestingly, looking at the population aged 20-24 in Małopolska reveals that the vast majority of them study. Since the early 2000s, the proportion of 20-24 year olds in tertiary education rose dramatically, reaching almost 90% by 2012.

Table 3.13: Students in tertiary education (ISCED 5-6) - as % of the population aged 20-24 years at regional level

	2001	2004	2008	2012	Δ% 2012-2001
EU27 - European Union (27 countries)	50,8	56,4	-	64,2	26,4%
MAŁOPOLSKA	57,9	67,9	81,7	89,5	54,6%

Source: Eurostat, GUS

Many students from all over the world decide to spend their semesters abroad in Poland. Kraków is one of their favourite destinations.

Table 3.14: Erasmus mobility

Years	2000/01	2005/06	2010/11	2013/14	Δ% 2014-2001
Students outgoing	3,691	9,974	14,234	15,517	320,4%
Students incoming	614	3,063	7,583	11,693	1,804,4%

Source: http://www.erasmus.org.pl/beneficjenci-programu.html#Rok_akademicki_201314

Kraków is held in high esteem by many visiting students, who come as part of Erasmus or other forms of international academic exchange, e.g. Ukrainian students. One of the Erasmus students argues:

> *"First of all, I am fascinated by this country (...) What Italian old people think about Poland? For instance my grandparents think that Poland is not a country where I can catch important opportunities, their minds are steady and for them Poland still reminds poverty, war, Nazi occupation and ex-communist state. Luckily, I am pretty well informed and I disagree with everything of their opinion but on the other side I cannot blame them, because they haven't got sufficient education and are too close minded to understand the current Poland. Cracow is an ideal city where you can settle…" (IT 2017).*

Students also enjoy the international exposure gained by the coming together of lots of nationalities in Kraków:

> *"Poland being quite close to Ukraine and parents visiting me often due to the close proximity of the countries with them being able to also drive down to Cracow 2-3 times a year and of course the international exposure since students come from all over Europe as well to study in Poland. Also it has similar culture, traditions, and values" (UKR 2017).*

3.5 Institutional characteristics of the area in relation to the knowledge-based economy and skilled migration

Two levels of institutions are involved in supporting the knowledge-based economy (KE) in the region. The main player is the regional authority, i.e. the Marshall Office of the Małopolska Region (UMWM). Through their departments and regional policymakers they draft, discuss and implement policies and programmes.

In addition, there are the activities of the central government in Warsaw, which acts via a Voivod (a local representative of the government) and mainly via the Ministry for Development (previously the Ministry for Regional Development). The Ministry manages and implements various national programmes that, for example, aim at boosting national innovativeness (PO Innowacyjna Gospodarka). The Voivod has control measures over the Marshall Office structures when it spends public money, as well as some other powers.

When it comes to the labour market there is a more complex situation. The local labour offices are in charge of the labour market in the local area: they manage various funds, both national and European, and they support the unemployed in various ways in accordance with the Act on Promoting Employment and the Labour Market Institutions (Dz.U. 2004 nr 99 poz. 1001 with subsequent changes). On the regional level there are regional labour offices which have a more statistical role and serve as managing institutions to implement the EU funds (European Social Fund). They collect data from local labour offices and monitor the situation in the region. They are a supporting arm of the Marshall Office of the region. Finally, at the top of the hierarchy is the Ministry of Family, Labour and Social Policy which coordinates policies in the labour market.

Migration, as a complex matter, falls in between the mandates of a few institutions, chiefly the Ministry of Interior; and the Ministry of Family, Labour and Social Policy. The Ministry of Interior deals with work permits and permissions to reside as well as asylum claims for foreigners; meanwhile, the Ministry of Family, Labour and Social Policy deals with the European Employment Services (EURES) system Then, those responsibilities in the region are respectively located at the Voivodship Office through the Office for Foreigners or in the Marshall Office via the Regional Labour Office. Regionally both institutions run various analyses on the migration–related situation in the region, which can be used by policymakers.

