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SME and Entrepreneurship Policy in the Slovak Republic

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Foreword

This publication presents the report of the OECD country review of small and medium-sized enterprise (SME) and entrepreneurship policy in the Slovak Republic. It was prepared at the request of the Deputy Prime Minister and Minister of Finance of the Slovak Republic and undertaken in collaboration with the Ministry of Economy of the Slovak Republic. It forms part of the series of OECD Country Reviews on SME and Entrepreneurship Policy undertaken by the OECD Centre for Entrepreneurship, SMEs, Regions and Cities. In addition to the Slovak Republic, country reviews have covered Canada, Indonesia, Ireland, Israel, Italy, Kazakhstan, Mexico, Poland, the Russian Federation, Thailand and Vietnam.

The reviews provide a comprehensive assessment of SME and entrepreneurship policies and programmes in reviewed countries and hands-on policy advice to national governments and their partners. They are based on a standard methodology including a diagnostic questionnaire completed by national government authorities, fact-finding discussions between an OECD team and policy and business stakeholders, and a peer review session where representatives from OECD governments consider the report. The Slovak Republic review report was discussed by the OECD's Working Party on SMEs and Entrepreneurship in October 2020 and approved by written procedure in May 2021.

The country reviews typically include one or two thematic chapters on issues of special relevance for the reviewed country, as agreed between the OECD and the country concerned. This review has two thematic chapters, on SME digitalisation and inclusive entrepreneurship.

The report shows that the Slovak Republic has strong start-up rates, but an SME economy that is relatively weighted towards micro enterprises and individual entrepreneurs and with relatively low SME productivity rates compared with other OECD countries. Key challenges are therefore to stimulate growth and productivity gains in new and small enterprises.

The Slovak government has introduced important policy reforms to strengthen the environment for SME and entrepreneurship development. They include regulatory improvements such as the "one in-one out" or "one in-two out" rules for new regulation affecting SMEs and entrepreneurs, the creation of National Business Centres in each region to provide advice and consultancy, widening access to finance measures to expand loan guarantee and risk capital provision, and new approaches to involving SMEs in apprenticeship training.

This report takes stock of the recent policy developments and makes many further policy suggestions aimed at supporting small firm scale up, SME digitalisation, micro and service sector firm productivity growth, and greater SME innovation and participation in foreign markets. The recommendations span a variety of areas, such as better balancing tax costs between employment and self-employment, establishing integration hubs and portals for small business and entrepreneurship support and developing an online diagnostic tool to support SMEs with digitalisation.

Acknowledgements

This review was undertaken by the OECD Centre for Entrepreneurship, SMEs, Regions and Cities (CFE) led by Lamia Kamal-Chaoui, Director, at the request of the Deputy Prime Minister and Minister of Finance of the Slovak Republic and in co-operation with the Ministry of Economy of the Government of the Slovak Republic.

The study was managed and supervised by Jonathan Potter (OECD CFE) and coordinated by Kris Boschmans (OECD CFE), under the supervision of Céline Kauffmann (Head of the Entrepreneurship, SME and Tourism Division, CFE). The report was drafted by a team involving Jonathan Potter (OECD, CFE), Chapter 1; Lenka Wildnerova (OECD CFE), Chapters 2 and 3; Lois Stevenson (independent consultant), Chapter 4; Alasdair Reid (European Future Innovation System Centre), Chapter 5; Robert Huggins (Cardiff University), Chapter 6; Kris Boschmans (OECD CFE), Chapter 7; and Thomas Cooney (Technological University Dublin) and David Halabisky (OECD CFE), Chapter 8. The report was edited by Kris Boschmans and Jonathan Potter. Heather Mortimer Charoy, Assistant, CFE, provided project support.

Members of the OECD Working Party on SMEs and Entrepreneurship Steering Group for this review provided valuable input: Kármen Billo, Ministry for Innovation and Technology, Hungary; Ciarán McLoughlin, Department of Business, Enterprise and Innovation, Ireland; Mr. Murat Şükrü Soykan and Mr. Necati Günaydin, KOSGEB (Small and Medium Enterprises Development Organisation), Turkey; and Christopher Athey, Anders Jonsson, and Lyudmyla Tautiyeva, United Nations Economic Commission for Europe.

This report could not have been drafted without the support and continued engagement of key stakeholders from the Slovak Republic. Numerous individuals from government ministries and agencies, associations, universities, think thanks and other institutions provided vital information and feedback throughout the consultation and drafting process. Their assistance during the kick-off mission and study mission, the detailed information submitted through the government completed fact-finding questionnaire, and constructive comments on earlier draft versions of this report were crucial. Special thanks are reserved for Veronika Michalkova, Monika Maruniakova, and Vladimir Tanistrak of the Ministry of Economy, Slovak Republic. The authors are also grateful for the comments received from the OECD Secretariat, including from staff of the OECD Regulatory Policy Division.

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Abbreviations and acronyms

ACE	Aalto Center for Entrepreneurship (Finland)
ACORNS	Accelerating the Creation Of Rural Nascent Start-ups (Ireland)
AISC	Australian Industry and Skills Committee
ALMP	Active Labour Market Policy
ASBAS	Australian Small Business Advisory Services
AUD	Australian Dollar
AWS	Austria Wirtschaftsservice Gesellschaft
AYR	Association of Young Roma
BDS	Business Development Services
BERD	Business Expenditure on Research and Development
BIC	Business Innovation Centre
BMDW	Ministry of Digital and Economic Affairs (Austria)
BMVIT	Federal Ministry of Transport, Innovation and Technology (Austria)
BMWi	Federal Ministry for Economic Affairs and Energy (Germany)
BRC	Better Regulation Centre
CAD	Canadian Dollar
CAG	Community Action Group
CCB	Central Co-ordination Body
CCR	Cardiff Capital Region (United Kingdom)
CNC	Computer Numerically Controlled
CVT	Continuous Vocational Training
DIA	Digital Innovation Agency (Austria)
DIH	Digital Innovation Hub
DSL	Digital Subscriber Line
EC	European Commission
EDD	Entrepreneurship Development Department (Kazkahstan)
EEN	Enterprise Europe Network
EIB	European Investment Bank
EIF	European Investment Fund
EIT	European Institute of Innovation and Technology
ERDF	European Regional Development Fund
ESF	European Social Fund
ESIF	European Structural and Investment Funds
EU	European Union
EUR	Euro
FDI	Foreign Direct Investment
FFE	Federation of Finnish Enterprises (Finland)
FFG	Research Promotion Agency (Austria)
GBP	Great Britain Pound
GCSTI	Government Council or Science, Technology and Innovation
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation

GEM	Global Entrepreneurship Monitor
HEI	Higher Education Institution
HPSU	High-Potential Start-Up
ICT	Information and Communication Technology
IIB	International Investment Bank
IT	Information Technology
INNOINFO	Office for Innovation Information and Advice
IPO	Intellectual Property Office
ISIC	International Standard Industrial Classification
JCI	Junior Chamber International (Slovakia)
KET	Key Enabling Technology
KOBIGEL	SME Development Support Programme (Turkey)
KOSGEB	SME Development Agency (Turkey)
LEADER	Liaisons Entre Actions de Développement de l'Economie Rurale (France)
LEO	Local Enterprise Office (Ireland)
MESR	Ministry of Economy of the Slovak Republic
MLSAF	Ministry of Labour, Social Affairs and Family
MNE	Multinational Enterprise
MOESRS	Ministry Education, Science, Research and Sport
MPSVR	Ministry of Labour, Social Affairs and Family
MSME	Micro, small and medium sized enterprise
NADSME	National Agency for Small and Medium-Sized Enterprises
NBC	National Business Centre
NGO	Non Governmental Organisation
NHF	National Holding Fund
NSF	National Science Foundation (United States)
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organisation for Economic Cooperation and Development
OLAF	European Anti-Fraud Office
OP	Operational Programme
OP HR	Operational Programme Human Resources
OP II	Operational Programme Integrated Infrastructure
OP R&D	Operational Programme Research and Development
OPR&I	Operational Programme Research and Innovation
PIAAC	Programme for the International Assessment of Adult Competencies
PISA	Programme for International Student Assessment
POCE	Exporter Advice Centre
R&D	Research and Development
REDI	Roma Entrepreneurship Development Initiative
REDI	Regional Entrepreneurship and Development Index
RIC	Regional Innovation Centre
RIS3 SK	Research and Innovation Strategy for Smart Specialisation of the Slovak Republic
RPIC	Europe Enterprise Network Regional Advisory and Information Centres
SARIO	Slovak Investment and Trade Development Agency
SBA	Slovak Business Agency
SBAfE	Small Business Act for Europe
SBD	Small Business Deduction (Canada)
SBIC	Small Business Investment Company (USA)
SCCI	Slovak Chamber of Commerce and Industry
SSTI	Slovak Centre of Scientific and Technical Information
SEIS	Seed Enterprise Investment Scheme
SFI	Science Foundation Ireland
SGDB	Slovak Guarantee and Development Bank

SIEA	Slovak Innovation and Energy Agency
SIH	Slovak Investment Holding
SIOV	State Institute for Vocational Education
SME	Small and Medium-sized Enterprise
SRDA	Slovak Agency for the Support of Research and Development
SZRB	Slovak Guarantee and Development Bank
TEA	Total Early Stage Entrepreneurial Activity
TEC	Trade by Enterprise Characteristics
UAE	United Arab Emirates
VAT	Value Added Tax
VET	Vocational Education and Training
UNDP	United Nations Development Programme
USD	United States Dollar
UVO	Office for Public Procurement
ZPS	Entrepreneurs Association of Slovakia
ZMPS	Young Entrepreneurs Association of Slovakia

Basic statistics of the Slovak Republic

Basic statistics of the Slovak Republic, 2019 (Numbers in parentheses refer to the OECD average)					
LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million)	5.5		Population density per km² (2018)	113.3	(38.2)
Under 15 (%, 2018)	15.7	(17.7)	Life expectancy (years, 2018)	77.3	(80.1)
Over 65 (%, 2018)	15.8	(17.2)	Men	73.9	(77.5)
Foreign-born (%)	3.6		Women	80.8	(82.8)
Latest 5-year average growth (%, 2018)	0.14	(0.55)	Latest general election	Mar	2020
ECONOMY					
Gross domestic product (GDP)			GDP per capita (EUR)	17.2	
In current prices (billion USD)	105.7		Value added shares (%)		
In current prices (billion EUR)	90.2		Primary sector (OECD 2018)	2.8	(1.4)
Latest 5-year average real growth (%)	4.1	(2.3)	Industry including construction (OECD 2018)	28.7	(22.4)
Per capita (000 USD PPP)	31.3	(46.5)	Services	65.1	(69.6)
SMES AND ENTREPRENEURSHIP					
Share of employment by firm size (%) (2016)			Labour productivity firm size (thousand EUR) (2017)		
1-9 employees	42.0		1-9 employees	13	
10-19 employees	6.0		10-49 employees	24	
20-49 employees	8.0		50-249 employees	27	
50-249 employees	15.8		250 or more employees	38	
250 or more employees	28.2				
Enterprise birth rate (% of employer enterprises) (2017)	9.6		3-year survival rate of new employer enterprises (%) (2017)	59	
Enterprise death rate (% of employer enterprises) (2017)	10.3		5-year survival rate of new employer enterprises (%) (2017)	27	
GENERAL GOVERNMENT					
Per cent of GDP					
Expenditure	42.7		Gross financial debt	63	
Revenue	41.4				
EXTERNAL ACCOUNTS					
Exchange rate (2020, EUR per USD)	0.893		Main exports (% of total merchandise exports 2018)		
PPP exchange rate (2020, USA = 1)	0.533		Boilers, machinery and mechanical appliances; electrical machineries and parts	31.3	
In per cent of GDP			Transportation	30.7	
Exports of goods and services (OECD 2019)	86	(30)	Metals	10.3	
Imports of goods and services (OECD 2019)	85	(29)	Main imports (% of total merchandise imports, 2018)		
Current account balance	-2.70	(0.30)	Boilers, machinery and mechanical appliances;	33.1	

			electrical machineries and parts		
Net international investment position (2014)	-62.9		Transportation	16.6	
Domestic value added in gross exports (%) (2016)	55.5	(92.9)	Metals	9.9	
Import content of exports (%) (2016)	44.5	(7.1)			
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate for 15-64 year-olds (%)	67.5	(68.7)	Unemployment rate, Labour Force Survey (age 15 and over) (%)	5.7	(5.4)
Men	73.3	(76.2)	Youth (age 15-24, %)	19.3	(14.9)
Women	61.6	(61.3)	Long-term unemployed (1 year and over, %)	54.9	(25.8)
Participation rate for 15-64 year-olds (%)	80.4	(78.4)	Tertiary educational attainment 25-64 year-olds (%)	25.8	(38.0)
Average hours worked per year	1 695	(1 726)	Gross domestic expenditure on R&D (% of GDP)	0.82	(2.48)
ENVIRONMENT					
Total primary energy supply per capita (million toe)	16.5	(5 320.8)	CO_2 emissions (tonnes/per capita)	5.3	(8.7)
Renewables (%)	9.9	(10.9)	Municipal waste (kilograms/per capita)	421.1	(539.1)
Exposure to air pollution (more than 10 g/m^3 of PM2.5, % of population)	100	(61.7)			
SOCIETY					
Income inequality (Gini coefficient, 2018)	0.236		Education (primary, secondary, post sec. non tertiary, 2016)	3.6	(4)
Relative poverty rate (%, 2014)	0.077		Education outcomes (PISA score, 2018)		
Gross adjusted disposable household income per capita (000 USD PPP)	22.38		Reading	441	(487)
Public and private spending (% of GDP)			Mathematics	488	(489)
Health care	6.9	(8.8)	Science	461	(489)
Pensions	7.3	(7.7)	Share of women in parliament (%)	20	(30.1)
			Net official development assistance (grant equivalent, % of GNI)	0.111	

Source: Calculations based on data extracted from the databases of the following organisations: OECD, World Bank, International Monetary Fund and Eurostat.

Executive summary

This report examines how government policy in the Slovak Republic can stimulate growth-oriented entrepreneurship and develop more innovative and internationalised SMEs. It covers SME and entrepreneurship characteristics and performance in the Slovak Republic, the business environment, the policy formulation and delivery framework, national programmes, the regional dimension of SME and entrepreneurship policy, SME digitalisation, and the role of inclusive entrepreneurship policies in supporting the labour market integration of the Roma population.

The report identifies a number of policy challenges and related recommendations. Areas addressed include scaling up of micro firms, increasing SME productivity, strengthening policy leadership and co-ordination, overcoming the lag in SME adoption of digital technologies, and supporting inclusive entrepreneurship.

Key findings

Enterprise scale up and innovation should be key policy priorities

The structure of the Slovak economy is relatively weighted to micro firms and individual entrepreneurs and to large firms, particularly foreign direct investors. Between the two extremes, there is a "missing middle" of SMEs with between 10 and 249 employees, with a share well below the OECD average. Although there is a high business start-up rate, the survival and growth rates of start-ups are relatively low and small business productivity is low. As many as 12% of adults were starting or running a new business in 2018, but the output per person of Slovak micro firms was only just above half the level of Slovak small firms in 2018 and only one-quarter of Slovak start-ups were still operating five years after their creation, a relatively low rate.

A holistic policy package is required to meet the challenge of scaling up micro firms. There is a need to ensure that labour taxation does not impede the self-employed from hiring. Stronger scale-up support programmes can also offer targeted mentoring to potential growth firms, improve the availability of risk capital to scale-ups and provide export credit to young firms.

The innovation and export performance of larger, established SMEs can also be strengthened. For example, Slovak SMEs generate only 15% of extra-European exports, compared with an average of 29% in European Union countries as a whole and struggle to integrate into the value chains of foreign direct investors. SME innovation and digitalisation levels are also low. Policies are needed to enable existing SMEs to adopt new technologies, build workforce and management skills and operate in wider markets. Inward investment policies should target and incentivise inward investment that creates domestic supply chains.

Regulatory constraints and high labour taxation are affecting SME growth and hiring

The Slovak Government has introduced reforms to improve regulations for SMEs and entrepreneurship, including a Better Regulation Strategy Act, a Better Regulation Centre, stakeholder consultations on regulations and an SME Test on the impacts of new legislation. However, weaknesses remain in some

areas, including start-up regulations and the frequency of amendments. Furthermore, only 15% of recent regulatory proposals affecting businesses led to a business cost estimate. Ongoing regulatory policy reforms should be pursued to address the outstanding issues. At the same time, a relatively high burden of taxation on employment may be a factor in the weak tendency of new and small firms to hire. Some 44% of Slovak tax receipts are social security contributions compared to an average of only 25% in the OECD area as a whole.

Stronger leadership and co-ordination of SME and entrepreneurship policy are needed

Several documents frame SME and entrepreneurship policy in the Slovak Republic, including the 2017 Law on Supporting SMEs defining the beneficiaries and action areas of Ministry of Economy support, the Operational Programme documents governing European Union funding for SME and entrepreneurship actions, and national strategic documents in thematic areas such as the Digital Transformation Strategy and the Regional Development Strategy. However, there is not a unified SME and entrepreneurship strategy. Furthermore, while the Ministry of Economy takes the lead for SME and entrepreneurship policy in the Government, it does not have a dedicated SME and Entrepreneurship Unit to manage co-ordination. A unified SME and entrepreneurship policy strategy, a lead policy unit, an inter-ministerial co-ordinating body, and an advisory council can all strengthen prioritisation, synergy and momentum behind the SME and entrepreneurship policy agenda.

The Slovak Government has created National Business Centres run by the Slovak Business Agency in each of the eight regions of the country. They offer an entry point to the different finance and advisory supports from the Slovak Guarantee and Development Bank (SGDB), EXIMBANK, the Slovak Investment and Trade Development Agency (SARIO), the Slovak Innovation and Energy Agency (SIEA) and the Slovak Business Agency itself. It would further be useful to create an interactive web portal to connect together the wide range of agencies providing advice and finance.

SMEs lag on digitalisation

Only 13% of businesses in the Slovak Republic are highly digitalised compared with 18% in the European Union as a whole. Access to digital infrastructure also lies below the OECD average. For example, only 13% of small firms and 17% of medium-sized firms had a connection with a download speed of at least 100 Mb/s in 2019. The Slovak Government can promote SME digitalisation by establishing Digital Innovation Hubs across the country to gauge SME digital competencies, assess technical solutions, act as one-stop shops on digital technology use and offer advice and financial support in their regions. It would also be useful to develop an online business diagnostic tool to support SMEs to identify digitalisation opportunities.

Policy for entrepreneurship should be inclusive across regions and populations

COVID-19 has been greatly disruptive for SMEs and entrepreneurship in the Slovak Republic, as in other countries, and is likely to hit lagging regions and disadvantaged population groups the hardest. Regional cluster and entrepreneurial ecosystem initiatives are needed in all regions as well as efforts to develop entrepreneurship networks and peer learning opportunities for women entrepreneurs. There is also an opportunity to invest in social enterprise and self-employment support initiatives to promote the labour market attachment of Roma people.

1. SME and entrepreneurship policy in the Slovak Republic – overall assessment and recommendations

This chapter presents the overall assessment and recommendations of the OECD review of SME and entrepreneurship policy in the Slovak Republic. It summarises the key messages of the report. It covers SME and entrepreneurship performance, the business environment for SMEs and entrepreneurship, the strategic framework and delivery arrangements for policy, national SME and entrepreneurship policies and programmes, the local dimension of SME and entrepreneurship policy, SME digitalisation, and entrepreneurship for the Roma population.

SME and entrepreneurship performance in the Slovak Republic

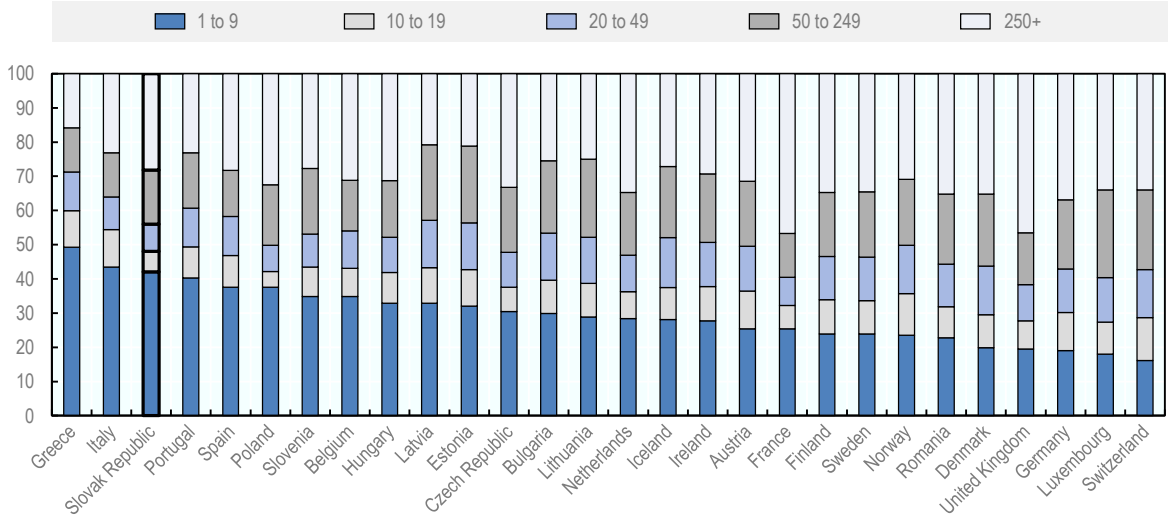
The Slovak economy has a relatively large share of micro firms

SMEs account for 99.9% of firms, 72% of jobs, and 58% of value added in the Slovak Republic. The share of micro firms is the largest among OECD countries. In 2017, 97% of firms in the Slovak Republic employed fewer than 10 employees, compared with an OECD average of 95%. For each employer enterprise, there are more than 2.5 non-employer firms, one of the highest shares in the OECD.

While the Slovak Republic has a high share of employment in micro firms, it has relatively few employees in firms in the 10-19 and 20-49 employment size bands, and employment in larger SMEs (50-249 employees) is low relative to other OECD countries (Figure 1.1). There is therefore a "missing middle" of firms of 10-249 employees in the Slovak Republic, which is instead relatively dominated by micro firms on the one hand, and large firms on the other.

Figure 1.1. Employment by firm size classes across OECD countries

Share in total in 2017



Source: OECD (2020a), Structural and Demographic Business Statistics database, (accessed on 10 February 2020).

