

# SMALL AND MEDIUM ENTERPRISES IN THE UPPER NITRA REGION

## *SCOPE AND CHALLENGES IN A SOCIALLY SENSITIVE, LOW-CARBON INDUSTRIAL TRANSITION*

### FINAL REPORT



(“Expert Coal Regions in Transition – Upper Nitra Region, Slovakia”)

COAL REGIONS IN TRANSITION – ANALYSIS OF THE SME SECTOR AND IDENTIFICATION OF ITS DEVELOPMENT  
POTENTIAL – UPPER NITRA REGION, SLOVAKIA

Richard Filčák | December 2019



**DISCLAIMER**

The author of this study is Mr. Richard Filčák, Institute for Forecasting, Slovak Academy of Sciences, Bratislava, Slovak Republic.

The information and views set out in this analysis are those of the authors and do not necessarily reflect the official opinion of the Commission. The Commission does not guarantee the accuracy of the data included in this study. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein.

EUROPEAN COMMISSION Directorate-General for Regional and Urban Policy  
Directorate F — Closure, Major Projects and Programme Implementation  
Unit F4 — Czechia and Slovakia

Contact: Jaroslav Straka, Andrea Lamprecht

E-mail: [jaroslav.straka@ec.europa.eu](mailto:jaroslav.straka@ec.europa.eu), [andrea.lamprecht@ec.europa.eu](mailto:andrea.lamprecht@ec.europa.eu)

European Commission  
B-1049 Brussels

© European Union, 2019

# **Table of Contents**

<b>INTRODUCTION .....</b>	<b>4</b>
<b>1. METHODOLOGY AND APPROACH .....</b>	<b>6</b>
<b>2. THE SECTOR IN NUMBERS .....</b>	<b>8</b>
2.1. SECTORAL STRUCTURE OF SMES .....	11
2.2. INVESTMENT RATE AND FDI.....	14
2.3. STRUCTURE OF SMES IN UPPER NITRA IN TERMS OF SMART SPECIALISATION .....	15
2.4. MICRO-ENTERPRISES IN UPPER NITRA .....	16
2.5. THE SMES – TRENDS AND FUTURE PERSPECTIVES .....	17
<b>3. ENTERPRISES IN FOCUS AND IMPLICATIONS FOR LABOUR MARKET .....</b>	<b>20</b>
3.1. LABOUR MARKET PROFILE OF THE MINERS.....	27
<b>4. EUROPEAN STRUCTURAL AND INVESTMENT FUNDS .....</b>	<b>29</b>
<b>5. GAP ANALYSIS AND RECOMMENDATIONS .....</b>	<b>35</b>
5.1. GAP ANALYSIS .....	38
5.2. SME AND INTERNAL NEEDS .....	40
5.3. SME AND OPERATING ENVIRONMENT.....	44
5.4. SME AND STRUCTURAL/ADMINISTRATIVE BARRIERS TO ESIF.....	47
5.5. ALTERNATIVE FRAMEWORK PROJECTS FOR THE REGION .....	52
5.6. TARGETED INTERVENTIONS: ALTERNATIVES .....	56
<b>6. CONCLUSIONS .....</b>	<b>58</b>
<b>7. ANNEXES .....</b>	<b>61</b>
ANNEX 1. ACRONYMS .....	62
ANNEX 2. SMES TURNOVER SHARES BY INDUSTRY IN THE UPPER NITRA REGION (%) .....	63
ANNEX 3. STRUCTURE AND PROFESSIONAL QUALIFICATIONS OF HBP EMPLOYMENT .....	64
ANNEX 4. SMES SUPPORTED IN 2007–2013 BY SF A KF IN UPPER NITRA (EUR) .....	65
ANNEX 5. SHARES OF THE SME SECTOR BY AREA OF ACTIVITY (%) .....	68
ANNEX 6. INDICATIVE VALUE OF ALTMAN’S Z-SCORES FOR BUSINESSES IN THE UPPER NITRA REGION (2017) .....	69
ANNEX 7. SALES BY INDUSTRY: GROWTH * AND SHARE .....	70
ANNEX 8. MICRO-ENTERPRISES BY INDUSTRY IN THE UPPER NITRA REGION.....	71
ANNEX 9. MICRO-ENTERPRISES – SHARE OF INDUSTRY REVENUES (% , AVERAGE 2013–2017) .....	72
ANNEX 10. THE NUMBER OF SMES IN SMART SPECIALISATION DOMAINS .....	73

## INTRODUCTION

The report is delivered within the framework of the expert contract entitled *Coal regions in transition – Analysis of SME sector and identification of its development potential – Upper Nitra region, Slovakia*. The political decision to phase out coal mining in Upper Nitra has been made and discussion is now focused on policies, activities and steps in the transition. Small and medium-sized enterprises (SMEs) are seen to be the key stakeholder in the process.<sup>1</sup> Although the regional position of the mining industry has been steadily declining, it remains the economic backbone of the region. Mechanical calculations would tell us that immediate total closure of the HBP coalmine would most likely increase the regional unemployment rate in the Prievidza district from the current 4.51% (October 2019) to an estimated range of 8–10%, depending on the effects of indirect employment from coal mining. SMEs and entrepreneurship in general are seen as being key to ensuring economic growth, innovation, job creation, and social integration in Slovakia. The sector plays, and will play, a crucial role in the transformation of the region of Upper Nitra after coal mining. The SME segment was identified as a challenge and, at the same time, an opportunity in addressing adverse effects affiliated with the transition.

The main goal of this report is to conduct an in-depth analysis of the SME sector in the Upper Nitra region and, through the collection and interpretation of quantitative and qualitative data, provide additional data and information for shaping economic and social policy, planning and programming utilisation of the European Structural and Investment Funds (ESIF), as well as supporting the implementation of the *Action Plan for Transformation of Coal Mining Region Upper Nitra*.

The point of departure for the report is *Socio-economic analyses to improve the use of ESIF*, which was prepared in 2018 and pointed out several structural challenges. First of all, the replacement of relatively well-paid jobs in the mining industry with new opportunities should support the manufacturing industry, innovations, and progressive technologies. The service sector (affiliated here with the tourist industry in particular) has, according to assessment, relatively limited potential. New economic activity would have to enhance diversification of the regional economy from dependence upon one major industry enterprise to a multi-industry enterprise economy.

The methodology of the survey is described in the first part of the report. It builds on a combination of quantitative and qualitative approaches to gather data and information for public policies and ESIF planning with respect to SME sector development and job creation support.

The quantitative part of the report provides a detailed picture of SMEs in Upper Nitra. Local consistency of SMEs indicates the pattern of regional specialisation with rather weak overlaps with the Research and Innovation Strategy for Smart Specialization (RIS3). On the other hand, the mixed and vibrant combination of micro-, small and medium-sized enterprises makes this segment relatively resilient to economic cycles. However, a significant proportion of SMEs surveyed already feel a decrease in the number of contracts and are expecting slowdown in the economic cycle. The overall status of businesses is positive: 46% of businesses are prosperous and 31% are unsustainable, while remaining 23 % is the grey zone between these two poles. The fastest-growing sectors are construction, agriculture and forestry, clothing and footwear, as well as chemistry and plastics. Meanwhile, tourism and gastro, finance, and advertising present the smallest development and progress. The overall assessment of the aggregated potential of the SME sector regarding job creation indicates that enterprises are currently able to absorb practically all available people with the required

---

<sup>1</sup> See *Action Plan for Transformation of Coal Mining Region Upper Nitra* — the document guiding the process, currently under discussion by the stakeholders. Its Pillar II (Economy, entrepreneurship and innovation) specifically calls for measures and objectives for SME development.

education and skills. However, the education and qualifications required do not match those of the people available in the labour market.

While the general situation in the labour market is, according to macroeconomic indicators, positive, the data do not fully correspond to assessment of the labour market from the perspective of the local SME representatives. There are perceived cyclical, structural and institutional barriers to increasing employment in Upper Nitra SMEs, while analysed education and skills of the miners do not fully match the labour market demands. Transformation of the region and phasing out coal will most likely emphasise already existing tensions and structural problems such as long-term unemployment, low purchasing power impacting upon the market, or increasing demands on social and health services. In the last stream of the survey of SMEs we focused on the perceived needs of SMEs which could potentially be supported and which may frame areas for future support from the ESIF.

Increasing the absorption capacity in the SME sector in the Upper Nitra region in order to create sustainable jobs in prospective sectors and branches of the economy would, however, require improvements in the overall system of ESIF management and development of more user-friendly approaches to SMEs. Support to SMEs should target both the external environment (human resources, infrastructure, and technical and managerial help in capacity development) and internal assistance in improving efficiency, boosting productivity, saving resources and speeding up technology transfer.

The final part of the report focuses on recommendations for targeted ESIF interventions for SMEs, and on examining strategic approaches to offsetting and mitigating the impact of the phasing-out of coal mining and related activities. The situation of using the ESIF indicates the need for special provisions in the key operational programmes. The special provisions could make the region more attractive to companies and entities from outside and stimulate local development in the key identified sectors.

The combination of investment in operating and internal environments needs to improve the overall economy of the region. Besides, direct jobs in SMEs targeted by interventions could also stimulate indirect employment. A functioning and well-developed regional economy will be more resilient and able to accept potential shock caused by mine closure. Yet, as we discuss in chapter 3.1, we may (with a high degree of probability) expect that a proportion of the miners will face problems in the local labour market. It is assumed in the category of trained people with professional experience and otherwise good potential in the labour market, especially in the category of low-skilled, low-trained employees with problematic potential in the labour market.

Direct help for the miners facing unemployment and measures helping miners in social integration could combine measures in educational/training programmes and the development of the segment of social enterprises. Investment in the operating environment of SMEs may embrace tools of social and green procurement — supporting the local market in goods and services.

Last but not least, closure of the mines is an opportunity for bigger ambitions than just replacing one sort of job with others. It may be seen to be a challenge of transforming the economy into a low-carbon, climate-change-adapted system.

## 1. METHODOLOGY AND APPROACH

The report focused on the four interlinked main research questions:

- *What is the present size and scope of the SME sector?* Here we focus on the available quantitative data and analyse SMEs with regard to the background of social, economic and demographic conditions in the region and along the lines of the identified trends.
- *What is the internal dynamic of the SME sector?* The focus here is on the qualitative survey among the defined and representative sample of local SMEs.
- *How much do the identified trends in SMEs correlate with the national/regional strategic development framework?* In other words, it will focus on how much the sectors/economic activities are in harmony with the transition towards smart, inclusive and sustainable growth.<sup>2</sup>
- *Where and how is the potential for using interventions through the ESIF as leverage for a successful transformation?* Here we explore outcomes of the quantitative and qualitative survey of SMEs vis-à-vis the present and foreseen framework of the ESIF interventions.

Both quantitative and qualitative approaches were deployed during the course of the study. Using data from the Slovak Statistical Office, FinStat, DataCube, mining company, and other available statistics, we focus on the number of employees, turnover, the sector of activities, the type of registration, trends in employment/growth, and the location, amongst others. Utilising data from ITMS+, we analyse here the present and previous programming period, and how many and which SMEs used the funds and for what types of projects.

The qualitative part of the survey used a desk study of available materials, semi-structured interviews, focus groups, and observations to provide data and information to the following specific qualitative research questions:

- *What are the drivers/barriers in a firm development and how do they perceive the local labour market?*
- *What are the development/job creation opportunities and potential for the SMEs?*
- *SMEs and ESIF — What are the experiences, lessons learned, obstacles and opportunities and what are the specific drivers and barriers in utilising the opportunities?*
- *What are the anticipated impacts of the phasing-out of coal mining on local businesses?*
- *What kind of assistance to the firm and/or to the labour force would help to improve employment and employability?*

The sample of respondents consisted primarily of SMEs. We divided the list of entities into three categories (micro-, small and medium-sized), and then each of them into two sub-categories of entities with/without experience with the ESIF. The list of SMEs was then configured using random sampling. Random sampling is the most basic and common type of sampling method used in social science

---

<sup>2</sup> Outcomes of the qualitative and quantitative survey provide data input to the comparison of the SME sector with national, regional and local frameworks of policies, programmes and plans, so as to conclude how much the sectors/economic activities are in harmony with the transition towards smart, inclusive and sustainable growth and with the aims of the Action Plan – Transformation of Coal Mining Region Upper Nitra (version March 31, 2019).

research and in scientific research generally. The main benefit of a random sample is that each researched subject has an equal chance of being chosen for the study. This means that it guarantees that the sample chosen is representative and that the sample is selected in an unbiased way.

By focusing on those with ESIF experience and those without it, we compared the information, perception and impact of the ESIF in the segment of SMEs. The data and information from the SMEs were triangulated, validated and enriched with data and information from the Ministry of Economy, local action groups (*Miestne akčné skupiny* – MAS), interviews of the Information Advisory Centre (*Informačno-poradenské centrum* – IPC), the Slovak Business Agency (SBA), local municipalities, NGOs, and the mining company.

For the purpose of better understanding potential and alternative approaches, best practices from other countries will be identified and analysed. They provided additional inputs, especially for the recommendations and alternative approaches to the SME sector development. We visited innovation centres in the Czech Republic (Brno and Ostrava). Semi-structured interviews were conducted with region transition experts in coal mining from the Czech Republic (RE:START) and Poland.

## 2. THE SECTOR IN NUMBERS

### KEY POINTS

- Local consistency of SMEs indicates patterns/signs of a certain regional specialisation with good overlaps with the Research and Innovation Strategy for Smart Specialization (RIS3).
- The mixed and vibrant combination of micro-, small and medium-sized enterprises makes this segment relatively resilient to economic cycles, although expectations of the sector are mostly pessimistic. A significant proportion of SMEs surveyed already feel a decrease in the number of contracts and are expecting slowdown in the economic cycle.
- The overall status of businesses is positive: 46% of businesses are prosperous and 31% are unsustainable, while remaining 23 % is the grey zone between these two poles. The fastest-growing sectors are construction, agriculture and forestry, clothing and footwear, as well as chemistry and plastics. Meanwhile, tourism and gastro, finance, and advertising present the smallest development.
- The future perspective is especially good in Human health and social work activities (Q), Public administration and defence (and compulsory social security) (O), and Financial and insurance activities (K). Information and communication (J) and Professional, scientific and technical activities (M) are also performing very well.

The EU has seven key priorities for SMEs: create a business-friendly environment, promote entrepreneurship, improve access to new markets and internationalisation, facilitate access to finance, support SME competitiveness and innovation, provide key support networks and information for SMEs, and support start-ups and scale-ups in particular. The EU priorities are reflected in the Slovak policies and programmes, including financial and technical schemes for SME support.

The size structure of enterprises in the Slovak Republic is very similar to the size structure of the business sector in EU countries and the same characterisation applies for the sum of the added value created by these business segments.<sup>3</sup> What differs is the geographical location, with Slovakia facing the problem of different paces of development in different regions of the country.

The quantitative survey and analysis of the SME sector in the Upper Nitra region build on available statistical data and provide a situational snapshot and the trends identified. In line with ToR, the level of analyses concerns the Trenčín region with a focus on the Prievidza and Partizánske districts. In the analysis we focus on SMEs active in the region, while entities will be analysed with respect to their size (micro-/small/medium-sized), industry and area of activities (NACE code), sales, profits, and employment.

According to Article 2 of the annex to Recommendation 2003/361/EC, the category of micro-, small and medium-sized enterprises (SMEs) is composed of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million and/or an annual balance sheet total not exceeding EUR 43 million. The European Union and its Member States recognise three categories of small and medium-sized enterprises (SMEs). These are: (i) micro-enterprises, (ii) small enterprises, and (iii) medium-sized enterprises.<sup>4</sup> Table 1 lists the thresholds for the three different categories.

<sup>3</sup> See, for instance, Bašová, A. Economic characteristics of SME in Slovakia and in Czech Republic. *Sociálno-ekonomická revue* / 01 – 2018.

<sup>4</sup> European Commission, 2015. User guide to the SME definition. Luxembourg: Publications Office of the European Union.

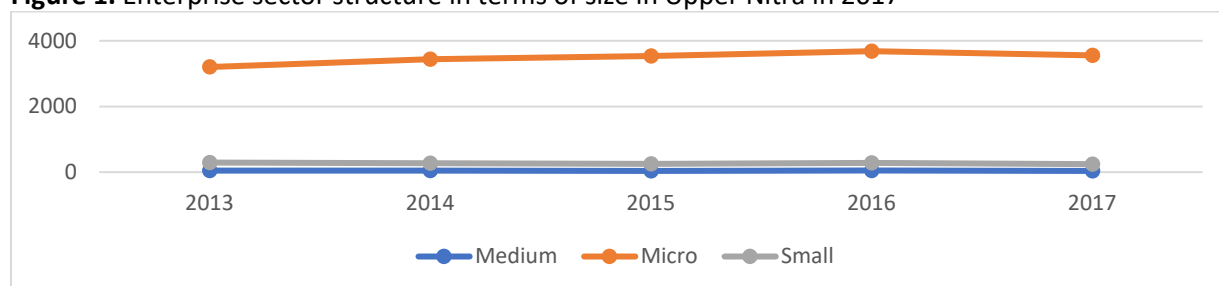


**Table 1.** Thresholds for SMEs

Enterprise category	Headcount: annual work unit (AWU)	Annual turnover	OR	Annual balance sheet total
Medium-sized	<250	≤EUR 50 million	↔	≤EUR 43 million
Small	<50	≤EUR 10 million	↔	≤EUR 10 million
Micro-	<10	≤EUR 2 million	↔	≤EUR 2 million

The data source consists of micro-data: financial data from the financial statements of small and medium-sized enterprises (SMEs; up to 250 employees, sales up to EUR 50 million) whose headquarters are in the districts of Partizánske and Prievidza, spanning the years 2009–2017. When we analyse the situation in Upper Nitra, there are in total 3835 enterprises that may be characterised as small and medium-sized. Out of them, 3560 entities qualify as micro-enterprises, 243 as small and 32 as medium-sized. As many as 566 enterprises have no employees/one employee.

In the Upper Nitra region, the share of small and medium-sized enterprises (SMEs) in terms of the number of enterprises has absolute dominance. According to Finstat (2019)<sup>5</sup>, which we primarily use in our analysis, a total of 3853 businesses were operating in this region in 2017, with only 18 being large enterprises. Figure 1 shows the size structure of the SME sector in the Upper Nitra region.

**Figure 1.** Enterprise sector structure in terms of size in Upper Nitra in 2017

	Počet			%		
	Partizánske	Prievidza	*UN	Partizánske	Prievidza	*UN
Micro-enterprise	804	2752	3556	91.2	93.2	92.7
Small enterprise	70	173	243	7.9	5.9	6.3
Medium-sized enterprise	8	28	36	0.9	0.9	0.9
Sum total	882	2953	3835	100	100	100

Source: Finstat (2019); Note: \* = Upper Nitra

The sectoral structure of the national economy and SMEs in Slovakia is divided into primary, secondary and tertiary sectors. The **primary sector** is the most important sector of the economy, consisting of basic raw material and material industries, the mining industry, agriculture, forestry, and energy. It is characterised by a slower pace of scientific and technical progress, slow productivity growth, and high investment intensity. Due to relatively lower production profitability and longer-term investments, it is not very attractive to SMEs.

The **secondary sector** links to the primary sector and includes manufacturing and construction, being affiliated with a rapid pace of implementation in respect of scientific and technological progress, fast

<sup>5</sup> The database consists of micro-data: data from the financial statements of small and medium-sized enterprises (SMEs; up to 250 employees, sales up to EUR 50 million), which are based in the districts of Partizánske and Prievidza, for the years 2013–2017.

labour productivity growth, and relatively rapid variation in the product range. It significantly affects the degree of development of the economy and the living standards of the population, and is the area in which countries try to support the development of SMEs often facing barriers as a need for high investment intensity and qualified labour shortage.

The **tertiary sector** comprises all kinds of services, such as trade, transport and tourism. It is the fastest-growing sector in developed countries with the relatively lowest investment intensity needs, a high pace of implementation in respect of scientific and technological progress, and high productivity growth. The trend is such that many activities move from the secondary to the tertiary sector.