In general there is a pattern, in force between 2000 and 2016, that macrostructural operations are increasingly taking place in central government, while regional self-government and the localities (poviats and gminas, both rural and urban municipalities) take care of practical operations. Regional authorities are also in charge of creating and implementing specific policies that relate to development of the region. Most national policies and hence self-governments' responsibilities are spelled out by specific regulations (act of the parliament and regulations of ministers), e.g. labour market policy, welfare state-related policies, educational policy, science policy etc.

4 Policy features affecting high-skilled migration flows and the performance of the knowledge economy

Małopolska shows the following picture when it comes to migration:

- A large positive internal migration balance, making it the second most attractive region in Poland, after Mazowsze.
- Kraków and KOM are attractive, especially to highly skilled professionals – this is confirmed by the influx of labour immigrants, arriving at an increasing rate in 2015 and in 2016.
- The external mobility data provided by the Office of Foreigners of the Voivodship Office, which grants permits to stay and work etc. for non-EU nationals confirms that Kraków and Małopolska are found interesting by foreigners.
- The largest national group coming to Małopolska is Ukrainian.
- People migrate out of Kraków – 9.3% of the over 2 million Poles who have been outside the country for longer than 3 months are migrants from Małopolska.
- Yet at the same time the inhabitants of Małopolska are reluctant to leave the region – it is characterised by a small migration coefficient, which suggests that its residents have a relatively low mobility.

Why is Kraków/Małopolska so attractive to high-skilled migrants? As the interviews show, and as policymakers argue, government programmes aimed at improving quality of life ensure that the region, especially Kraków, including its metropolitan area (KOM), provides various opportunities for individuals and businesses. Kraków (KOM) serves as a “hub” where funds are invested to boost innovation and entrepreneurship and thus to pull potential high flyers. This is coherent with the regional policies.

Nonetheless the present phase of development of Małopolska will not be a short story. It is the result of actions and policies that were implemented some time ago, since the EU accession at least. Shifting the powers when it comes to regional policy from central to self-government level and building participative rather than imperative-based policymaking has benefitted in a number of ways, mainly through the improvement of and increased access to:

- Transportation - constructing and improving the existing material infrastructure (hard) such as roads (main roads A4 -east -west, E77-north-south), railways (6.9 km/100 km2 – railway density as opposed to 5.9% in the country), airports (local one in Balice, and two other airports in the neighbouring regions, i.e. Pyrzowice and Rzeszów) – the present period and activities are laid down in the Strategy of Transport Development in the Małopolska Region 2010-2030 etc. All the above improve access to existing free economic zones where many business endeavours are located. It also connects with the neighbouring regions and allows for smooth connection within the region.

- Entrepreneurship and support for employers and employees in general via Operational Programmes like Innovative Economy, Human Capital (2013-2017). Małopolska is the only Polish region that has been awarded by the Committee of the Regions with the title of the European Region of Entrepreneurship 2016, for its work in supporting the private sector through its innovative entrepreneurship strategy (UMWM 2016).
- Innovation and related infrastructure (soft) e.g. labs, co-working centres and support targeting innovative sectors and industries, like games, start-ups, R&D, science development etc. All of the above link to the regional intelligent specialisations (RIS).
- Shift in the economic framework, i.e. re-directing the local and regional economy to the innovations and knowledge sectors as laid down in the Development Strategy of the Małopolska Region for 2011-2020 and other policy documents, e.g. on intelligent regional specialisations (RIS[9]). RIS include nature, sustainable energy, ICT, chemistry, manufacturing of metals and metal products and products of mineral nonmetallic raw materials, electrical engineering and machine industry, creative and leisure industries. In the proposal the list included also RIS: higher education and R&D, yet by the decision of the Region's Management Board it was abandoned (Cholewa et al, 2016, s.13).
- Quality of life, i.e. actions to improve the quality of life and the well–being of the city and of the region's inhabitants (e.g. construction of new connections, via railways, light metropolitan railways, roads, airports).
- Cooperation - introducing its various forms among stakeholders and across sectors, e.g. university and industry along with the transfer of knowledge and introducing some degrees needed by the industry e.g. CIMA within Accounting and Finance or Engineering and Environmental Protection, Advanced Materials and Nanotechnology, Mathematics and Nature Combined Degree, etc. Some of these degrees are local university initiatives, while others are financed and prompted by the Ministry of Science and Higher Education (the last three examples).
- Awareness by policymakers at the regional level who see the potential of the region and its labour force and want to make use of it.