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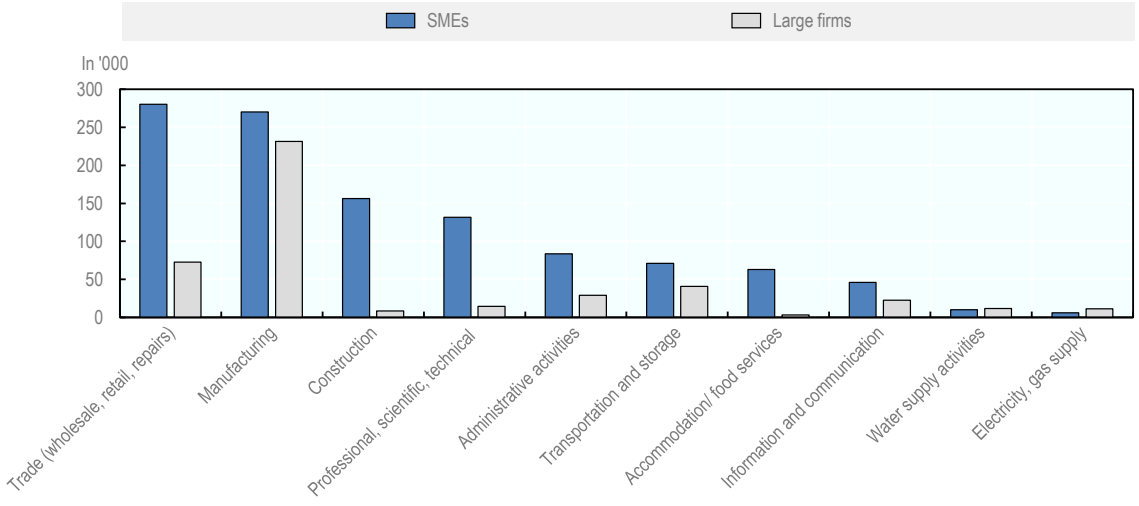
In terms of output, micro firms in the Slovak Republic produce only 23% of value aded, relative to an employment share of 42%. This points to their relatively low productivity. It contrasts with the situation in some countries, notably Denmark, Luxembourg, France and the United Kingdom, where the average productivity of micro firms is not much lower than for their larger counterparts.

Manufacturing is the largest sector in the Slovak Republic, employing 500 000 employees, of which approximately 54% work in SMEs (Figure 1.2). However, the trade sector has the largest number of SME employees (280 000, or 80% of the sector's total employment). Sectors with high shares of SME employees are the accommodation and food enterprises sector, which is almost exclusively composed by SMEs, which account for 95% of employment, followed by the construction sector, and professional, scientific, and technical services. There is an above average representation of SMEs in sectors

particularly affected by the COVID-19 crisis, which include: transport manufacturing, construction, wholesale and retail trade, air transport, accommodation and food services, real estate, professional services, and other personal services.

Figure 1.2. Sectoral employment by firm size in the Slovak Republic



Source: OECD (2020a), Structural and Demographic Business Statistics database.

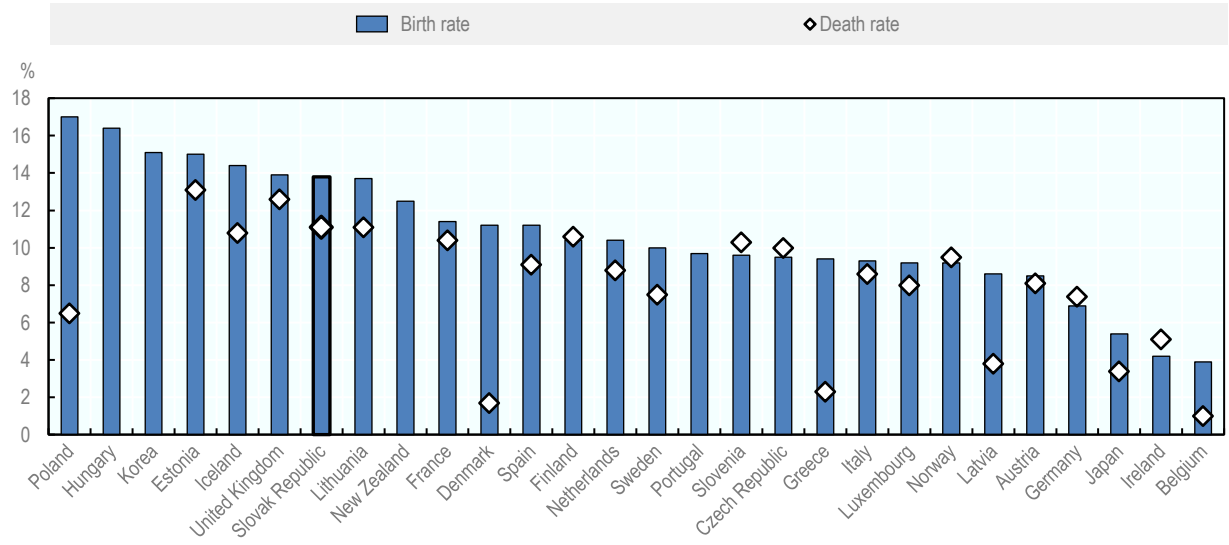
StatLink https://doi.org/10.1787/888934247058

The Slovak economy has very high business dynamism

At the end of 2017, 13.8% of firms in the Slovak Republic had been created during that year. This new firms share is among the highest in OECD countries (Figure 1.3). High business creation is accompanied by a high share of enterprise deaths. In 2017, 11.1% of previously existing firms left the market. As a result, the Slovak Republic has one of the highest enterprise churn rates of OECD countries. The Slovak Republic also has a high share of medium-growth and high-growth enterprises; 13% of enterprises in industry in 2017, the third highest rate among OECD countries with comparable data. On the other hand, the new enterprise survival rate is low. Only approximately one quarter of start-ups were still operating in their 5th year in the Slovak Republic in 2017, one of the lowest new enterprise survival rates among OECD countries.

This very high business dynamism may stimulate productivity growth through reallocation of resources from less productive existing firms to more productive new firms, or from the introduction of innovations and creative ideas in start-ups. However, there may also be negative consequences – for example in terms lack of development of economies of scale through firm growth or limited investment in employee skill development.

Figure 1.3. Enterprise birth and death rates in 2017



Note: Birth and death rate of employer enterprise. Employer enterprise rates do not include entries and exists from the population of firms that happens due to mergers, acquisitions, break-ups and restructuring of enterprises.
Source: OECD (2020a), Structural and Demography Business Statistics database.

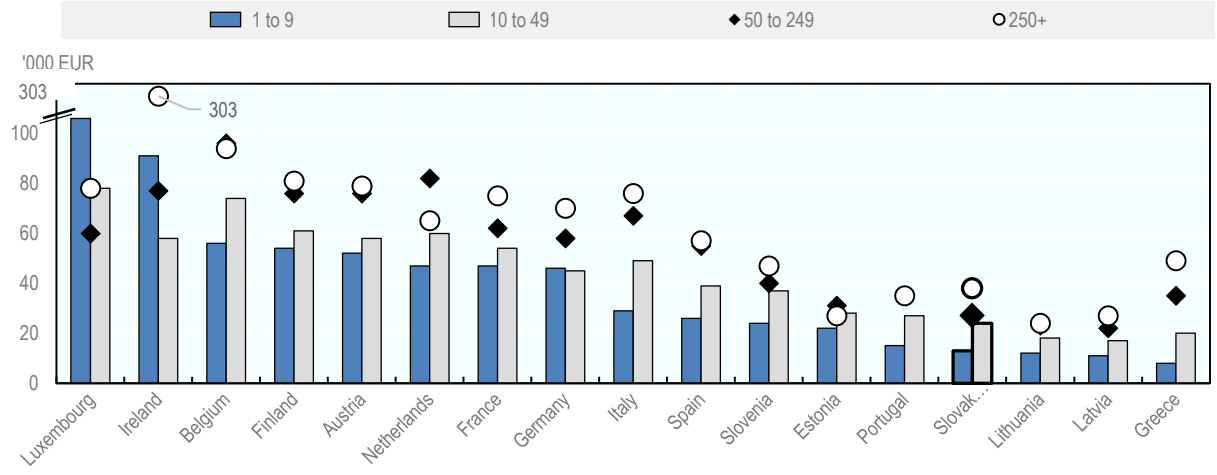
StatLink https://doi.org/10.1787/888934247096

SME productivity is low and stagnant or falling

SME labour productivity is low in the Slovak Republic compared to most other OECD countries (Figure 1.4) Micro firms with less than 10 employees generate output of only EUR 13 000 EUR per person. Productivity almost doubles to EUR 24 000 for firms with 10 to 49 employees. Medium-sized firms' productivity is higher, but also lags behind other OECD countries.

Figure 1.4. Labour productivity by firm size

In thousands of EUR in 2017



Note: Analysis restricted to OECD countries with EUR currency. Large firms in Ireland have the highest productivity, with 303 thousand EUR in 2017.
Source: OECD (2020a), Structural and Demographic Business Statistics database.

StatLink https://doi.org/10.1787/888934247191

Furthermore, Slovak SME productivity has been stagnant or declining in recent years. SME productivity in the Slovak service sector fell by 18% from 2011 to 2017. SME productivity in manufacturing increased by only 6%, compared with an average increase of 42% in OECD countries. For firms with under 20 employees, productivity declined by almost 10% from 2010-2017, whereas it grew by 17% in medium-sized firms.

Causes of the poor productivity performance relate to the entry of less productive firms into the market, obstacles to growth of micro firms and untapped opportunities for SMEs to absorb technology.

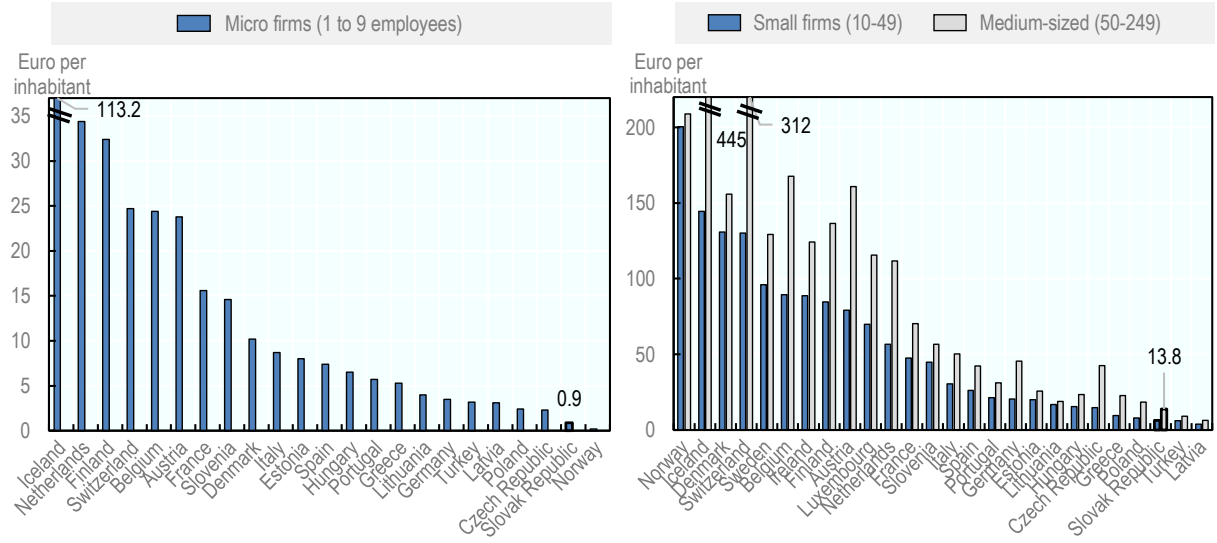
Relatively few small firms export or innovate

Only 8% of Slovak Republic firms with between 10 and 49 employees export, compared with 14% across OECD countries, although the share of larger SMEs that export (50 to 249 employees) is close to the OECD average. Overall, SMEs generate only 15% of extra-European exports compared with an average of 29% in European Union countries as a whole.

Slovak SMEs also have relatively low R&D spending levels (Figure 1.5), although Slovak SME R&D spending has quadrupled over past decade, albeit from a very modest base. There is a particular R&D gap among medium-sized firms. Only 16% of medium-sized firms report that they engage in R&D spending on continuous basis compared with an EU average of approximately one-third.

Figure 1.5. Innovation spending

Total value of R&D spending by firm size, in 2017



Source: Eurostat (2020a) BERD database. https://ec.europa.eu/eurostat/web/science-technology-innovation/data/database. Entrpreneurship rates are high.

StatLink https://doi.org/10.1787/888934247362

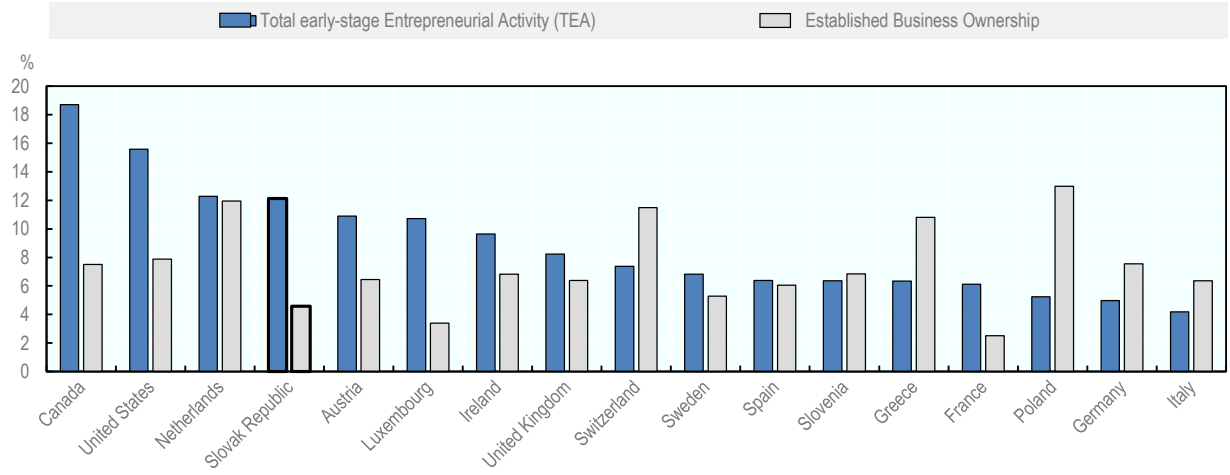
Entrepreneurship rates are high

The Slovak Republic has one of the highest shares of self-employed people in the labour market among OECD countries. In addition, 12% of the adult population were starting or running a new business in 2018 (Total early-stage Entrepreneurial Activity), a high proportion by international standards

(Figure 1.6). The Slovak Republic has a higher proportion of youth in entrepreneurship than most other OECD countries. Furthermore, more than half of adults declare that they possess the knowledge and skills to start, the third highest rate among surveyed OECD countries. However, a relatively high share of adults cite a scarcity of jobs as their motivation to start a business. Furthermore, women are only half as likely as men to be entrepreneurs, and their rate of business creation has fallen since 2011. In addition, the Slovak Republic has many family businesses facing the issue of how to organise business transfer to the second generation of family owners.

Figure 1.6. Early-stage entrepreneurial activity

Percentage of adults, in 2018



Source: OECD interpretation of Global Entrepreneurship Monitor (2020), https://www.gemconsortium.org.

StatLink https://doi.org/10.1787/888934247419

Policy recommendations

- Encourage policies that allow firms to scale up and grow.
- Take action to facilitate the process of business transition, including for family-owned businesses.
- Promote policies that increase productivity in existing SMEs, especially among micro and very small firms and service sector SMEs.
- Promote policies that support SMEs to become more active in foreign markets, including markets further afield than the European Union.
- Consider the adoption of additional measures to stimulate innovation activities among SMEs, especially for medium-sized enterprises.
- Improve the overall business environment to tackle the perception that entrepreneurship opportunities are relatively weak and that it is hard to start a business.
- Adress the larger than average gap in entrepreneurship rates by gender for employer enterprises

The business environment for SMEs and entrepreneurship

Macro-economic conditions have been favourable but COVID-19 is having a severe impact on SMEs

Demand conditions and macro-economic stability have been favourable to SME growth and entrepreneurship in recent years. GDP grew continuously from 2009-18 at an average annual rate of over 3%. However, GDP contracted by some 6% in 2020 as a result of the COVID-19 pandemic, despite forceful public measures to contain the spread of the virus and mitigate the damage done to the economy.

Regulatory reforms need to be continued

The Slovak Republic ranked 45th among 190 economies in the World Bank "Ease of Doing Business" Index in 2020 and performs in line with many other OECD countries on overall regulatory performance indicators. An obligation to conduct regulatory impact assessments has been in place since 2010, and an SME Test was introduced in 2015. In 2018, the government adopted a whole-of-government policy for regulatory quality (the *RIA 2020 Better Regulation Strategy).*

However, there are also areas of business regulation that can be further strengthened. This includes business start-up regulations – the Slovak Republic ranks in only 118th place on the World Bank Doing Business indicators on Ease of Starting a Business. Furthermore, insolvency procedures take up to 4 years in the Slovak Republic, compared with an average of 2 years in the EU. In the case of SME access to public business support, a problem is "gold plating" of EU regulations, through which the government introduces additional requirements on the top of the EU requirements. Another issue is lack of stability in business regulation. Thus in 2018, 86% of SME owners declared that frequent amendments to legislation influenced the functioning and growth of their businesses.

The innovation system does not favour SME innovation

The Slovak Republic is classed as a "moderate innovator" in the European Innovation Scoreboard and ranks at the tail of OECD countries on innovation system measures. Areas for improvement include academic research performance, business investment in R&D, cooperation between public research and the private sector, and innovation within SMEs. Both lack of innovation spending and lack of business engagement with higher education institutions (HEIs) hold back commercialisation of research through SMEs and entrepreneurship.

SME development is hindered by skills shortages

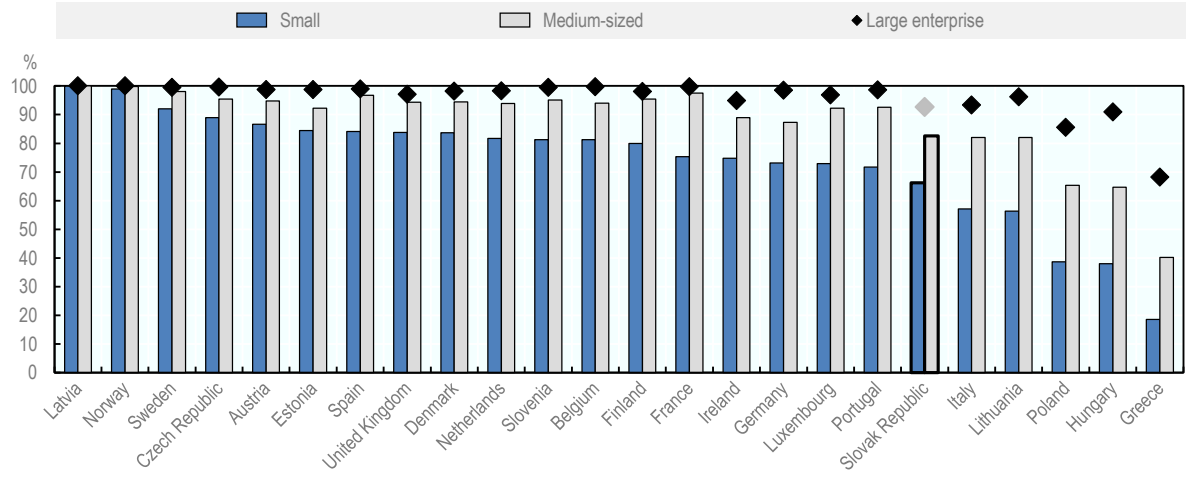
As in other countries, Slovak SMEs face difficulties in obtaining skilled workers. Particular skills shortages relate to digital skills, electronics skills, science-based knowledge, administrative and management skills, and soft skills such as oral expression. Only one-quarter of adults have a university degree compared to an average of 37% across the OECD countries. There are also weaknesses in the matching of tertiary education curricula with business needs reflecting inflexibilities in HEI curricula and gaps in co-ordination with business. At vocational education level, the Slovak Republic operates a dual education system, with some 490 employers and 85 vocational schools participating in 2018. However, only two-thirds of Slovak small firms provided training in 2015, in contrast with 75% across the OECD (Figure 1.7). The formal education system provides little training in entrepreneurship.

Upgrading skills that can be used across a variety of tasks and jobs, promoting flexibility, teaching soft skills, and investing in increasing managerial capability will support productivity growth, innovation and internationalisation and help prepare the Slovak labour force for future automation challenges. Another

potential source of talent is attracting returning migrants from the large Slovak diaspora living in other countries.

Figure 1.7. Enterprises providing continuous vocational training

Share of firms by size class in 2015



Source: Eurostat (2020b), Education and training in the EU database.

StatLink https://doi.org/10.1787/888934247685

Some transport and digital infrastructure gaps need to be addressed

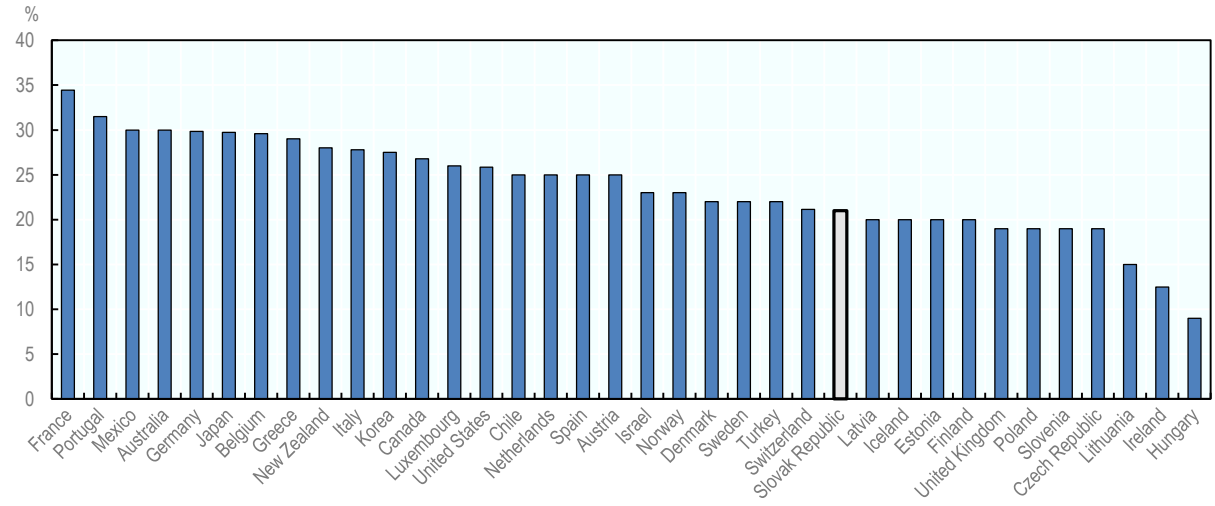
The quality of transport infrastructure varies across the country, with eastern and southern regions lagging behind. This has affected the extent to which different regions have been able to attract foreign direct investment (FDI), which is a potential driver for SME development. There are also some weaknesses in digital infrastructure. Only 13% of small firms and 17% of medium-sized firms had a connection where the download speed was at least 100 Mb/s in 2019, despite high adoption of cloud services among SMEs that ideally require higher download speed. For medium-sized firms, this is the lowest value among European countries. This is a constraint to SME digitalisation.

Relatively high social security payments may hinder small firm growth

Corporate taxes are low on average in the Slovak Republic (Figure 1.8). The standard corporate income tax rate in the Slovak Republic was 21% in 2020 for corporate taxpayers with taxable revenues above EUR 100 000. The rate is lower than in most OECD countries, where the average tax rate was 24% in 2018. In 2020, a reduced corporate income tax of 15% was introduced for all self-employed, entrepreneurs and corporations with income of less than EUR 100 000. Only a handful of countries have preferential rates for very small enterprises. A less distortive alternative could be a preferential tax rate for the first part of business income, and higher rate after a threshold.