## 2.1. SECTORAL STRUCTURE OF SMES

In our analysis, we focused on the structural characteristics of the SME sector in Upper Nitra, focusing mostly on: sectoral structure, FDI structure, RIS3 context, micro-enterprises, as well as estimating the future development potential of the SME sector. We carry out the analysis for the region of Upper Nitra as well as for the districts of Partizánske and Prievidza.

When we analyse the SME sector by area of activity in the districts of Partizánske and Prievidza, the fastest-growing sectors are construction, agriculture and forestry, clothing and footwear, as well as chemistry and plastics. Tourism and gastro, finance, and advertising present the smallest development. This may indicate problems with respect to purchasing power and a generally smaller demand for services.

We assume that the absorption capacity of small and medium-sized enterprises in the region is set by the number of SMEs<sup>6</sup> and their size (indicated by sales). We build on the statistical classification of economic activities of SK NACE Rev. and analyse at the sectional level (A10) resp. divisions (A88).

The structure of small and medium-sized enterprises by sector in terms of the number of SMEs is presented in Table 2 (average for 2013 to 2017). In the secondary sector, the highest share of SMEs is situated in the C-Industries (13%) and F-Construction (11%) sectors. In the tertiary sector, Wholesale and retail trade and repair of motor vehicles and motorcycles (G) constitutes 28%, which is also the largest sector in terms of the number of SMEs in the HN region's economy. Another branch with a relatively high proportion is Professional scientific and technical activities (M) (knowledge-intensive sector) with a share of 11% (legal, accounting, architectural, advertising, engineering, R&D, etc.).

---

<sup>6</sup> Note: we state the number of enterprises in the analysis because this indicator may indicate the potential/capacity of potential ESIF beneficiaries.

**Table 2.** SME by industry in the Upper Nitra region

Section NACE Rev. 2	No. of SME (avg 2013-2017)			% SME (avg 2013-2017)		
	HN*	Prievidza	Partizánske	HN*	Prievidza	Partizánske
(A) Agriculture, forestry and fishing	91	68	22	3%	3%	3%
(B) Mining and quarrying	9	8	1	0%	0%	0%
(C) Manufacturing	443	316	127	13%	12%	15%
(D) Electricity, gas, steam and air conditioning supply	16	10	6	0%	0%	1%
(E) Water supply, sewerage, waste management and remediation activities	26	16	10	1%	1%	1%
(F) Construction	404	316	88	11%	12%	11%
(G) Wholesale and retail trade; repair of motor vehicles and motorcycles	990	729	260	28%	27%	32%
(H) Transportation and storage	129	97	32	4%	4%	4%
(I) Accommodation and food service activities	153	127	26	4%	5%	3%
(J) Information and communication	155	125	30	4%	5%	4%
(K) Financial and insurance activities	44	38	6	1%	1%	1%
(L) Real estate activities	224	178	46	6%	7%	6%
(M) Professional, scientific and technical activities	372	304	69	11%	11%	8%
(N) Administrative and support service activities	173	140	33	5%	5%	4%
(O) Public administration and defence; compulsory social security	13	12	2	0%	0%	0%
(P) Education	29	26	3	1%	1%	0%
(Q) Human health and social work activities	171	127	43	5%	5%	5%
(R) Arts, entertainment and recreation	49	43	6	1%	2%	1%
(S) Other service activities	49	40	9	1%	1%	1%
Total	3540	2721	819	100%	100%	100%

Source: Finstat (2019); Note: \* = Horna Nitra

The second perspective of SMEs and their structure is, through the indicator, concerned with the share of revenues (sales of own products and services) of individual industries in the total revenues of SMEs in Table 3. Industrial production (C) (39%) and Construction (F) (17%) dominate. In services, Wholesaling and retailing and repair of motor vehicles and motorcycles (G) (7%) is the largest, but its position is not as dominant as seen through the number of businesses (Table 1; 28%), which may indicate that there are a large number of smaller entities with relatively low economic strength in this sector. The second-highest share is in Transport and storage (H) (5.8%). In terms of the share of revenues in the region's economy, Agriculture, forestry and fisheries (A) is relatively high.

**Table 3.** SME revenues by sector in the Upper Nitra region (% , average 2013–2017)

Section NACE Rev. 2	HN*	Partizánske	Prievidza
(A) Agriculture, forestry and fishing	7,7	14,6	5,5
(B) Mining and quarrying	1,6	-	2,1
(C) Manufacturing	38,5	48,9	35,3
(D) Electricity, gas, steam and air conditioning supply	4,8	4,6	4,8
(E) Water supply, sewerage, waste management and remediation activities	1,1	2,5	0,6
(F) Construction	17,0	8,3	19,7
(G) Wholesale and retail trade; repair of motor vehicles and motorcycles	7,0	7,6	6,9
(H) Transportation and storage	5,8	3,8	6,4
(I) Accommodation and food service activities	1,3	0,8	1,5
(J) Information and communication	1,3	1,1	1,3
(K) Financial and insurance activities	0,2	0,1	0,2
(L) Real estate activities	3,4	2,7	3,7
(M) Professional, scientific and technical activities	3,3	1,3	4,0
(N) Administrative and support service activities	2,5	0,7	3,0
(O) Public administration and defence; compulsory social security	0,2	0,2	0,2
(P) Education	0,2	0,0	0,3
(Q) Human health and social work activities	3,4	2,3	3,7
(R) Arts, entertainment and recreation	0,4	0,4	0,4
(S) Other service activities	0,3	0,2	0,4
Total	100	100	100

Source: Finstat (2019); Note: HN = Upper Nitra

In industrial production, the following divisions account for the largest share of sales: manufacture of metal structures except for machinery and equipment, manufacture of leather and leather products, manufacture of rubber and plastic products, and manufacture of other non-metallic mineral products. These four sub-sectors compose almost two thirds of the industrial production in the Upper Nitra region.

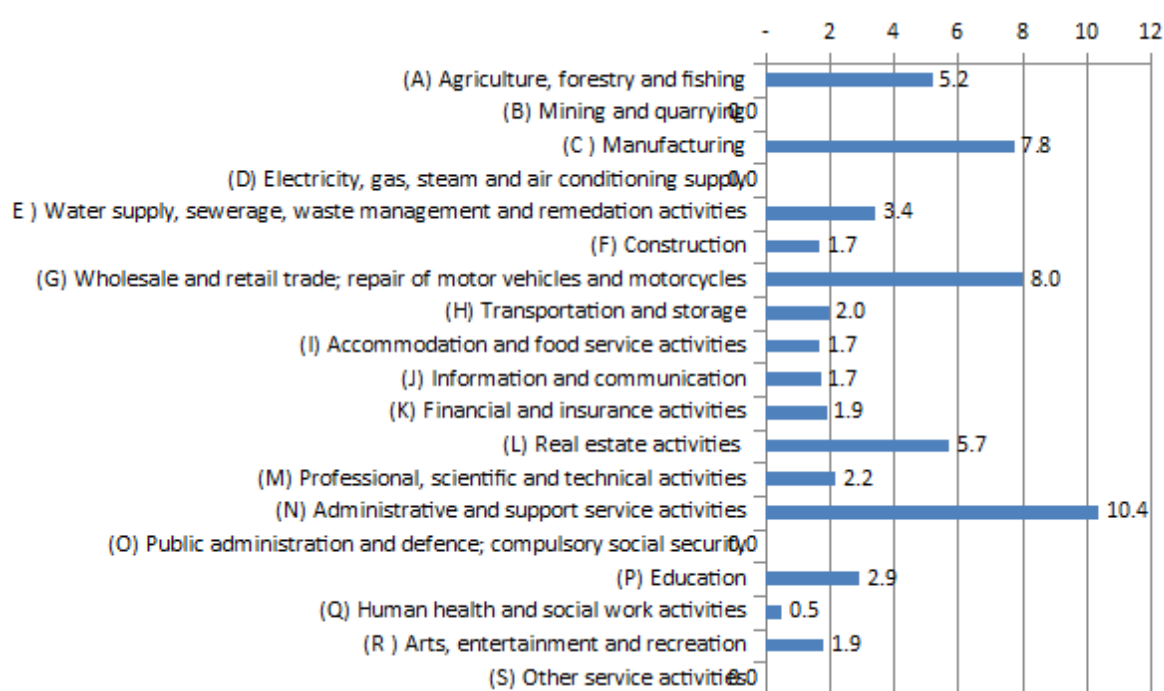
In terms of the potential absorption of vacant labour in the region, two sectors appear to be key: industrial production and construction. These two sectors, given their position in the regional economy and their similarity in terms of labour structure (similar to the mining and quarrying sector), can drain a large proportion of the labour force. We also observe some potential in the service sectors, which are labour-intensive and have lower knowledge intensity (i.e. a low need for a highly skilled and specialised workforce): Wholesale and retail trade and repair of motor vehicles and motorcycles (G) and partly also Transport and storage (H).

## 2.2. INVESTMENT RATE AND FDI

Factors that determine socioeconomic development and regional convergence include investment. In this respect, HN is one of the underfinanced regions. The rate of investment (the share of gross fixed capital formation in GDP) in the Trenčín region<sup>7</sup> is 19% (average for 2013–2016), which is below the national investment rate of 23.8% (Annex 1). A similar situation exists in the case of foreign direct investment, which plays a key role in the economic development of the Slovak economy and largely replaces domestic private investment. In the case of FDI, SMEs can become involved in supply networks and new demand for market services. The Prievidza district, which was allocated EUR 2762 in FDI per capita in 2016, was just above average in comparison with other districts (the median value of 2016 was EUR 2654). The Partizánske district was even worse: with the value of EUR 1322 in FDI per capita, it is among the districts with the lowest per capita figure. Of course, the FDI influence is not limited by district boundaries; neighbouring/nearby districts with above-average FDI allocation include the districts of Ilava, Trenčín, and Žiar nad Hronom, which have approximately twice the volume of FDI. However, Kia Motors Slovakia and Jaguar Land Rover strategic investments remain key.

In the HN region, foreign SMEs compose 4.9% of the total number of SMEs. Their share in individual sectors is shown in Figure 2. Not only can foreign SMEs gain better access to finance, markets, technological and non-technological innovations, knowhow, and so on, they can also create stronger competition for domestic businesses. Foreign SMEs are most represented in the manufacturing, wholesale, retail and repair of motor vehicles and motorcycles, administrative and support services.

**Figure 2.** Share of foreign SMEs in the HN region (% of enterprises, 2017)



Source: Finstat (2019)

<sup>7</sup> Data is only available at the NUTS III level.

## 2.3. STRUCTURE OF SMES IN UPPER NITRA IN TERMS OF SMART SPECIALISATION

As industrial production plays an important role in the region, it is important to know how the business and/or sectoral structure of the HN region reflects the *Research and Innovation Strategy for Smart Specialization* (RIS3). Table 4 shows the share of revenues of individual domains of intelligent specialisation (1 to 5) in the total sales of the HN region (as well as the districts of Partizánske and Prievidza). The division of individual sectors into specific domains is presented in Annex 4. For a rough comparison, we also list the domain shares at the national level, which are only approximate comparisons<sup>8</sup>. Thus, we will obtain an approximate picture of the regional specialisation of Upper Nitra within the domains of intelligent specialisation.

**Table 4.** Smart specialisation domain shares in the Upper Nitra region (%)

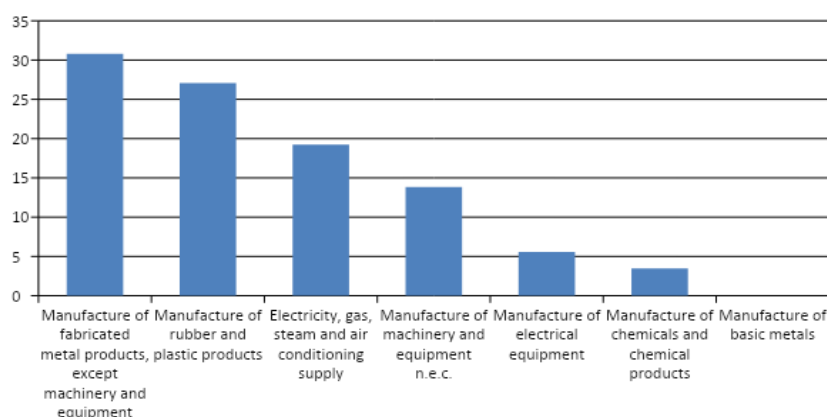
Section NACE Rev. 2	Number of enterprises			Revenue			Gross added value
	HN	Partizánské	Prievidza	HN	Partizánské	Prievidza	Slovensko
1-Cars for the 21st century	0,1	0,0	0,1	1,1	0,0	1,5	4,3
2-Industry for the 21st century	5,4	6,1	5,2	25,4	30,4	23,8	12,9
3-Digital Slovakia and Creative Industry	4,6	3,7	4,9	1,4	1,1	1,5	5,0
4-Healthy food and the environment	2,8	3,5	2,5	7,9	15,2	5,7	4,0
5-Population health and medical techn.	4,7	5,1	4,6	3,4	2,2	3,7	3,3
Industries outside the domain of smart specs.	82,4	81,6	82,7	60,7	51,1	63,8	70,5
Together	100	100	100	100	100	100	100

Source: Finstat (2019) and SO SR (2019)

Note: Domain 1 includes NACE C29. Domain 2 includes NACE C20, C21, C22, C24, C25, C27 and C28, D35. Domain 3 includes NACE 26 and J58-63. Domain 4 includes NACE A01, C10 and C11. Domain 5 includes NACE Q86.

From the point of view of the SME structure in the HN region, the key domain is 2-Industry for the 21st century (compared to the Slovak economy, we can even speak of an over-proportional representation and, thus, a certain regional specialisation) and partly also the 4-Healthy food and environment domain. The share of individual industries within the 2-Industry for the 21st century domain is shown in Figure 3.

**Figure 3.** Industry shares in the smart specialisation 2-Industry for the 21st century (% share)



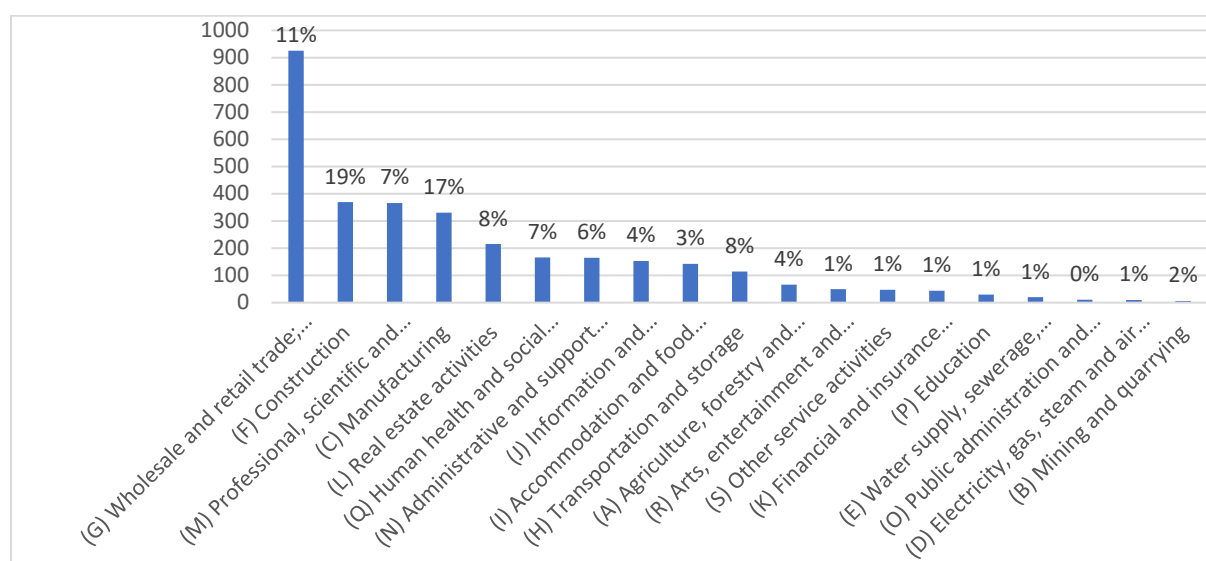
Source: Finstat (2019)

<sup>8</sup> National-level domains are quantified on the basis of the gross value added of the entire corporate sector (including large enterprises).

## 2.4. MICRO-ENTERPRISES IN UPPER NITRA

We pay special attention to micro-enterprises in the region of Upper Nitra. In 2017 their share of the total number of SMEs in the region was 92.7%. Their detailed sectoral structure is illustrated in tables in the annexes. Knowledge of micro-enterprises in the region by sector can be a helpful indicator in determining the capacity of the region/sector's absorption capacity in the context of designing active economic policy instruments. Figure 4 summarises micro-enterprises in Upper Nitra and provides the number of entities in different segments as well as their share of total revenues (percentage).

**Figure 4.** Micro-enterprises in Upper Nitra (number) and their share of total revenues (percentage)



The most profitable areas are construction, generating 19% of the total revenues, followed by manufacturing (17%) and wholesale and retail trade and repair of motor vehicles and motorcycles, for which 11% was reached, also in a comparatively higher number of entities. The segment of micro-enterprises is generally rather dispersed. The positive trend is such that there are a high number and higher revenues of entities in manufacturing and services.



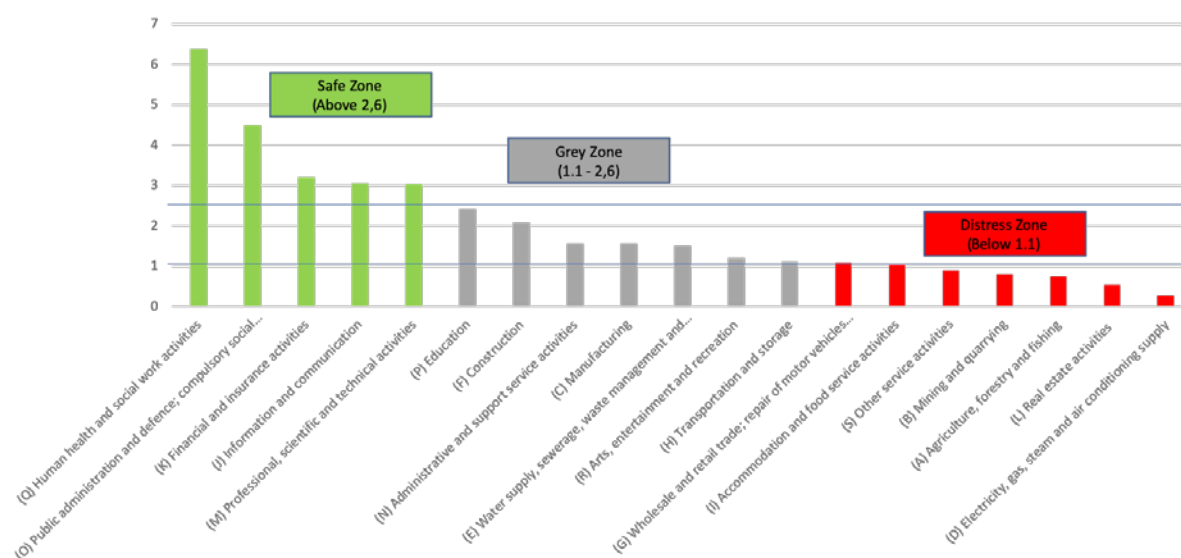
## 2.5. THE SMES – TRENDS AND FUTURE PERSPECTIVES

Figures on the number of SMEs point out two trends. Firstly, the relative increase in the number of SMEs in the region is caused especially by micro-enterprises, and the number of small and medium-sized enterprises slightly decreases. Secondly, the relative increase of micro-enterprises may be explained to some extent by a legal framework enabling the outsourcing of certain activities/services to individuals who are registered as entrepreneurs (e.g. accountants, interpreters, plumbers, etc.). This is usually because of precarious forms of work in some professions, or very specific areas of expertise provided by the entities.

When we compare the number of SMEs, there are 882 registered entities in Partizánske (2017) and 2958 in Prievidza. Considering that the population ratio between these two districts is 1:3, the number of SMEs generally reflects the size, although there is a difference in medium-sized enterprises. Prievidza hosted in 2017 a total of 29 entities, while Partizánske hosted only eight.