The above is confirmed by the actions of the regional authorities, i.e. encourage higher spending on R&D – some funds were allocated within the Regional Operational Programme. In 2015 the main project SPIN – the Małopolska Centres of Knowledge Transfers – was

[9] The concept of RIS comes from the innovation based change and the role of the knowledge in the economy (http://www.umwm.pl/publikacje/gospodarka/oddzialywanie-inteligentnych-specjalizacji-regionalnych-na-rozwoj-gospodarczy-malopolski)

successfully implemented. It aimed at providing consulting services for companies in the region, in line with the strategy on the regional inteligent specialisations (RIS). The services were subcontracted by the academic centres of the knowledge transfer, which acted as brokers of innovation (www.spin.malopolska.pl). The table below shows the main projects implemented in the region.

Table 4.1: Main projects within a theme" Technological R&D, innovation and entreprenuership" (in million pln)

Name of the project	Beneficiary	Value	Co-financing
Implementing innovative technology of producing rubber S-SBR X3 in Synthos Dwory 7 (Oświęcim)	Synthos Dwory 7 sp. z o.o.	591,3	124,8
National Centre for Electromagnetic Radiation for reseach purposes (Kraków)	Jagiellonian University	199,1	169,2
Development of the Jagiellonian Park of Technology Incubator - Life Science (Kraków)	Jagiellonian Centre of Innovation sp. z o.o.	171,9	101,3
Cyclotronic Centre Bronowice – Gantra position	Polish Academy of Sciences – Institute of Nuclear Physics	167,6	126,8
Centre of competencies for dispersed computing infrastructures of GRID type – PLGridCore (Kraków)	Academic Computing Centre CYFRONET AGH	144,9	123,2

Source: SIMIK Database, UMWM 2016.

Moreover, the region hosts a number of Industrial & Technology Parks. These are (PAIH 2016) as follows:

- Kraków Technology Park, MMC Brainville in Nowy Sącz.
- Tarnów Science and Technology Park.
- the Jagiellonian Center of Innovation – Techonology Park Life Science in Kraków.
- Małopolska Information Technology Park in Kraków.
- "Crystal" Industrial Park in Tarnów.

The regional perspective and actions are linked with the national and European frameworks. To start off it is the cohesion policy, which remained in line with the Commission requirement and standpoint, which was the main instrument used to promote regional development and reduce disparities between the member states and regions. The cohesion policy in Poland and consequently in the Małopolska region has focused on areas of interest such as R&D, but also supports small and medium-sized enterprises (SMEs), education, transport, telecommunication, social and environmental infrastructure. Simulations conducted for the European Commission have provided evidence of the impact of cohesion and rural development policies, which aim to improve the economic structures of EU member states. The national economies improve when it comes to their competitiveness, the productivity of factors of production and their direct investment in technology. Some simulations estimate the effect on the national GDP of the main beneficiaries of cohesion policy spending. The increase in GDP amounts to +4.3% in Poland, while in Hungary and Latvia the improvement is even larger (European Commission 1).

The development and modernisation policies grounded on the EU funding are seen to benefit the country and region's development. However, some authors argue that the previous and also the present programming periods show a certain drift of regional policies, with no specific goals and no direction. As a result, no additional increases in productivity occur and the gap is not reduced at the pace anticipated (Geodecki et al., 2012).

In the present programming period, i.e. between 2014 and 2020, Poland will manage 22 operational programmes (OPs) under EU cohesion policy, funded by ERDF, ESF and the cohesion fund. The planned allocation for Poland in a given period is around 77.6 billion euro (in total cohesion policy funding). Out of that Małopolska will participate in the funding for 16 OPs of 51.2 billion euro, in 23.2 billion euro through the cohesion fund, in 700.5 million euro for European Territorial Cooperation and 252.4 million euro for the Youth Employment Initiative. Finally, it will participate in the ESF in Poland of a minimum of 12.8 billion euro (European Commission 2).