Figure 1.8. Statutory corporate income tax rates

Combined corporate income tax rate in 2018



Note: This figure shows 'basic' (non-targeted) central, sub-central and combined (statutory) corporate income tax rates for resident corporations. Where a progressive (as opposed to flat) rate structure applies, the top marginal rate is shown. Tax rates targeted to specific industry or income types are not shown in the table. Please also refer to the Explanatory Notes on statutory corporate income tax rates for more details.
Source: OECD (2020b), Public Sector, Taxation and Market Regulation: Corporate Tax Statistics database.

StatLink https://doi.org/10.1787/888934247761

An important feature of the Slovak business taxation system is a high share of revenues from social security contributions rather than corporate taxation. Social security contributions represent 44% of the tax receipts in the country, compared to about one-quarter in the OECD. This emphasis on taxing employment may constrain employment growth in SMEs.

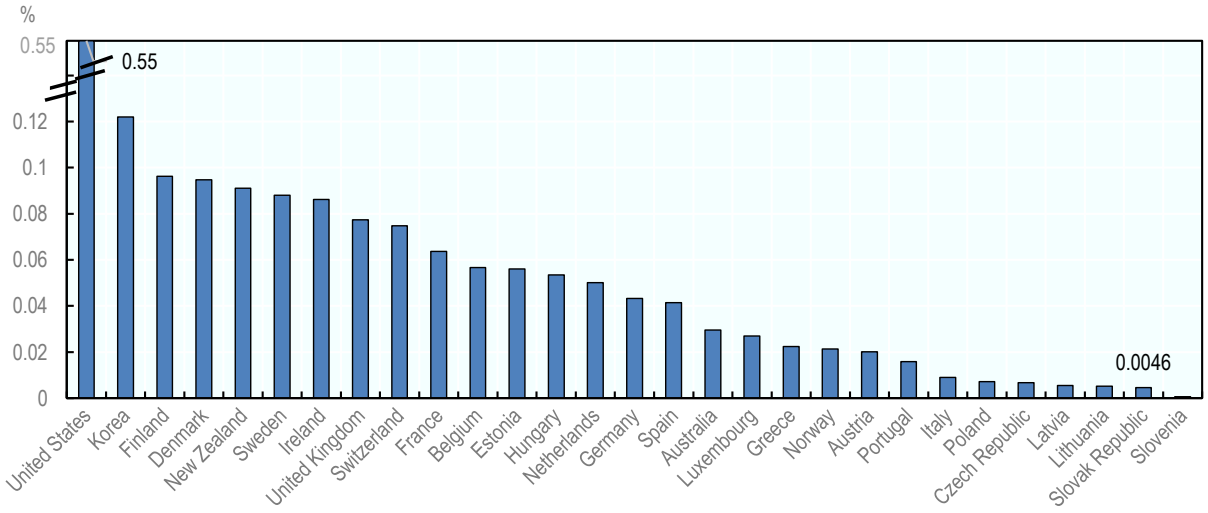
The volume of R&D tax credits doubled between 2018 and 2020. In 2020 the tax credit available was double the R&D costs incurred. This is a significant incentive to SME R&D activity.

Equity finance and alternatives to debt finance are limited

Slovak entrepreneurs rely heavily on traditional means of financing, including savings, family funds, reinvested capital and bank loans. New forms of financing are underdeveloped and, at 0.0046% of GDP, the share of venture capital investments in GDP is among the lowest in the OECD, where venture capital investment is 0.06% of GDP on average (Figure 1.9). Tax incentives or credits for investors in start-ups and support for public-private venture capital funds could favour the growth of venture capital and business angel activity.

Figure 1.9. Venture capital investments

In US Dollars as a share of GDP in 2018



Note: Venture capital is made up of the sum of early stage (including pre-seed, seed, start-up and other early stage) and later stage venture capital. As there are no harmonised definitions of venture capital stages across venture capital associations and other data providers, original data have been re-aggregated to fit the OECD classification of venture capital by stages.
Source: OECD (2020a), Structural and Demographic Business Statistics Database

StatLink https://doi.org/10.1787/888934247856

The spillovers from trade and foreign direct investment openness are currently limited

The Slovak economy is very open to exports and imports, which account for 90% of GDP. It is also highly integrated in global value chains through inward FDI, which employed more than half of the workers in the manufacturing sector in 2016, a larger share than any other OECD country. However, success in attracting FDI fails to translate into productivity spillovers for SMEs, reflecting limited supply linkages with domestic SMEs. For example, transport equipment, the main exporting industry in the Slovak Republic, adds only 40% of value locally. The relatively low skill and knowledge content of current FDI also limits opportunities for SME innovation spillovers.

Policy recommendations

Regulatory environment

- Fully implement the RIA 2020 Strategy to improve the overall evaluation culture.
- Streamline and centralise oversight and provide training faciltities to improve regulatory management practices.
- All governmental proposals, including initiatives of members of parliament, should undergo the same legislative procedures and involve engagement with stakeholders, allowing enough time for discussion and collection of comments.
- Review existing regulations and their usefulness on a systematic basis.
- Adopt simplification procedures to decrease administrative burden by continuing to upgrade electronic documentation procedures.

- Carefully monitor the impact of the recent modifications to the insolvency procedure and consider taking additional action to reduce the time required and cost of bankruptcy.
- Limit gold-plating by ensuring all new legislation introduces only the necessary amount of regulations.

Innovation and R&D

- Improve the coordination of the various public stakeholders active in the innovation sphere.
- Pool different academic research initiatives and create larger research units, which could act as focal points for public-private innovation partnerships.

Education/skills

- Establish skills councils to assess skills needs, ensure the representation of SMEs within them, and create a mechanism for SMEs to influence the curriculum to address skills shortages.
- Increase SME participation in apprenticeship programmes.
- Minimise costs and barriers to participation of SMEs in vocational education and training programmes and boost the variety of course offerings to include digital skills training, management capabilities training, and improving soft skills such as communication.
- Engage with diaspora communities and develop outreach programmes to attract back skilled Slovaks living abroad

Taxation

- Carefully review possible unintended consequences of lower corporate tax rates for micro firms.
- Reduce the tax incentive for self-employment by ensuring a similar tax burden from social security contributions on self-employed income as on employment income.
- Assess the impact of the recent expansion of the R&D tax credit and adjust if necessary, increase awareness among SMEs of available R&D tax credits and ensure administrative clarity in the application and follow-up process for the tax credits.

SME access to finance

- Establish investment readiness programmes to prepare entrepreneurs to access finance at all stages in the development of their firm.
- Introduce tax incentives or exemptions for early stage equity investors to support the development of alternative forms of financing for innovative and growth potential SMEs and start-ups.
- Improve financial education in the population with appropriate financial training initiatives.
- Support co-funding of early-stage equity investments.

Trade and foreign direct investment

- Strengthen the emphasis of FDI attraction efforts on more knowledge- and skill-intensive investments with greater potential for domestic innovation spillovers.
- Increase the capacity of domestic firms to participate in global value chain networks by ensuring the availability of a qualified workforce and strengthening management capabilities in SMEs.

Strategic framework and delivery arrangements for SME and entrepreneurship policy

There is no overarching SME and entrepreneurship policy document

The legal framework for SME and entrepreneurship policy in the Slovak Republic is set out in the Law on Supporting SMEs, adopted in 2017. This defines the beneficiaries – start-ups, existing micro, small and medium enterprises – and the types of support to be provided by the Ministry of Economy or its delegates, including a section on better regulation. However, there is no national SME and entrepreneurship policy strategy document setting out policy directions across different ministries, action areas and funding sources. The largest single source of SME and entrepreneurship support is the Operational Programme for Research and Innovation 2014-20 (OP R&I 2014-2020), which includes priority axes on "Enhancing the Competitiveness and Growth of SMEs" and "Developing Competitive SMEs in the Bratislava Region" with allocated spending of EUR 401 million for the 2014-20 period. However, this document does not cover regulatory improvements, entrepreneurship education or public procurement for SMEs and start-ups for example, or relevant SME and entrepreneurship actions in national thematic strategies such as the Digital Transformation Strategy and the Regional Development Strategy.

An overarching, cross-government SME and entrepreneurship strategy could improve co-ordination of policy action and implementation. It would lay out the vision, strategic objectives, quantifiable targets, policy pillars (e.g. access to finance, access to markets), related programme actions, responsible actors, institutional structure for implementation, and a monitoring and evaluation framework for SME and entrepreneurhsip policy. It would also clearly distinguish support to different kinds of SMEs (e.g. start-ups, micro-enterprises, traditional SMEs, innovative SMEs, growth-oriented SMEs) and to addressing different challenges.

SME and entrepreneurship policy lacks a lead unit, a cross-government co-ordination mechanism and an SME advisory council

A number of ministries are directly or indirectly involved in SME and entrepreneurship policy. The Ministry of Economy is the lead ministry. It is responsible for implementation of the SME Support Law and implementation of the OP R&I 2014-2020 through its support agencies, the Slovak Business Agency (SBA), the Slovak Investment and Trade Development Agency (SARIO), and the Slovak Innovation and Energy Agency (SIEA). The SBA also plays a role in developing policy by analysing barriers to SME and entrepreneurship development and proposing policies.

However, the Slovak Ministry of Economy does not have an SME and Entrepreneurship Policy Unit that could take responsibility for ensuring that policies affecting SMEs and entrepreneurship are adequately integrated across the various departments and sections of the ministry and in other ministries. A high-level inter-ministerial SME and entrepreneurship policy committee or council is also lacking. This could define the role of different ministries and the mechanisms by which policies and programmes will be co-ordinated. The Ministry of Economy has established a Working Group for Implementation of the Small Business Act for Europe Principles, with the participation of the SBA and nine ministries, but this does co-ordinate SME and entrepreneurship more generally.

There is a high degree of consultation with SMEs on legislative and regulatory proposals in the Slovak Republic (OECD 2020c), which is one of the key activities of the SBA Better Regulation Centre. However, there is not a broader mechanism for gathering SME inputs on broader SME and entrepreneurship policy issues. A formal SME Advisory Council could play this role.

A policy portfolio examination would help assess the mix of spending

It is not straightforward for policy decision makers in the Slovak Republic to assess the distribution of SME and entrepreneurship policy spending by main policy area (e.g. entrepreneurship and business management training, access to finance, market expansion, innovation, etc.) and target populations (e.g. potential and nascent entrepreneurs, new start-ups, micro-enterprises, innovative SMEs, high-growth firms, etc.). Although much programme data is provided by the Antimonopoly Office and the SBA annual reports, the information is not presented by area of policy intervention. A policy portfolio accounting approach could be introduced to present and monitor government SME and entrepreneurship policy expenditures, activities and impacts by policy type and target group.

Use of business identification number information could support evaluation

The Slovak Government has made various arrangements for the monitoring and evaluation of SME and entrepreneurship policies. For example, the OP R&I 2014-20 identifies output-related key performance indicators and targets for annual reporting, including numbers of SMEs supported by different programmes, as well as macro outcome indicators such as employment, value added, SME exports and new firm survival rates. However, the Slovak Republic is less developed in the conduct of formal impact evaluations. The SME Support Law stipulates that applicants to each support programme must provide their business identification number and the Central Register for the Registration and Monitoring of de Minimis Aid records data on the value of support provided. Although not designed for this purpose at the outset, these data could be used as a tool for impact evaluation of programmes and as a tool to support policy makers in guiding SMEs to relevant programme supports given their pathway of programme use.

A connecting hub would strengthen the policy delivery system

Several organisations deliver business support to SMEs and start-ups. Key agencies for access to finance are the Slovak Guarantee and Development Bank (SGDB) (direct loans, guarantee products, micro-credit, venture capital), EXIMBANK (export credits, guarantee, and insurance products), and the SBA (micro-credits, venture capital investments). Business advice is provided by the SBA, the Slovak Investment and Trade Development Agency (SARIO) and the Slovak Innovation and Energy Agency (SIEA), but business advice centres are also operated by the Ministry of Education, Science, Research and Sport, the Ministry of Foreign and European Affairs, and the Europe Enterprise Network. Co-ordination of business support is therefore an issue, including securing awareness of the different sources of business support among SMEs and entrepreneurs and ensuring that appropriate cross-referrals are made to clients from one organisation to another.

The SBA has set up National Business Centres in the eight regions of the country as an entry point for new entrepreneurs and SMEs, and there is some evidence of collaboration among some of the delivery actors. Furthermore, a proposal has been made to create a “Connecting Hub” in the start-up support ecosystem to act as an umbrella and a service to the different business support organisations. This would be a useful addition to the policy delivery arrangements. It would provide brokering of links with clients and across organisations as well as joint resources. The development of such a hub could be undertaken in co-ordination with the proposal for the establishment of a Digital Innovation Hub in the Digital Transformation Strategy to provide a support ecosystem to build the digital capacity of businesses. Futhermore, there is not a comprehensive, integrated and interactive web portal showing SME supports by stage of entrepreneurship/SME development and organisational provider, as is common in many OECD countries. The administrative requirements in applications for programme support could also be simplified in some cases.

Policy recommendations

- Develop a national SME and entrepreneurship development strategy setting out policy objectives, targets, strategic pillars addressing the major challenges facing new entrepreneurs and existing SMEs, tailored approaches to fostering start-ups and enterprise scaling-up, and a monitoring and evaluation framework.
- Establish a higher-level inter-ministerial council to oversee development and implementation of a national policy to support SME and entrepreneurship development.
- Create an SME and Entrepreneurship Policy Unit in the Ministry of Economy with responsibility for co-ordinating policy development and measures among other relevant ministries and agencies.
- Establish a higher level inter-ministerial Council on SME and Entrepreneurship Development.
- Establish an SME Advisory Committee or Council including SMEs and entrepreneurs and their representative organisations, SME support organisations, and independent experts to provide policy input to the Minister of Economy and the higher level inter-ministerial Council on SME and Entrepreneurship Development.
- Formulate a regularised public-private policy dialogue mechanism inclusive of SMEs and entrepreneurs that expands beyond the issue of better regulation.
- Adopt a policy portfolio approach towards the management and evaluation of SME and entrepreneurship policy and support across state ministries and agencies, identifying policy expenditures and impacts by type of policy intervention and type of SME and entrepreneurship target group.
- Establish connecting hubs in the entrepreneurship support ecosystem to bring together the various organisations offering support to SMEs and start-ups.
- Design and publish an integrated, and interactive SME and entrepreneurship policy web portal to inform SMEs and entrepreneurs about support possibilities.

SME and entrepreneurship programmes

A business diagnostic tool and client management approach would strengthen business development services

The SBA is the main agency providing publicly-supported business development services for SMEs and entrepreneurship in the Slovak Republic. It implements a range of advisory and consulting programmes. This includes the Acceleration, Incubation, Internship, and Growth programmes delivered by the National Business Centres in each region. It also operates a start-up support scheme, a family business support scheme, a national project on SME internationalisation and supports the European Enterprise Network.

SMEs and entrepreneurs obtain support by responding to calls for participation in the various programmes. This puts the onus on the firms to identify and apply for the support most relevant for them. Introduction of an online business diagnostic tool could be made available for firms that wish to use it, with the benefits of increasing awareness of business development services among SMEs and entrepreneurs, increasing their understanding of areas for improvement and helping to orient them to the right services. In addition, an approach based on client management of a portfolio of companies identified for their growth potential or other characteristics (such as entrepreneurs from disadvantaged groups, SMEs in regional clusters or national priority sectors) would also increase policy targeting and effectiveness.

SME innovation support should include actions to strengthen university-SME links

The Slovak Innovation and Energy Agency (SIEA) plays a key role in directing resources from the OP R&I 2014-20 and the Research and Innovation Strategy for Smart Specialisation of the Slovak Republic (RIS3 SK) to SME innovation. Priority Axes 3 and 4 of the OP R&I allocated EUR 357 million for SME innovation and competitiveness projects up to the end of 2018, focused on technology transfers, product and process innovations by SMEs and national projects for the business environment. These schemes have been well run and are met with significant interest by potential applicants. SIEA also supports creative vouchers for SMEs and innovation workshops and mentoring for entrepreneurs. However, there has been little support to stimulate various forms of university engagement with SME innovation.

Internationalisation programmes are at a basic level

A number of State agencies support SMEs with exporting, international technology transfer, and participation in global value chains. EXIMBANKA, the export credit agency, offers banking, guarantees and insurance products and consulting services to Slovak companies regardless of their size. However, it cannot support companies that are less than three years old, i.e. potential “born globals”. SARIO maintains a portal providing comprehensive information on state support for exporters, and offers a range of supports to assist companies to export and link with foreign direct investors. This includes support for participation in events, capacity building in companies, support through Trade Points in Slovak regions, and support for use of e-commerce tools. The SBA provides business advisory services to support SMEs to internationalise. The Ministry of Foreign Affairs and European Affairs also operates a ‘Business Centre’ and supports the internationalisation of businesses through the network of Slovak embassies.

Overall, the services are of a relatively basic level and some more sophisticated and intense supports could be added. Furthermore, both the links among the different supports and organisations and the management of client relations could be strengthened. More impact could be obtained through a more focused approach built around developing clusters or supporting supply chain development by providing services to groups of SMEs working to target jointly new markets.

Entrepreneurship training and skills programmes lack a co-ordinated approach

Various business associations support entrepreneurship skills development in the general population. For example, the Entrepreneurs Association of Slovakia is co-operating with the SBA on supporting entrepreneurship education. Similarly, the SIEA supports a number of activities promoting innovation and entrepreneurship, including innovation prizes for students. However, the support is dominated by ad hoc projects delivered across a number of different various organisations and there is an absence of a clear nationwide strategy and coordinated approach to entrepreneurship education and training.

New sector skills councils and changes to the dual training system are strengthening SME skills

The Operational Programme for Human Resources (OP HR), managed by the Ministry of Labour, Social Affairs and Family, is the main source of financing for programmes that help upgrade skills and address skills gaps for SMEs. Recent strengthening of the skills policy includes the establishment of 24 sector skills councils, which mobilise representatives of ministries, regions and business federations in making skills needs assessments which can be used to stimulate the supply of appropriate training for SMEs. In addition, improvements have been made to the dual training system to increase the participation of SMEs, including simplified administrative requirements for participating firms, an increased share of practical training, the possibility to undertake practical training in other certified employers, direct

payments (complementing tax exemptions) to employers providing practical training, increased funding to VET schools, and the possibility for employers to increase the student payment to above the minimum wage to attract more students. However, more could be done to increase the portability of training qualifications across employers, including through increased flexibility of apprenticeship schemes and further development of the national qualification system. It is also important to ensure that the outputs of the sectoral skills councils are fed into improved training programmes.

Access to finance programmes are now supporting a wider range of instruments

Since 2016, the Government has increased the emphasis on loan guarantees and risk capital relative to grant finance in its access to finance support for SMEs and start-ups. This helps to increase the range of finance options available and the efficiency and effectiveness of support. The Slovak Guarantee and Development Bank (SGDB) now provides substantial loan guarantees for companies. It had an outstanding guarantee portfolio in 2018 of EUR 78.4 million, guaranteeing up to 55% of loan values. The SGDB is also a significant player in micro-finance support, with a total outstanding micro loan portfolio of EUR 303 million at the end of 2018, and the SBA made microloans of EUR 9.6 million between 2013 and 2018. However, the Government could seek some rationalisation in the number of venture capital and equity funds it supports in order to ensure that each fund has sufficient scale to manage efficiently and professionally. For example, Slovak Investment Holding (SIH), a subsidiary of SGDB, made only three new investments in 2018, for a value of EUR 0.45 million, and Innovation and Technology Fund and Eterus Capital also have small deal flows.

The Office for Public Procurement promotes SME participation

The Office for Public Procurement is the central State body with oversight of public procurement. It monitors procurement procedures across government for legal compliance, provides training and guidance to the various contracting authorities, including on how to facilitate SME access to procurement, and offers advisory services to SMEs interested in tendering. In compliance with the EU directive on public procurement of 2014, the procedure has several features that facilitate SME participation, for example the practice of digitalising most of the application process and breaking large contracts into smaller lots. Several procedures, such as the low value contract procedure, were also simplified in recent years. Possibly as a result, SMEs increasingly participate in public procurement, in terms of the number and value of contracts. In 2018, 94.3% of public procurement contracts and 62.7% of contract values were awarded to SMEs. However, it is estimated that there are 3 000 contracting authorities in total, many operating at the regional and municipal level. This may adversely affect the level of professionalisation in some instances. The procurement office could therefore encourage more joint public procurement tenders on a voluntary basis, introduce a certification system to those contracting authorities assessed as following appropriate procedures, and increase the standardisation of tendering documents and procedures. Furthermore, tendering processes in the Slovak Republic often select winner bidders on a price-only basis and the procurement office could encourage the inclusion of some qualitative criteria.

There is scope for more dedicated entrepreneurship programmes for women and youth

There are relatively few entrepreneurship support programmes in the Slovak Republic that are specifically targeted to population groups with special needs and barriers, aside from the mainstream programme of start-up grants for the unemployed.

A small number of dedicated and tailored programmes for female entrepreneurship have recently been launched but more could be done. For example, the SBA is participating in an international project to support new women business angels and runs an annual Woman Entrepreneur of Slovakia contest to promote a positive image of female entrepreneurship. It also conducts targeted outreach to attract women entrepreneurs to incubator and entrepreneurship training programmes, although the programmes themselves are not typically tailored to the needs of women entrepreneurs. The gap in tailored advice could be filled by strengthening entrepreneurship networks and peer-learning opportunities for women, particularly outside of Bratislava.

There is also scope to create a stronger offer of support for young people interested in starting a business. Most of the current support is part of entrepreneurship education in the formal education system. This is complemented with more hands-on entrepreneurship training offered by non-governmental organisations (e.g. Young Entrepreneurs Association of Slovakia) and on university-based incubators. While often high quality offers, these initiatives tend to be located only in large cities, or near universities.

Policy recommendations

Business development services

- Consider introducing an online business autodiagnostic tool to help increase SME awareness of available business development services and orient them to the right support.
- Introduce a client management approach to business development services to identify and monitor support impacts on a portfolio of companies identified for their growth potential or other characteristics (such as entrepreneurs from disadvantaged groups, SMEs in regional clusters or national priority sectors).

Innovation support

- Strengthen innovation support provided by universities to SMEs, for instance by expanding the Support of Research and Development programme, including outside of the capital region.
- Make the R&D tax credit more SME-friendly by simplifying the administrative procedures and introducing specific provisions for SMEs and start-ups.

Internationalisation programmes

- Expand the Supply Chain Development activities of SARIO.
- Provide a “value chain” of support for exporting companies at every step in the business development process by streamlining the currently fragmented system.
- Introduce a client management system that facilitates sharing information on businesses supported by various agencies.

Entrepreneurship training programmes

- Streamline and rationalise initiatives to provide entrepreneurship training outside of the formal education system.

SME workforce skills development programmes

- Ensure that the outputs of the sector skills councils are fed into improved training programmes that enhance both technological and soft skills in SMEs.

- Evaluate the impact of recent changes to the dual apprenticeship scheme on SME participation and readjust if necessary.