We analyse the financial health of SMEs in individual sectors on the basis of Altman's Z-score<sup>9</sup>. The Altman Z-score is the output of a credit strength test that gauges a company's likelihood of bankruptcy. It is based on five financial ratios that we can calculate from available public sources. Furthermore, using profitability, leverage, liquidity, solvency and activity, we may predict whether a given sector has a low or high probability of being insolvent. It is a model for evaluating a corporate crisis using discriminatory analysis. If its value is more than 2.6 the business is prosperous (financial difficulties of the future are not expected financial difficulties); the value of 1.1–2.6 enterprises is average (in the so-called grey zone there is no statistical forecast for determining the future of the business) and a value of less than 1.2 speaks of the high probability of bankruptcy (poor financial condition of the enterprise). Figure 5 summarises the outcomes of the calculations.

**Figure 5.** Altman's Z-score for Upper Nitra section NACE Rev. 2



<sup>9</sup> Altman's Z-score =  $0.717 * x_1 + 0.847 * x_2 + 3.107 * x_3 + 0.420 * x_4 + 0.998 * x_5$  (where  $x_1$  is net working capital/total capital (asset),  $x_2$  is retained earnings/total capital,  $x_3$  is profit interest and tax/total capital,  $x_4$  is the equity market value (market price of shares)/foreign capital, and  $x_5$  is turnover/total capital).

Annex 7 (sales by industry: growth \* and share) shows the average annual rate of sales of the Upper Nitra economy. This indicator, combined with the industry share, will provide a more plastic picture. Sectors with above-average growth rates and shares also include: Industrial production (C), Wholesale and retail trade and repair of motor vehicles and motorcycles (G), Transport and storage (H), Real estate activities (L), and Administrative and support services, and Health and social work (N).

From the point of view of the financial health of enterprises in the region of Upper Nitra and their likely future development, we can draw several points for the next development:

- The overall status of businesses is positive: 46% of businesses are prosperous and 31% are unsustainable, while remaining 23 % is the grey zone between these two poles.
- More than 50% of the non-performing businesses are in the following sectors: Agriculture, forestry and fishing (A), Mining and quarrying (B), Steam and cold air gas supply (D), Real estate activities (L), and Other activities (S).
- The future perspectives are especially good in Human health and social work activities (Q), Public administration and defence (and compulsory social security) (O), and Financial and insurance activities (K). Information and communication (J) and Professional, scientific and technical activities (M) are also performing very well.

The situation in the SME sector was evaluated by the European Commission in its *Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation*.<sup>10</sup> The report points out that Slovakia has one of the highest levels of enterprise productivity dispersion, while SMEs are much less productive than large enterprises. It also notes that the links between science and business are inadequate, but the share of small and medium-sized enterprises selling over the Internet has also decreased and SMEs have exercised significantly worse access to the single market over the years. The Commission has highlighted the increasing use of financial instruments with potential in the SME sector, including start-ups, and the functioning of the National Business Center in offering comprehensive support to small and medium-sized enterprises and those interested in starting their business.

The sector of micro-, small and medium-sized enterprises in Upper Nitra was analysed in detail in section 3 of the report (in terms of numbers, sectors and activities). A positive trend is that of the development of manufacturing/industrial production with as much as 39% of the total revenues, followed by construction business (17% of the revenues). These two sectors have, at the same time, the highest potential absorption capacity of vacant labour in the region. Wholesaling and retailing and repair of motor vehicles and motorcycles is significant with respect to its 7%, but here we observe a large number of smaller entities with relatively low economic strength.

The pattern is visible when we compare the SME structure to the *Research and Innovation Strategy for Smart Specialization* (RIS3) and analyse the share of revenues of individual domains of intelligent specialisation (1 to 5) in the total sales of the region. The key domain is 2-Industry for the 21st century. When we compare Upper Nitra to the Slovak economy, there is clear and over-proportional representation. In other words, there are signs of a certain regional specialisation. The second pattern that is visible is for the 4-Healthy food and environment domain.

Sectors with above-average growth rates and shares are, behind industrial production, wholesale and retail trade and repair of motor vehicles and motorcycles, transport and storage, real estate activities,

---

<sup>10</sup> Communication from the Commission to the European Parliament, the European Council, the Council, the European Central Bank, and the Eurogroup 2019 European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation (EU) No 1176/2011 {SWD(2019) 1000 à 1027 final}.

administrative and support services, and health and social work activities. Based on Altman's Z-score, we may conclude that health and social work activities show the overall best economic performance, which is strongly influenced by the spa town in the region.

### 3. ENTERPRISES IN FOCUS AND IMPLICATIONS FOR LABOUR MARKET

#### KEY POINTS

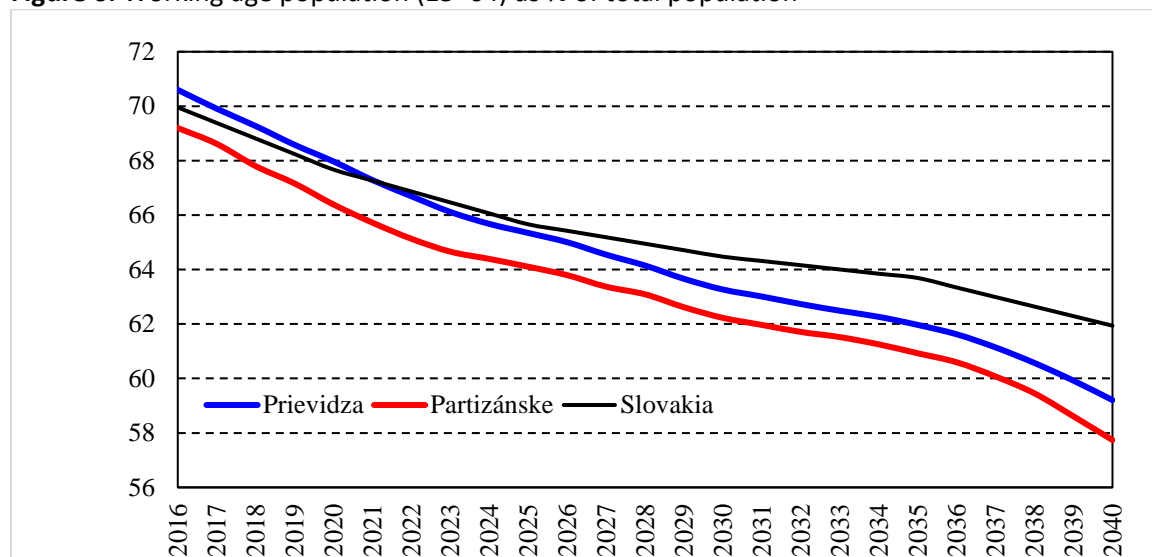
- The general situation in the labour market is, according to macroeconomic indicators, positive. However, the indicators do not fully correspond to assessment of the labour market from the perspective of local SMEs. Projections regarding possible new job creation were rather sceptical among the representatives of SMEs.
- Aggregated potential of the SME sector regarding job creation is relatively low. There are cyclical, structural and institutional barriers to increasing employment in Upper Nitra SMEs, and addressing the situation of former miners would require complex interventions.
- There is a perceived lack of 'apt' skilled workers and the widespread strategy is to retain the key employees, even if it puts pressure on wage increases. Competitiveness in a medium/long range is observed in investment in new technologies and IT solutions.
- Contrary to the mainstream political discourse, the role of administrative and tax burdens seems to be rather exaggerated as the key bottleneck for increasing job creation by SMEs.
- The role of speed road R7 construction was not topping as a priority by SMEs, although they generally support the project and see it as key for the regional development. Yet it is not seen to be a tool for boosting employment — there were concerns that a better and faster road may have a negative impact, allowing for more commuting and increased competition in the labour market with Nitra and Trenčín.
- Poor quality of the professional school system and a lack of public/rental housing were indicated as adverse factors affecting the labour market.

Economic theory usually operates with five reasons for unemployment: cyclical, structural, seasonal, frictional and institutional. Cyclical unemployment means that employment in the economy undergoes periodic cycles of ups and downs. Structural unemployment occurs when a worker's skills no longer match any business need. Seasonal unemployment considers weather or temporal conditions. Frictional unemployment arises because searching for a job does not always provide instantaneous results. It takes time for businesses seeking workers and people wanting jobs to find each other. Institutional unemployment arises when wages are too high and provide a barrier for employers. Outcomes of the qualitative survey point to a very careful approach of local SMEs to further enlargement due to the perceived slowdown of growth, increasing salaries, and a general lack of skilled workers in the market. In other words, there are perceived problems with respect to cyclical, structural and institutional barriers to increasing employment.

The general situation in the labour market in Upper Nitra is positive. Unemployment rates decreased steadily in both the Prievidza and Partizánske districts over the 2010s. The decrease in unemployment rates was primarily fuelled by an economic boom and increase in total employment in each district in the period of 2012–2018. The total number of employed people increased by 8.2 thousand (7%) in the Prievidza district and by 4.5 thousand (10%) in the Partizánske district.

At the same time, the region is undergoing significant demographic changes and the decrease in stock of the workforce was a contributory factor to the decrease in total unemployment. A forecast of the working age population (15–64) as a percentage of the total population displayed in Figure 6 points to the fact that a perceived lack of human resources among SMEs is not a temporary problem and will worsen over time. There are no specific dates for the region, with estimations based on Slovak averages indicating that micro-enterprises employ some 47% of the total SME workforce, small enterprises provide some 12% of the job opportunities, and medium-sized enterprises provide the remaining 15%.

**Figure 6.** Working age population (15–64) as % of total population



Source: SOSR and in-house forecasts by the Institute for Forecasting (Slovak Academy of Sciences), 2018.

The labour market in Slovakia has been characterised over the last two decades by the high share of the long-term unemployed.<sup>11</sup> The long-term unemployment rate in Slovakia averaged 8.76% from 1998 to 2019, reaching an all-time high of 12.50% in the first quarter of 2002, which was well above the EU average of 2.9%.<sup>12</sup> As a particular response to the EU Council Recommendation of 18 May 2016 concerning the National Reform Program of Slovakia 2016 and a Council Opinion on the Slovak Stability Program 2016 (Country Specific Recommendations – CSR) concerning the integration of the long-term unemployed into the labour market, the Action Plan to strengthen the integration of the long-term unemployed into the labour market in the Slovak Republic was developed. Following the adoption of the plan, and also due to conjecture in the business cycle, such unemployment decreased to a record low 3.50% in the first quarter of 2019 from 3.70% in the fourth quarter of 2018<sup>13</sup>. However, long-term unemployment remains prevalent in the east and in some central regions a regional difference is still large and long-term unemployment has remained stubbornly high.

The Upper Nitra region recorded a steady decline in numbers: while in 2015 there were 5230 persons defined as long-term unemployed, in 2017 the number was 1736 persons, with only 1034 persons as of June 2019 (UPSVAR, statistics). Since the upsurge in the economic cycle, employment growth has been strong, and unemployment has been falling quickly. However, there remain pockets of

<sup>11</sup> Partly due to high unemployment among the Roma ethnic minority.

<sup>12</sup> The long-term unemployment rate refers to the share of persons unemployed for 12 months or more in the total number of active persons, those who are either employed or unemployed, in the labour market. This unemployment has ‘scarring’ effects, and the long-term unemployed are more difficult to bring back to the labour market (OECD, 2013b).

<sup>13</sup> For further details see *TradingEconomics* at: <https://tradingeconomics.com/slovakia/long-term-unemployment-rate>).

widespread joblessness in the region and a substantial proportion of the unemployed are likely to be Roma, many of whom lack skills and employment experience.<sup>14</sup>

While general quantitative data show a generally plausible situation in respect of the size and focus of the sector, qualitative assessment indicates deeper problems and tensions with implications for the labour market. In other words, macroeconomic indicators do not fully correspond to assessment of the labour market from the perspective of local SMEs. Based on a study of the context (qualitative analytical part) and a qualitative survey on the sample of regional SMEs, we conduct SWOT analyses of the sector in Upper Nitra (Figure 7).

---

<sup>14</sup> There are segregated Roma communities in Prievidza, Handlová and Partizánske. In particular, settlement in Handlová is closely related to the mine company — it was originally a village for miners, an outcome of former regime policies to attract Roma to heavy industry and following segregation tendencies.

**Figure 7.** SWOT analysis of the SME sector in Upper Nitra

		SWOT	
		Strengths	Weaknesses
I n t e r n a l		<ul style="list-style-type: none"> <li><input type="checkbox"/> Boom in economic cycle and period of growth (temporary)</li> <li><input type="checkbox"/> Links to the European Union market EMU Currency (EUR), and close links to core markets/countries</li> <li><input type="checkbox"/> Competitive advantage of lower labour costs and lower wages</li> <li><input type="checkbox"/> Flexibility and ability to adjust to the market requirements</li> <li><input type="checkbox"/> Bigger foreign direct investment needs smaller local subcontractors</li> <li><input type="checkbox"/> Experienced and skilled labour force and professionals</li> <li><input type="checkbox"/> Increasing investment in technologies and IT solutions</li> <li><input type="checkbox"/> Relatively central geographical position within the country, with close proximity to industrialised belt</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Dependence on foreign companies affiliated with pressure on costs</li> <li><input type="checkbox"/> Lack of skilled personnel due to emigration out of the region, resulting in a lack of interest among the young people in vocational training and general demographic trends</li> <li><input type="checkbox"/> Weak purchasing power in the country/region (especially for service/tourist industry)</li> <li><input type="checkbox"/> Problem with growth – highly competitive markets</li> <li><input type="checkbox"/> Economy of scale: vulnerable focus of the production (small series and addressing niches in the market)</li> </ul>
	E x t e r n a l	<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Increasing sectoral shift from production to services</li> <li><input type="checkbox"/> New emerging opportunities in renewable energy, green technologies, recycling and “green jobs” in general</li> <li><input type="checkbox"/> Increasing purchasing power (due to higher wages) in the country/region</li> <li><input type="checkbox"/> Automatisations and Industry 4.0 (addressing the problem of qualified labour shortage)</li> <li><input type="checkbox"/> External support (state subsidies, ESIF)</li> <li><input type="checkbox"/> New automated/computerised machines and technologies are easier to operate and may provide jobs for people with lower skills/education</li> </ul>	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Economic cycle (foreseen recession)</li> <li><input type="checkbox"/> Shortage of available workforce and structural problem of lacking skills and capacities</li> <li><input type="checkbox"/> Global competition (with Poland as the dominant regional player, and cheaper products from Asia)</li> <li><input type="checkbox"/> Increasing cost of production (end of the model based on cheap labour)</li> <li><input type="checkbox"/> Shift in patterns of production and consumption</li> </ul>

Especially in manufacturing industries are SMEs facing increasing global and regional competition (i.e. from Poland). While many consider, or already practice import of semi-product, moving entire production abroad was not indicated – it is considered extremely complicated (unstable environment, lack of human resources). Prevailing strategy is, that firms must increase their efficiency while focusing on the market “niches” not so lucrative for bigger and multi-national companies.

Many SMEs currently already work as subsidiaries of multinational companies. Some already operate in the West Balkans, Ukraine, and provide services/goods internationally. The perceived threat among firms operating as subsidiaries for multinational companies is their moving of some of the production back to the core countries. As the cost of labour is decreasing as the competitive tool with automatisations, this trend is visible (although some of the respondents oppose this, arguing with the proximity of Upper Nitra to the core countries and embedded investments).

A significant proportion of SMEs surveyed already feel a decrease in the number of contracts and are expecting slowdown in the economic cycle. The problem of “high” and increasing salaries is combined with a lack of skilled workers. The perception of practically all SMEs interviewed is concerned with focusing on retaining their key personnel, while investing in technologies and IT.

Economic theory usually operates with five reasons for unemployment: cyclical, structural, seasonal, frictional and institutional. Cyclical unemployment means that employment in the economy undergoes periodic cycles of ups and downs. Structural unemployment occurs when a worker’s skills no longer match any business need. Seasonal unemployment considers weather or temporal conditions. Frictional unemployment arises because searching for a job does not always provide instantaneous results. It takes time for businesses seeking workers and people wanting jobs to find each other. Institutional unemployment arises when wages are too high and provide a barrier for employers. Outcomes of the qualitative survey point out a very careful approach of local SMEs to further enlargement due to the perceived slowdown of growth, increasing salaries, and a general lack of skilled workers in the market. In other words, there are perceived problems with cyclical, structural and institutional barriers to increasing employment.

Projections regarding possible new jobs were rather sceptical among the representatives of SMEs. The majority of them expressed the opinion that they are in the ‘optimum’ situation regarding the output of their enterprises and the number of workers. Very few plan the expansion and extension of production, with the focus remaining on maintaining the size and share of the market. Moreover, regarding the recruitment of possible employees, they all had the feeling that the price of the workforce hits the limit. In the process of further automation and computerisation of production, they do not foresee a space for hiring an additional workforce due to the necessity to keep themselves competitive in the market.

Another remarkable thing which was thematised is, in their opinion, the lack of ‘apt’ skilled workers. They expressed their opinion that there is a lack of disposable and available skilled workers who should have exactly the skills required in their sphere of production.

Problems with the unavailability of a skilled, qualified, almost tailor-made workforce is often attributed mainly to two factors: firstly, a decline in the standards and amount of apprenticeship schooling and, secondly, the working of an ‘invisible hand’ in the labour market — those who are capable and more skilled, have already found jobs in the region or abroad.

Contrary to the mainstream political discourse, the role of administrative (e.g., registration fees, building permit costs) and tax burdens seems to be rather exaggerated as the key bottleneck for SME development. The majority of SMEs would obviously support lesser taxes and a smaller administrative burden, but it was neither rated as the top priority or a significant obstacle in a firm’s sustainability and/or expansion, nor pointed out as the problem in increasing the number of employees. The employment cost (including social contributions, taxes) matters, and SME were critical especially to recently adopted amendments to Labour Code increasing costs of night and weekend work.

Another development factor set forth in the discussion surrounding Upper Nitra development concerned how namely the crucial role of speed road R7 construction was not topping as a priority of SMEs. While SME respondents stated it would generally help, in reality they do not see it as being a crucial problem in their business operations. Respondents indicated that a bypass around Prievidza is the main challenge. In the case of a better connection to Trenčín and Nitra there were even concerns that better and faster roads may have a negative impact on them, as it would allow more commuting and they may face increasing competition in the labour market.<sup>15</sup>

---

<sup>15</sup> These conclusions are supported by a recent study of R1 effects connecting Bratislava and Banská Bystrica, wherein practical beneficiaries were especially endpoint/bigger cities withdrawing the labour force from the countryside and smaller cities in between (V. Baláž et al., 2018).



Quality of the professional school system is seen to be the problem and enterprises face a lack of young people replacing the ageing key workforce. Demographic trends (see the demographic prognosis developed for the region) in the context of extremely low-scale migration from abroad will, to a great extent, influence the local labour markets in Prievidza and Partizánske, yet a qualitative survey of the sample of local SMEs points out the problem of structural unemployment, according to which a worker's skills do not match local business needs. At the same time, SMEs have listed the lack of a skilled labour force as the main limiting factor in their development. Key areas in which the state could intervene with ESIF support are dual education and public/rental housing projects, which would help to attract especially young people to remain in the region.

The overall assessment of the aggregated potential of the SME sector regarding job creation indicates that enterprises are currently able to absorb practically all available people with the required education and skills. However, educational and qualification skills do not match the people available in the labour market. The profile and experience of SMEs in respect of the employment of the long-term unemployed are prevalently negative and there is little interest of the companies in employing such people. This would most likely include miners released in the process of the phasing-out of coal mining. In particular, the group of miners with low-skilled, low-trained employees with low potential in the labour market (see chapter 3.1) would (with high probability) increase the number of the long-term unemployed.

The identification of key SME sectors and segments with the potential for creation of sustainable jobs is a complicated task, depending on global and local factors. In section 2 we analysed the financial health of SMEs in individual sectors on the basis of Altman's Z-score. In the assessment we correlate these data with an OECD study on jobs that are at risk of automation in OECD countries,<sup>16</sup> and with the qualitative data generated in research for the report. The assessment of key SME sectors and segments with the potential for creation of jobs is provided in Figure 8.

---

<sup>16</sup> For further details see: [https://www.oecd-ilibrary.org/employment/jobs-at-risk-of-automation-in-oecd-countries\\_02c13de8-en](https://www.oecd-ilibrary.org/employment/jobs-at-risk-of-automation-in-oecd-countries_02c13de8-en) (*Jobs at risk of automation in OECD countries: Share of jobs which are at a high risk of automation or a risk of significant change in %*).