The Deputy Prime Minister Morawiecki's Plan for a Responsible Development was considered as a kind of response to those concerns. The plan for the next 25 years highlighted some elements that had already been addressed by scholars, e.g. inter alia support to business and innovation or the middle income trap. It is worth noting that results of evaluations seem to be present in the plan and lessons are incorporated, e.g. investing funds and not spending them, machining the needs of the labour market with the trainings offered, or addressing the overlap of institutional responsibilities to improve their efficiency (Plan na rzecz…2016).

However, at this stage it is difficult to say to what degree these will be implemented as this is a central governmental programme, with no social consulting process or stakeholders' involvement at the phase of design.

5 Testing the evidence: main results achieved and shortcomings

The interviews conducted fall into two groups: 1) the stakeholders, such as policymakers and experts; and 2) students.

The first group represented regional authorities, i.e. Marshall Office of the Małopolska Region (UMWM) - Joanna Urbanowicz, Regional Labour Office (WUP) - Alina Paluchowska, Adam Biernat, Sebastian Ramenda, City of Kraków (UMK) Jacek Woźniak – former Director of Regional Policy in UMWM, in charge of the Region's Strategy now City's Strategy, Lewiatan (Employers Association in Małopolska - Kamilla Banasik – Brudny, Cracow University of Economics, the International Programmes Office (IPO) in charge of students mobility (Sylwia Rutkowska, Magdalena Krasowska).

Additionally, input was given by Voivodship Office, Department for Foreigners (UW) – Szymon Strzelichowski.

The other set of questions include students: an Erasmus student (Italy - Fabio Bettiol), a student working and studying in Kraków (Ukraine - Anna Rachek), student migrants, only studying here (India - Vaishali Singh).

Elements pointed out by stakeholders, policymakers and experts

The region is considered a knowledge-based one, penetrated by international capital while playing host to many international companies with subsidiaries in Kraków. However, the city's strong position does not stem only from the business side, but is secondary to its access to a very well-educated labour force, due to the fact that it hosts many academic institutions. Kraków, as a student city, has a large population of talented students and graduates, who look for interesting and challenging jobs, speak foreign languages and are mobile, much more so than their parents were at their age.

The development of the region is financed by EU and national sources. At the end of June 2016 as many as 8,138 projects in the region were realised – the programing period of 2007-2013 – and their value amounted to 37.9 billion pln (UMWM 2016, s. 271). It is organised around the concentration rather than diffusion principle, locating many of the activities, including business and value-added activity, in Kraków (KOM)10. Alongside the already existing metropolisation processes, the projects have made Kraków (KOM) into a dominating actor in the region (UMK 2017).

The quality of life is high in Kraków, people enjoy living there and the employment opportunities are seen as competitive compared to other areas of the region (UMK 2017; UMWM, 2017; WUP 2017). Moreover, the transportation network which was in place was

[10] Just to remind that we address Kraków in its larger territory as Kraków Metropolitan Area (KOM – Krakówski Obszar Metropolitalny).

modernised and in many instances built from scratch. It is indeed becoming more and more advanced, which is expected to benefit commuters' opportunities, allowing individuals to live outside of the city without incurring such high financial and time costs (UMK 2017).

There is no doubt that Kraków is the core of Poland's modern economy, based on knowledge, surpassing other cities in the region like Tarnów and Nowy Sącz and other cities in the country like Warsaw[11], Wrocław and Poznań. Kraków is growing and its offer in various aspects is the greatest in the region. Moreover the regional and city policymakers emphasise and support regional intelligent strategies, i.e. areas of specialisation (RIS) as a part of Regional Intelligent Strategies (WUP 2017; Lewiatan 2017, UMWM 2017).

On the other hand, traditional sectors and their needs seem to be forgotten. The employers in those sectors express frustration with this situation, wishing their funding needs would be addressed by these strategies. The traditional sectors innovate too, but without much awareness from policymakers, according to informal discussions. These individuals require funds and attention, too (Lewiatan 2017).