Access to finance programmes

- Change programme entry criteria to enable Eximbanka to provide financial support to companies on the market for less than three years.
- Scale up the activities of the Slovak Investment Holding, especially its equity and quasi-equity operations.
- Select a qualified fund manager for the activities of the Central Europe Fund of Funds overseen by the asset management subsidiary of the Slovak Guarantee and Development Bank.
- Rationalise public venture capital and private equity funds.

Public procurement programmes

- Encourage the inclusion of qualitative criteria in public procurement procedures.
- Raise the expertise of contracting authorities through a certification system and encouraging joint public procurement tenders.
- Address potential shortcomings regarding the e-procurement procedure.

Entrepreneurship programmes for under-represented social groups

- Strengthen entrepreneurship networks and peer-learning opportunities for women, particularly outside of Bratislava.
- Expand support for youth entrepreneurship outside of the formal education system.

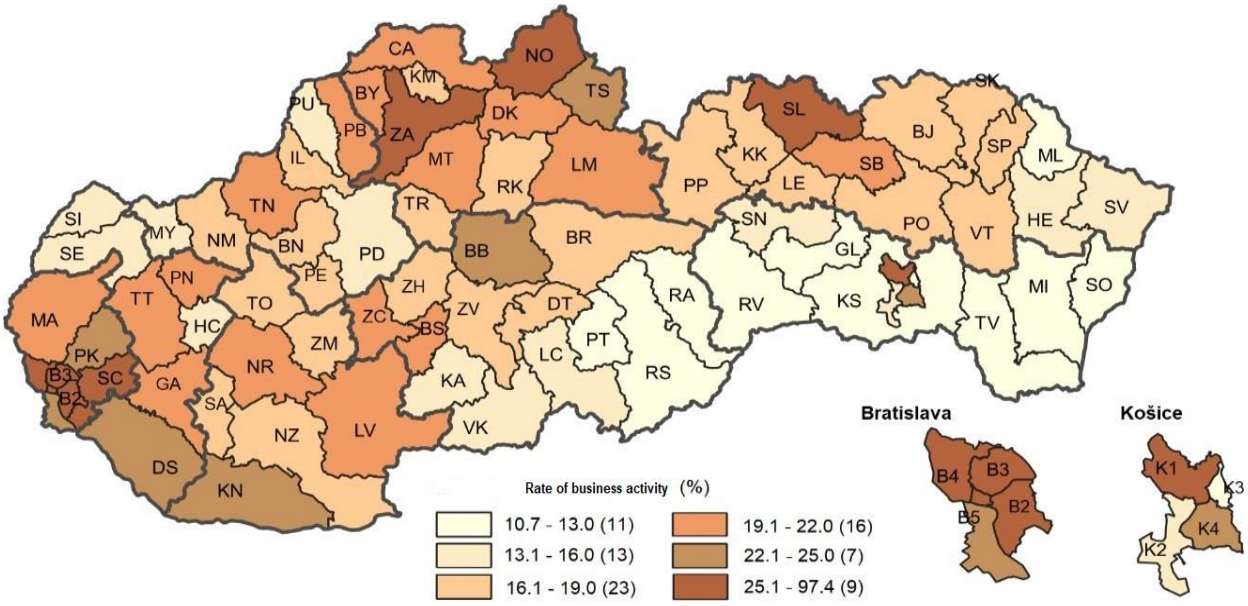
The local dimension of SME and entrepreneurship policy

Stronger SMEs and entrepreneurship are needed to drive transition in regions lagging economically

There are major regional income and employment inequalities between Bratislava, and to a lesser extent the whole of the west of the Slovak Republic, and the centre and east of the country. An important cause of these inequalities has been regional structural economic changes, in terms of industrial decline in Košice, Žilina, Trenčín, Prešov and reductions in the agricultural workforce in Nitra, Banská Bystrica and Košice. Where there are strong SMEs and healthy entrepreneurship, regions can respond more effectively to declines in traditional specialisations, since new and small firm development generates jobs in new sectors and transforming existing sectors towards niche activities aimed at growing parts of the market. The problem to be addressed in the Slovak Republic, however, as in many other OECD countries, is that small business and entrepreneurship activity is currently weak in those regions with the greatest structural challenges and hence the greatest need for SMEs and entrepreneurship.

At the regional level, the stock of active SMEs per 10 000 inhabitants in Bratislava is more than three times than that in the region of Košice as well as outstripping all the other regions. At local level, there is a broad east-west gradation in the share of SMEs, roughly the mirror image of the prosperity of the local areas, as shown in Figure 1.10.

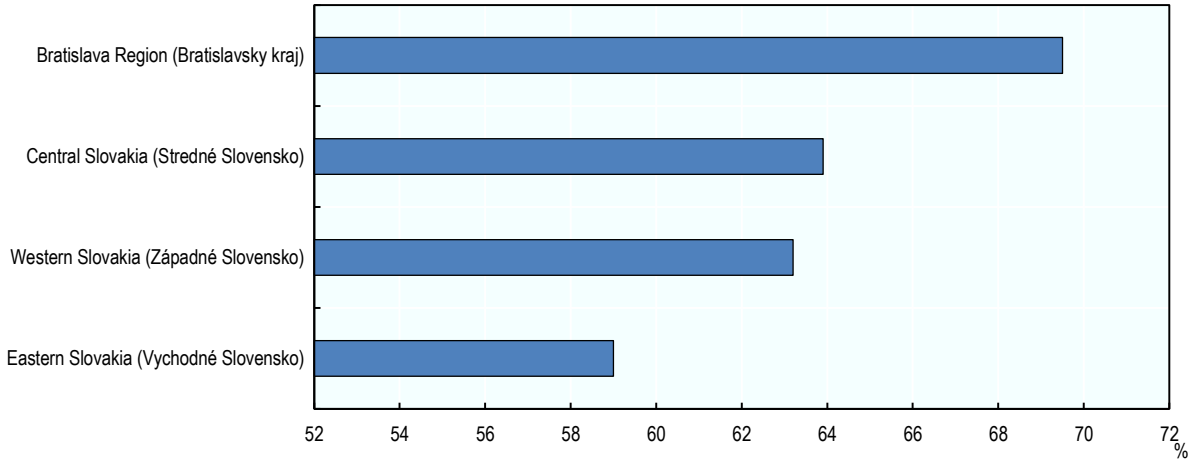
Figure 1.10. Business Activity across Local Districts of the Slovak Republic in 2018



Source: SBA (2018), Report on the State of Small and Medium-Sized Enterprises in the Slovak Republic in 2018.

Underlying these differences, are important east-west differences in entrepreneurial attitudes, capabilities and aspirations, as summarised in the Regional Entrepreneurship Development Index (Figure 1.11).

Figure 1.11. Regional Entrepreneurship Development Index



Source: Szerb et al. (2017), Regional Entrepreneurship Development Index

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Overall, there is a need for a set of regional level actions that can strengthen conditions for entrepreneurship and SME development throughout the country. Clearly there is a priority to improve SME and entrepreneurship performance in lagging regions, but it is also important not to hold back development in the stronger areas of the country, which face different kinds of constraints. Bratislava has developed into a secondary European hub for the technology sector and has strong potential as a

motor for the Slovak economy, but is facing constraints in talent generation and retention in the face of international competition. The city of Košice is also starting to emerge as a second national entrepreneurial hub, with new co-working spaces opening up and new market developments, and is likely to face some of the same issues as Bratislava. Policy therefore needs to identify and respond to region-specific constraints to SME and entrepreneurship development in different regions of the country. This can be supported by assessment of SME and entrepreneurship development issues in the country's regional smart specialisation strategies.

Gaps in finance, advice and support infrastructure need to be addressed

One of the requirements to improve start-up performance and SME development in weaker regions is to ensure that public support for access to finance, access to business advice, and access to an infrastructure of co-working spaces, business incubators and scale-up office space is evenly provided across the country and covers all regions. The regional innovation infrastructure and the "institutional thickness" of intermediary organisations needs to be strengthened, particularly outside of Bratislava, where the number and quality of incubation centres, counselling centres, enterprises with venture capital, and technological centres and parks is relatively limited.

Regional universities can play a greater role in supporting SMEs and entrepreneurship

Cultural barriers affecting attitudes to entrepreneurship are having adverse impacts on business start-up rates and SME growth rates in the poorer regions of the Slovak Republic. This is combined with a lack of start-up skills in the population. Regional universities can play a greater role in building entrepreneurial attitudes and skills among young people by offering high-quality entrepreneurship education and providing start-up support for graduates, such as co-working spaces. There is also scope for the regional universities to strengthen their collaboration with local SMEs on SME innovation projects, for example through consulting and internships.

Cluster organisations can be anchors for regional entrepreneurial ecosystem development

A number of promising regional industry cluster initiatives have emerged from the bottom up in the Slovak Republic and could become platforms for developing stronger regional entrepreneurial ecosystems. There are currently 16 certified cluster initiatives, such as 'IT Valley' in Košice, the 'Slovak Automotive Cluster' in Trnava, the 'Electrotechnical Cluster' in Galanta, and the 'Slovak Plastic Cluster' in Nitra. These fledgling regional clusters need policy support to develop coherent management and strategies and to undertake operational activities. They could become a focus of local initiatives for SME and entrepreneurship development such as sector-specific skills and innovation projects involving groups of SMEs, new local centres of expertise and technology development, and joint marketing and brand building for the clusters. As well as funding for operational activities in these areas, the cluster organisations could be supported by a framework to promote capacity-building and mutual learning across cluster organisations in the country and internationally on effective local and sector-specific SME and entrepreneurship support actions.

SME and entrepreneurship development should be integrated into effective regional smart specialisation strategies

Assessments of regional entrepreneurial ecosystem weak links are important to prioritising local policy actions to support start-ups and scale-ups and mobilising and co-ordinating national and regional public, private, research and education actors in addressing regional weaknesses. There is an established

framework for regional strategy development into which these assessments and stakeholder consultations and engagements can be integrated, namely the process of preparing and implementing regional smart specialisation strategies for the European Regional Development Fund (ERDF) actions. The current system of multi-level governance is overly bureaucratic and involves too many players, which has had a negative impact on policies such as Smart Specialisation and makes the formulation and implementation of regional and local level policies complex and difficult. The formation of local enterprise partnerships involving groupings of employers together with education and training institutions and government representatives could support the creation of regional SME and entrepreneurship development strategies.

Policy recommendations

Strengthen business support across the regions

- Ensure the availability of adequate financial, training, mentoring and other business support for entrepreneurs and SMEs in each region, especially with regard to establishing start-ups with growth potential and introducing innovative products and processes.
- Increase the provision of co-working spaces, business incubators and scale-up office space across the regions.

Strengthen cluster organisations

- Support existing and new cluster initiatives by the provision of resources for cluster management organisations, strategy development processes and operational activities.
- Bolster networking activities both within and across cluster initiatives through the organisation of purpose-driven and goal-oriented events and meet-ups.
- Ensure that cluster initiatives are fully integrated into policy support for SMEs and entrepreneurship, and are not considered as standalone activities.

Strengthen the role of universities as regional entrepreneurial ecosystem anchors

- Stimulate universities in lagging regions to provide entrepreneurship education, entrepreneurial spaces and start-up support for graduates.
- Increase the emphasis of universities in lagging regions on providing innovation consultancy and support to regional SMEs.

Involve local actors in regional entrepreneurial ecosystem development strategies

- Establish regional entrepreneurial ecosystem assessments and development strategies for each of the eight regions, and integrate the assessments and strategies with the regional smart specialisation process.
- Support the creation of local partnerships involving local authorities, strategically important enterprises, universities and business support providers to provide local intelligence and consultation for the formation of regional entrepreneurial ecosystem strategies and support the implementation of the strategies.

SME digitalisation

SMEs face challenges in digitalisation

Digitalisation reaps benefits for SME productivity and performance, including offering a route for small firms to upscale and increase efficiency, with large potential aggregate benefits for the wider economy. However, digitalisation is low in the Slovak Republic in general. In 2016, Slovak companies spent only 1.74% of gross fixed capital investment on computer hardware, for example, below most other OECD countries. In 2019, the European Union Digital Economy and Society Index (DESI) ranked the Slovak Republic 21st among the 28 EU member states. At the same time, SMEs have lower digitalisation levels on average than larger firms. Low SME take up of digital technologies in the Slovak Republic reflects a number of challenges, in particular with respect to managing IT security issues, availability of workforce skills and IT specialists, availability of financing for digital investments and low connection speeds available through digital infrastructure.

Digital skills and other digitalisation framework conditions need to be strengthened

An important strand of Slovak government policy to support SME digitalisation needs to involve horizontal policy actions to improve digitalisation framework conditions. There should be a particular emphasis on tackling skills shortages. The Slovak Republic scores below the OECD average on "problem solving in technology-rich environments", which is a measure of ease of use of digital technology in the adult population provided by the OECD Programme for the International Assessment of Adult Competencies (PIAAC). It also faces significant shortages of ICT specialists. However, only 12% of small firms in the Slovak Republic provided ICT training for their workforces in 2019, compared with 20% in the OECD area. The Slovak Government has taken some action to improve digital skills in recent years. For example, the dual education platform set up in 2016 aims to make the education system more attuned to the needs of the labour market, including digital needs. However, more needs to be done.

Additional important improvements to framework conditions for SME digitalisation should be made in the areas of upgrading digital infrastructure and improving regulations. In addition, the Slovak Government has made significant progress in e-government services over the last few years, for example by passing a law on "guaranteed" electronic invoicing for public tenders in 2019. The growth of e-government can be a further important stimulus for SME digitalisation by offering platforms, technologies, standards and demonstration effects for SMEs.

Business advice and financial support for SME digitalisation should be reinforced

Another strand of policy support for SME digitalisation should involve introducing targeted support to those SMEs and entrepreneurs that are highly motivated to embrace digitalisation and to specific sectors or clusters. This can catalyse their development and provide demonstration effects to the economy as a whole. In particular support for advice and finance on digitalisation is needed.

Access to finance can be a significant obstacle to digitalisation for some SMEs, particularly for those taking larger scale and riskier investment projects in more sophisticated technologies. Although access to credit is relatively easy in the Slovak Republic in general, it can be more difficult for intangible investments, while the Slovak Republic does not have a well-developed risk capital market. At the same time, public support for financing SME digitalisation has not been strong. Reinforcing this support could therefore have important impacts.

This should be combined with expanded business development services in the form of training, mentoring and coaching for SME digitalisation. Although the SBA has establised a network of National Business Centres, there appears to be no dedicated business advice programme to support SMEs with ambitious digitalisation plans.

Online business diagnostic tools can be an important entry point for businesses in need of support and advice, enabling SME users to benchmark their performance, identify areas for improvement, obtain guidance and links to support on how to address weak points. A number of business diagnostic tools internationally focus on SME digitalisation issues, as stand-alone tools or as part of broader diagnostic assessments of business operations. However, there is not currently such a tool aimed at Slovak SMEs.

Digitalisation actions could be better co-ordinated across government and with non-government actors

The Office of the Prime Minister has taken the lead in policy for digitalisation by developing the Strategy of the Digital Transformation of Slovakia 2030 and the Action Plan for the Digital Transformation of Slovakia 2019-2022. However, it is unclear how other ministries and government bodies will contribute towards its implementation. Moreover, there are a range of other strategies and players in this field, including the National Action Plan for Smart Industry 2018, which includes strategic goals related to SME digitalisation, and the National Coalition for Digital Skills and Occupations of the Slovak Republic, which was established in 2017 to propose measures to strengthen digital skills. Given the involvement of a large number of policy actors and actions, it is important to have strong cross-government co-ordination. This could include mapping of current initiatives affecting SME digitalisation, identification and scaling up of initiatives that work well, and filling gaps in support measures. High-level political leadership for this agenda will be important as well as an effective working-level co-ordination mechanism.

It is also important to strengthen government partnerships with non-government stakeholders. For example, working in partnership with government, Chambers of Commerce and business associations could do more to raise awareness of SME digitalisation needs, provide peer learning opportunities, and support the design and implementation of SME digitalisation policies.

Digital Innovation Hubs are not yet fully on-stream

One of the proposed initiatives of the Government's Action Plan for the Digital Transformation of Slovakia is the creation of a network of Digital Innovation Hubs. These would act as one-stop shops to help companies expand their use of digital technologies. In April 2020, three Digital Innovation Hubs were under preparation (two in Bratislava and one in Kosice), but none were yet active. Making the network of Digital Innovation Hubs fully operational is an objective that should be pursued and is one of the measures proposed in the Government's Smart Industry Action Plan.

Policy recommendations

- Stimulate on-the-job training activities to acquire digital skills, possibly through the introduction of a tax allowance for SMEs investing in an approved training course for their personnel.
- Pilot a finance support programme for digitalisation for relatively risky or advanced SME digitalisation projects.
- Expand business development services (training, mentoring, coaching) to selected high-potential SMEs, and more basic services for firms in their early stages of digitalisation.
- Develop an online business diagnostic tool for SME digitalisation in the Slovak Republic.

- Include quantifiable and well-defined objectives related to SME digitalisation in the Strategy of the Digital Transformation of Slovakia 2030.
- Create a cross-government coordination mechanism to design and implement policy responses related to SME digitalisation.
- Improve collaboration with non-government bodies to provide support for SME digitalisation projects.
- Establish Digital Innovation Hubs across the country, as foreseen in the Action Plan for the Digital Transformation of Slovakia, embedded within the smart specialisation strategy, and provide financial, logistical and human resources support to make them fully operational.

Inclusive entrepreneurship – the Roma community

The Roma population experiences high labour market exclusion

It is estimated that there are between 400 000 and 500 000 Roma people in the Slovak Republic, accounting for 7-9 per cent of the country's population. Approximately half of the Roma population live dispersed among the majority population and approximately half live in a Roma settlement (with a minimum threshold of 30 people). The regions with the highest shares of Roma in the population are in the east and south-east (Košice, Prešov and Banská Bystrica), which are relatively weak regions in economic performance.

The Roma community in the Slovak Republic suffers from very poor levels of labour market attachment. The majority of the Roma population are at risk of poverty, suffer from housing exclusion, have low life expectancy and weak upward social mobility between generations (see Table 1.1). For example, the probability of Roma born in concentrated residential areas becoming unemployed or earning less than a minimum wage in irregular work is almost 70% (OECD, 2019).

Table 1.1. Selected indicators of Roma exclusion in the Slovak Republic

	General Population	Roma
At-risk-of-poverty rate (%)	13	87
Employment rate, 20-64 (%)	68	25
NEET rate - neither in work nor in education, aged 16-24, (%)	14	65
Drop-out rate from education (%)	7	58
Share of households living without a toilet, bathroom and shower inside the dwelling (%)	0.6	43
Share of households living in areas affected by crime, violence and vandalism (%)	8.7	30

Source: EU (2016), *Second European Union Minorities and Discimination Survey, Roma – Selected findings*, European Union Agency for Fundamental rights

A number of issues are affecting Roma labour market participation, including low Roma education and skill levels, weakening demand for unskilled and low skilled workers as a result of structural economic change away from agriculture and heavy industry, stigmatisation of the Roma community and poor transport links to sources of jobs from Roma settlements.

Self-employment and business creation rates are also low

Low levels of labour market attachment are reflected in very low levels of formal self-employment among the Roma population in the Slovak Republic. UNDP (2012) estimated that only 1.8 per cent of the Roma working population were self-employed compared with 7.1 per cent of the general population living in nearby geographic areas. Whereas minority and disadvantaged communities frequently have

higher rates of formal entrepreneurship than the population as a whole, since self-employment enables people to generate earned income in the face of barriers to employment, this route out of unemployment and poverty is not being fully exploited in the case of Roma in the Slovak Republic.

Policy needs to address a number of inter-related constraints that impact on the numbers of Roma people successfully operating in self-employment. These include:

- discrimination in the market, which can make it difficult for Roma people to obtain suppliers and customers;
- low education and skill levels among the Roma population, including language barriers, which affect entrepreneurial ambitions, opportunities, and networks and engagement with administrative and legal processes;
- lack of labour market experience, which reduces the ability of Roma people to build entrepreneurship skills and networks and develop successful business ideas;
- lack of finance, including lack of savings, credit history and bank credit;
- the welfare trap, whereby people in receipt of welfare benefits could experience a reduction of net income from starting work as a result of losing welfare benefits.

At the same time, however, there are a number of successful Roma entrepreneurs, who could provide role models for other Roma people interested in self-employment. Some of them could also provide mentoring

There are only scattered public interventions for promotion of entrepreneurship by Roma people

The national government has developed a Strategy for the Integration of Roma, which is co-ordinated by the Office of the Slovak Government Plenipotentiary for Romani Communities and depends on the budgets of individual ministries. In 2018, expenditure was almost EUR 120 million, targeted especially at employability and employment (EUR 75 million), education (EUR 30 million) and housing (EUR 7 million) activities. No specific element of the strategy was dedicated to self-employment or entrepreneurship measures. Furthermore, the SBA (the main provider of support to entrepreneurs) has no tailored start-up programme dedicated to the Roma community. Dedicated microfinancing and business development advice for the Roma community could be very important in helping launch Roma entrepreneurship.

Social enterprises play a significant role in Roma labour market attachment

Several Slovak municipalities are active in supporting the labour market attachment of the Roma community in their areas through creation and operation of municipal firms offering fixed-duration employment to people without work. One of the common approaches of these social enterprise initiatives is the development of housing for the Roma community by the Roma community, but there are also many other product/service models. Work integration social enterprises such as these offer an important route for supporting Roma people to move from unemployment into employment or self-employment. They offer a period of supported employment that provides an employment history, new work skills, networks, role models and other benefits for moving into employment or self-employment. There is great potential to scale up and spread social enterprise initiatives run by municipalities and non-profit sector actors with national government support, as part of both the entrepreneurship and labour market policy agendas. Since the Slovak Republic's adoption of the Social Economy and Social Enterprise Act in 2018, it is possible to provide public financial instruments, demand-support and compensatory forms of aid to social enterprises and this route can be exploited to strengthen support for Roma entrepreneurship.

NGOs are also providing support that can be built on

A number of non-governmental organisations (NGOs) are also involved in addressing Roma issues in the Slovak Republic. Very few offer specific support for employment or self-employment but some that are involved in training and skills development. These include the Association for a Better Life, Pontis Foundation and the Young Roma Association in the Slovak Republic, and the Brussels-based Roma Entrepreneurship Development Initiative (REDI), which operates internationally. There is an opportunity to expand thes training and finance programmes offered to Roma communities for self-employment and entrepreneurship by offering public financial support to NGOs for this purpose. Furthermore, Roma community centres are provind to be effective locations for social services in many municipalities, and there is an opportunity to deliver some custom-designed entrepreneurship training for Roma through these community centres.

A network of Roma entrepreneurship support organisations could be established

A key overall priority for government should be to identify successful types of social enterprises initiatives for the Roma and initiatives that are supporting Roma entrepreneurship and support them to upscale, including by working in collaboration with relevant municipalities and NGOs and participating in international initiatives. It would also be useful to create a network of organisations supporting Roma entrepreneurship and employment that can share good practice and organise peer-to-peer learning activities.