**Figure 8.** Estimated potential of the key SME sectors and segments in the creation of jobs

Sector	Outlook of job potential	
SAFE ZONE		
(Q) Human health and social work activities	High potential based on demographic trends (generally ageing population) and developing capacities of Bojnice as a spa town	↑
(J) Information and communication	Spreading the services is accompanied by increasing efficiency and the automatisation and centralisation of services	↓
(M) Professional, scientific and technical activities	Solid potential and opportunities for growth	↑
(K) Financial and insurance activities	Increase of the sector is accompanied by increasing efficiency and automatisation	↓
(O) Public administration and defence; compulsory social security	Increasing demand on the services is accompanied by IT deployment	→
GREY ZONE		
(F) Construction	Solid potential, albeit depending on the economic cycles and purchasing power of the population	↑
(N) Administrative and support service activities	Increasing demand on the services is accompanied by IT deployment	→
(C) Manufacturing	Solid potential to maintain and increase the current level of activities, albeit depending on many external and internal factors (see SWOT)	↑
(E) Water supply, sewerage, waste management and remediation activities	Solid potential and opportunities for growth; closure of the mines will provide (at least in the short and medium term) new job opportunities	↑
(R) Arts, entertainment and recreation	Solid potential, albeit depending on the economic cycles and purchasing power	↑
(H) Transportation and storage	Increase of the sector is accompanied by increasing efficiency and automatisation	→
(P) Education	Demographic trends are offset by higher demand for long-term education needs	→
DISTRESS ZONE		
(I) Accommodation and food service activities	Solid potential, albeit depending on the economic cycles and purchasing power	↑
(G) Wholesale and retail trade; repair of motor vehicles and motorcycles	Solid short-term potential, albeit depending on the economic cycles and purchasing power	↑
(A) Agriculture, forestry and fishing	Limiting factor is land availability and increasing efficiency of farms; certain form of general land reform will be necessary (combined with support to small and medium-sized farms)	→
(B) Mining and quarrying	Besides coal mining, there is only limited quarrying of construction material in the region	↓
(L) Real estate activities	Demand on the services depends on economic cycles accompanied by IT deployment	→
(S) Other service activities	The segment is generally not showing high potential, although some segments are growing	↔
(D) Electricity, gas, steam and air conditioning supply	Increasing demand on the services is accompanied by IT deployment	→

Notes: ↑ Positive trend/increase in employment → Stabilised situation/fluctuation upwards and downwards, ↓ Negative trend/decrease in employment, ↔ Not possible to assess

### 3.1. LABOUR MARKET PROFILE OF THE MINERS

From the perspective of mining, phasing-out and transformation of the local labour market are two extremely important factors. The general trend of the economic cycle may influence the demand for work and the structural problem of skills and capabilities. As we analysed in the 2018 report, based on the data provided by a mining company, the HBP, a.s. coalmine, employed 3782 people,<sup>17</sup> of whom 3017 were in the coal sector and 765 were situated in the non-coal sector in 2018. A significant number of the coal sector employees may retire in the next few years and there are alternatives in respect of early-retirement schemes.<sup>18</sup>

As for the coal sector, 2002 people were employed in underground and 1015 in aboveground jobs. The data provided by the HBP can be correlated with the number of employees, as reported under the law by the Main Mining Office of the SR.<sup>19</sup> There is relatively significant fluctuation in the number of employees as well as the problem of how many people work at a particular time in activities directly related to mining and how many are situated in different workplaces of a diversifying company. According to qualitative research, the company moves workers between its operations as needed.<sup>20</sup>

The level of education reached is of key importance from the perspective of the potential of the mine employees in the labour market. The data on miners' education and professional training are illustrated in Figure 9. We may broadly divide the mine employees into four groups requiring a different approach and a different scope of support:

- **Regular and early-retired employees/Out of the labour market:** This group will require more investment in social and healthcare systems in the region, which may provide opportunities in the "silver economy" and/or social entrepreneurship.
- **Highly skilled professionals/High potential in the labour market:** These are professionals with high education and/or high professional training and skills. Some will remain in the mining company and work in the closure process and/or in the mine enterprises that will remain after the mine operations terminate. Others will not have a problem finding adequate jobs in the region or elsewhere.
- **Trained people with professional experience/Good potential in the labour market:** This is the group with solid potential for finding adequate jobs in the labour market, while they are primarily the focus group for SME requirements. The ESIF may play a key role in supporting well-paid opportunities in progressive sectors with a long-term impact on the economic prosperity of the region. Some training and tutorials may be required.
- **Low-skilled, low-trained employees/Low potential in the labour market:** This group may have potentially the biggest problem finding employment and will require specific training, tutorials or coaching, with specific approaches being designed with respect to working with the people and the SMEs simultaneously.

---

<sup>17</sup> The total employment of 3782 jobs also included 177 external employees, of whom 72 were foreigners.

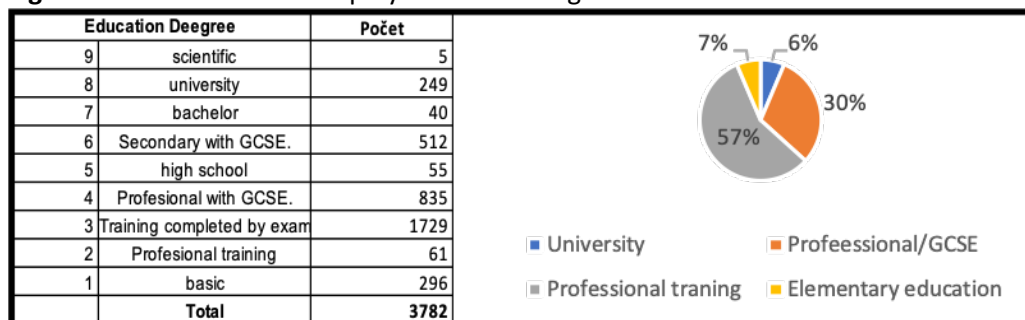
<sup>18</sup> Action Plan for Transformation of Coal Mining Region Upper Nitra (version March 31, 2019).

<sup>19</sup> According to the Office, in 2017, as many as 1908 employees were working directly in brown coal and lignite mining (148 on the surface). We see here, compared to 2016, an increase of 663 workers (the number of underground workers dropped by 22). For more information see: PRÁVA O ČINNOSTI za rok 2017 Hlavného banského úradu a obvodných banských úradov Slovenskej republiky. Available at: <http://www.hbu.sk/files/documents/spravy/2017/ročná%20správa%202017.pdf>.

<sup>20</sup> SUPPORT FOR COAL REGIONS IN TRANSITION: Socio-economic analyses to improve the use of ESIF. Expert study Upper Nitra, Slovak Republic, 2018.

Out of the staff, 294 (6%) people have some form of college education. An additional 30% have formal education with GCSEs and occupy high-profile professional and administrative jobs. The biggest group, constituting 57%, have some form of professional training. An estimated 679 people (7%) fall into the category of low-skilled workers (mine employees without specific qualifications, surface staff without specific qualifications, other staff). The age, education and skills of the miners do not fully match the market demands. See Figure 9 for more information.

**Figure 9.** Number of HBP employees and the highest-reached education



Source: HBP a.s., upon request of the Deputy Prime Minister Office, 2018.

## 4. EUROPEAN STRUCTURAL AND INVESTMENT FUNDS

### KEY POINTS

- Inconclusive evidence was found on the role of the ESIF as a key determinant/factor in the transformation of SMEs and the shift to more sophisticated production, yet it clearly enables scale-up of the original production.
- The experience of SMEs with the ESIF varies — they generally are considered a useful tool for development, but their utility is limited by various institutional barriers (e.g. administration, demanding public procurement rules).
- Projects in the programming period of 2014–2020 are, thus far, in the stage of being contracted — implementation is delayed. They cover a range of micro-, small and medium-sized enterprises with a dominant focus on manufacturing and production.
- ESIF absorption capacity for small and medium-sized enterprises in the programming period of 2014–2020 in the Upper Nitra region has been below the Slovak average. The situation of ESIF utilisation in the region also corresponds to general problems in the country with a limited absorption capacity of resources available.
- Mapping structural barriers to better utilisation of the ESIF provides data and information for follow-up discussion surrounding possible approaches and measures.

SMEs in Upper Nitra have been actively participating in the ESIF and were included in state aid assistance. State assistance focused primarily on industrial production, using a *de minimis* scheme (2015–2018). However, the primary sources of economic incentives are currently the ESIF.<sup>21</sup> SMEs are one of the key targets of the ESIF and are presently supported as part of the Partnership Agreement 2014–2020 under Thematic Objective 3: *Enhancing the competitiveness of SME, the agricultural sector (for the EAFRD) and the fisheries and aquaculture sector (for ENRF)*.

Activities supported by the ESIF focus on a wide range of small and medium-sized enterprises in different sectors. The measures taken are designed to cover all phases of the lifecycle of different types of SMEs, and to capture their changing needs. Key instruments include the Rural Development Programme (RDP), the Operational Programme Research and Innovation (OP R&I), and the Operational Programme Fisheries (OP F). The main sources of SME funding are the PO3 and PO4 of the OP R&I. In both cases, and as of December 31, 2018, we have observed a rather low level of absorption (14.04% and 13.86% respectively), although contracting rates were high (88.48% and 94.55% respectively). At the same time, absorption, as well as the contracting rates (max. 15.5%) of the two priority axes of the OP F, was critically low. In the case of the RDP, TO3 was covered by six individual axes, some of which indicate high (e.g. M14 up to 63%) and others low levels of absorption capacity (e.g. M08 only 0%). The RDP reached the highest contracting rate under TO3.

In 2017, there were a total of 218,805 small and medium-sized enterprises and 323,947 sole traders in Slovakia, but the value of the indicator for OP R&I-supported enterprises was only 2400. The indicators for agriculture for the period of 2013–2017 indicate a slight improvement in the sector's competitiveness, which has also been achieved through increased EU support. The increase in support (from EUR 713.2 million in 2013 to EUR 776.1 million in 2017) has contributed to profit growth as well. The average annual share of support in proportion to revenues has increased from 30.4% to 32.5% over this period.

---

<sup>21</sup> For further details see *Socio-economic analyses to improve the use of ESIF* (2018).

Support from the ESIF to small and medium-sized enterprises in the programming period of 2014–2020 in the Upper Nitra region has been, thus far, below the Slovak average, yet it was, nevertheless, a very important factor in SME development.<sup>22</sup> Inconclusive evidence was found on the role of the ESIF as a key determinant/factor in the transformation of SMEs and the shift to more sophisticated production. However, it definitely enables scale-up of the original production. Table 5 lists the contracted amounts of regional projects in which a beneficiary had its seat in the Upper Nitra region<sup>23</sup>. Practically all projects in the table are in the stage of being contracted and they cover a wide range of micro-, small and medium-sized enterprises. The dominant focus is on manufacturing and production.

---

<sup>22</sup> See also Annex 4 for information on the programming period of 2007–2013 and SME support in the Upper Nitra region.

<sup>23</sup> The Upper Nitra region also benefitted from national projects in fields of active labour market policies. Regional shares of national projects are not available in Slovakia.

**Table 5.** List of SMEs supported in 2014–2020 by the ESIF in Upper Nitra (EUR) and as of December 31, 2018 (it lists the contracted projects, amounts allocated, and maps of areas in which the support is distributed)

Name of recipient	OP	Amount (EUR)	Project status	Category	NACE	District
CCC Slovakia, s. r. o.	OP HR	180368	Contracted	Medium		
JOZUE s.r.o.	OP HR	118430	Contracted	MC	56290 Other dining services	Prievidza
Normex s.r.o.	OP HR	77660	Contracted			Nitra
CASTILL, s.r.o.	OP R&D	891960	Contracted	S	31090 Manufacture of other furniture	Prievidza
Toolshed Slovakia, spol. s r.o.	OP R&D	303100	Contracted	S	25990 Manufacture of other fabricated metal products i. n.	Prievidza
VUP, a.s.	OP R&D	197767	Contracted	M	20140 Manufacture of other organic basic chemicals	Prievidza
Ing. Peter Beňo - KOVOPRODUKT	OP R&D	108867	Contracted	MC	Metalworking and locksmith work. Service and repair of metalworking and woodworking machines.	Partizánske
MVM SK s. r. o.	OP RaD	231000	Contracted	S		Prievidza
Ing. Miroslav Čerey Výrobky z dreva a kovov	OP R&D	307727	Contracted	MC	46900 Non-specialized wholesale trade	Prievidza
1113 Bojnice s.r.o.	OP R&D	333333	Contracted	M		Prievidza (HQ in Bratislava)
SKMODEL s.r.o.	OP R&D	270533	Contracted	S	55100 Hotel and similar accommodation	Prievidza
Radovan Kašička K-Fruct	OP R&D	209717	Contracted	S	20160 Manufacture of plastics in primary form	Partizánske
ROYAL DATA GROUP EUROPE s.r.o.	OP R&D	384600	Contracted	MC		Prievidza
Róbert Švejda SPEKTRUM	OP R&D	360960	Contracted	S		Prievidza
VUP, a.s.	OP R&D	124438	Contracted	M	93190 Other sports activities	Prievidza
ESYP s.r.o.	OP R&D	40376	Contracted	S	20140 Manufacture of other organic basic chemicals	Prievidza

Source: Office of Deputy Prime Minister (OLAP Cube) and authors' computation. Note: allocations refer to contracted projects. NACE code by project beneficiary.

The main sources of data and information for this chapter comprise in-depth personal interviews with SME managers, owners and key technical staff. Data and information from the SMEs were triangulated with in-depth interviews with other stakeholders (e.g. Ministry of Economy, local action groups/*Miestne akčné skupiny* – MAS, interviews of the EU funds information office, Slovak Business Agency/SBA, local municipalities, NGOs, and the mining company).

Analysing the experience and situation of ESIF implementation, absorption capacity, and outcomes, there are several bottlenecks identified in the process. These are important for further utilisation of the incentives available (and not only) in Upper Nitra. The qualitative survey for the report indicates eight areas/issues identified by the SMEs/respondents. These are summarised in Table 6.

**Table 6.** Technical problems/issues identified in the process of SME support through the ESIF

Issue	Impact and implications	Proposed management strategy
Substantial administrative burden; requirements are unclear and place on applicants demands that are difficult to meet	SMEs are reluctant to apply; especially for smaller enterprises, admin is a strong barrier — technical assistance is reportedly weak (reportedly, they cannot obtain targeted information and explanations)	A combination of small grants through MAS, enlargement of the voucher system, and other user-friendly services for SMEs; improving the flexibility of implementing instruments, assessment, and a reduction in the rigidity of regulations; better training and evaluation for administrators/clerks at first contact
Rigidity of regulations	Complicated procedures of tenders, and problems with the state aid regulations; needing to stick to the original project details rigidly required by the authority (while circumstances continue to change) limits the implementation of projects	Re-evaluation of competitiveness principles and provision of state aid and adjusting to changes; modification of rules, allowing to better adapt to the local context
A prolonged process and unforeseen changes in the implementation process	Increasing cost for applicants (need to update outdated audits and change cost estimations based on inflation and market prices)	A shorter and faster process of decision making would improve interest in the ESIF; improving time management of the process would positively influence the image of the funds and interest in participation
Public procurement limits and demands	At least in two cases, PP is indicated as the reason as to why SMEs cancelled participation in the ESIF	Simplification of procedures and technical assistance with PP; improving technical capacities and skills of the administrators at all levels to assist SMEs in the process
The role of consultancy companies	Under the current system are SMEs dependent on outside capacities which are often expensive	Enhancing technical assistance; Information and Advisory Centres in self-governing regions are a step in the right direction, but would need to improve their capacities
Quality of the technical support	Common experience reported is the lack of targeted and valid	Enhancing technical assistance and improving the quality of



	responses to the questions raised by SMEs in the process of application and/or implementation (e.g. when they ask questions regarding specific calls and implementation procedures, they are directed to manuals and cannot get obtain guidance from the authorities)	advisory services; Information and Advisory Centres in self-governing regions
Access to information	While there are many information activities declared, the pool of the SMEs informed seems limited	Improving the databases of SMEs and targeted information related to specific calls; improving the dissemination of information on successful applications
Provisions of new job creation	Provision to employ new persons (55+, or long-term unemployed) as a part of ESIF contracts is highly problematic for SMEs	This provision was already cancelled. Alternatively, preferential treatment for people graduating from training courses and/or intermediate labour market projects.

The issue most often thematised was the administration of EU grants. Administration and all requirements were evaluated negatively almost unanimously. Only in one instance did we obtain a somewhat neutral opinion. Managers mostly complained about very laborious requirements regarding the detailed parameters with respect to the purchase of machinery. One year prior to the purchase to be co-financed by ESIF they were obliged to specify every technical detail including the price and prepare the purchase plan. In practice it often happened that the producer changed the price or some parameters (e.g. introduced meanwhile new model of the machinery), and in that instance, the process was annulled.

In another case the applicant reportedly required changing the project scope several times. The process was so lengthy that they needed to update an expired energy audit (while the situation with energy performance was the very same) and pay the auditing company twice.

One of the most innovative and progressive companies in our sample (production of industrial robots) illustrates the point with administrative burdens. The company withdrew from an already awarded ESIF grant for technology because they were not able to get their public procurement procedure approved by the managing authority, even after several attempts.

When inquiring as to whether they would apply again for EU funding, the answers were rather sceptical.

As was confirmed also in this research, clients and recipients of the EU funding consider the fund administration to be very difficult in general, and (so to speak) not user-friendly. This also entails complicated communication with project managers in Bratislava. These positions are rather frequently changed in administration. SMEs complain that they cannot build formal relationships with somebody responsible for assistance and people do not seem flexible enough.

Access to information on the ESIF was generally not perceived to be a problem. Yet in spite of the significant amount of energy and resources invested through technical assistance, the majority of SMEs still report as a source of the information on ESIF calls predominantly consultancy companies offering their services. Dominant sources of information for SMEs include various consulting companies, actively searching for opportunities and then motivating selected SMEs to prepare project proposals.

Practically all interviewed SMEs point out the problem of human resources as being the main challenge. They would welcome more young trained people who are motivated to work in manufacturing industries and services; particularly because they feel endangered by prospects of key ageing employees leaving. However, they strongly opposed employing the long-term unemployed. This problem appears to be especially protruding in the grants funded by the European Structural Funds. It is a requirement in the majority of funding to create and sustain new jobs for, according to various criteria, disadvantaged registered jobseekers. In order to comply with grant requirements, SMEs are forced to employ these new workforces even though entrepreneurs do not need them. These new workforces work alongside 'old' regular employees, but they have a rather lower status and are considered useless. Regular employees used to call them 'extras', like during the shooting of a movie, wherein extras are acting against the backdrop of settings but the genuine acting space is reserved for skilled actors.

Some of the issues are relatively easier to address, and some are already persistent problems in the management of cohesion policy tools. Increasing absorption capacity in the SME sector in the Upper Nitra region in order to create sustainable jobs in prospective sectors and branches of the economy would, however, require improvements in the overall system of ESIF management and development of more user-friendly approaches to SMEs. Mapping structural barriers for better utilisation of the ESIF provides data and information for the next chapter and the discussion surrounding possible approaches and measures.

## 5. GAP ANALYSIS AND RECOMMENDATIONS

### KEY POINTS

- Gap analyses introduce the recommendations identified, mapping the gap between the desired state (where we want to be in the development of the SME sector), the current state (where we are according to our analyses) and what are the action steps (what we may/should do to address the gap between those two).
- Support for SMEs has to be targeted towards both the external environment (school system/human resources, infrastructure, and technical and managerial help in capacity development) and internal assistance towards individual SMEs for improving efficiency, boosting productivity, saving resources, and speeding up the technology transfer to Industry 4.0.
- A specific challenge lies in the management and implementation of projects supported by ESIF, where the absorption capacity is limited by various structural barriers, whereby blocking better utilisation by SMEs of the funds available. Recommendations here focus on the general framework of ESIF implementation in Slovakia, taking into consideration the local specifics.
- Several options (or examples) in respect of regional frameworks and/or strategic projects are discussed in the subsequent sub-chapter. The examples outlined are generated based on the analyses of the SME needs in Upper Nitra, and are building upon the experience of other EU countries with respect to using ESIF for regional development and/or the coal mining transition.
- The final set of recommendations open alternatives regarding how to approach the region specifically, i.e. providing a concentrated impulse for the regional transformation and leveraging the coal offset. Specific calls for proposals and possible areas of intervention dedicated to SMEs in the Upper Nitra region are suggested, with reflection upon experiences from the past and present programming periods.