Cohesion policy, in general all funding from the European Fund for Regional Development, played a crucial role for development of the region, especially in Kraków the city or KOM more broadly. They financed and continue to support the development of the transportation system like roads, bridges, railway connections (some projects are in the implementation phase at the moment like the Fast Metropolitan Railway) and improvements to air connectivity (airport). This obviously makes the city more accessible to national and international travellers. The second aspect is related to activity **to enhance innovation: a lot of funds are allocated to R&D activities, mainly labs,** supporting both universities and the private sector (e.g. Selvita, UJ etc.). Some companies also see Kraków as having potential for their operation, as the city hosts several **start-up centres,** and is a home to the **new industry focusing on games** and their development. Moreover the offshoring companies engage in R&D activity, which itself boosts innovation in the region (UMWM 2017, WUP 2017).

Moreover, there is an observable qualitative change happening within Kraków (KOM) thanks to various initiatives and funding of the following (UMK 2017):

- Unique projects, often related to developed technologies – a high level of saturation is observed.
- Creating new lab area, which is financed by the EFRD and which in the future will provide their services and expertise to other entities from outside of the city/region/ country, i.e. hire of technology.

[11] The relationship with Warsaw is rather problematic, given the long-time competition between the cities and natives of both, and due to the fact that Warsaw continues to attract and pull many individuals out of Kraków, as the types of job vacancies differ between the two.

- Since the 2004 EU accession Poland started to fully participate in numerous macroeconomic processes, which had a positive effect on attracting FDI, the mobility of professionals and the development of the human capital.
- Changes to the “outsourcing” sector – at present called Advanced Sector of Business Services – which does not locate only simple services there but is shifting towards more ambitious services that would utilise the local talents pool.

Companies see Kraków as a core for their future activity and they move their operations to Kraków for various reasons (see also Tholons 2017; McKinsey and Company 2015):

- Access to human resources – students and graduates.
- High level of their education – not that common across the world.
- Knowledge of languages is a benefit.

Kraków (KOM) possesses resources concentrated in two dimensions that substantially contribute to its superior position in Poland and in Europe as a micro-scale knowledge economy. These are (UMK 2017) as follows:

- The city itself – with its various types of infrastructure, which was discussed in the previous section – from roads, airport, labs to cultural and social infrastructure, high-quality human capital, a very good reputation.
- Instruments used by the city and regional authorities, i.e. EU funds enhancing the infrastructure in various ways also in a context of metropolisation which attracts foreign investors.

The companies require specialists, who are not in sufficient numbers in Kraków, in particular the IT specialists, who move to Kraków from India, Moldova, Russia (WUP 2017; UW 2017). Moreover, specialists share their experience of living in Kraków with friends and family back home, which attracts more to come, even if for a short period of time (WUP 2017). Additionally, it is noted that many students start their careers while being at the university, suggesting a smooth school-to-work transition (IPO 2017; UMWM 2017).

Why do people move to Kraków? There are some structural factors, like unemployment in the Southern countries (Spain, Italy, etc.) and the poor economic situation in the Ukraine, but what also matters is the quality of life. Kraków is a nice place to live and it is easily reachable in terms of transportation (WUP 2107). Some experts argue that it is not the opportunity or employment that brings people to Kraków; rather, people move in and then vacancies emerge. People simply want to live in a nice and comfortable environment, which Kraków offers (UMK 2017).

There are some internal mobility flows as well. However, people from Małopolska tend to have strong family ties, which has an impact on their mobility. Still, they move. There is quite a substantial mobility between neighbouring regions and cities, mainly due to the fact that many people come to Kraków to study and decide to stay there and find employment. Interestingly, there are two patterns: they either relocate to Kraków or decide to live in their original town or village and commute to Kraków on a daily basis (UMWM 2017). On top of these, there are many adventurers who easily relocate to other cities, like Wrocław, Warsaw, etc. Statistically, Kraków continues to be very attractive for newcomers, as evidenced by its large positive migration balance (WUP 2017). Also, other cities are not regarded as attractive places to live and work, e.g. Nowy Sącz has been experiencing a process of industry disintegration, meaning large companies are relocating to Warsaw, mainly due to poor transport links (UMK 2017).