Policy recommendations

Labour market attachment through social enterprises

- The Office of the Slovak Government Plenipotentiary for Romani Communities should introduce into its planning a strategy for the introduction of 40 additional municipal social enterprises by 2025. The Office should identify key stakeholders to provide detail to the plan and determine key targets to be achieved.
- The Ministry of the Interior of the Slovak Republic should be responsible for securing the required funding to achieve the strategy and dispersing the ring-fenced funds dependent upon the municipalities achieving agreed targets.
- Conferences and government meetings where the Mayors of municipalities gather should be targeted by the Office of the Plenipotentiary to provide awareness, training and promotional support for the establishment of municipal social enterprises. A network of participating municipalities should also be established to enable peer-to-peer learning across the duration of the strategy.
- The Ministry of Labour, Social Affairs and Family of the Slovak Republic should review the amount of money that people on welfare benefits receive when they participate on a social enterprise programme to ensure that they will not be disadvantaged financially because they participate in such a programme. Any anomalies whereby a person entering a social enterprise programme is financially worse off should be identified and addressed.
- Programme participants should be paid their salaries through formal bank accounts to help build a personal credit history.

Business creation and self-employment by Roma people

- The Office of the Plenipotentiary should invite a small number of successful Roma entrepreneurs to create an 'Association for Roma Entrepreneurs' to help identify and promote Roma entrepreneurs as role models within the community.
- The Association of Roma Entrepreneurs should be supported to introduce initiatives such as job shadowing and mentoring whereby nascent Roma entrepreneurs can learn from established entrepreneurs.
- A microfinance programme should be introduced for Roma entrepreneurs, potentially managed by the Association for Roma Entrepreneurs. The Ministry of the Interior of the Slovak Republic should be responsible for securing the required funding to achieve the strategy and dispersing the ring-fenced funds dependent upon the Association achieving agreed targets.
- A one-stop shop or telephone line should be made available to provide access to business and legal support for nascent and established Roma entrepreneurs. This could be provided either through the labour offices or by the Association of Roma Entrepreneurs.

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2. Performance of SME and entrepreneurship characteristics in Slovak Republic

This chapter describes the structure and performance of SME and entrepreneurship activity in the Slovak Republic. It describes the number of firms, employment and value added distribution by firm size class. It reports progress on key business demography indicators, including firm entry and exit, churn rate, and occurrence of high-growth enterprises. It describes levels of SME productivity, internationalisation, and innovation. It also covers attitudes towards entrepreneurship and spatial disparities in SME and entrepreneurship rates across the Slovak Republic. The chapter identifies policy priorities based on this assessment.

Business structure in the Slovak Republic

The Slovak small business economy is weighted to very small enterprises

The Slovak economy is predominantly characterised by very small firms (Table 2.1). Some 97.0% of Slovak employer firms had fewer than 10 employees in 2017. This share increased slightly between 2013 and 2017, coinciding with a drop in the proportion of small firms with 10 to 19 employees which accounted for 1.5% of employer firms in 2017. Fewer than 1% of firms employed at least 20 employees, and there were only 2 460 medium-sized firms (with 50-249 employees), or about 0.5% of all firms in 2017. The number of SMEs grew by 5% per year on average between 2013 and 2017 (after declining by around 21 000 between 2011 and 2013). In parallel, the number of large firms has been in relative decline.

Table 2.1. Active employer enterprises in the Slovak Republic 2013-2017

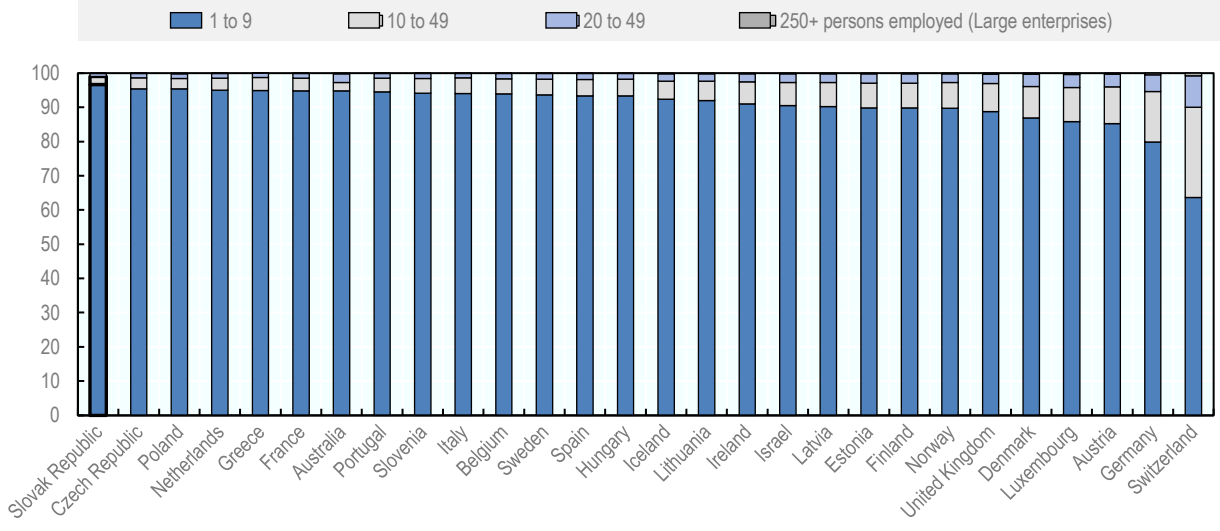
Size class	2013	%	2014	%	2015	%	2016	%	2017	%
1-9 persons employed	376865	96.6	403879	96.8	411765	96.7	429999	97.1	454450	97.0
10-19 persons employed	6973	1.8	7185	1.7	7730	1.8	5890	1.3	6897	1.5
20-49 persons employed	3658	0.9	3397	0.8	3473	0.8	4121	0.9	4215	0.9
50-249 persons employed	2183	0.6	2147	0.5	2264	0.5	2396	0.5	2460	0.5
250+ persons employed (Large enterprises)	508	0.1	524	0.1	531	0.1	555	0.1	581	0.1
Total	390187		417132		425763		442961		468603	

Source: OECD (2020a), Structural and Demographic Business Statistics database.

The share of micro firms in the Slovak economy is higher than in any other OECD country, followed by the Czech Republic, Poland and the Netherlands (Figure 2.1).

Figure 2.1. Enterprises by size in the OECD countries

Share in total number of firms in 2017



Source: OECD (2020a), Structural and Demographic Business Statistics database.

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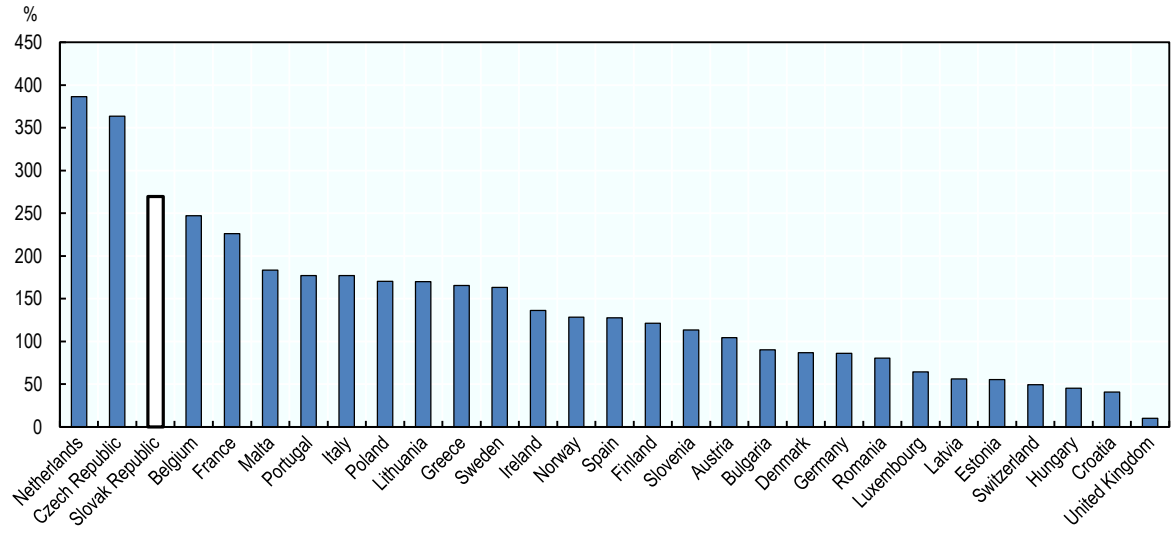
There are more than 2.5 non-employer firms for each employer firm in the economy, one of the largest shares in the OECD countries (Figure 2.2).

Figure 2.2. Non-employer firms across OECD

Ratio of non-employer firms to all employer firms in 2017



Source: OECD (2020a), Structural and Demographic Business Statistics database.

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The high share of very small enterprises may stem from individual preferences, but may also relate to features of the overall business environment. For instance, the high proportion of non-employer firms may be related to difficulties in hiring employees due to strict labour market regulations, or relatively steep taxes for first hires. Interviews revealed that hiring the first employee is especially costly for firms, and that instead of hiring a new employee, many firms opt for subcontracting to a self-employed contractor.

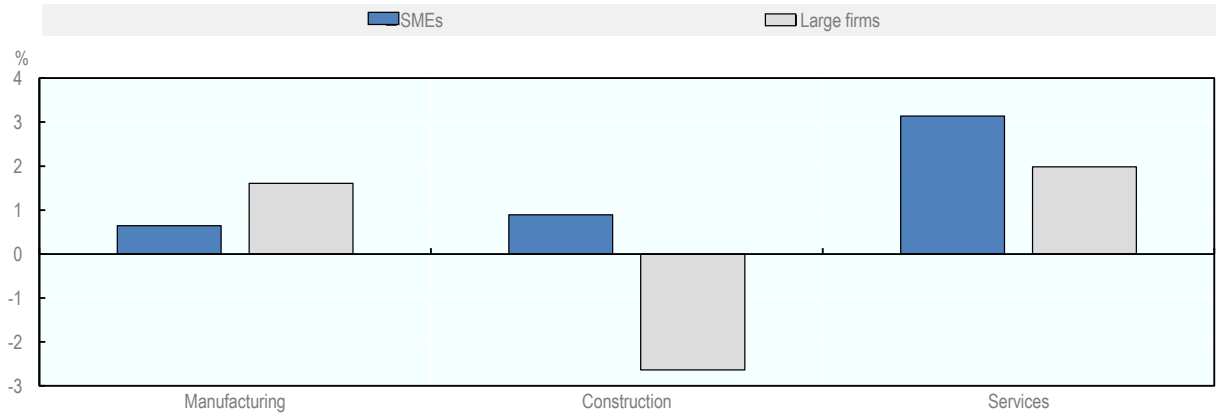
Most SME growth is in service sectors

The number of firms in the service sector grew relatively rapidly between 2011 and 2017, reflecting a slight shift towards a more service-sector-oriented economy. On average, 3% of new SMEs were added each year over that period, and by 2017, there were almost 300 000 SMEs active in services. The corresponding growth for large enterprises amounted to 2% (Figure 2.3).

The other sectors experienced slower but positive growth in their numbers. In manufacturing, there were 70 000 SMEs in 2011, and 72 000 firms in 2017, with an increase of 0.6% on average each year. The number of large firms grew from 276 to 303 firms, increasing by 1.6% each year. Construction activities are dominated by SMEs, with 95 000 firms having fewer than 250 employees, and 16 large firms in operation in 2017. On average, 0.6% of new SMEs in construction were added on a yearly basis since 2011 (Figure 2.3).

Figure 2.3. Expansions of sectors by firm size

Average annual growth rates, 2011-2017



Note: Manufacturing refers to 10-33 ISIC4 Rev. 4 sectors, Construction are sectors 41 to 43, and Services refer to sectors 45 to 82, l excluding 64-66 of ISIC Rev.4
Source: OECD (2020a), Structural and Demographic Business Statistics database.

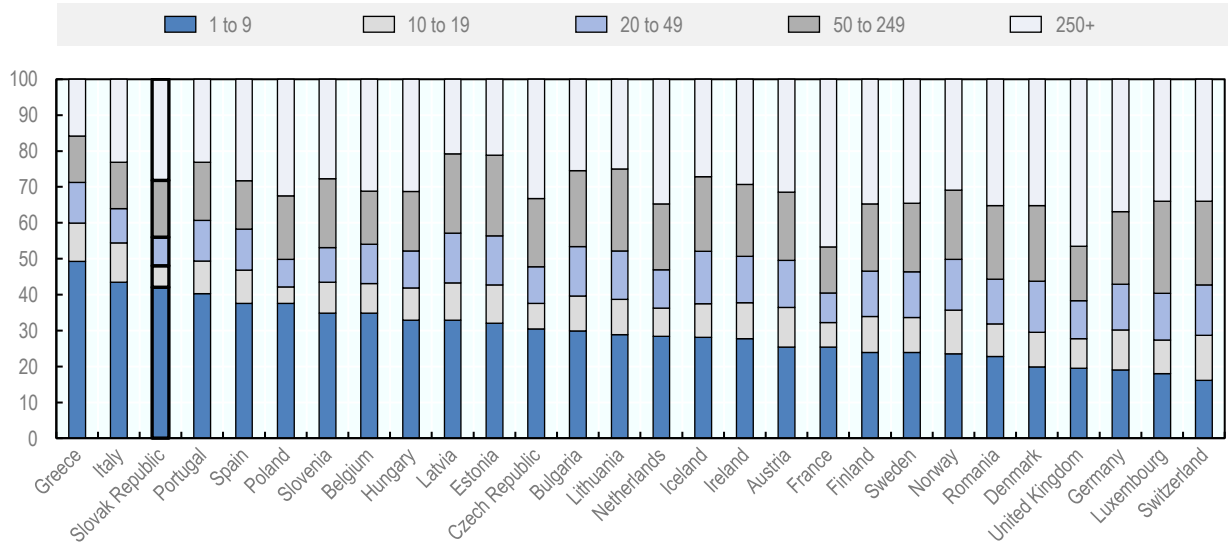
StatLink https://doi.org/10.1787/888934247001

SMEs account for the great majority of business employment

SMEs in the Slovak Republic are responsible for 72% of business employment (Figure 2.4). The neighbouring OECD countries tend to have higher shares of employment in large firms. Between 67% and 69% of the workforce was in SMEs in Austria, the Czech Republic, Hungary and Poland in 2017, compared to 72% in the Slovak Republic. Small firms with fewer than 50 employees employed 56% of the business workforce in the Slovak Republic in 2017, 5 percentage points above the OECD average. The Slovak Republic also had a higher share of employment in the micro segment than other OECD countries, except Italy and Greece. The middle-sized firms are slightly better represented with 16% workers, although this was still below the average of 19% across OECD economies.

Figure 2.4. Employment by firm size classes across OECD countries

Share in total in 2017



Source: OECD (2020a), Structural and Business Demography Statistics database.

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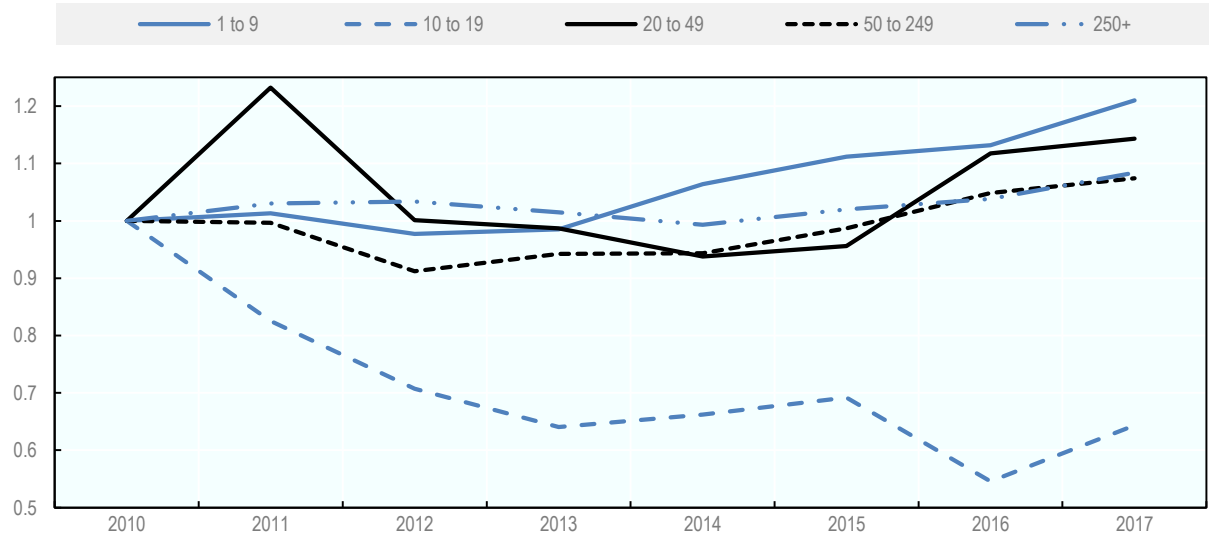
The missing middle-sized firms in Slovak Republic is not a recent phenomenon, suggesting insufficient incentives for firms to to grow, and the need for policies supporting firms to surpass the threshold of 10 employees. Employment in micro firms grew by 21% between 2010 and 2017, compared to growth of only 7% in mid-sized and 8% in larger firms. Firms with fewer than 20 employees, but more than ten, observed a decline in the number of people employed, employing only two-thirds of the workforce they did in 2010 (Figure 2.5).

Figure 2.5. Employment by firm size in the Slovak Republic over time

Normalised to the value in 2010, such that 2010 = 1



Source: OECD (2020a), Structural and Demographic Business Statistics database.

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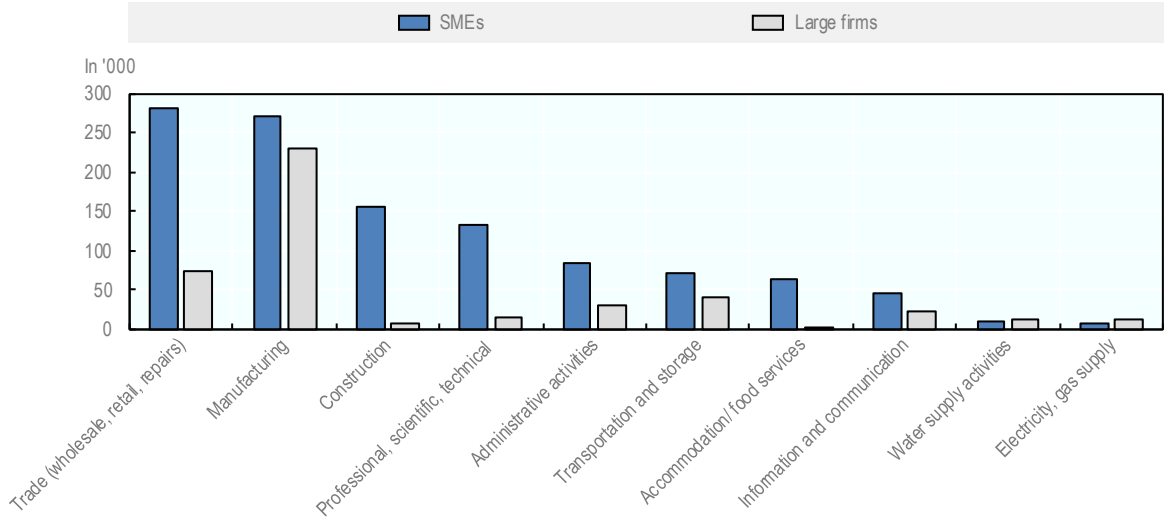
SME employment is greatest in sectors with low productivity and greate exposure to the COVID-19 crisis

The manufacturing sector is the biggest employer in the Slovak Republic, employing 500 000 employees, of which about 54% work in SMEs. The trade sector, including wholesale trade, retail, and repairs has the largest number of employees that work in SMEs (280 000, or 80% of the sector's total employment). Accommodation and food enterprises is almost exclusively composed by SMEs, with 95% of employment, followed by the construction sector, and professional, scientific, and technical services.

Figure 2.6. Sectoral employment by firm size in the Slovak Republic

Number of person employed in 2017



Source: OECD (2020a), Structural and Demographic Business Statistics database, (accessed on 7 January 2020).

StatLink https://doi.org/10.1787/888934247058

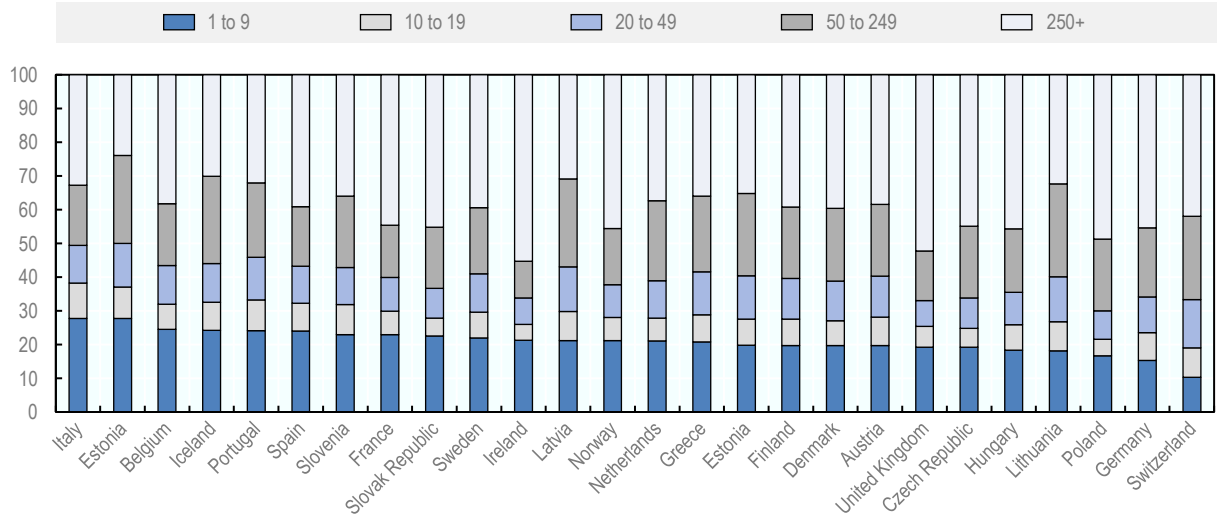
The sectors with higher shares of SMEs also tend to be less productive. Most of the customer services require low starting costs and are easily replicable, and therefore face higher competition and high business churn rates. There is also an above average representation of SMEs in sectors particularly affected by the COVID-19 crisis, which include: transport, manufacturing, construction, wholesale and retail trade, air transport, accommodation and food services, real estate, professional services, and other personal services.

SME productivity is relatively low

The productivity gap between SMEs and large firms is relatively wide in the Slovak Republic. Despite accounting for 72% of jobs in businesses, SMEs generated only 58% of total value added in 2016, up from 55% in 2011. Micro firms produced the largest share of value added among SMEs, at 23%. Small firms with fewer than 20 employees generated 5% and small firms, with more than 20 but fewer than 50 employees, generated 9% of value added. Finally, medium-sized firms generated an important share of value added (about one-fifth of the total value added) in the Slovak economy considering their relatively small share in the firm count and employment (Figure 2.7).

Figure 2.7. Value added by firm size in OECD countries

As a share of total value added by employer enterprises in 2016



Source: OECD (2020a), Structural and Demographic Business Statistics database.