Based on the quantitative and qualitative data and information gathered and analysed in the preparation of the report, we summarise here several key factors and points influencing the role and potential of SMEs in the transformation process of the Upper Nitra region. In spite of many positive steps at the policy level and improvements in the support of SMEs, there are cyclical, structural and institutional barriers to increasing employment.

**Cyclical unemployment** means that employment in the economy undergoes periodic cycles of ups and downs. There are signals indicating that economic growth is slowing down. Short- and medium-term expectations of the interviewed representatives of the sector are mostly pessimistic. A significant proportion of SMEs surveyed already feel a decrease in the number of contracts and are expecting a slowdown in the economic cycle. The number of inserted openings in the web job registration of the Central Office of Labour, Social Affairs and Family (istp.sk) decreased in the previous 10 months by 28.5% in Prievidza.<sup>24</sup>

**Structural unemployment** occurs when a worker's skills no longer match any business need. In spite of the relative decrease of the openings, a key challenge for the majority of SMEs concerns human resources. An ageing society increases the importance of productivity and the efficient use of available human resources for maintaining growth. The overall assessment of the aggregated potential of the

---

<sup>24</sup> The number of jobs for people with lower and medium levels of education. A comparison between December 5, 2018 and October 5, 2019.

SME sector regarding job creation indicates that enterprises are currently able to absorb practically all people available with the required education and skills. However, the educational and qualification requirements do not match those of the people available in the labour market.

**Institutional unemployment** arises when wages are too high and provide a barrier for employers. Practically all of the enterprises analysed confirmed an increase in salaries in the past 12 months. On the one hand, this trend is pushed by their need to retain, in particular, key experts and recourse personnel in their business. On the other hand, it leads to a tendency to save on low-skilled positions. The outcome of the research confirms evidence from the literature<sup>25</sup> that raising the minimum wage pushes business owners to replace low-skilled workers with automation.

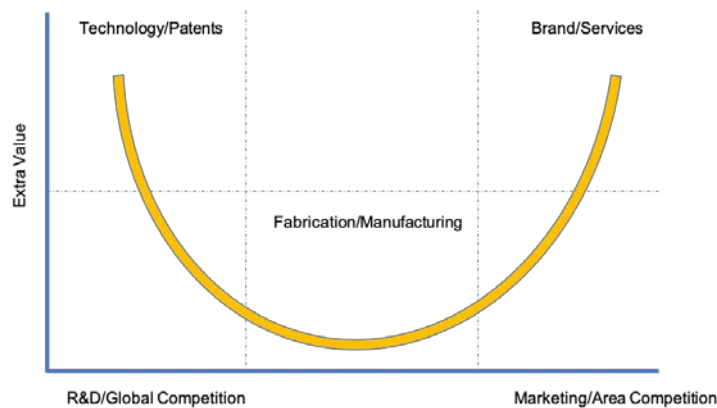
The mixed and vibrant combination of micro-, small and medium-sized enterprises renders the SME segment relatively resilient to economic cycles. The overall status of businesses is positive: 46% of businesses are, based on the available quantitative data, prosperous. Some 31% show signs of unsustainability, while remaining 23 % is the grey zone between these two poles. The fastest-growing sectors are construction, agriculture and forestry, clothing and footwear, as well as chemistry and plastics. Meanwhile, tourism and gastro, finance, and advertising present the slowest development. Yet, based on the analyses of the SME sector of Upper Nitra, we may point out the problems in respect of the structure and focus of the enterprises. The local consistency of SMEs shows some patterns of regional intelligent specialisation, but the majority of production is lagging behind. The number of industries outside of the domain of smart specialisation in 2019 still constitutes 82.4% and in 2018 they generated 60.7% of revenues.

This indicator corresponds to the quantitative assessment of the sector, which is essentially formed by manufacturing and services focused on niches in the market (usually products with lower added value, exposed to global competitors), or supply demands created by bigger and more technologically advanced foreign companies. It is a situation which may be graphically illustrated using the so-called smiling curve (Figure 10). Generally, the two ends of the value chain (technology/patents and brand/services) command higher values added to the product than does the middle part of the value chain, which is manufacturing.

---

<sup>25</sup> See, for instance, Grace Lordan and David Neumark (2018) People Versus Machines: The Impact of Minimum Wages on Automatable Jobs NBER Working Paper No. 23667. Or Autor, David H., Alan Manning, and Christopher L. Smith. 2016. "The Contribution of the Minimum Wage to US Wage Inequality over Three Decades: A Reassessment." *American Economic Journal: Applied Economics*, Vol. 8, No. 1, January, pp. 58-99.

**Figure 10.** Smiling curve – value-added fluctuation across the different stages of bringing a product into the market



*Source:* Stan Shih, 1992.

The economic model after the 1990 transformation was, to a great extent, based on an educated/skilled yet cheap labour force. Given the economic, demographic and social trends, this model reaches its limits. All in all, the situation in Upper Nitra is not significantly different from other Slovak or, in a wider context, other similar European regions. The development goals and intentions of smart specialisation and the increasing added values of the industry and services clash here with the reality of global and regional competition, brain drain, lagging behind with respect to R&D, a lack of human resources and knowhow, as well as the specifics of the local market. Transformation of the region and phasing out coal will most likely emphasise the already existing tensions and structural problems and provide a challenge for public policies and investment.

## 5.1. GAP ANALYSIS

A gap analysis is a process that compares actual performance or results with what was expected or desired. As illustrated in Figure 11, in the gap analyses we focus on three interlinked areas under consideration: (i) internal needs of SMEs, (ii) operating environment, and (iii) management and implementation of European Structural and Investment Funds.

The Government of the Slovak Republic adopted several key strategic documents and legislative measures relevant to the development of SMEs, providing a framework for the development of the sector. The development of innovative start-ups is to be stimulated by the newly adopted Concept for Start-up Support and the Development of the Start-up Ecosystem in the Slovak Republic, which is supplemented by the Creative Industry Development Strategy in the Slovak Republic for the cultural and creative industries. Additionally, the Concept of Smart Industry for Slovakia was also adopted, creating a suitable framework so that SMEs can also learn from the latest trends in the upcoming fourth industrial revolution. The Research and Innovation Strategy for the Smart Specialisation of the Slovak Republic is considered a key strategy and comprises defined general support frameworks for SMEs, as well as targeted support for selected priority areas within the OP R&I.

Yet, despite the efforts, the Slovak republic is seriously lagging behind its goals in the area of R&I and is not able use opportunities provided by ESIF to increase inputs and outputs in research, development and innovation. Increases in domestic business expenditure on R&D and increase in innovation capacities of the small and medium-sized enterprises (SMEs) were targeted on the input side. As for the output side, the ESIF support to R&D should be reflected in higher numbers of patents and good quality scientific publications. The Priority Axes (PA) 1 and 2 of the Operational Programme Research and Innovation (OP R&I) provide key support to the goal. The PA1 and PA2 accounted for low rates of certified spending – 7.34 % and 5.02 % respectively, as of 31 December, 2018). In the absence of support from ESIF, the business sector secures over 80 % finance from its own resources and macro indicators show only limited progress. Although there is a positive trend in increasing concentration of R&D investment in five domains of smart specialisation (RIS3), the patenting intensity and shares of innovative enterprises in total enterprises remain very low. Inevitably, lower level of research outputs does not provide sufficient room for multiplicatory effects, collaboration and transfers from research to SMEs.<sup>26</sup>

The Slovak Republic is gradually developing a comprehensive framework of measures targeting SMEs. OP Research and Innovation provides grants to SMEs and additional assistance through non-financial and financial instruments and national projects. There is an open call aimed at promoting smart innovation in industry (call code OPVal-MH / DP / 2018 / 1.2.2-21), a call aimed at supporting the implementation of social innovation in the SME environment (OPVal-MH / DP / 2019 / 3.1.1-3.3.1-22), and a call aimed at promoting SME involvement in EU-SME Instrument programmes (OPVal-MH / DP / 2018 / 3.2.1-18).

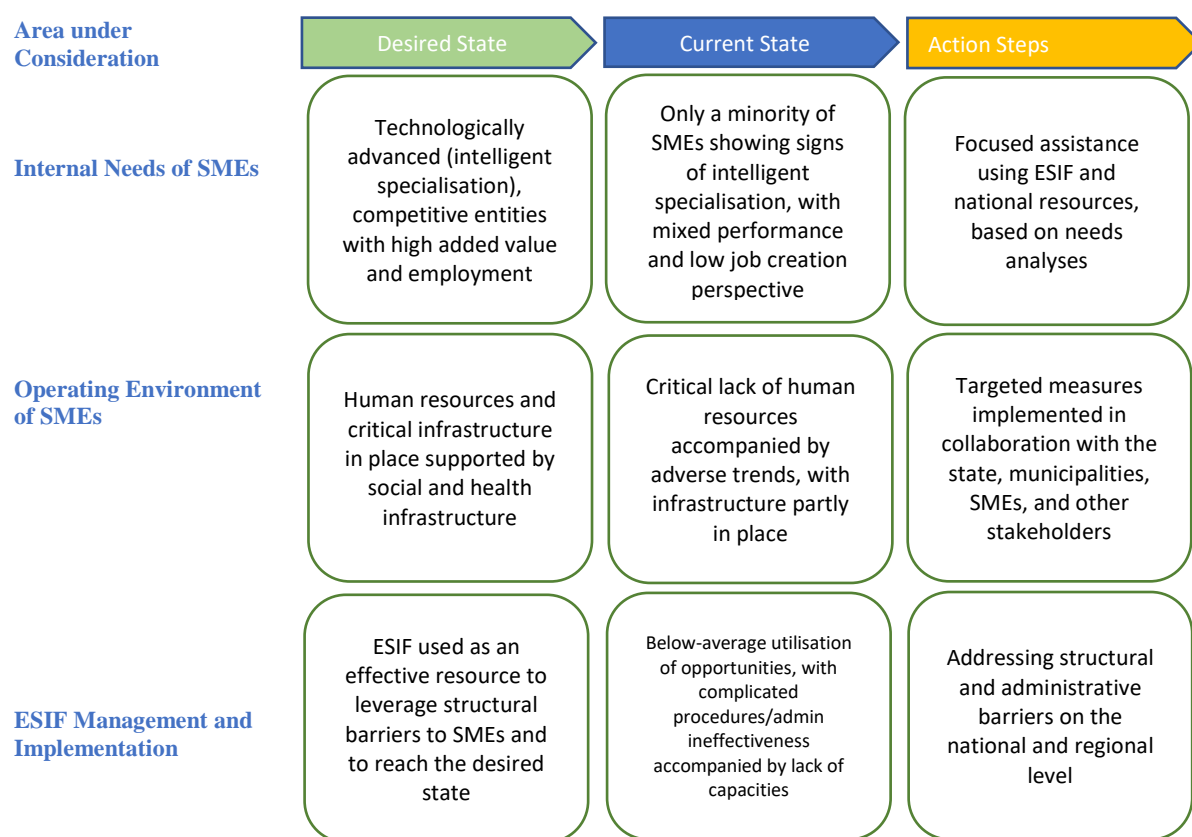
Furthermore, there is the National Enterprise Centre – Regions (*Národné podnikateľské centrum – Regióny*), which was implemented as a national project by the Slovak Business Agency and aims at a one-stop-shop concept that provides a broad portfolio of information and complementary services for start-ups and established entrepreneurs at different stages of the life cycle, as well as business

---

<sup>26</sup> The latest step in improving the situation is the merger of the Integrated Infrastructure Operational Program (OPII) with the OP RDI in the programming period 2014-2020. It should make the implementation more effective and eliminate the risks of permanent loss of finances due to the use of the  $n + 3$  rule within the Operational Program Research and Innovation (OP Val). Adopted in October 2019, it is too early to evaluate impacts.

entrants. Another national project is that of Supporting the Internationalization of SMEs, which was implemented by the Slovak Investment and Trade Development Agency (SARIO) and the Slovak Business Agency. It aims to support SMEs in regions outside of Bratislava in their integration into the global market. The Slovak Innovation and Energy Agency implements national projects such as Support of Creative Industry Development (including vouchers for services), with another focused on increasing the innovation performance of the Slovak economy. There are financial instruments in place including EUver – ROZVOJ by the Slovak Guarantee and Development Bank, a.s. (SZRB), as well as a programme of loans to small and medium-sized enterprises through FLPG guarantee provider UniCredit Bank Czech Republic and Slovakia, a.s. Slovak Investment Holding (as the manager of National Development Fund II) provides direct venture capital investments under the Operational Programme Research and Innovation.

**Figure 11.** Gap analysis



## 5.2. SME AND INTERNAL NEEDS

While the strategies and aims of policies target supporting technologically advanced (intelligent specialisation), competitive entities with high added value and employment, analyses point out the current situation, wherein only a minority of SMEs show signs of intelligent specialisation, and in terms of economic development we observe a mixed performance and low job creation perspective.

In the final stream of the survey of SMEs we focused on the perceived needs of the sector which could potentially be supported and which may frame areas of future intervention by the ESIF. In the qualitative analyses of perceptions of the regional SME itself (where they see the future of their business) the survey indicates the prevailing intention to move towards more technologically advanced production with higher added value. For these ends, they indicated key challenges and needs in the following broader areas:

- *Technology transfer and supporting investment in heavy machinery and technologies;*
- *A lack of premises and affordable space for start-ups and SMEs;*
- *Investment in decreasing the pollution produced by industry as a tool with which to improve the quality of life, attractiveness of the region, and the efficiency of SME production;*
- *Helping with the transfer to low-carbon energy supply and energy efficiency;*
- *The spreading of smaller financial instruments, adjusted to the local needs and capacities of SMEs (especially micro-enterprises);*
- *The development of capacities in management and technology adoption skills;*
- *Support programmes for start-ups and young firms;*
- *Enhancing regional cohesion, information sharing, and promoting the regional economy and its competitiveness;*
- *Better education, training, coaching and other tools to improve the capability of the labour force in the region;*
- *Technology transfer and knowhow to improve the sophistication and diversification of production;*
- *Supporting activities that help firms to improve access to markets and exports;*
- *Strengthening contact and building linkages between SMEs and foreign and/or large companies;*
- *Opening new areas of market opportunities.*

When confronting the opinions of SME owners and managers with those of business analysts and experts, we may add an emerging area of activities in the implementation of the Green Action Plan (GAP), aiming to help small and medium-sized enterprises (SMEs) to take advantage of the opportunities offered by the transition to a green economy. It presents ways for SMEs to transform environmental challenges into business opportunities, e.g. in the circular/carbon-neutral economy. Linking climate change policies and alternative energy/fuel sources may help to reduce SMEs' energy costs through support for the initial investment and to boost productivity.

An emerging field is also observed in social enterprises. Here the Law on the social economy and social enterprises and on amendments to certain acts n. 112/2018 Z.z. (13 March 2018) provides a new



framework for the development of the sector as well as alternatives for the employment of people with otherwise complicated and disadvantaged positions in the labour market.

Besides the support to newcomers, it is important to continue to focus on “traditional industries” such as the shoemaking industry, wood processing, and others. Although they are not seen to be industries for the future and do not provide high added value, as we can see from the analyses, they generate substantial revenues for the sector in the region and provide a solid number of employment opportunities. At the same time, these are the entities facing the highest and increasing regional and global competition. These industries should remain competitive so that their market share does not fall abruptly with economic and social consequences for the region.

In Table 7 we map out needs and gaps, list categories of perceived SME needs and discuss options and alternatives in addressing selected areas using new and/or modified instruments.

**Table 7.** Internal needs of SMEs – key recommendations

SME need identified	ESIF measures in place	Follow-up/recommendations
Technology transfer and supporting investment in heavy machinery and technologies; access to knowhow and improving the sophistication and diversification of production	There are open and upcoming opportunities provided by OP R&I (see pages 4/5). The Ministry of Economy is preparing a special call dedicated to the Upper Nitra region for late 2019.	Grants and vouchers were evaluated by SMEs as being very helpful and useful tools for improving their performance and their access to the markets. The call dedicated specifically to Upper Nitra SMEs will be oriented towards the purchase of technologies/properties. Using a <i>de minimis</i> approach, there will be up to a EUR 200,000 ESIF contribution per project. Co-financing has not been set up yet, but could be in the range of 50–85%. A qualitative evaluation of the results of the first call could help in targeting follow-up calls aiming at technologies, buying new machinery and industrial robots and boosting productivity. The fastest-growing sectors identified in the analyses, and with solid potential for further growth and development, are construction, agriculture and forestry, clothing and footwear, as well as chemistry and plastics.
A lack of premises and affordable space for start-ups and SMEs	Space/premises are, to some extent, included in the current measures (e.g. a special call dedicated to the Upper Nitra region in 2019 should also allow investment in properties).	Besides properties and space in the firms already operating in the market, there is a perceived need for investment in entrepreneurial infrastructure: a special call for the regeneration of brownfields (i.e. abandoned buildings, ideally with some historical value) and their transformation into functioning areas of activity and/or small and medium-sized incubators for start-ups and SMEs could provide new opportunities and improve the situation in the region.
Investment in decreasing the pollution produced by industry as a tool with which to improve the quality of life, attractiveness of the region, and the efficiency of SME production	This has been partly addressed in OP R&I (technologies) and OP QE (investment in air quality).	A specific call aimed at the industry/SMEs in the region could have an immediate impact on air quality and the quality of life, while rendering the region more attractive and competitive for other types of service enterprises. There is the potential to analyse enterprises clustered around PP in Nováky from the perspective of more comprehensive concepts based on industrial ecology and/or interlinking these premises and improving overall efficiency and environmental impacts. A provision enabling this type of project could be considered for the OPs in preparation of the upcoming programming period.
Helping with the transfer to low-carbon energy supply and energy efficiency	OP QE has been supporting SMEs in energy efficiency/savings and RE.	Experiences of the SMEs with this type of support are highly positive, improving the economy and competitiveness of SMEs while helping to meet climate change policy targets. A specific call for the region or preferential treatment in open calls could help regional SMEs.
The spreading of smaller financial instruments, adjusted to the local needs and capacities of SMEs (especially micro-enterprises)	There are starting programmes of local action groups ( <i>Miestne akčné skupiny</i> – MAS) supported by the Rural Development Programme and IROP.	It is too early for an evaluation, but the qualitative survey indicates mixed impacts. The extent to which this assistance is accessible (especially for micro-entrepreneurs with limited experience/capacities in applying for outside assistance) depends on <i>ad hoc</i> motivation and the experience of MAS staff. These programmes would require (based on the evaluation of the first outcomes) the enhancement of capacities and more methodological and technical coordination at the regional/national level. The micro-entrepreneurs are identified in the report as being the target group with significant potential, albeit with rather limited capacities and skills in the development of projects, conducting public procurement and managing grants.
The development of capacities in management and technology adoption skills	The Slovak Business Agency and NPs aimed at a one-stop-shop concept that provides a broad portfolio of information and	While the national and regional framework provides some opportunities, there is a recommendation of a feasibility study for the development of a self-sustainable regional innovation centre, combined with support and investment in technical infrastructure (premises). Such a regional centre (located

	complementary services for start-ups and established entrepreneurs at different stages of the life cycle, as well as business entrants. There are NPs focused on integrating regional SMEs into the global market and increasing the performance of innovation.	in Upper Nitra) could provide a platform for linking research and development, SMEs, and capacity development programmes that enhance the local network of industries and services. A regional innovation centre could build upon twinning with similar successful projects in adjacent regions of the Czech Republic and other countries and use instruments of the new programming period.
Support programmes for start-ups and young firms	There are financial instruments in place including direct venture capital investments.	Small business incubators <i>in situ</i> could provide a space that helps start-up companies to develop by providing services such as management training or office space, enhancing regional infrastructure and the provision of available premises/space combined with preferential treatment for start-ups and young firms locating their activity in Upper Nitra.
Supporting activities that help firms to improve access to markets and exports; strengthening contact and building linkages between SMEs and foreign and/or large companies	There are measures in place helping SMEs with presentations at fairs and with marketing, e.g. the national project Supporting the Internationalization of SMEs.	Special preferential treatment for entities from the region as a temporary option could include the presentation of regional SMEs at selected fairs. There is potential in linking these efforts to build the regional market, regional trademarks, and support regional cooperation.
Opening new areas of market opportunities, e.g. in the circular/carbon-neutral economy and in social services (including social enterprises)	Specific support to these areas is foreseen for the new programming period.	Emerging business opportunities in a green economy, green entrepreneurship, opportunities for SMEs in a greener value chain, and access to markets for green SMEs may provide new opportunities, combined with preferential treatment for entities from the region. Better utilisation of the tools of green and social procurement could improve the local market with goods and services.