Students and those working with students note the following aspects:

Foreign students come to UEK to study and learn Polish. The Cracow University of Economics (UEK) hosts students from various countries, but the majority come from Germany, France and Spain. The University does not have many agreements with non-European countries, which is why these students are a minority of scholarship holders. Regardless, there are a small number of students coming from Japan, Taiwan, China and India.

In some cases Kraków was selected and is seen as a dream place of residence; in others, this is not the case at all. As one Ukrainian student noted:

> *"Cracow was never my preference or not the place in my mind to pursue my studies and I never thought it would become my city of residence. After I finished school I was applying for a few universities in Ukraine. At that point my preferred subjects to pursue further studies were Journalism, Psychology and political science. I passed my final exams at the end of June and sent a link to view my mark sheet from the education centre to my father. While viewing the results he found an advertisement on the website of a firm assisting with university admissions in Poland which changed my life completely. He asked whether I'd like to try and I agreed. All the application processes for the Polish universities started in July however I also submitted my documents to Ukrainian universities just in case and was accepted by 2 universities in Kiev and one in Zaporozhe, my home city, for scholarship programme. Then with the Polish Universities there was an issue with my chosen field of studies since it was difficult to study in a foreign language such as Polish in the first place and studying journalism required advance level literary spoken & written language skills hence I opted out of studying journalism and applied for Finance & Accounting degree even though i participated in private Polish language lessons for 2 months. "*

In general we should note that students who come to Kraków (UEK) for a year or yearly scholarship are attracted <u>not only by the university's educational offer, but also by many other non-education factors</u>. Kraków is a recognised brand in Europe and in the world because of its centuries-old, rich history. One of the coordinators highlights that (IPO):

> *"the city located at the junction of trade routes of medieval Europe, the city whose openness has attracted centuries of migrants from various parts of Europe, mainly Jews. Then the city in which culture and science flourished, which later became the cradle of Polish intelligentsia. At one time also the capital of Poland and the royal seat. It is a place of religious worship associated with the figure of the late John Paul II".*

However, another coordinator stressed economic factors such as (IPO):

> *"The city that draws on tradition and history is continuing to build up its positions as a well-developed educational and know-how centre. The region possesses a regional policy which attracts the foreign investors and FDI to relocate their centres to Kraków and its surroundings (see Skawina, Zabierzów, Niepołomice, Krzeszowice)."*

Moreover, this is confirmed by students who argue:

"I decided to study in Poland because there is a lot of exposure and it is a developing country and a lot of scope for finance-related jobs" (IND).

On the other hand, an Italian student notes:

> *"I decided to join the Erasmus program in Kraków because of many reasons: first of all, I am fascinated by this country and I really wanted to discover its potentiality, I know that its economy is increasing and I think in the next years will be one of the most attractive country within EU. (…) Cracow is an ideal city where you can settle, both the historical-cultural heritage and nightlife are perfect for students like us, it is little, cosy and charming and what surprises me is the fact that is super safe. I do not like people that answer ' I came to Cracow because is cheap', I really do not (…) I don't think career opportunities are higher after obtaining a diploma in this university, but still as a foreigner I can study and learn in another language, English, learning experience due to the fact that I am living in another unknown country and for sure this is a good thing for my CV. Salaries are lower here but still if we compare the PPP between Italy and Poland I am pretty sure that you can have an higher standard of life here in Poland rather than Italy. As I said it is a perfect place to live, especially for young people, at least Cracow"(IT).*

Moreover, Kraków's higher education institutions are versatile, and their transnational strategies produce a better understanding of foreign languages in their graduates, who become more attractive in the labour market as a result (IPO).

Clearly, individual motivations vary. One could note curiosity about studying abroad and gaining international educational experience. Other attractions include the chance to learn a foreign language, to meet new people and to experience a term abroad. Many students from Germany, France, Ukraine and the United States choose Poland because they have Polish ancestors. They want to learn Polish to get acquainted with the country's culture.