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The micro firm share of output of 23% is relatively low, considering that their share in employment is 42%. This points to their relatively low productivity. This contrasts with the situation in some countries, notably Denmark, Luxemburg, France and the United Kingdom where the average productivity of these firms is not much lower than for their larger counterparts. Given low productivity levels in the smallest firms, the Slovak Republic's relatively high share of very small firms presents a challenge to the aggregate productivity of the overall economy, suggesting scaling up as a possible policy priority.

Many early entrepreneurs have no recruitment plans

Most entrepreneurs in the Slovak Republic do not plan to hire more than five employees. Ten percent of adults (and about 80% of all early stage entrepreneurs) declared that their intention was to hire up to five persons within five years' time, and about 6% of adults, or about half of new entrepreneurs, do not plan to hire any employees at all. While many entrepreneurs across surveyed OECD countries have modest growth and employment ambitions, the proportion is relatively high in the Slovak Republic, suggesting a possible area for policy intervention. In some countries such as Ireland, Latvia, and the United States, a higher share of early entrepreneurs target to recruit six or more employees within five years at their inception.

Entrepreneurship and small business activity is weaker in the eastern regions

The table below illustrates a range of indicators of small business and entrepreneurship activity across Slovak regions. It shows that Bratislava has a far more well developed SME and entrepreneurship economy than other regions. For example, the stock of active SMEs in Bratislava is more than three times than that found in the region of Košice, as well as outstripping the other NUTS III regions. The rate of firm creation in Bratislava is lower than other regions, but this is characteristic of a more resilient SME and entrepreneurial economy with less firm deaths and higher survival rates after both one and three years of creation. In addition to the marked divide between the capital and other regions, there are also differences across the other seven regions, with Žilina, Nitra and Trnava having significantly

higher rates of SME density compared to Košice and Banská Bystrica. Furthermore, within regions there are also apparent local district level differences, with Košice – for example – having a number of local pockets of high entrepreneurship rates.

Table 2.2. SME and entrepreneurship ativity by region, 2018

Region	Stock of active registered SMEs per 10,000 people	Rate of firm creation	Rate of firm deaths	Survival rate - one year after creation	Survival rate - three years after creation
Bratislava Region	1,664	8.3%	4.4%	89.4%	79.7%
Trnava Region	832	10.1%	6.1%	82.4%	65.2%
Trencín Region	765	10.5%	7.7%	78.7%	64.0%
Nitra Region	861	11.8%	7.7%	78.4%	63.7%
Žilina Region	955	10.7%	7.1%	81.0%	65.8%
Banská Bystrica Region	681	11.4%	7.6%	77.4%	63.5%
Prešov Region	730	13.5%	8.4%	72.6%	61.5%
Košice Region	583	11.0%	7.4%	77.0%	62.6%
Slovak Republic	874	10.6%	6.7%	80.4%	66.9%

Note: Calculated on the basis of the date of establishment and disestablishment of the entity. Number of newly born firms and number of firms deaths divided by the number of enterprise population (active and inactive)
Source: SBA (2018).

In terms of entrepreneurial attitudes and culture, data from the Global Entrepreneurship Monitor indicates that the regions of Bratislava, Trnava and Trenčín are above average in terms of the perception of opportunities for starting a business. The level of perception of opportunities for starting a business in Bratislava is almost double the national level. The regions of Nitra, Žilina, Banská Bystrica, Prešov and Košice have below average levels of perceived entrepreneurial opportunities. Bratislava also has the highest representation of the population who believe they have the required skills and knowledge – 'perceived capabilities' – to start a business, but the difference is less marked than the regional differences for 'perceived opportunities'. This suggests that individuals in lagging regions consider that entrepreneurial barriers are more related to external business environment issues than their own human capital.

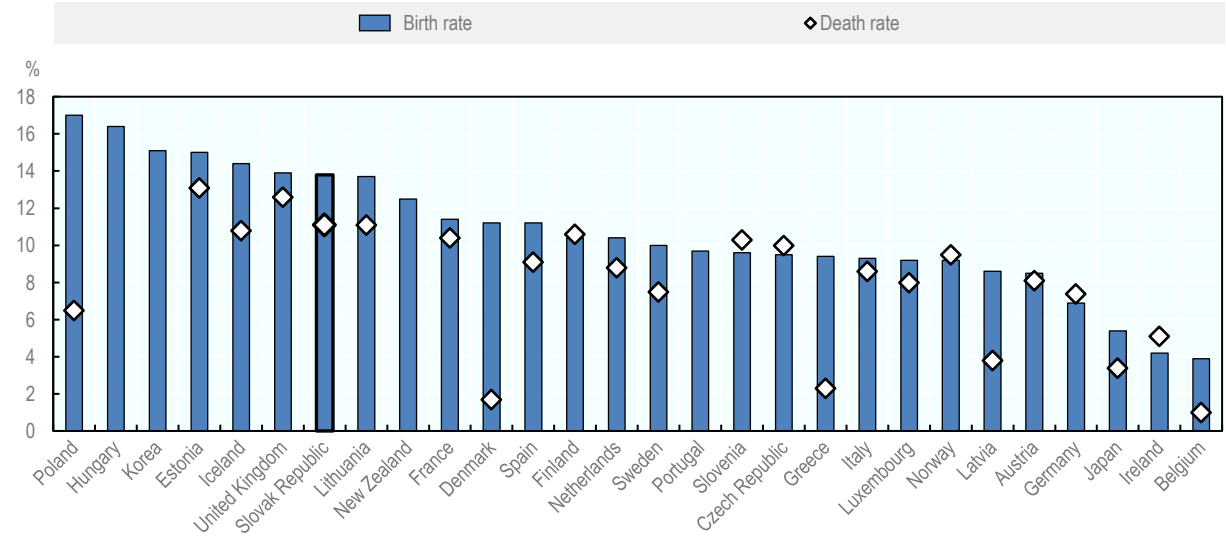
Business dynamics

Business birth rates are among the highest in the OECD

Business demography in the Slovak Republic is characterised by high start-up rates combined with low firm survival rates. The Slovak business creation rate is among the highest in the OECD countries. By the end of 2017, 13.8% of all firms were created in that year. This rate is similar to the employer enterprise birth rate in Lithuania or the United Kingdom and well above the OECD average (Figure 2.8). The new enterprise creation rate in the Slovak Republic has been steadily increasing, doubling between 2007 and 2012, and increasing by additional 2 percentage points in the following years to stabilise at the current rate.

High business creation is accompanied by a high share of enterprise deaths. In 2017, 11.1% of previously existing firms left the market. Only Estonia and the United Kingdom had higher death rates.

Figure 2.8. Enterprise birth and death rates in 2017



Note: Birth and death rate of employer enterprise. Employer enterprise rates do not include entries and exists from the population of firms that happens due to mergers, acquisitions, break-ups and restructuring of enterprises.
Source: OECD (2020a), Structural and Demographic Business Statistics database.

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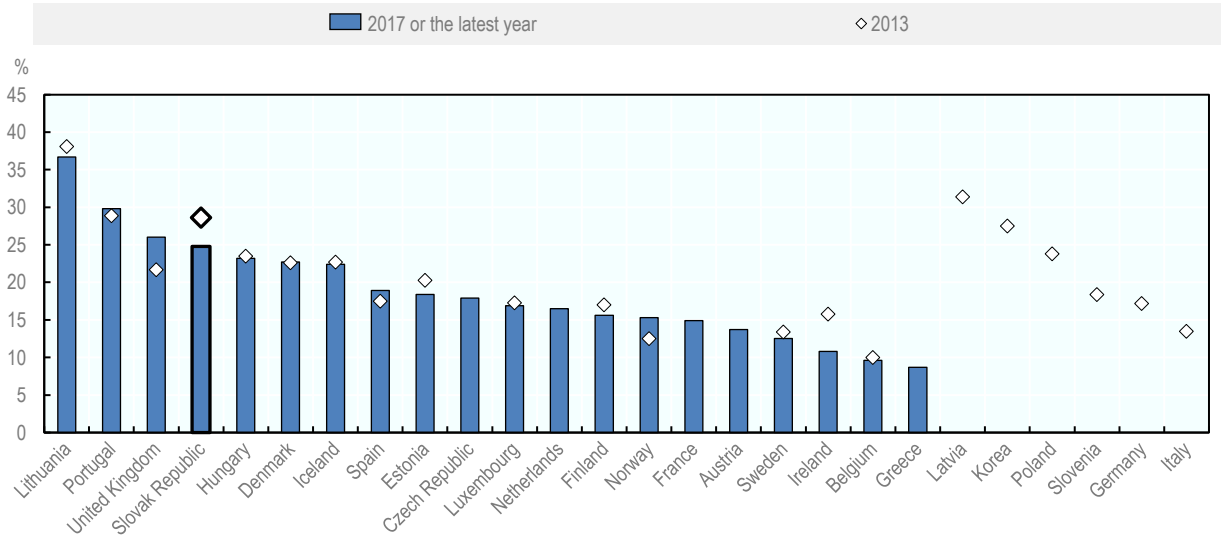
The churn rate has declined since 2013, but remains high, especially in financial and insurance activities

As a consequence of high rates in business births and deaths, the Slovak Republic is among the OECD countries with the highest enterprise churn rate in recent years (Figure 2.9). The churn rate, calculated as the sum of birth and death rates of all firms, gives an overall idea of the business dynamics in the country. Higher churn rates are often associated with productivity growth due to the reallocation of resources from less productive firms to firms that are more productive. The churn rate in the Slovak Republic in 2017 was 24.8%, a drop from 28.6% in 2013, but still high by international comparison.

Figure 2.9. Enterprise churn rate

Sum of enterprise birth and death rates as a share in total number of firms, in 2013 and 2017



Note: Churn rate is an aggregate value of birth and death rates. The rates are given for all enterprises.
Source: OECD (2020a), Structural and Demographic Business Statistics database.

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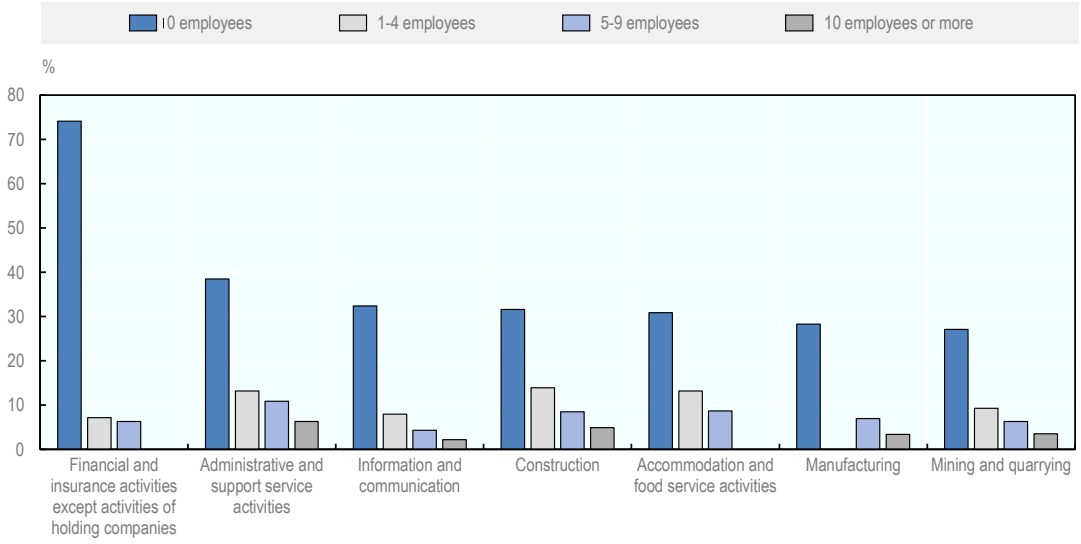
Non-employer firms are responsible for high churn rates in certain sectors (Figure 2.10). This is exemplified by the financial and insurance sector, which has the highest churn rate for non-employer firms, with 74% of firms that entered or exited in 2017. The churn rate drops to 7% when excluding non-employer firms, lower than in most other sectors. High churn, especially among non-employer firms, can indicate difficulties in business growth, for example in hiring the first employee and going beyond the initial stage of starting a company.

Figure 2.10. Churn rate by enterprise size and sector in the Slovak Republic

Churn rate as a share of total firms in the sector in 2017



Note: Selected sectors. Shares indicate percentage of firms that entered or exited the market within the size and sector group.
Source: OECD (2020), Structural and Demographic Business Statistics database.

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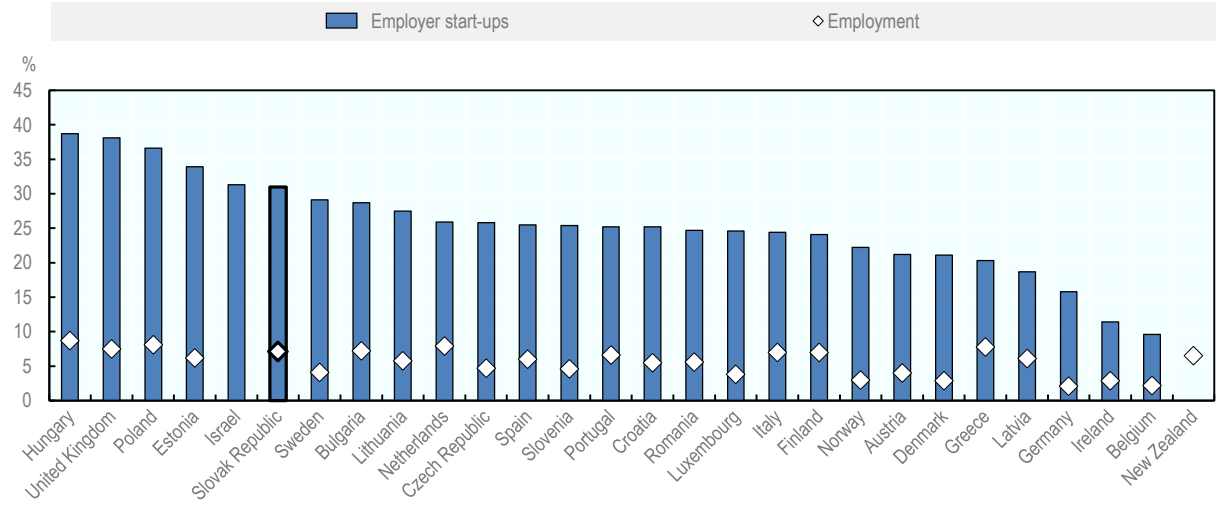
Start-ups comprise one-third of Slovak enterprises, but rarely live beyond 5 years

Almost one-third (31%) of firms in the Slovak Republic are two years of age or younger. This rate is comparable with other Central European countries such as Bulgaria, Estonia, Lithuania or Poland, with Hungary an exception with close to 40% of firms in the two year age bracket. Some 7% of the Slovak workforce is employed in start-ups compared with an average of 6% across the OECD (Figure 2.11).

Figure 2.11. Employment in start-ups

Share of start-ups in the total number of firms and in total employment in 2017



Note: Share of employer start-ups. Employer start-ups are firms between 0 and 2 years since their incorporation. Employment for start-ups is calculated for firms that are 1 or 2 years old.
Source: OECD (2020a), Structural and Demographic Business Statistics database.

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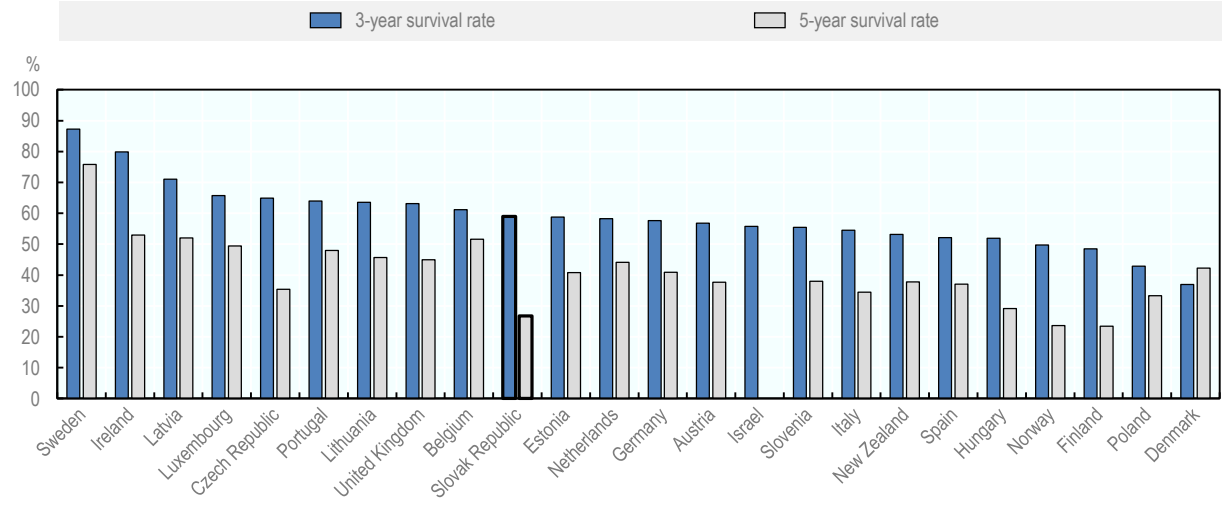
However, the survival rate of start-ups in the Slovak Republic is relatively low. Only about one quarter of start-ups was still active in their 5th year of existence in 2017, which was one of the lowest 5-year survival rates among OECD countries. The 3-year survival rate is closer to the OECD average, with about 60% of start-ups surviving 3 years after they started their activity (Figure 2.12).

Figure 2.12. Survival rates of employer enterprises

Share of surviving firms in total number of firms born in the same year, 2017



Note: The 5-year survival rate is the share of enterprises in 2017 that were newly born in 2012 out of the total number of enterprises born in 2012. Similarly, the 3-year survival rate refers to firms that were born in 2014, and still existed in 2017 among the total number of firms born in 2014.
Source: OECD (2020a), Structural and Demographic Business Statistics database.

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Many businesses are facing the challenge of business transfer, especially family-owned businesses

The Slovak Republic has a young market economy where the oldest firm has been in operation only since 1989. Many of the owners of firms originally established at the time of the transition from a socialist economy have now reached retirement age and need to transfer the business to the next generation. This is a particular issue for family-owned businesses. However, the tax system is not very supportive of the transfer of businesses to family members, since the tax obligations for the family are equivalent to selling the company to any other individual. Box 2.1 puts a spotlight on the issue of business transfer among family-owned businesses in the Slovak Republic.

Box 2.1. Family business transfer and succession tax law

The Small Business Act for Europe acknowledges the importance of family business in employment and economic prosperity for the European Union (EU) countries, and pays special attention to the business succession issue. The transfer of ownership and management tends to be one of the major problems of family-owned businesses. Each year in the EU, about 450 000 firms, employing more than 2 million employees, undergo a transfer to a new owner. At the EU level, the COSME programme can provide resources for programmes assisting business transfer in form of financial assistance, advisory services, raising awareness, and creating online platforms for business transfers.

It has been estimated that between 80 to 95% of Slovak firms are family businesses, and two-thirds of them have exclusively family members that are employed in managerial positions (Mandl, 2008). However, in contrast with most European economies, the Slovak Republic is relatively unfamiliar with business transfers, since the first major wave of family business transfer has only occurred in the past decade. A survey of about 360 family businesses found that one-third were more than 20 years old, another third were between 10 and 20 years old, and only about 28% of family businesses had undergone transfer to a new generation (SBV, 2018). The SBA has made five recommendations for supporting family businesses: (1) creating a definition of family business, (2) adjusting the tax system, (3) simplifying the labour code and methods for employing family members, (4) introducing more stability in entrepreneurship law, and (5) supporting tertiary education in the population and connecting education with the labour market (SBV, 2018).

However, besides these recommendations, a framework on how to transfer the business to others does not exist. Most entrepreneurs have unrealistic valuation visions, and moving assets is costly due to high taxes. Furthermore, inheritance taxes are more favourable than income taxation, which creates an incentive to postpone business transfer and discourages ample planning ahead of time.

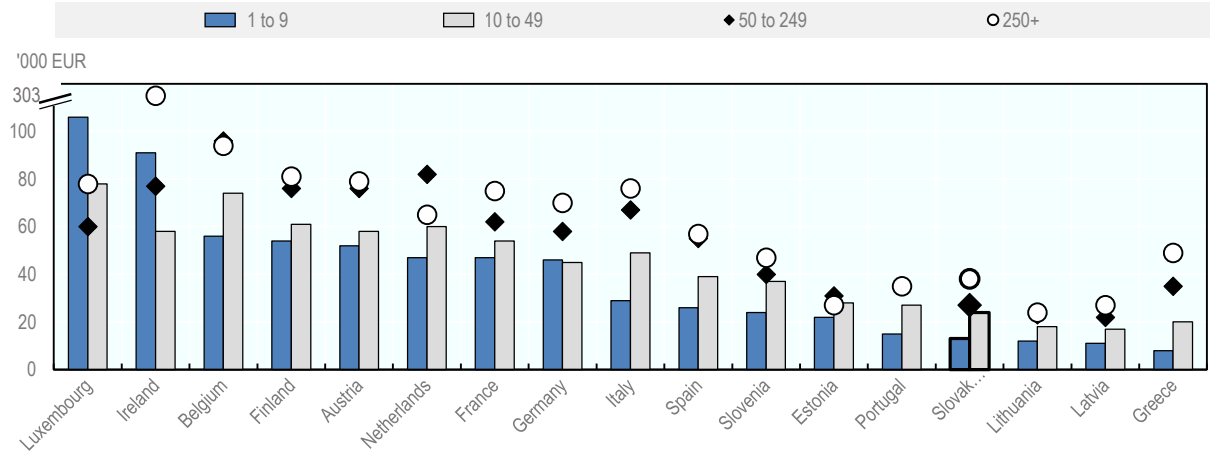
Productivity of SMEs in the Slovak Republic

The productivity of SMEs is low and has been in decline among the smallest firms

Labour productivity in the Slovak Republic is lagging behind other OECD countries. Micro firms with fewer than 10 employees generate output of EUR 13 000 EUR per person, equivalent to 12% of the average productivity of micro firm in Luxemburg, the frontrunner among countries with comparable data. The productivity almost doubles to EUR 24 000 for firms with 10 to 49 employees. Medium-sized firms' productivity is higher, but also lags behind most countries. Medium-sized firms in Belgium, Ireland or the Netherlands are about 3 times more productive than in the Slovak Republic (Figure 2.13).

Figure 2.13. Labour productivity by firm size

In thousands of EUR in 2017



Note: Analysis restricted to OECD countries with EUR currency. Large firms in Ireland have the highest productivity, with 303 thousand EUR in 2017.
Source: OECD (2020a), Structural and Demographic Business Statistics database.