### 5.3. SME AND OPERATING ENVIRONMENT

In the qualitative stream of the survey of SMEs we focused on the perceived needs of the SMEs with regard to their operating environment and current/future interventions by the ESIF. Key challenges for the majority of SMEs are concerned with human resources. An ageing society increases the importance of productivity and the efficient use of available human resources for maintaining growth. The overall assessment of the aggregated potential of the SME sector regarding job creation indicates that enterprises are currently able to absorb practically all people available with the required education and skills. However, the educational and qualification requirements do not match those of the people available in the labour market. Problems with respect to the unavailability of a skilled, qualified, almost tailor-made workforce are often attributed mainly to two factors: firstly, a decline in the standards and amount of apprenticeship schooling and, secondly, the working of an 'invisible hand' in the labour market — those who are capable and more skilled and have already found jobs in the region or abroad, and those who are available and are often less capable, less skilled, inflexible and generally unable to carry the expected workload.

The economic model after the 1990 transformation was, to a great extent, based on an educated/skilled yet cheap labour force. SMEs nowadays depend heavily on their employees of a middle age. It is the outcome of the baby boom in Czechoslovakia in the early 1970s. However, these people are on the turn of entering the category of 50+ in the upcoming years. It is a key challenge for many employers as to how much they would be able to keep these people in work, and for the 50+ people if they would be able to keep pace with the increasing technology and other skills demands.

Another development factor set forth is concerned with infrastructure. Here we may refer to roads, housing and social/health care. Although the construction of speed road R7 was not top priority of SMEs, it is seen to be an important factor for the development of the region. In the case of a better connection to Trenčín and Nitra there were however concerns that better and faster roads may have a negative impact on them, as they would allow for more commuting and they may face increasing competition in the labour market. The respondents indicated a bypass around Prievidza as being important for services and time management. A lack of public/rental housing was indicated as being an adverse factor affecting the labour market. For these ends, we may indicate key challenges and needs in the following broader areas:

- *Better education, training, coaching and other tools to improve the capability of the future labour force in the region;*
- *Targeted measures to keep employees in the category of 50+ in work and to train them regarding new technology and skills demands;*
- *Public/rental housing projects for keeping the people in the region;*
- *Investment in infrastructure and services (transport/social/health care).*

There were 13 projects implemented in the region in the programming period of 2007–2013 that targeted SMEs and human resources. OP Employment provided support in the total amount of EUR 1 068 167. In the current programming period we identify thus far only three projects in the total amount of EUR 376 458 (OP HR), although we have to consider that in the current programming period the majority of assistance is distributed through national projects.

Given the strategic importance of ESIF assistance, it would be appropriate to strengthen the focus on both young employees and soon-to-be employees, as well as on the category of 50+. It is important

to provide appropriate support to young people, particularly by preparing them for the changing labour market, offering them further training and supplementing the missing competences for the performance of a particular profession, and enabling them (together with the employers) to acquire practical skills in the form of an internship or mentoring and practice.

In active labour market policies the ESIF are a key source of funding, providing multiple options for strengthening the emphasis on education, measures for adapting people to changing labour market conditions or for the implementation of upskilling programmes. While the effects of education are measurable only in the longer term, it produces measurable effects in the form of a reduction in registered unemployment.

Analyses of infrastructure projects such as public/rental housing for keeping people in the region, or investment in infrastructure and services (road/social/health care), did not constitute the main scope of the survey, yet especially in the qualitative part these investments ranked high among the SMEs as conditions for the longer-term survival of their businesses.

According to Eurostat data (2019), as much as 50% of working young people in Slovakia still live with their parents. The European Union average is 35%, while Slovakia is the second-to-last in the EU. The construction of rental housing is supported by the amendment to the Act on the State Fund for Housing Development (ŠFRB) that will enter into force on 1 January 2020. It was prepared by the Ministry of Transport and Construction mainly with the aim to support labour mobility. Entry into the new segment was announced by Kooperativa a.s., Vienna Insurance Group. It wants to build up to 1500 rental apartments throughout Slovakia. It indicates improving conditions for various forms of public-private partnerships. Investments in transport infrastructure and social and health care are an integral part of the Action Plan for Upper Nitra Transformation and there are projects submitted or being prepared for submission through various operational programmes.

In Table 8 we map out needs and gaps, list categories of perceived needs and discuss options and alternatives in addressing selected areas using new and/or modified instruments.

**Table 8.** Operating environment of SMEs – key recommendations

SME need identified	ESIF measures in place	Follow-up/recommendations
Better education, training, coaching and other tools to improve the capability of the future labour force in the region	The main sources of support are currently the OP Human Resources (PA1, PA2, PA3 and PA5) and Integrated Regional Operational Programme (especially PA2).	The lack of human resources is a key challenge and dual education (in direct collaboration with SMEs) and significant investments in the life-long learning and upskilling programmes are areas in which support from the ESIF may provide important leverage. Using experience from the pilot project in Prešov in establishing direct collaboration among schools and employers is possible in the current PP and could be enlarged in the upcoming period. Firms in the region do not optimally utilise opportunities provided by ESIF (see analyses of projects from OP HR) and it indicates the need for measures with which to increase absorption capacity.
Targeted measures to keep employees in the category of 50+ in work and to train them regarding new technology and skills demands	The main sources of support are currently the OP Human Resources (PA1 and PA3) and Integrated Regional Operational Programme (PA2).	Working with the demographic category of 50+ is one of the main challenges for the short- and mid-term perspective of the local labour market. Training and coaching programmes should target both people who are employed as well as those who have lost employment. Firms in the region do not optimally utilise opportunities provided by ESIF (see analyses of projects from OP HR) and it indicates the need for measures with which to increase absorption capacity. Slovakia, in comparison to other EU28 countries, shows low participation in life-long learning activities, and significant investments should also be made in establishing a functional system of life-long learning opportunities.
Public/rental housing projects for keeping people in the region	There is the State Fund for Housing Development (ŠFRB) and initiatives of the private sector, as well as financial instruments distributed under the so-called Investment Aid for Registered Social Enterprises.	It would be optimal to get support for this infrastructure into the new programming period of 2021–2027 and (together with local municipalities and companies) firstly model optimal utilisation of the available resources and location of the housing. There is a basis emerging for the development of public–private partnerships in the construction and operation of the housing. Through the adoption of the Act on social economy and social enterprises, the rental housing for low income moved also among the key activities of the emerging social enterprises sector in Slovakia and the social enterprises active in the sector of housing are eligible for tailor-made financial instrument development by SIH.
Investment in road and social/health care infrastructure	There are different projects under consideration, prepared, submitted or already implemented by the municipalities and other stakeholders.	There are various direct and indirect effects of better infrastructure on the local economy, the labour market and, last but not least, the present and future labour force that are crucial for short- and longer-term competitiveness of the small and medium-sized enterprises. Transformation of Upper Nitra may provide a “window of opportunity” regarding how to attract investments and transform the region into a model also for the other parts of the country.

#### 5.4. SME AND STRUCTURAL/ADMINISTRATIVE BARRIERS TO ESIF

The ESIF are of key importance for the country in many respects: as a leverage for catching up with more advanced countries, support for comprehensive approaches built upon analyses and planning, a tool for the implementation of development strategies, and (last but not least) a source of innovative and experimental approaches.

However, in reality, many initiatives and projects face the rigidity of procedures and the excessive focus on administrative compliance, and procedures are tedious and often discouraging (See Chapter 4 for more details). As the outcome, innovative approaches are encouraged, albeit extremely complicated to implement. The auditing is significantly oriented towards process control without the ability to perceive the needs of individual projects. As we analyse and describe in the analytical part of the report, although progress has been made and there are increased capacities of technical assistance, problem remains with its quality. A lack of qualified technical assistance many SMEs indicated as a substantial problem, especially with respect to procurement procedures.

Based on the qualitative part of the survey with SME representatives, as well as with experts from managing authorities and other governmental and non-governmental bodies, we list here key areas perceived to be a bottleneck for better utilisation of the ESIF resources:

- *The perception of the ESI Funds is associated with a high level of administrative burden, a low degree of flexibility, and lengthy processes;*
- *A substantial administrative burden; requirements are unclear and place upon applicants demands that are difficult to meet;*
- *The rigidity of regulations: complicated procedures of tenders, as well as strict interpretation of the state aid rules;*
- *A prolonged process and unforeseen changes in the implementation process;*
- *Procurement limits and demands;*
- *Sensitivity of declarations/provisions of new job creation in SMEs;*
- *Commercial services and consultancy companies;*
- *Quality of the technical support;*
- *Access to information and involvement of SMEs/stakeholders.*

All of the aforementioned areas are not specific to Upper Nitra, but we touch here upon the more general problem of ESIF management in Slovakia. According to the evaluation report of the progress made in the implementation of the Partnership Agreement<sup>27</sup>, the total rate of certified spending by operational programmes (OP) and the Rural Development Programme (RDP) was 19.3% (as of 31 December 2018). The ITMS data indicate diverse levels of spending rates for specific OP. The highest spending rates were reported by the Operational Programme Integrated Infrastructure (30.5%), the Operational Programme Technical Assistance (34.4%) and the Rural Development Programme (37.6%). A medium-high spending rate was reported for the Operational Programme Human Resources (23.3%).

---

<sup>27</sup> Deputy Prime Minister's Office for Investments and Informatization of the Slovak Republic: *Evaluation of the progress made in the implementation of the Partnership Agreement as of 31 December 2018*, Final Report 2019.

Low spending rates were reported for the Operational Programme Fisheries (4.2%), the Operational Programme Research & Innovation (9.6%), the Integrated Regional Operational Programme (12.1%), the Operational Programme Efficient Public Administration (14.5%) and the Operational Programme Quality of Environment (16.1%).

Given the fact that we are approaching the end of the programming period, these data indicate some serious problems in ESIF management and implementation.<sup>28</sup> In Table 9 we map out needs and gaps in the structural and administrative barriers to ESIF from the perspective of SMEs.

---

<sup>28</sup> The data are from December 31, 2018 and given the experience from the previous programming periods, the level of contracting and implementation of projects will most likely increase towards the end.



**Table 9.** Structural and administrative barriers to ESIF from the perspective of SMEs

Structural/administrative barriers	Impact and implications	Follow-up/recommendations
The perception of the ESI Funds is associated with a high level of administrative burden, a low degree of flexibility, and lengthy processes	There is an increasing level of mistrust among potential beneficiaries from the SMEs. This is reflected in a declining interest as reflected by the number of applications, as well as the low rate of contracting of demand-oriented projects.	The challenge for the near future lies in restoring lost confidence in the ESIF as an effective and targeted aid instrument for all types of potential beneficiaries among the SMEs. This can also be achieved through the creation of new administrative processes or by involving non-public entities in the administration of assistance. The use of assistance through financial instruments may also contribute to improvements.
Substantial administrative burden; requirements are unclear and place upon applicants demands that are difficult to meet	SMEs are reluctant to apply; especially for smaller enterprises, administration is a strong barrier — technical assistance is reportedly weak (reportedly, possible applicants cannot obtain targeted information and explanations).	There should be a combination of small grants through MAS, enlargement of the voucher system, and other user-friendly services for SMEs; improving the flexibility of implementing instruments, assessment, and a reduction in the rigidity of regulations; and better training and evaluation for administrators/clerks at first contact and those working for regional ESIF information centres.
The rigidity of regulations: complicated procedures of tenders, as well as strict interpretation of the state aid rules	Needing to conform to the original project details rigidly required by the authority (while circumstances continue to change) limits the implementation of projects and (due to the application of <i>de minimis</i> schemes) limits the absorption capacities.	The auditing is significantly oriented towards process control without the ability to perceive the needs of individual projects. These would require reassessment of the procedures and more targeted approaches. There should be a re-evaluation of the competitiveness principles and the provision of state aid and adjusting to changes, as well as an application of rules allowing for better adaptation to the local context.
A prolonged process and unforeseen changes in the implementation process	There is an increasing cost for applicants (need to update outdated documents and change cost estimations based on inflation and market prices), with the lengthy evaluation processes often outdating the needs of the applicants.	A shorter and faster process of decision making would improve interest in the ESIF; improving time management of the process would positively influence the image of the funds and the interest in participation.
Procurement limits and demands	Procurement has been indicated as the reason as to why SMEs cancelled participation in the ESIF.	There should be simplification of procedures and technical assistance with procurement, as well as improving the technical capacities and skills of the administrators at all levels to assist SMEs in the process. Simplified procedures linked to the level of co-financing have already been put in place by OP R&I (if an SME decides upon 50% co-financing, it undergoes

		a simple procedure), and procedures for IROP/RDP assistance implemented through the Local Action Group (MAS) are reportedly too complicated, especially for micro-enterprises. The Strategic Partnership on Public Procurement (signed in 2018 by Public Procurement Office, DG REGIO and DG GROW is a step forward and foreseen opening PP offices in all 8 self-governing regions should improve local capacities. It would require to secure high standards of the advisory/capacity building services at the local level and specific focus on Upper Nitra.
Sensitivity of declarations/provisions of new job creation in SMEs	Attempts to condition ESIF upon the employment of new persons (in most cases, those who are most distant from the labour market) as part of ESIF contracts is highly problematic for SMEs.	This provision was already cancelled in a number of calls, but was reported as being highly problematic in the past. It points out the sensitivity of attempts to stimulate employment in SMEs through the conditionality of ESIF.
Commercial services and consultancy companies	Under the current system, SMEs are dependent on outside capacities which are often expensive (and only bigger companies can afford them) and negatively influence perception of ESIF	There should be an enhancement of assessable and capable technical assistance paid by public resources; Information and Advisory Centres in self-governing regions are a step in the right direction, but would need to improve their capacities.
Quality of the technical support	Formal and superficial technical support discourages potential applicants, especially from micro-/small enterprises that do not reach for consultancy services.	A common experience reported is the lack of targeted and valid responses to the questions raised by SMEs in the process of application and/or implementation (e.g. when they ask questions regarding specific calls and implementation procedures, they are directed to manuals and cannot obtain guidance from the authorities). There should be an enhancement of technical assistance, as well as improving the quality of advisory services (including those provided by Information and Advisory Centres in self-governing regions). The provision of technical assistance at the regional level is a step in a good direction, but the system would need in-depth methodological guidance, accountability and capacity building from the assistance providers.
Access to information and	While there are an increasing number of information activities declared, the pool of SMEs informed seems to be limited.	There should be improvement to the databases of SMEs and targeted information related to specific calls, as well as improving the dissemination of information on successful applications.  To avoid preferential treatment, authorities could create Question and Answer section on a web page, where requests/questions from SMEs and other stakeholders are (anonymously) posted and officially approved and valid answers are transparently displayed to all stakeholders.

<p>Local capacities and involvement of SMEs/stakeholders</p>	<p>The region is fragmented and besides top-down approach, there is a need for bottom up mobilisation.</p>	<p>Local capacities would be a key to utilise opportunities. The fragmented regions should build coordinated approach among the local municipalities, business associations and education sector.</p> <p>Moreover, there should be involvement of non-profit organisations; for example, activities of NGO Friends of the Earth/CEPA are positive examples of how to mobilise the local community (not only) of SMEs and, through presentations and discussions, motivate local stakeholders. These types of regional public–private partnerships could be supported also through ESIF.</p>
--	--	---

## 5.5. ALTERNATIVE FRAMEWORK PROJECTS FOR THE REGION

In this chapter we provide four examples of regional frameworks and/or strategic projects. The examples outlined are generated based on the analyses of the SME needs in Upper Nitra, and are building upon the experience of other EU countries with respect to using ESIF for regional development and/or the coal mining transition. The aim is to stimulate discussion surrounding the alternatives for addressing a broader spectrum of identified problems, as well as food for thought regarding approaches to the region-specific projects.

### ***Example 1. A strategic project focusing on brain drain***

Working title: *Keep the brains in and attract new ones*

A model of a framework/strategic project focused on retaining local talents and attracting people from outside (locals who have left as well as others who are interested in moving into the region).

There are a series of initiatives aimed at regaining citizens and attracting newcomers. Potential focus, scope and activities:<sup>29</sup>

- Attracting new and regaining business-making capacities: develop a scheme for providing grants of EUR 10,000–30,000/person to potential entrepreneurs residing abroad/in other part of the country for the creation of innovative start-ups within the region.<sup>30</sup> The entrepreneurs would need to qualify for this assistance based on demanding, but clear and transparent criteria.
- Networking: organisation of regional events focused on people who had migrated abroad and then returned/moved to the region. Providing information on housing, real estates on the market, and practical information on kindergartens, schools and practical issues.
- Mitigating the brain drain effects by providing young entrepreneurs with grants, allowances or other incentives to open start-ups in the region, fostering entrepreneurship and economic growth locally, as well as preventing the leave of talents.
- Training programmes aimed at individual mentoring support for businesses. This could support core skills and foster the development and implementation of business ideas.
- Building partnerships with local enterprises and other stakeholders for the development of a strategy designed to achieve common goals such as giving young locals the possibility of building their future in their native town.
- Special modules focused on female entrepreneurs: creating a platform on which they could share their business experiences and ideas, creating regional female communities who share an attachment to the region of origin as well as the desire to contribute innovation to the regional economy, thus becoming inspiring examples for other women.<sup>31</sup>

---

<sup>29</sup> We build here upon the mapping and analyses of successful projects from the EU countries compiled in the report: Simona Cavallini et al. 2018. *Addressing brain drain: The local and regional dimension*. doi:10.2863/280544.

<sup>30</sup> Inspired by Umbria (IT), ESF 2007-2013, axis V, Transnational and Interregional Actions.

<sup>31</sup> Successfully tested in the ERDF project led by Saxony-Anhalt (DE).

### **Example 2. Join project of an innovation centre**

Working title: *Provide space and coaching to boost local entrepreneurship in regionally based innovation centre*

A model of a framework/strategic project focused on creating/building space managed by experienced staff dedicated to capacity development of the SME sector in Upper Nitra.

There are a series of initiatives aimed at regaining citizens and attracting newcomers. Potential focus, scope and activities:<sup>32</sup>

- An implementation study building upon local conditions and foreign and domestic experience.
- The creation of a self-governing system for the cluster, board and procedures based on a local governance structure ensuring long-term development of the centre (e.g. association of legal entities), including a model of long-term financing and a system of recruitment and assessment of staff.
- Developing alternative/attractive space providing bases for activities and attracting people from the region and from outside of the region.
- Building an entrepreneurial ecosystem focused on networking, support to SMEs, and innovations.
- Providing space for co-working (a space in which workers from different companies share an office space, as a means of promoting synergies, fostering collaboration and, last but not least, allowing cost savings and convenience through the use of common infrastructure).

### **Example 3. Focusing on brownfields**

Working title: *Using buildings from the past for future growth*

A model of a framework/strategic project focused on creating/building space available for the SME sector in Upper Nitra.

There are a series of steps aimed at renovating already existing buildings and bringing them to the new purpose. Potential focus, scope and activities:<sup>33</sup>

- Identification of brownfields in the region with the potential for development into commercial space. These could include former mining premises, abandoned buildings of cooperative farms, and various premises of municipalities.
- Assessing the potential of the premises for commercial purposes and linking the space with people (start-ups, local entrepreneurs, attracting people from outside of the region).

---

<sup>32</sup> Inspired by approaches in Brno and Ostrava (CR).