The Ukrainian student, who actually relocated permanently, notes:

> "*Poland being quite close to Ukraine and parents visiting me often due to the close proximity of the countries with them being able to also drive down to Cracow 2-3 times a year and of course the international exposure since students come from all over Europe as well to study in Poland. Also it has similar culture, traditions, and values"* (UKR).

The students from the East see education and the possibility of finding a job as the main reasons for studying in Kraków:

> *"I think it has a good education system and the possibility to find a job after graduation. Cracow has a lot of opportunities for young professionals as the city is developing rapidly. There are so many business opportunities and with multinational corporations opening their branches in Cracow providing internships, part-time and*

> *full-time job opportunities. While pursuing my master's I am also engaged in a part-time job at State Street bank which allows me to pursue my master's degree and gain work experience as well. I like my job and would like to continue as a full-time employee after graduation" (UKR).*

On the other hand, many Westerners agree and point to the potential to bridge fun and education, networking and temporary visits: the Erasmus students generally visit friends in other locations and go on to visit sites in the country as part of their intercultural experience. Those from the East see their place as a base, from which they can report back information to others. Anna, the Ukrainian, says:

> *" I constantly get messages from my schoolmates on social networks about pursuing higher studies in Poland. They seek information about the education system, subjects, tuition fees etc. So far there is only one girl who has followed me in my footsteps after I recommended the same transfer agency and she is currently studying Chinese in Warsaw" (UKR).*

What are the students' plans for the future? Do they wish to remain or to move again, and why?

There is a group of Western students that stays longer every year in Kraków after the end of the study period. Some scholarship holders are willing to extend their stay. Most often they seek placement or work in their native language. Some people fall in love with the city. Others find the love of their lives and build their life plans around their new partners.

This serves as a summary: "I love Cracow very much, because I felt a certain level of acceptance from the city. I left Ukraine when I was just 17 years old since in Ukraine we finish school at 16-17 years of age. I think I wouldn't be able to adapt so easily for example in a country like USA as I did in Poland. Cracow is also very dear to me as I met someone very special here. Since that person is not native to Poland, we travelled a lot together visiting different countries and we both prefer Scandinavia or North America to settle down. But at least for another year I'm going to be in Cracow" (UKR).

Some state they are planning to remain in Kraków because career opportunities are numerous (IND). The Italian student indicates that he will do an internship:

> *"in summer, probably in State Street Bank, because I love this city, I have met many local friends, I want to improve my job experience within a international environment and then this corporation is very interesting" (IT).*

Our fieldwork concludes by noting the city is a major asset attracting both individuals and investors in various ways. We can observe a number of processes which lie behind this attraction, such as:

- metropolisation processes.
- Europeisation experienced by both the city and the region after joining the EU.

- Targeting of EU funds in some specific areas like innovation, start-ups, games etc. as well as providing impetus for the development of hard infrastructure capacity (roads, railway, airport) – this is mainly financed by EU funds, including the cohesion policy.
- The central government’s decision to allow self-government to decide and be involved in local issues, which can be seen also from the design perspective on the strategy level.

6 Conclusions and lessons learnt for cohesion policy

Table 6.1: Summary evidence

Hypothesis 1 Favourable living and business conditions and cultural attractiveness of the city attract high-skilled migrants to come and live in Kraków (KOM)	**Expected results**	**Mechanism**	**Probative Values**	**Evidence collected**	**CONFIDENCE IN H1**
Hypothesis 2 Favourable living and business conditions and cultural attractiveness of the city (KOM) does not prevent some individuals to migrate out of the city and region					
Intervention X (spending in the innovative infrastructure and examples)	Result See table 7	Economic incentives to firms	CERTAINTY (high) UNIQUENESS (medium)	See table – data from SIMIK and regional authorities (UMWM 2016)	PASSED
Intervention Y Support for the city and region as a highly attractive place with poles of work, living and education	Result Number of foreign students registered (Erasmus/ non-Erasmus) and young foreign graduates residing and working	Reputation	CERTAINTY (high) UNIQUENESS (high)	increasing/ number of students incoming very high/ new forms of cooperation between various universities/	PASSED
Intervention Z e.g. support to location of firms	Various areas in the city and outside the city	Reputation	CERTAINTY (high) UNIQUENESS (high)	New business areas/ new companies relocating to Kraków	PASSED

The authorities' motivation behind lending support to create a knowledge-based economy and hence encourage companies to locate there was clear. Both authorities and investors recognised the potential provided by the presence of highly skilled individuals, a high number of students and the various incentives of self-government, i.e. special economic zones to name the most obvious, which is also changing to be more innovative and creative.