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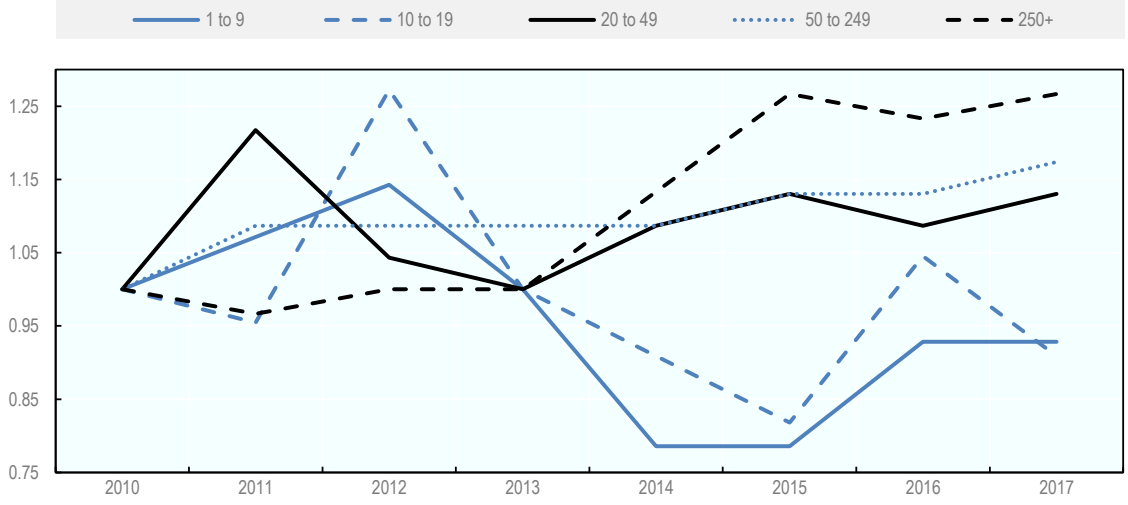
In addition, labour productivity among SMEs has been falling since 2011, largely driven by developments in micro and very small firms in the service sectors (Figure 2.14). For firms under 20 employees, overall productivity in 2017 was almost 10% below 2010 levels. This stands in contrast with medium-sized and large firms in which productivity has grown since 2010.

Figure 2.14. Labour productivity by firm size in the Slovak Republic

Normalised to the value in 2010, such that 2010 = 1, 2010-2017



Note: Labour productivity measured in Millions of EUR.
Source: OECD (2020a), Structural and Demographic Business Statistics database.

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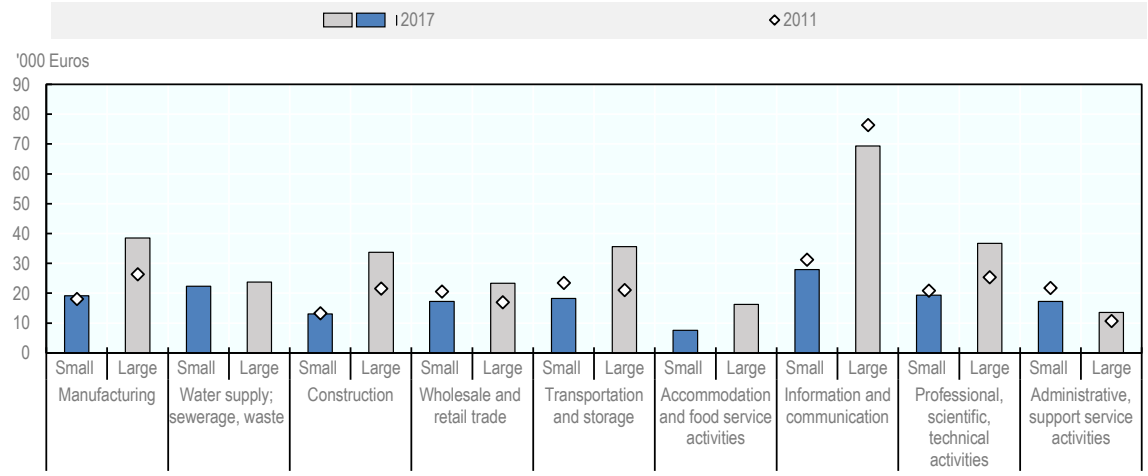
The sectoral composition of firm creation in the Slovak Republic, i.e. mostly in unproductive and low value-added or labour-intensive sectors has played a role in these productivity trends. In particular, SMEs in Transportation and storage, and Administrative and support service activities were notably less productive in 2017 than in 2011. By contrast, manufacturing SMEs increased productivity over this period. Large firms, with an exception of Information and communication sector, increased their average productivity in all sectors, especially in Manufacturing and Professional, scientific, and technical activities (Figure 2.15).

Figure 2.15. Sectoral productivity by firm size in the Slovak Republic

Labour productivity in 2011 and 2017



Source: OECD (2020a), Structural and Demographic Business Statistics database.

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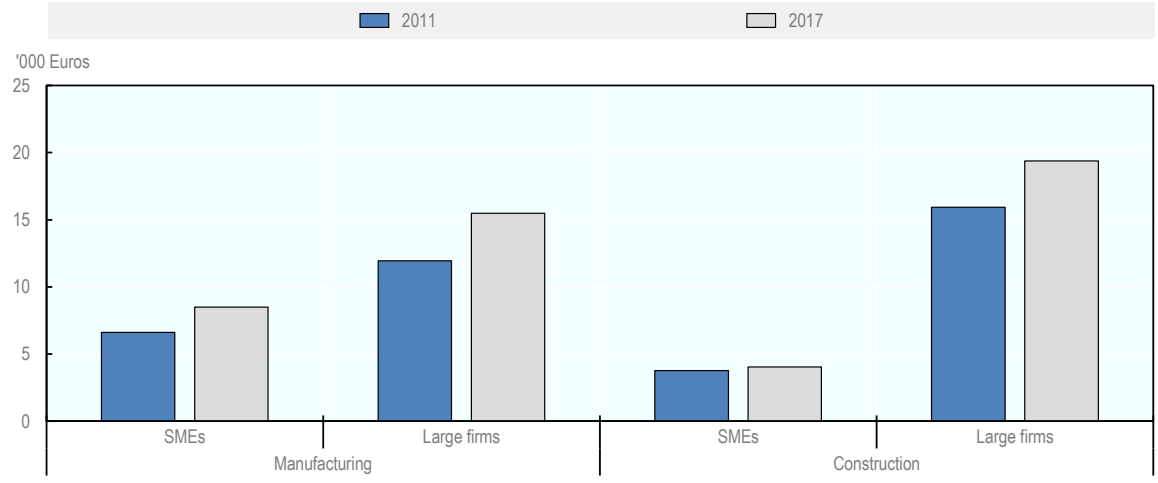
Wages in SMEs continue to lag behind wages in large firms

The low productivity in SMEs, and the sizeable productivity gap by firm size, has implications for the wages of SME employees. The average wage per employee stood at 8 500 EUR in SMEs and 15 000 in large firms in manufacturing in 2017. Manufacturing wages increased by about one third between 2011 and 2017, but at a slightly lower rate in SMEs than large firms. The average employee in an SME in the construction sector was paid EUR 4 000, whereas remuneration at large construction firms averaged at over EUR 19 000 in 2017. Wages in large construction firms grew by 22% since 2011 compared with a 7% increase in SMEs (Figure 2.16).

Figure 2.16. Wages by firm size and sector in the Slovak Republic

Average annual wage in 2011 and 2017



Note: Manufacturing refers to 10-33 ISIC4 Rev. 4 sectors, Construction are sectors 41 to 43, data for other sector is unavailable.
Source: OECD (2020a), Structural and Demographic Business Statistics database.

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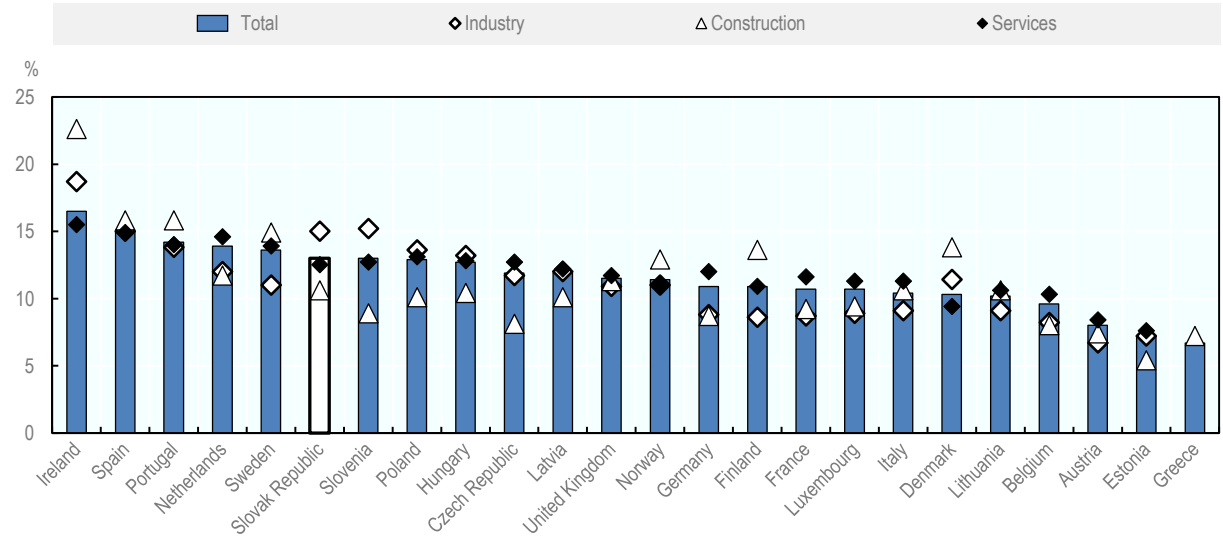
High growth enterprises, internationalisation and SME innovation in the Slovak Republic

The Slovak Republic has one of the highest shares of high-growth enterprises in industry

There is evidence from a range of OECD countries that at least 50% of new jobs are typically created by high growth enterprises (with 10% growth in employment per year over a three year period (NESTA, 2009; Rivard, 2017; Deschryvere, 2008). A lot of attention has been given to young firms when monitoring high-growth, but only 1.27% of firms were so-called “gazelles” (medium and high-growth enterprise under 5 years since its incorporation date) in the Slovak Republic in 2017 (Eurostat, 2020). Taking firms of all ages, 13% of all Slovak firms were medium or high-growth enterprises in 2017, with an overrepresentation in industry, including mining, manufacturing, electricity, and water supply sectors. The Slovak Republic outperforms the OECD average for the share of medium and high-growth enterprises in industry, construction and services, with a particularly high share in industry (Figure 2.17).

Figure 2.17. Share of medium and high-growth enterprises by sector in 2017



Notes: Share of medium and high-growth enterprises in total population of enterprises with at least 10 employees. The high growth refers to OECD-Eurostat definition of high growth (OECD, 2007) which defines high growth as an average growth of 20% over 3-year period. Medium growth refers to firms that grow at least 10% on average over three years.
The variable of high growth is employment.
Source: OECD (2020a), Structural and Demographic Business Statistics database.

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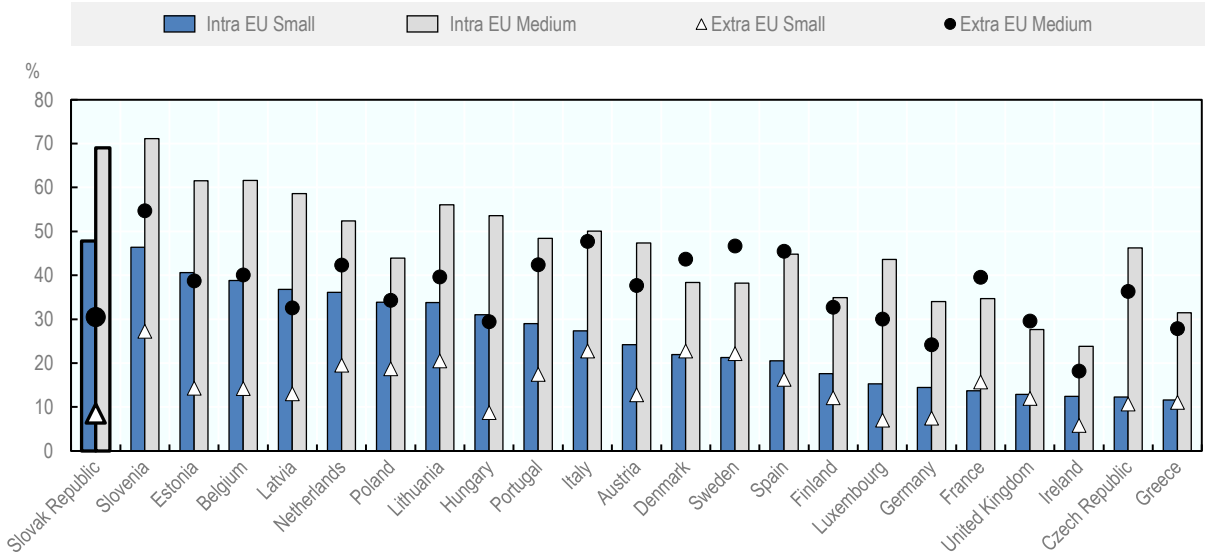
Slovak SMEs under-perform in exports going beyond the EU market

SMEs in the Slovak Republic are very likely to have an exporting experience. As a small landlocked country with four EU neighbours, the Slovak Republic has a large trading potential, and more than one-half of firms in the Slovak Republic export within the single market. In 2017, small firms were more likely to export to another EU country than small firms in any other OECD country, with nearly every other small firm being an exporter. Similarly, medium-sized firms had one of the highest propensities of being an intra-EU exporter among the OECD countries, 69% in 2017 (Figure 2.18).

However, Slovak SMEs lag behind in exports to markets located beyond the EU borders. Only 8% of small firms, and 30% of medium-sized firms in the Slovak Republic have non-EU exports, both below the OECD averages (15% and 37% respectively) (Figure 2.18). This stands in contrast with countries like Slovenia, Italy and Sweden where at least one-fifth of small firms and one-half of medium-sized firms export outside the EU. Exporting to more distant countries might be riskier, but also more lucrative. As a majority of SMEs already possesses exporting experience, the next step of reaching more distant markets could be quite accessible and increase profitability.

Figure 2.18. Share of exporting firms by size in OECD countries

As of total number of firms in the size class in 2017



Source: OECD (2020a), Structural and Demographic Business Statistics database

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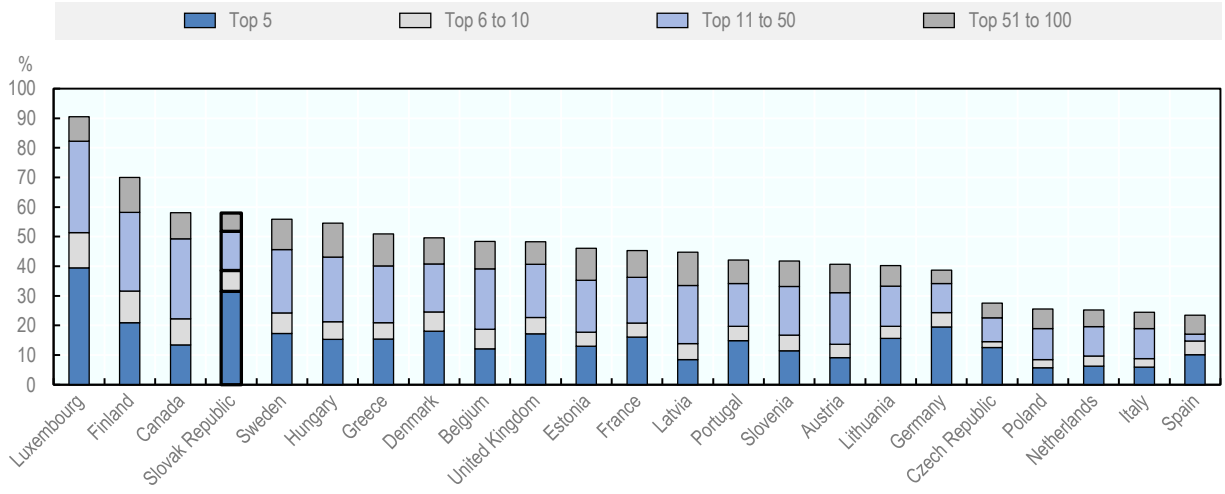
Exporting is highly concentrated in a few firms

In the Slovak Republic, SMEs generate only 15% of extra-European exports, and 29% of exports within the EU (OECD, 2020a).

The top 100 exporters create the majority of export value in the Slovak Republic. Five firms alone generated almost one-third of export value in 2017, while the top ten firms were responsible for 38.5% of exported value. Only in Luxembourg is a similar concentration of activity accounted for by the top five firms (Figure 2.19). Exports are very concentrated by sector, with electronics and the automotive sector accounting for large shares.

Figure 2.19. Concentration of export value among top exporters

As a share of total export value in 2017



Note: The value of exports is recorded in US Dollars. Concentration is a ratio of value of export by firms in each ranking in 2017 over total value of exports.
Source: OECD (2020b), Globalisation: TEC database.

StatLink https://doi.org/10.1787/888934247305

Furthermore, the domestic value added in exports is relatively low, as is the case in most countries in Central Europe. By and large, this reflects the role of the country as an assembly hub of intermediate imported inputs (OECD, 2019).

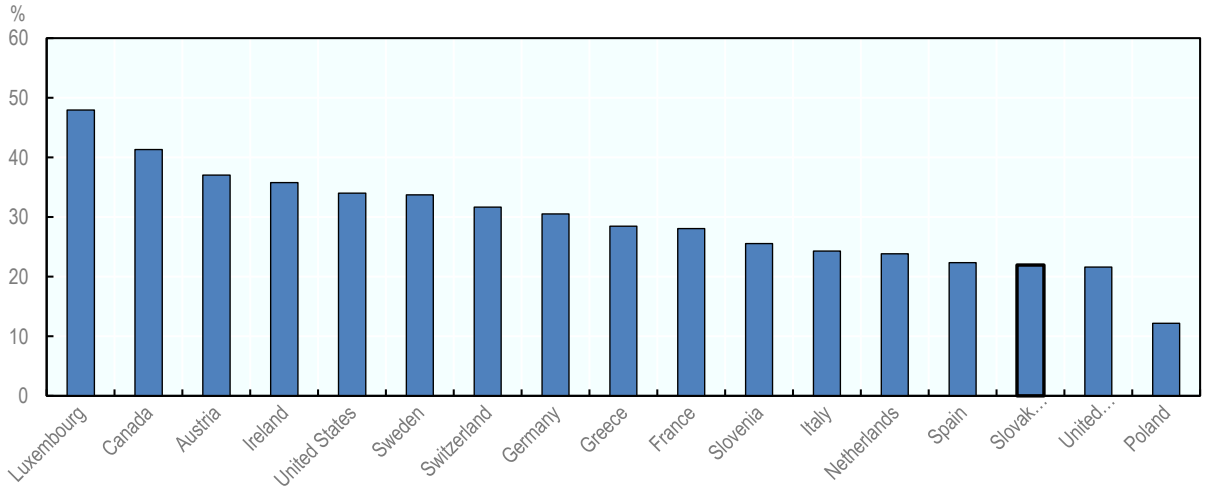
SME innovation levels are relatively low

Young firms in the Slovak Republic tend to be less innovative than their counterparts in other OECD countries

Slovak entrepreneurs are less innovative on average than entrepreneurs in other OECD countries. The Slovak Republic also underperforms in terms of R&D expenditure of SMEs. Furthermore, the Slovak Republic has a relative low share of new businesses bringing a new product or service to the local market (Figure 2.20).

Figure 2.20. Innovative young firms

Percentage of those adults involved in early entrepreneurial activity who indicate that their product or service is new to at least some customers and few or no businesses offer the same product, in 2019



Source: (Bosma, 2020)

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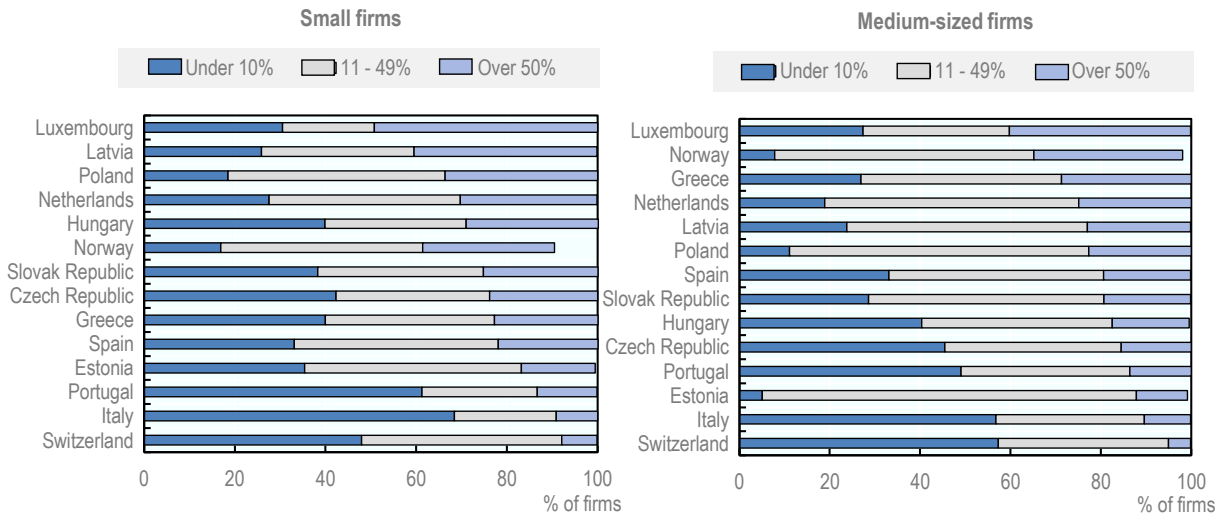
SME workforces have relatively few employees with tertiary education

38% of the small firms and 29% of medium-sized firms that innovate employ less than 10% of their workforce with a university degree, a figure in line with the average among countries with comparable data (Figure 2.21). Only approximately 20% of innovative small firms and innovative medium had more than one-half of their workforces with a university degree, in line with the average for a range of countries. However, only 8% of non-innovative SMEs firms had more than half of their workforces with university education, one of the largest gaps between innovative and non-innovative SMEs in Europe (Eurostat, 2020).

Figure 2.21. Share of workforce with higher education in innovative firms in 2016



Note: Elaboration of results of the latest community innovation survey (CIS, 2016). Percentage refers to workforce with university education in enterprises that either have introduced an innovation or have any kind of innovation activity (including enterprises with abandoned/suspended or on-going innovation activities).
Source: Eurostat (2021) Community Innovation Survey dataset: https://ec.europa.eu/eurostat/web/science-technology-innovation/data/database.