<sup>33</sup> An approach focused on the regeneration of brownfields in coal regions in transition through ESIF has been successfully implemented in the Czech Republic.

- Tailoring a scheme for financing projects using ESIF, focusing specifically on entrepreneurs in selected fields in which a lack of premises is identified as a bottleneck for business (e.g. agriculture and food processing, greenhouses, slaughterhouses).
- Linking available space with other programmes and training, focusing on synergies with innovation centres, training projects or social entrepreneurs.

#### ***Example 4. Opening new opportunities and the development of local SME capacities***

*Working title: Using the temporary measure of onsite technical assistance for improving the operating environment of SMEs, the identification of new opportunities in business/services and providing targeted technical assistance to SMEs in ESIF*

There are a series of steps aimed at onsite technical assistance, supporting projects in improving the operating environment of SMEs and the identification of new opportunities in business and services. Potential focus, scope and activities:

- Establishing a regional hub of technical assistance as a temporary measure during the transformation of the region. This could include partnerships between local municipalities (premises) and technical assistance provided by ESIF (funding).
- The regional hub of technical assistance would not directly help with project development for individual entities, but would focus on organising training and workshops for interested SMEs, related to either open or foreseen calls.<sup>34</sup>
- The hub would identify and promote new emerging areas of entrepreneurship (e.g. in the circular economy, Green Action Plan for SMEs, social enterprises) and, in collaboration with ESIG management, participate in the preparation of dedicated calls and/or temporary affirmative actions for local SMEs.
- The hub would support activities in improving the operating environment of SMEs and fostering new potential business and service opportunities, e.g. regional strategies and planning for energy/green enterprises and social enterprises. The first refer to the establishment of regional sustainable energy centres focusing on regional and local low-carbon climate adaptation strategies. The hub would facilitate methodological and expert support for the introduction of systematic energy/climate planning, leading to the development of new business and service opportunities in climate change adaptation, the circular economy and waste management, or industrial ecology. The second stream refer to methodological and expert support for the development of structural conditions and capacity building for the promotion and establishment of social enterprises in the region.

#### ***Example 5. Decarbonisation at a regional level and clean energy transition***

*Working title: Using the momentum of coal phase out for comprehensive project of energy transition in the region, with specific focus on SMEs.*

Cost of energy is one of key identified problems in SMEs competitiveness. According to statistics, industrial customers in Slovakia in the lowest category with annual consumption of 500 to 2,000 MWh

---

<sup>34</sup> In accordance with the state aid measures and conditions.

pay the highest prices of electricity (excluding taxes) within the V4 region, ie. 104.2 € / MWh.<sup>35</sup>  
Potential focus, scope and activities:

- Development of comprehensive energy transition plan, focusing whole region and combining planning, capacity building with innovative approaches to energy production and consumption.
- Addressing fragmentation of local approaches, the project could bring together key local stakeholders including industry and services. There is potential for exploring cogeneration principles, industrial ecology concept (i.e., in Nováky industrial hub) and in decentralisation of the energy production and consumption.

---

<sup>35</sup> Quarterly Report on European Electricity Markets, European Commission, Directorate-General for Energy, Market Observatory for Energy.

## 5.6. TARGETED INTERVENTIONS: ALTERNATIVES

The current programming period is coming to its end, although there are opportunities to use the substantial amount of resources still available. Considering the timing of the mine closure, the key challenge would lie in the upcoming programming period of 2021–2027. In the following part we outline and discuss five potential approaches to the current and upcoming period:

<p><b>Targeted call limited to the SMEs operating in the region:</b> in the form of defining this region as a specific region and a special target for ESIF measures (e.g. conversion region or structurally disadvantaged region). The first step in this direction is a call under preparation by the Ministry of Economy, using a <i>de minimis</i> scheme for the support of SMEs. There is the potential to extend this approach also to other areas, specifically targeting operating environments and improving situations with human resources and technical infrastructure (e.g. entrepreneurial incubators, social housing).</p>	<p><b>Pros:</b> a relatively simple approach, the possibility to use already available funds in the current programming period, experience with this type of assistance, and direct impact on the SMEs.</p> <p><b>Cons:</b> structural barriers with administration/procedures, investment in new machinery/technologies often leads to a decrease in the demand for labour, the application of a <i>de minimis</i> scheme across the majority of open calls also decreases the absorption capacity of the allocated resources (<i>de minimis</i> is part of the state aid and limits the total amount of assistance per individual entity).</p>
<p><b>Preferential treatment for the regional SMEs in general calls:</b> in the form of special treatment in the selection process or introducing affirmative measures into decision making (e.g. more points for activities conducted in the area). Some of the areas outlined for support to SMEs and their operating environments are subject to general support in Slovakia.</p>	<p><b>Pros:</b> a relatively simple approach, the possibility to use already available funds in the current programming period, improving the chances of regional entities in the evaluation and selection process could help in the transformation.</p> <p><b>Cons:</b> the preferential treatment must be approved by the Monitoring Committee of the respective OP, which may require additional time, structural barriers with administration/procedures, investment in new machinery/technologies often leads to a decrease in the demand for labour, the application of a <i>de minimis</i> scheme across the majority of open calls also decreases the absorption capacity of the allocated resources (<i>de minimis</i> is part of the state aid and limits the total amount of assistance per individual entity).</p>



<p><b>Special axis/measure focused on the transformation of Upper Nitra:</b> similar to a special axis used in the past for the City of Culture 2013 (Košice), develop a framework approach addressing the region as such, with a focus on the improvement of the external and internal operating environments of SMEs. A single call — open to SMEs, municipalities and NGOs — aimed at one common direction of accelerating the transformation of the region vis-à-vis the gradual process of the mine closure.</p>	<p><b>Pros:</b> the possibility to support transformation in a holistic way generates interlinked projects that reinforce each other.</p>
	<p><b>Cons:</b> more complicated for programming, would require a cross-funding approach in axis financing, a well-defined common target of the call, the generation of a sufficient number of projects would require better local coordination, perhaps in the form of joint body/secretarial coordination and stimulation of individual stakeholders or in the form of a new intermediary body located in the target region.</p>

<p><b>Allocate an agreed percentage of the total financial assistance for the 2021–2027 period on a level of the new Partnership Agreement:</b> a percentage dedicated specifically to projects implemented in Upper Nitra could be binding and motivating for individual operational programmes and would stimulate focus on the region.</p>	<p><b>Pros:</b> a clear and unambiguous signal to the region, stimulation for managing authorities of relevant OPs to work with the number and support the process, accountability.</p>
	<p><b>Cons:</b> more complicated for programming of the relevant OPs, difficult to estimate challenging yet realistic percentage.</p>

<p><b>Strategic project:</b> using a foreseen instrument of strategic projects (new programming period of 2021–2027) and designing and implementing projects that would combine sources from various operational programmes while addressing simultaneously the key structural problems in Upper Nitra.</p>	<p><b>Pros:</b> if well targeted (e.g. human resources for SMEs, infrastructure development) and with strong regional cooperation, leadership and co-ownership, it may provide advancement in the selected area.</p>
	<p><b>Cons:</b> an unclear format (thus far) with high demand on well-targeting outputs, requiring strong managerial coordination and cross-ministerial cooperation, administrative barriers may be too complicated.</p>

## 6. CONCLUSIONS

There is increasing focus in the EU on regions in industrial transition. They are seen as the key for the overall transformation to green and social economy, while keeping prosperity and competitiveness of the EU. The regions all around the Europe face specific yet often similar challenges. These are related especially to a lack of appropriate skilled-base, high unit labour costs and deindustrialisation, which makes it difficult for them to harness fully the benefits of globalisation, technological change and the opportunities to a shift to a low-carbon/circular economy.<sup>36</sup>

A just, socially sensitive and low-carbon industrial transition in Upper Nitra would require a combination of investments in SMEs' operating and in internal environments. Besides, direct jobs in SMEs targeted by interventions could also stimulate indirect employment. A functioning and well-developed regional economy will be more resilient and able to accept potential shocks caused by mine closure.

Challenges ahead are significant. Among the most important we highlight in the conclusions following four: (i) Demographic change; (ii) Weak partnership and networking for SME development; (iii) Educational and training system; and (iv) Mis-match between intelligent specialisation and local SME structure.

The process of rapid ageing and brain drain limits development potential of the region. Demands on social and health service will grow. In a longer term it impacts financial governance. Less people living in the area means less municipal revenues, which also limit ESIF investment capabilities. Most of declining areas lose their inhabitants despite heavy effort to stop depopulation. A proper scaling of potential future ESIF projects (to adapt it to shrinking demand and to contain future liabilities) is therefore of importance.

There are examples of successful framework projects from other regions, improving local conditions for SME and providing added value for the sector. Some of them are outlined in the report. Yet as we also see, it is not only about the investments, but also about local capacities and local management. For instance, co-working spaces and business incubators are important, but one needs to keep infrastructural assets under control. (e.g. if too many infrastructural assets created – much of it remains empty and is financially unsustainable). Investments into infrastructure should be tightly connected with local managerial structures and soft measures (e.g. training providing, capacity building and other related activities).

First precondition for successful framework projects would be partnership and networking. However, analyses of the local conditions indicate rather weak networking. Municipalities and SMEs are not collaborating sufficiently. There is a small business incubator in Prievidza (not very visible) and there are meetings and exchanges of opinions, but there would be a need for a stronger institutional structure focused on R&D, creating and operating co-working spaces and business incubators on the regional level. Establishing a business support institution, focused on “one-stop shop for business” concept could be a step forward, requiring as a first step feasibility study.

Educational and training system is a bottleneck for the SME sector development. OECD point out, that the educational system in Slovakia is generally insufficiently focused on the acquisition of soft skills, such as the ability to work with others, share information, organise ones work, and communicate with, influence and manage others. Given the digital transformation and the growing use of robots, the

---

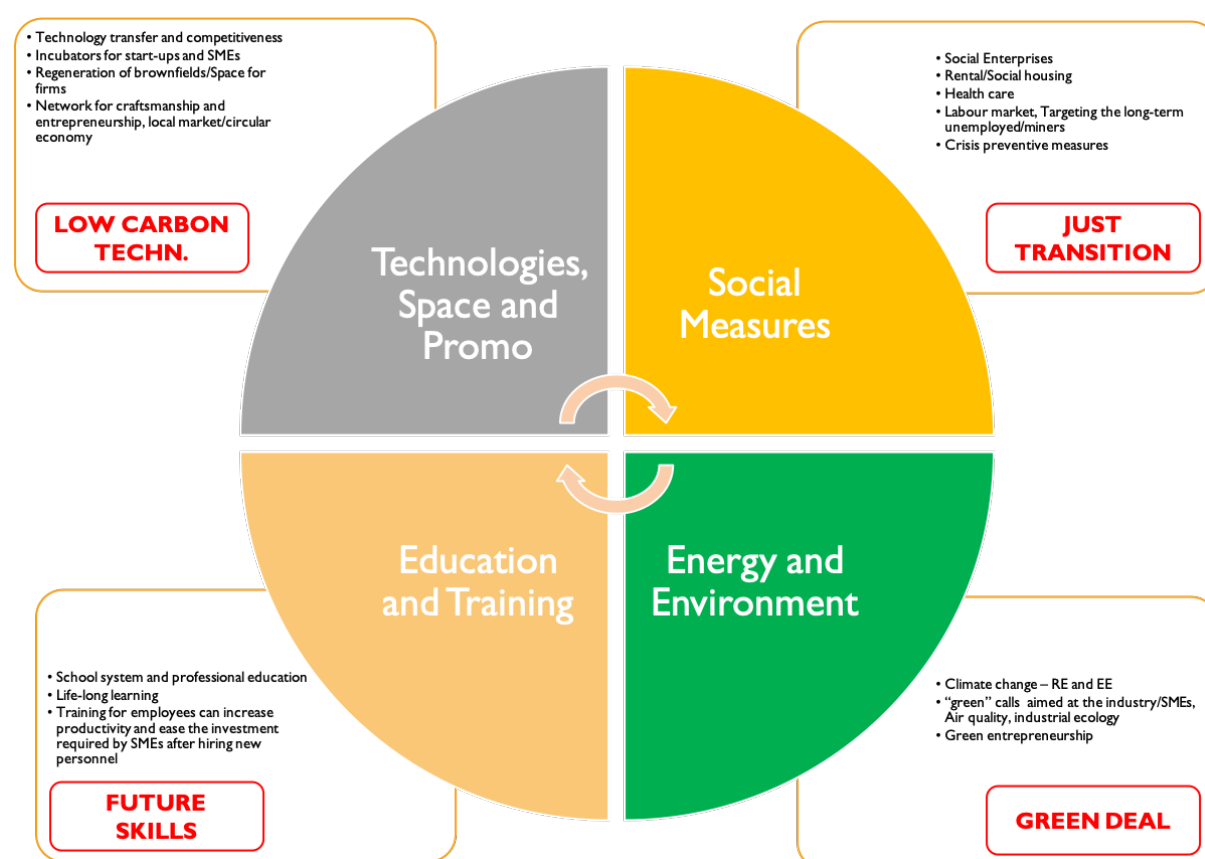
<sup>36</sup> See OECD Report (2019), Regions in Industrial Transition: Policies for People and Places. OECD Publishing: Paris. <https://doi.org/10.1787/c76ec2a1-en>

value of these social skills, which are required for tasks that cannot be automated or are complementary to cognitive skills, is rising.<sup>37</sup> OECD evaluation of the Slovak education system is basically in line with evaluations and perception of the SMEs in this report. Lack of skilled and flexible workforce already now and increasingly to the future represent key factor negatively influencing the performance and capacity of SMEs.

Last but not least, the analytical report points out to the mismatch between intelligent specialisation and local SME structure. Analyses indicates strong dependency of the local SMEs on areas outside regional intelligent specialisation. The industries that generate most of revenues stay outside regional intelligent specialisation, which opens the question if they should be supported (at least temporary in the process of the coal phasing out).

On the other hand, ambitious goals of the EU and Slovakia in carbon neutrality and Green Deal<sup>38</sup> would require substantial industrial transition also on the regional level. A comprehensive approach to the SMEs and their operating environment not only needs focus on competitiveness and jobs creation – it is also about quality of the growth and type of economy we are planning to build (Figure 12).

**Figure 12.** Comprehensive approach to the SMEs and their operating environment



<sup>37</sup> See OECD (2019), OECD Economic Surveys: Slovak Republic 2019, OECD Publishing, Paris. [https://doi.org/10.1787/eco\\_surveys-svk-2019-en](https://doi.org/10.1787/eco_surveys-svk-2019-en)

<sup>38</sup> Slovak Republic officially declared goal to reach carbon neutral by 2050.

A just, socially sensitive and low-carbon industrial transition in Upper Nitra is a matter of vision, combined with hard and soft measures. **Vision and Mobilisation** means, that besides top down policies of the EU and Slovak Republic, there is local co-ownership bottom up approach to formulation of needs.

One of the challenges in addressing the needs of SME sectors lies in the fact that while we speak here about Upper Nitra, in reality we deal with more or less connected municipalities with the central role of Prievidza, Nováky a Handlová and the more specific case of Partizánske with rather different structural conditions and compositions of SMEs. **Clear Leadership** in such a fragmented region is needed for coordination and utilisation of opportunities available. The issue of coordination and joint efforts on the regional level is crucial for improving the operating environment of SMEs. It would also limit the potential with respect to how much the region will be able to utilise some of the provisions available through special treatment in ESIF.

**Local Capacities** are key to develop strategic/framework projects. Last but not least, as the reports concludes in its analytical part, successful industrial transformation needs **inputs from the outside**. The focus is on real quality of the technical assistance as the key to support local capacity building, as well as to improving access to the information.

## 7. ANNEXES

## ANNEX 1. ACRONYMS

<b>ACB</b> Administrative Capacity Building	<b>NGO</b> Non-Governmental Organisation
<b>BAT</b> Best Available Techniques	<b>NUTS</b> Nomenclature of Territorial Units for Statistics
<b>BATNEEC</b> Best available techniques not entailing excessive costs	<b>OP</b> Operational Programme
<b>CBA</b> Cost Benefit Analyses	<b>OPAaRD</b> Operational Programme Agriculture and Rural Development
<b>EaSI</b> EU Programme for Employment and Social Innovation	<b>OPF</b> Operational Programme Fisheries
<b>EC</b> European Commission	<b>OPHR</b> Operational Programme Human Resources
<b>EFR</b> European Funding Research (Horizon 2020)	<b>OPII</b> Operational Programme Integrated Infrastructure
<b>EGF</b> European Globalisation Adjustment Fund	<b>OPR&amp;I</b> Operational Programme Research and Innovation
<b>EIA</b> Environmental Impact Assessment	<b>OPQE</b> Operational Programme Quality of Environment
<b>ESIF</b> European Structural and Investment Funds	<b>RES</b> Renewable Energy Source
<b>ENO</b> Power Plant Nováky	<b>RFCS</b> Research Fund for Coal and Steel
<b>ERDF</b> European Regional Development Fund	<b>RIS3</b> Research and Innovation Smart Specialisation Strategy
<b>ESF</b> European Social Fund	<b>R&amp;D</b> Research and Development
<b>EU</b> European Union	<b>SE</b> Slovenské Elektrárne (Slovak Electricity Comp.)
<b>HBP</b> Hornonitrianske bane Prievidza	<b>SME</b> Small and medium-sized enterprise
<b>HNR</b> Upper Nitra Region	<b>s.r.o.</b> Spoločnosť s ručením obmedzeným ("company with limited liability")
<b>ICT</b> Information and Communications Technology	<b>S3</b> Smart specialisation
<b>IN</b> Input	<b>TO</b> Thematic Objective
<b>IROP</b> Integrated Regional Operational Programme	<b>TPP</b> Thermal Power Plant
<b>JRC</b> Joint Research Centre	<b>URSO</b> The Regulatory Office for Network Industries (Úrad pre reguláciu strategických odvetví)
<b>KET</b> Key Enabling Technology	<b>WWTP</b> Waste Water Treatment Plant
<b>LIFE</b> (Integrated Projects)	
<b>NACE</b> Statistical classification of economic activities in the European Community	
<b>MC</b> Micro Enterprise	

## ANNEX 2. SMEs TURNOVER SHARES BY INDUSTRY IN THE UPPER NITRA REGION (%)

Branch/Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	Average 2013-2017	Ranking based on average 2013- 2017
Agriculture and forestry	3,60	2,82	3,51	3,05	8,61	6,79	7,34	7,43	4,44	6,92	3.
Energy and mining	6,14	9,12	3,25	9,42	11,30	4,89	6,18	5,18	2,72	6,06	6.
food	0,49	7,88	7,27	0,19	0,41	1,16	1,31	0,56	5,91	1,87	15.
Automobile industry	0,46	10,14	9,97	0,22	0,48	2,09	0,22	0,21	12,71	3,14	10.
Wood and paper	2,34	1,50	1,68	1,71	3,55	2,71	3,07	3,01	1,87	2,84	13.
Clothing and footwear	14,10	12,08	11,12	2,44	6,52	5,69	4,38	6,78	4,10	5,49	7.
electrical engineering	0,67	0,65	0,69	0,77	1,84	1,62	1,55	1,31	0,88	1,44	18.
Chemistry and plastics	23,44	26,02	23,83	2,73	5,86	20,16	9,07	5,48	16,80	11,47	2.
Metalworking and Metallurgy	2,93	3,00	2,68	52,02	7,57	6,40	7,46	7,73	4,94	6,82	4.
engineering	9,68	5,65	6,03	1,66	4,18	5,62	6,31	6,40	11,30	6,76	5.
Production - others	0,26	0,34	0,22	0,29	0,40	0,37	0,42	0,50	0,35	0,41	27.
Waste treatment	1,97	1,13	0,66	0,53	1,39	0,93	0,98	0,82	0,53	0,93	19.
construction	10,64	7,75	6,48	8,83	19,80	16,25	21,07	26,36	14,09	19,51	1.
wholesale	3,72	1,66	11,70	1,84	3,58	3,33	4,04	4,11	2,64	3,54	9.
Retail	1,55	0,82	1,58	0,83	1,72	1,38	1,65	1,50	1,00	1,45	17.
mediation	0,34	0,14	0,22	0,17	0,69	0,73	0,92	0,97	0,69	0,80	24.
Transport and logistics	5,22	2,63	2,82	2,32	4,45	4,21	6,34	5,30	4,40	4,94	8.
Tourism and gastro	1,05	0,62	0,71	0,90	2,07	2,10	2,24	2,11	1,40	1,98	14.
finance	0,16	0,09	0,04	0,19	0,36	0,29	0,27	0,29	0,22	0,29	28.
hazard	0,00	0,01	0,01	0,02	0,01	0,01	0,03	0,02	0,02	0,02	32.
Information technologies	0,47	0,24	0,18	0,30	0,91	0,85	0,97	1,00	0,64	0,87	22.
Media, publishers and culture	1,74	0,08	0,56	0,59	0,87	0,90	0,77	0,77	0,41	0,75	25.
real estate	1,81	0,93	1,40	1,85	3,59	3,05	3,05	3,24	2,19	3,03	12.
Development and testing	1,68	1,05	0,73	0,56	0,93	0,83	1,05	1,09	0,66	0,91	20.
Law, counseling and accounting	0,45	0,27	0,39	3,18	1,00	0,82	1,17	0,97	0,59	0,91	21.
Sale and maintenance of vehicles	0,21	0,14	0,21	0,37	0,77	0,62	0,75	0,71	0,51	0,67	26.
Designing and engineering	2,36	0,61	0,34	0,73	0,84	0,78	1,13	0,95	0,52	0,85	23.
advertising	0,16	0,05	0,05	0,09	0,22	0,28	0,32	0,33	0,26	0,28	29.
service	1,22	0,46	0,54	0,80	1,61	1,34	1,65	1,80	1,24	1,53	16.
Education and training	0,07	0,05	0,04	0,04	0,15	0,15	0,18	0,19	0,20	0,17	31.
telecommunications	0,14	0,10	0,07	0,08	0,26	0,24	0,24	0,25	0,16	0,23	30.
Government	-	-	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	33.
health service	0,93	1,97	1,00	1,28	4,05	3,40	3,87	2,61	1,62	3,11	11.
<b>Grand Total</b>	100	100	100	100	100	100	100	100	100	100	