Socio-economic and cultural factors play a vital role here, combining economic conditions, social environment and access to culture. Moreover, institutional conditions support location, e.g. through the relatively short period of time to receive work permits for non-EU nationals, or the strong role of the family, which discourages migration. Also, institutional arrangements of the labour market attract people from other regions and countries. A certain role is played here by the cohesion policy, which benefited the development of various forms of infrastructure (both soft and hard). A role is also played by the educational and research institutions, which attract students from other areas who stay in Kraków after they graduate.

The changes achieved within the previous 15 years (taking into account the pre-accession funds) have a high level of sustainability.

The processes listed above are interlinked so that Kraków (KOM) attracts individuals, especially highly skilled individuals and technology-driven businesses, to relocate there. To remind these processes are as follows:

h) metropolisation processes;

i) Europeisation that occurred both in the city and the region after Poland joined the EU – similar processes emerge and also benefit development and the attraction of business and individuals to Kraków (KOM) ;

j) targeting and concentrating the spending of EU funds in some specific areas like innovation, start-ups, games etc. as well as providing impetus for the development of hard infrastructure capacity (roads, railway, airport) – this is mainly financed by EU funds, including the cohesion policy;

k) awareness of the central government to allow self-government to decide and be involved in local issues, which can be seen also from the design perspective on the strategy level.

On the other hand, as laid down in our second hypothesis, in spite of these policies people leave after settling temporarily - including people from within the country (e.g. Warsaw) and abroad (e.g. UK, USA). This might be related to a search for high-skilled jobs that are not available in Kraków (KOM) (e.g. consulting) but also in the past it has been related to a mismatch between the skills offered and the requirements of the labour market. Hence, even with a decrease in the unemployment rate and the existing positive wage differential with international levels, individuals decide to leave. This seems to be happening in spite of the actions and policies implemented, confirming the neoclassical microeconomic paradigm of migration or new economies of migrations, i.e. individuals weigh costs and benefits.

There is no doubt that policies, institutions and individuals work well together and contribute to the growth of the region. Some factors can be measured financially, e.g. by level of spending. Meanwhile, others have a non-material character, like awareness and involvement and participatory decision-making, rather than decisions based on imperatives of the central bureaucracy. Hence the assessment is purely subjective. For sure, Kraków (KOM) can serve as a best-practice example that could be transferred to other areas, as long as the main three factors are kept in mind: policies; institutions; and a young, well-educated labour force.

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A list of people interviewed:

The stakeholders, policy makers and expert representing regional authorities, i.e.:

a) Marshall Office of the Małopolska Region (UMWM) – Director of the Regional Policy Department Mrs Joanna Urbanowicz;

b) Regional Labour Office - Deputy Director Ms Alina Paluchowska and Mr Adam Biernat, Mr Sebastian Ramenda;

c) City of Kraków - Deputy Director of Development Department Mr Jacek Woźniak - he is also a former Director of Regional Policy in UMWM, in charge of the Region's Strategy);

d) Lewiatan – The Employers Association – the Małopolska region branch – Mrs Kamilla Banasik – Brudny;

e) Cracow University of Economics, International Programmes Office in charge of students mobility – Deputy Director Mrs Sylwia Rutkowska, in charge of Erasmus mobility Ms Magdalena Krasowska;

f) The Małopolska Voivodship Office, Department for Foreigners - an additional input Mr Szymon Strzelichowski;

g) Students and graduates:

h) Erasmus students – Italy - Mr Fabio Bettiol;

i) student working and studying in Kraków - Ukraine – Ms Anna Rachek;

j) student migrants, only studying here – India - Ms Vaishali Singh.

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