Source: Finstat, 2019

### ANNEX 3. STRUCTURE AND PROFESSIONAL QUALIFICATIONS OF HBP EMPLOYMENT

Profession	Number
A mining machinery driver and loader operators	295
Staff working with explosives	182
Operators of welding and metalworking equipment	440
Drivers of mining locomotives	544
Electricians	305
Digging operators - engineers, pushers, explorers	50
Mine experts	8
Engineers, operating mining machinery and equipment	160
Rescue Station staff	75
Mine employees without specific qualifications	412
Crane, binders, motor vehicle drivers	205
Surface staff without specific qualifications	155
Operators at Nováky power plant	61
administration	125
<b>Together with mining and surface activities and support services</b>	<b>3017</b>
Metalworkers, milling machines, lathe operators	30
Welders, cutters, metals	25
Locksmiths	40
Drivers of mine trucks, crane, binders	9
other	86
<b>Together with the engineers</b>	<b>190</b>
Train drivers	14
Conveyor mine vehicle, drivers, vehicle combinations	13
Railway engineers and technicians, machine and equipment operators	33
Other staff	26
<b>Total rail transport</b>	<b>86</b>
Traffic	62
Heating sector	40
security	112
Agro - Fish Farm	109
Hotels and accommodation services	166
<b>Total off-mining services</b>	<b>765</b>
<b>Total HBP</b>	<b>3782</b>

Source: HBP a.s., upon request of the Deputy Prime Minister Office



**ANNEX 4. SMEs SUPPORTED IN 2007–2013 BY SF A KF IN UPPER NITRA (EUR)**

TIN and name of recipient	OP Compet.	OP Fish.	OP Env.	OP Empl.	OP Health	Total (EUR)	SME	NACE	District
35189479 - Patrik Kucka	154440					154440	M	56300 Hospitality services	Prievidza
40648401 - František Oboňa - MIFE	127514					127514	MC	47190 Other retail sale in non-specialized stores	Prievidza
43412581 - Július Kovács - FUTURE				31110		31110	MC	46190 Various goods brokering	Prievidza
31415474 - INCON, spol. s r.o.	322550					322550	M	22230 Manufacture of plastic products for the building industry	Prievidza
31419321 - Bioplant, s.r.o.		262456				262456	S	01240 Pomegranate fruit	Partizánske
31594689 - ARTRA s.r.o.	191268			176494		367762	M	15200 Manufacture of footwear	Partizánske
31619347 - VAVRO, spol. s r.o.				112355		112355	MC	55100 Hotel and similar accommodation	Prievidza
31622054 - PENTIMEX				14693		14693	MC	26510 Manufacture of instruments for measuring, testing and navigating	Prievidza
34146300 - WINTOPERK, s.r.o.	205155					205155	M	15200 Manufacture of footwear	Prievidza
35951737 - Geotim, s.r.o.				139537		139537	Canc.		NA
36002186 - KPN REAL, spol. s r.o.				125612		125612	S	25610 Treatment and coating of metals	NA
36054267 - HIRJAK - HARDWOOD, s.r.o.	118320					118320	S	16290 Manufacture of other products of wood; manufacture of cork, straw and wicker products	NA
36294098 - BELMONTKLIMA s.r.o.	115895					115895	Canc.		NA
36296937 - EPUR, spol. s r.o.	29135					29135	MC	15200 Manufacture of footwear	Partizánske
36298859 - BK PARKET, s.r.o.	20655					20655	M	16220 Floor parquet production	Prievidza
36303917 - CASTILL, s.r.o.	145753					145753	M	31090 Manufacture of other furniture	Prievidza

36305367 - SPORT HOTELING, spol. s r.o.				92550		92550	MC	55100 Hotel and similar accommodation	Prievidza
36307092 - GAZZA s.r.o.				126640		126640	MC	55100 Hotel and similar accommodation	Prievidza
36310280 - TESCO copiers				112113		112113	MC	85590 Other education i. n.	Prievidza
36311693 - Technické služby mesta Partizánske, spol			1359301			1359301	M	35300 Steam and cold air distribution services	Partizánske
36315133 - RYBHOS s.r.o.		16890				16890	MC	10200 Processing and preserving of fish, crustaceans and molluscs	Partizánske
36315303 - MAT-obaly, s. r.o.	145471					145471	M	22220 Manufacture of plastic packaging	Prievidza
36317471 - NyNa s. r. o.	79003					79003	M	14190 Manufacture of other wearing apparel and accessories	Prievidza
36318990 - VAŠA s.r.o.	374000					374000	M	46900 Non-specialized wholesale trade	Prievidza
36326381 - DREVITAL, s.r.o.	424320					424320	S	43320 Joinery work	Topoľčany
36331163 - SaarGummi Slovakia s.r.o.	1251310					1251310	BIG		NA
36333379 - MANUS-MED, s.r.o.					581738	581738	MC	86220 Special medical practice activities	Prievidza
36339865 - NEMOCNICA Handlová - 2. súkromná nemocnica					709770	709770	M	86100 Hospital activities	Prievidza
36517984 - BUS servis s.r.o.				46476		46476	S	33170 Repair and maintenance services of other transport equipment	Prievidza
36742619 - YADO s.r.o.	50964					50964	S	14120 Manufacture of workwear	Prievidza
36785156 - EUROPACK TECHNOLOGY s.r.o.	117388			15241		132629	Canc.		NA
36792942 - WENS DOOR s.r.o.	237126					237126	S	16231 Manufacture of builders' carpentry and joinery	Prievidza
36822604 - Alternative Energy			5235110			5235110	S		Bratislava
44160062 - CONTI engineering, s.r.o.	3516			22727		26243	MC	27900 Manufacture of	Partizánske

								other electrical equipment	
31409911 - VIPO a.s.	178438					178438	M	28990 Manufacture of other special-purpose machinery i. n.	Partizánske
31562175 - PORFIX - pórobetón, a.s.	845449					845449	M	23610 Manufacture of concrete products for construction purposes	Prievidza
31625657 - UNIPHARMA - 1. slovenská lekární					849361	849361	BIG		NA
34152024 - NOVESTA, a.s.				52617		52617	BIG		NA
36056006 - Stredoslovenská vodárenská spoločnosť a.s.			3518204			3518204	BIG		Banská Bystrica
36298972 - MV staving	638300					638300	M	41201 Construction of residential buildings	Prievidza
36345903 - ČAJKA BOJNICE, a.s.	392304					392304	MC	93110 Operation of sports facilities	Prievidza
<b>Total</b>	6168274	279346	10112615	1068167	2140868	19769270			NA

Source: Office of Deputy Prime Minister (OLAP Cube) and authors' computation. Note: allocations refer to contracted projects. NACE code by project beneficiary.2019.

## ANNEX 5. SHARES OF THE SME SECTOR BY AREA OF ACTIVITY (%)

	Partizánske					Prievidza					Partizánske	Prievidza
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	Average 2013-2017	
Agriculture and forestry	19,09	14,46	13,68	14,03	13,03	5,64	4,49	5,34	5,59	3,03	14,86	4,82
Energy and mining	3,55	5,09	5,19	5,44	4,87	13,50	4,83	6,49	5,11	2,37	4,83	6,46
food	0,52	0,35	0,53	0,87	0,78	0,38	1,40	1,56	0,47	6,75	0,61	2,11
Automobile industry	0,08	0,04	0,06	0,08	0,07	0,59	2,70	0,27	0,25	14,78	0,06	3,72
Wood and paper	5,93	3,09	3,24	3,38	2,97	2,88	2,60	3,02	2,90	1,68	3,72	2,62
Clothing and footwear	18,93	15,85	8,64	20,18	18,33	3,00	2,64	3,05	3,06	1,76	16,39	2,70
electrical engineering	3,50	3,02	2,93	2,00	2,14	1,37	1,20	1,12	1,12	0,68	2,72	1,10
Chemistry and plastics	7,12	19,78	21,53	7,43	8,61	5,50	20,28	5,16	4,93	18,14	12,89	10,80
Metalworking and Metallurgy	3,51	3,14	3,34	4,17	4,63	8,72	7,38	8,76	8,72	4,99	3,76	7,71
engineering	7,17	6,40	7,28	8,50	6,02	3,33	5,39	6,00	5,82	12,17	7,08	6,54
Production - others	1,14	1,03	1,13	1,41	1,74	0,19	0,17	0,20	0,25	0,12	1,29	0,19
Waste treatment	2,66	2,09	2,26	2,12	2,24	1,03	0,58	0,57	0,46	0,24	2,27	0,58
Construction	6,11	7,06	8,92	8,57	10,35	23,69	19,00	24,88	31,29	14,71	8,20	22,72
wholesale	5,00	4,25	5,69	4,39	3,98	3,18	3,05	3,52	4,03	2,42	4,66	3,24
Retail	0,88	0,77	0,84	1,23	1,24	1,96	1,56	1,91	1,58	0,96	0,99	1,59
mediation	0,09	0,45	0,25	0,28	0,63	0,86	0,82	1,13	1,16	0,70	0,34	0,93
Transport and logistics	3,31	2,38	3,14	4,15	5,77	4,77	4,75	7,34	5,62	4,17	3,75	5,33
Tourism and gastro	0,86	1,05	1,07	0,77	1,29	2,41	2,42	2,60	2,48	1,42	1,01	2,27
finance	0,13	0,13	0,10	0,20	0,19	0,43	0,34	0,33	0,32	0,22	0,15	0,33
hazard	-	-	-	-	-	0,01	0,02	0,04	0,03	0,02	-	0,02
Information technologies	0,26	0,38	0,57	0,81	0,77	1,10	0,99	1,09	1,06	0,61	0,56	0,97
Media, publishers and culture	0,61	1,15	0,48	0,42	0,29	0,94	0,83	0,86	0,87	0,44	0,59	0,79
real estate	3,49	2,56	2,50	2,43	2,63	3,62	3,20	3,22	3,46	2,12	2,72	3,13
Development and testing	0,16	0,21	0,19	0,24	0,19	1,15	1,01	1,32	1,32	0,74	0,20	1,11
Law, counseling and accounting	0,45	0,48	0,55	0,59	0,68	1,15	0,92	1,36	1,08	0,58	0,55	1,02
Sale and maintenance of vehicles	1,72	1,34	1,57	1,68	1,75	0,50	0,41	0,49	0,44	0,31	1,61	0,43
Designing and engineering	0,32	0,25	0,36	0,29	0,25	0,99	0,95	1,37	1,13	0,57	0,29	1,00
advertising	0,24	0,18	0,21	0,17	0,31	0,21	0,31	0,36	0,37	0,25	0,22	0,30
service	0,83	0,76	0,82	0,96	1,16	1,83	1,52	1,92	2,04	1,25	0,91	1,71
Education and training	0,09	0,01	0,01	0,03	0,03	0,17	0,19	0,23	0,24	0,22	0,03	0,21
telecommunications	0,46	0,37	0,38	0,43	0,43	0,21	0,20	0,20	0,20	0,11	0,41	0,18
Government	-	-	0,01	0,01	0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,00
health service	1,78	1,86	2,54	2,74	2,64	4,69	3,87	4,29	2,58	1,45	2,31	3,37
<b>Grand Total</b>	100	100	100	100	100	100	100	100	100	100	100	100

Source: Finstat, 2019

## ANNEX 6. INDICATIVE VALUE OF ALTMAN'S Z-SCORES FOR BUSINESSES IN THE UPPER NITRA REGION (2017)

Section NACE Rev. 2	počet firiem v odvetví				%			prosperujúce/ neprosperujúce
	Not prospering	Average	Prospering	total	Not prospering	Average	Prospering	
(A) Agriculture, forestry and fishing	35	27	26	88	40	31	30	0,74
(B) Mining and quarrying	5		4	9	56	-	44	0,80
(C) Manufacturing	125	104	196	425	29	24	46	1,57
(D) Electricity, gas, steam and air conditioning supply	11	2	3	16	69	13	19	0,27
(E) Water supply, sewerage, waste management and remediation activities	8	7	12	27	30	26	44	1,50
(F) Construction	97	104	202	403	24	26	50	2,08
(G) Wholesale and retail trade; repair of motor vehicles and motorcycles	347	216	376	939	37	23	40	1,08
(H) Transportation and storage	47	34	52	133	35	26	39	1,11
(I) Accommodation and food service activities	66	20	68	154	43	13	44	1,03
(J) Information and communication	31	32	95	158	20	20	60	3,06
(K) Financial and insurance activities	10	6	32	48	21	13	67	3,20
(L) Real estate activities	120	44	65	229	52	19	28	0,54
(M) Professional, scientific and technical activities	71	82	216	369	19	22	59	3,04
(N) Administrative and support service activities	54	24	85	163	33	15	52	1,57
(O) Public administration and defence; compulsory social security	2	2	9	13	15	15	69	4,50
(P) Education	7	6	17	30	23	20	57	2,43
(Q) Human health and social work activities	18	45	115	178	10	25	65	6,39
(R) Arts, entertainment and recreation	15	15	18	48	31	31	38	1,20
(S) Other service activities	19	9	17	45	42	20	38	0,89
<b>Total</b>	<b>1088</b>	<b>779</b>	<b>1608</b>	<b>3475</b>	<b>31</b>	<b>22</b>	<b>46</b>	<b>1,48</b>

Source: Finstat (2019)

## ANNEX 7. SALES BY INDUSTRY: GROWTH \* AND SHARE

Section NACE Rev. 2	Average annual growth rate of sales 2016-2017	Percentage of the total in% (2015-2017 average)	number of SMEs in the industry
(A) Agriculture, forestry and fishing	3,79	8,37	65
(B) Mining and quarrying	-26,96	1,55	6
(C) Manufacturing	5,92	38,58	322
(D) Electricity, gas, steam and air conditioning supply	0,84	4,25	14
(E) Water supply, sewerage, waste management and remediation activities	0,26	1,08	18
(F) Construction	1,17	15,66	274
(G) Wholesale and retail trade; repair of motor vehicles and motorcycles	9,34	7,70	469
(H) Transportation and storage	10,79	6,02	94
(I) Accommodation and food service activities	10,69	1,23	82
(J) Information and communication	0,04	1,19	118
(K) Financial and insurance activities	10,83	0,16	24
(L) Real estate activities	9,04	3,54	171
(M) Professional, scientific and technical activities	-0,27	3,76	275
(N) Administrative and support service activities	4,15	2,82	100
(O) Public administration and defence; compulsory social security	4,65	0,23	13
(P) Education	30,36	0,27	23
(Q) Human health and social work activities	3,73	2,90	162
(R) Arts, entertainment and recreation	11,43	0,37	33
(S) Other service activities	3,23	0,32	33
<b>Total</b>	<b>4,62</b>	<b>100,00</b>	<b>2296</b>
<b>Median</b>	<b>4,15</b>	<b>2,82</b>	

Source: Finstat (2019)

Note: growth is expressed as the average annual rate in 2015–2017

## ANNEX 8. MICRO-ENTERPRISES BY INDUSTRY IN THE UPPER NITRA REGION

Section NACE Rev. 2	No of Micro Enterprises (average 2013-2017)			% micro enterprises (average 2013-2017)		
	HN	Partizánske	Prievidza	HN	Partizánske	Prievidza
(A) Agriculture, forestry and fishing	66	15	51	2	2	2
(B) Mining and quarrying	6	1	5	0	0	0
(C) Manufacturing	331	92	239	10	12	10
(D) Electricity, gas, steam and air conditioning supply	10	4	6	0	1	0
(E) Water supply, sewerage, waste management and remediation activities	20	7	14	1	1	1
(F) Construction	369	84	285	11	11	11
(G) Wholesale and retail trade; repair of motor vehicles and motorcycles	926	243	683	29	33	27
(H) Transportation and storage	114	28	86	4	4	3
(I) Accommodation and food service activities	142	25	117	4	3	5
(J) Information and communication	153	30	123	5	4	5
(K) Financial and insurance activities	44	6	38	1	1	2
(L) Real estate activities	215	44	171	7	6	7
(M) Professional, scientific and technical activities	366	69	297	11	9	12
(N) Administrative and support service activities	165	31	134	5	4	5
(O) Public administration and defence; compulsory social security	11	2	11	0	0	0
(P) Education	29	3	26	1	0	1
(Q) Human health and social work activities	166	42	124	5	6	5
(R) Arts, entertainment and recreation	49	6	43	2	1	2
(S) Other service activities	47	9	38	1	1	2
<b>Total</b>	<b>3229</b>	<b>739</b>	<b>2491</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Finstat (2019)

## ANNEX 9. MICRO-ENTERPRISES – SHARE OF INDUSTRY REVENUES (% , AVERAGE 2013–2017)

Section NACE Rev. 2	HN	Partizánske	Prievidza
(A) Agriculture, forestry and fishing	4%	2%	5%
(B) Mining and quarrying	2%	0%	2%
(C) Manufacturing	17%	23%	16%
(D) Electricity, gas, steam and air conditioning supply	1%	2%	1%
(E) Water supply, sewerage, waste management and remediation activities	1%	4%	1%
(F) Construction	19%	23%	18%
(G) Wholesale and retail trade; repair of motor vehicles and motorcycles	11%	13%	10%
(H) Transportation and storage	8%	5%	9%
(I) Accommodation and food service activities	3%	2%	3%
(J) Information and communication	4%	4%	3%
(K) Financial and insurance activities	1%	0%	1%
(L) Real estate activities	8%	8%	8%
(M) Professional, scientific and technical activities	7%	4%	7%
(N) Administrative and support service activities	6%	2%	7%
(O) Public administration and defence; compulsory social security	0%	0%	0%
(P) Education	1%	0%	1%
(Q) Human health and social work activities	7%	7%	7%
(R) Arts, entertainment and recreation	1%	1%	1%
(S) Other service activities	1%	1%	1%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: Finstat (2019)



## ANNEX 10. THE NUMBER OF SMEs IN SMART SPECIALISATION DOMAINS

	Average 2013-2017		
	HN	Partizánske	Prievidza
1-Cars for the 21st century	4	0	4
2-Industry for the 21st century	191	50	141
3-Digital Slovakia and Creative Industry	163	30	132
4-Healthy food and environment	98	29	69
5-Healthy population and medical technologies	167	42	125
Outside the domains of smart specialization	2917	668	2249
Total	3540	819	2721

Source: Finstat (2019)