StatLink https://doi.org/10.1787/888934247343

Slovak SMEs lag on innovation spending

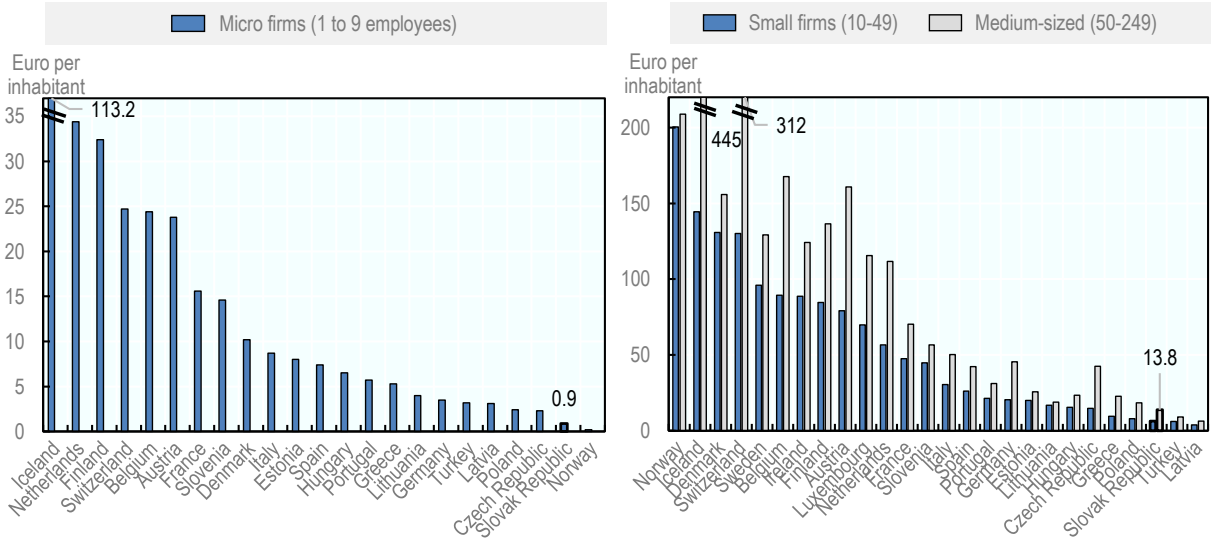
The Slovak research and innovation performance is well below the EU27 and OECD averages and the Slovak Republic has consistently under-performed even compared to neighbouring Visegrad countries. Even the multinational firms located in the Slovak Republic undertake relatively (to other OECD and neighbouring countries) little R&D in their Slovak operations. In the Slovak Republic, business R&D is mostly done by few larger domestically-owned companies in the automotive and ICT sectors and R&D departments of a few multinational (MNC) firms located in the country (Baláž et al, 2017). Domestic SMEs continue to compete based on low costs of production, but due to rising wage levels this strategy is under pressure.

The European Innovation Scoreboard data indicates that shares of in-house innovating SMEs was much lower in the Slovak Republic (13.9%) than that in the EU28 (28.8%). Moreover, while R&D investments increased over the last decade, they are strongly dependent on foreign funding sources, notable the ESIF programmes, with fluctuations in R&D expenditure (notably public investment) linked to the transition between various ESIF funding periods or programmes (European Commission, 2020).

Slovak small firms and medium-sized firms spend an equivalent of EUR 6 and 14 per inhabitant on R&D respectively, far short of spending in the most R&D-intensive OECD countries such as Denmark, Iceland, and Switzerland (Figure 2.22). Slovak firms with fewer than 10 employees spent only EUR 0.9 per inhabitant on R&D compared to an average of EUR 15 per inhabitant for OECD countries with comparable data.

Figure 2.22. Innovation spending

Total value of R&D spending by firm size, in 2017



Source: Eurostat (2020), BERD database: https://ec.europa.eu/eurostat/web/science-technology-innovation/data/database.

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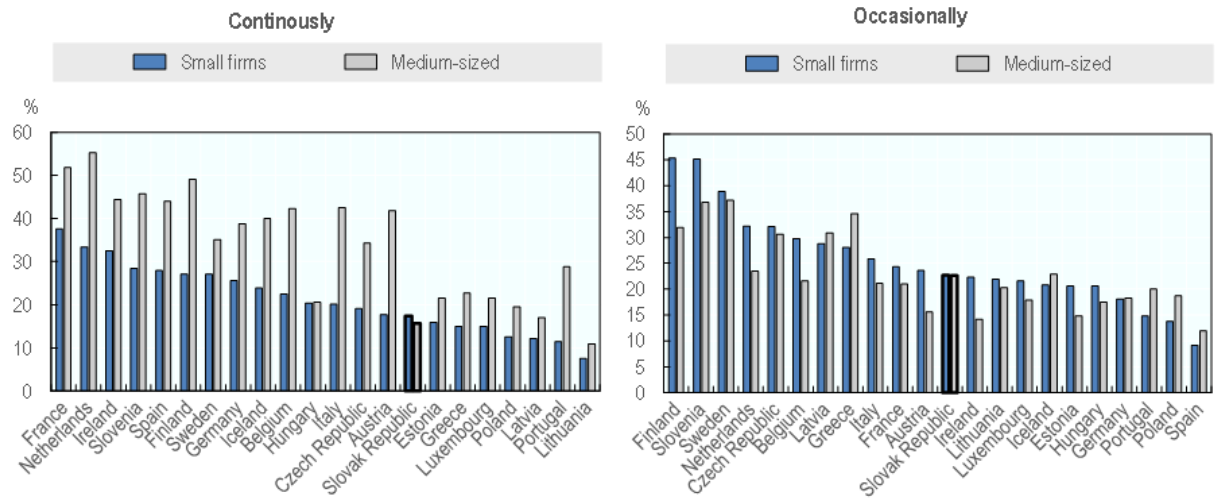
Medium-sized firms in the Slovak Republic have a particular lag behind their counterparts in other countries in R&D spending. Indeed, the Slovak Republic is one of the few EU countries where medium-sized firms invest in R&D less frequently than their small counterparts. In 2016, 17% of small firms declared that they engage in R&D spending on continuous basis, in comparison with 16% of medium-sized firms. Across EU countries, about one-third of medium-sized firms undertake R&D spending on a continuous basis, and 20% among small firms. Occasional R&D spending occurs more frequently, for about 23% of SMEs in the Slovak Republic (Figure 2.23).

Figure 2.23. Frequency of R&D investment by firm size

Percentage of respondent innovating continuously or occasionally, in 2016



Source: Eurostat (2020), BERD database from CIS https://ec.europa.eu/eurostat/web/science-technology-innovation/data/database

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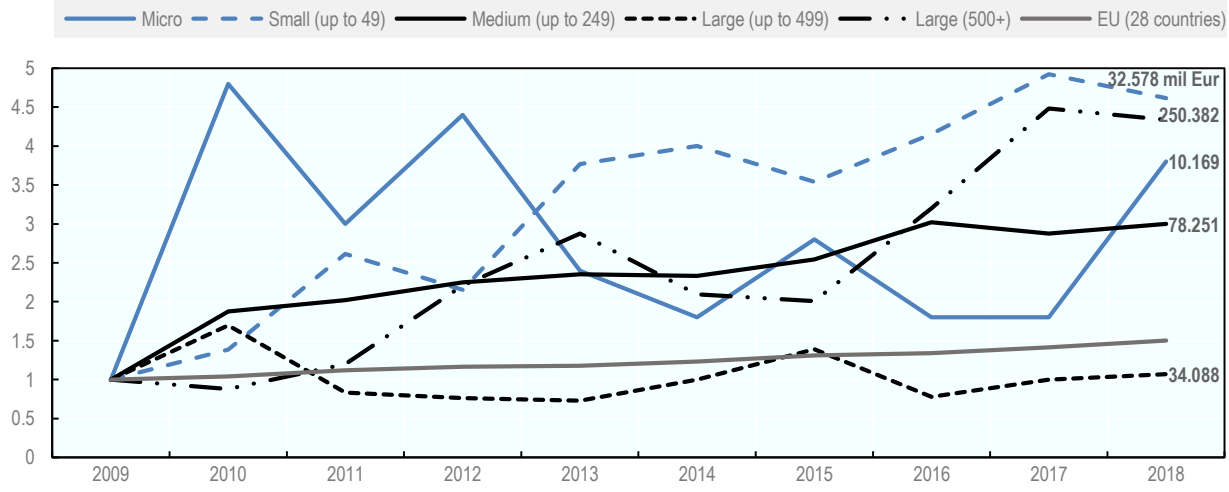
However, the Slovak Republic is catching up on R&D spending. R&D spending in Slovak SMEs has quadrupled over the past decade, albeit from a very modest base. Total R&D spending in the Eurozone increased by about 50% between 2009 and 2018. By contrast, in the Slovak Republic, small firms had doubled their 2009 R&D spend &D by 2011, and spent 4.6-times the 2009 amount (a total of EUR 33 million) by 2018. Medium-sized firms increased their innovation spending 3-fold over the same period (Figure 2.24).

Figure 2.24. R&D spending over time and by size class in the Slovak Republic

Normalised, 2009 == 1. Values in million EUR in 2018



Source: Eurostat (2020), BERD database: https://ec.europa.eu/eurostat/web/science-technology-innovation/data/database

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Entrepreneurship culture and performance in the Slovak Republic

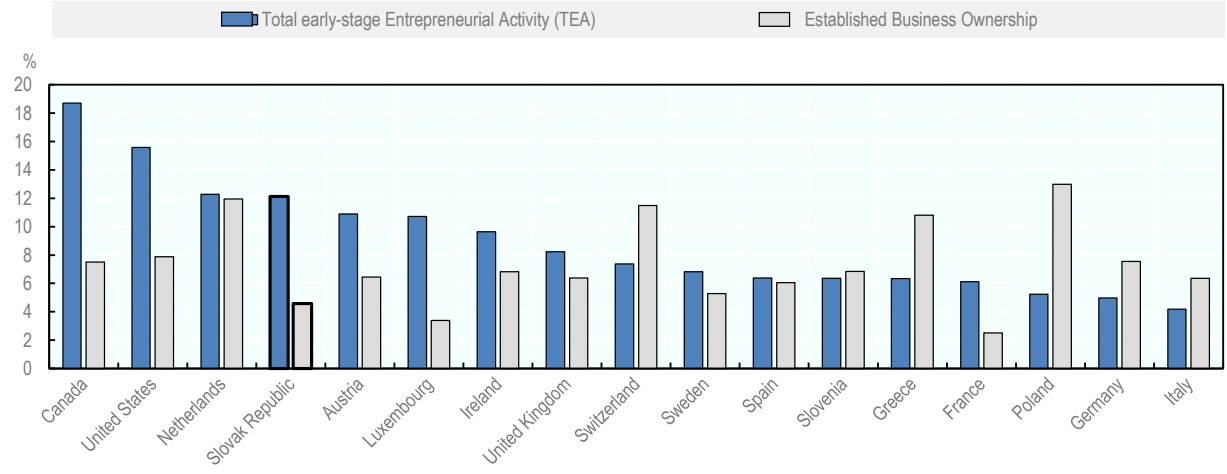
Entrepreneurship rates are high, but Slovaks perceive fewer entrepreneurial opportunities

The share of the population involved in entrepreneurship activity is relatively high in the Slovak Republic, with over 12% of adults engaged in early-stage entrepreneurship activity in 2018 (Figure 2.25). The Slovak Republic is also among the countries with the highest shares of adults who know someone who started a business in the past two years, with two-thirds of adults responding affirmatively in 2019 (Bosma, 2020).

The motivation to start a business in the Slovak Republic differs from other European countries. Only about 40% of adults would start a business to make a difference in the world, and for about 35% the motivation is to build great wealth or high income. These values are lower than in most of the other OECD countries surveyed. Continuing a family tradition is motivating for fewer than 3 out of 10 adults, but more 6 out of 10 stated that their main motivation is to earn a living. The Slovak Republic has among the highest rates in the EU of entrepreneurs citing scarcity of jobs as the motivation to start their business (Bosma, 2020).

Figure 2.25. Early-stage entrepreneurial activity

Percentage of adults, in 2018



Source: OECD Entrepreneurship Monitor data (2020), https://www.gemconsortium.org ton (Accessed on 5 March 2020).

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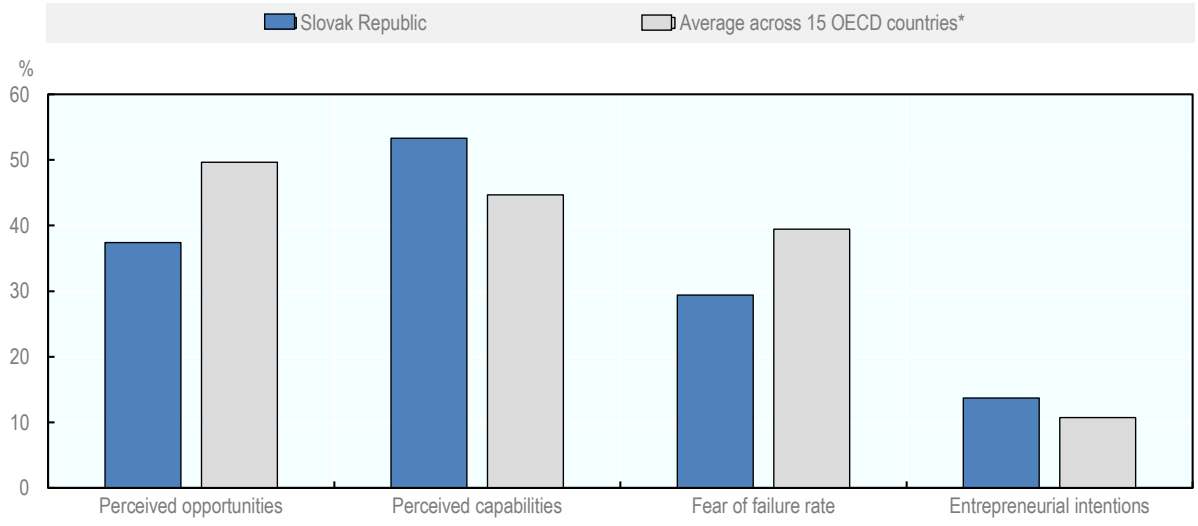
Despite the relatively high entrepreneurship activity rate, the perception of adults is that there are insufficient opportunities and most believe that their area has a bad environment for starting a new business. Only about 37% of adults perceived that there were good opportunities to start a new business in their area in 2018, lower than the OECD average, but with France, Italy Greece, and Spain scoring even lower (Figure 2.26). In addition, only one-quarter of adults believed that it is easy to start a business in the Slovak Republic, which placed the Slovak Republic together with Israel in the lowest-rank position in 2019 among 50 surveyed countries (Bosma, 2020).

Entrepreneurial attitudes among adults in the Slovak Republic illustrate that quite a sizeable proportion of the population consider themself as potential entrepreneurs. Slovaks generally see themselves as

capable of starting a new business, with more than a half of adults declaring that they possess the knowledge and skills to do so. Among the surveyed OECD countries, only Canada and the United States scored higher, with the OECD average around 45%. Similarly, potential entrepreneurs had less fear of failure in the Slovak Republic than in any other surveyed OECD country in 2018. Consequently, Slovak adults considered an entrepreneurial career more frequently than their OECD counterparts, with 14% of current non-entrepreneurs intending to start a business (Figure 2.26).

Figure 2.26. Entrepreneurial attitudes in the Slovak Republic

Share of adults responding affirmatively to individual entrepreneurial attitudes, in 2018



Note: *Countries used for calculating OECD average: Austria, Canada, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Poland, Slovenia, Spain, Sweden, Switzerland, United Kingdom, and United States.
Source: Bosma et al. (2020)

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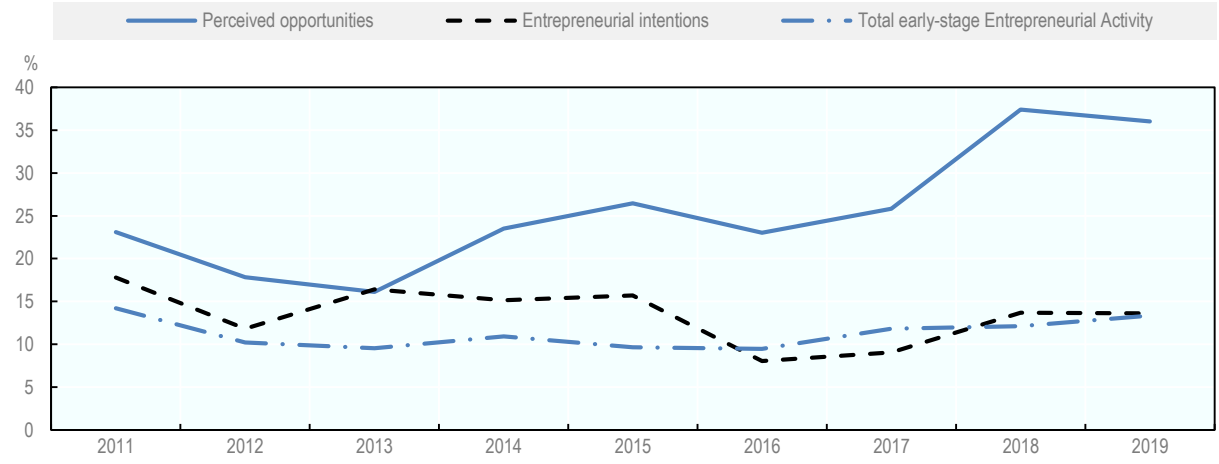
The Slovak Republic is a relatively young market economy and attitudes towards entrepreneurship have undergone some fluctuations over time. While still low compared to the OECD average in 2019, the percentage of adults that see good opportunities to start a business in the area where they live more than doubled since 2013. During the same period, early entrepreneurial activity increased slightly, by about 4 percentage points from a low of 9% in 2016. Intentions to start a business in the next three years on the other hand were lower in 2019 than between 2013 and 2015 (Figure 2.27).

Figure 2.27. Evolution of entrepreneurial attitudes in the Slovak Republic

Share of adults, 2011-2019



Note: The share of 18-64 population who agree that there are good opportunities in the area where they live, plan to start the business in the next three years, or are new entrepreneurs or own a new business.
Source: Bosma et al. (2020).

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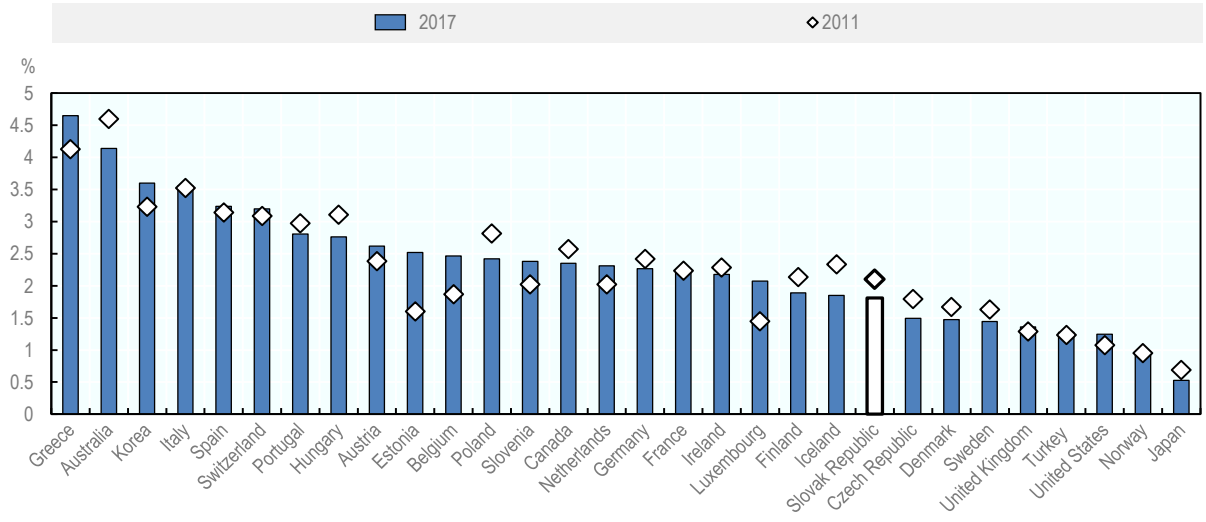
Gender gaps in self-employment are large and female entrepreneurship has declined

Female entrepreneurship in the Slovak Republic is relatively rare in an international context and has been declining over the past decade. In 2017, only 1.8% of employed women in the Slovak Republic were entrepreneurs, defined as self-employed with employees, similar to Iceland or Finland and well below the average for OECD countries. This share was down from 2.1% in 2011 (Figure 2.28). Men were twice as likely to be self-employed with employees, a share which increased since 2011. On the other hand, the share of self-employed women as a whole (with and without employees) increased from 7.5% to 8.4% (as a percentage of all women), while and the share of self-employed men fell from 16.2% to 14.8% over the same period. This suggests that women become entrepreneurs more often out of necessity (OECD, 2020).

Figure 2.28. Female entrepreneurship

Share of total employed, in 2011 and 2017



Note: Entrepreneurship refers to number of self-employed who have employees divided by the total number of employed, multiplied by 100.
Source: OECD (2020a), Structural and Demographic Business Statistics database.

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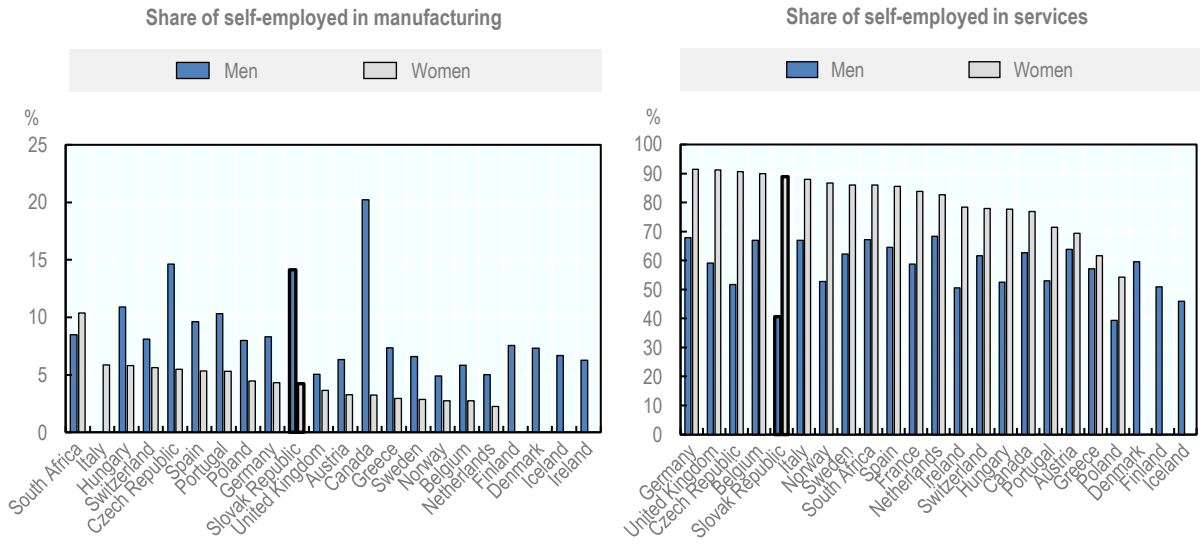
In the Slovak Republic, 89% of the female self-employed were in services in 2017 compared with 40% for men. This is the largest gender gap in service sector entrepreneurship across the OECD countries (Figure 2.29, figure on the right). The share of self-employed women in manufacturing sectors in the Slovak Republic is around the OECD average at about 4% of female entrepreneurs. For male entrepreneurs, 14% are in manufacturing, higher only in Canada and the Czech Republic among OECD countries (Figure 2.29, figure on the left).

Figure 2.29. Entrepreneurship by sector and gender

Share of total self-employed, in 2017



Note: Share of self-employed working in Manufacturing or Services in the total number of self-employed, multiplied by 100. Data refer to 15-64 year old. Sorted from the highest to lowest female self-employment shares.
Source: OECD (2020), Social Protection and Well-being database.

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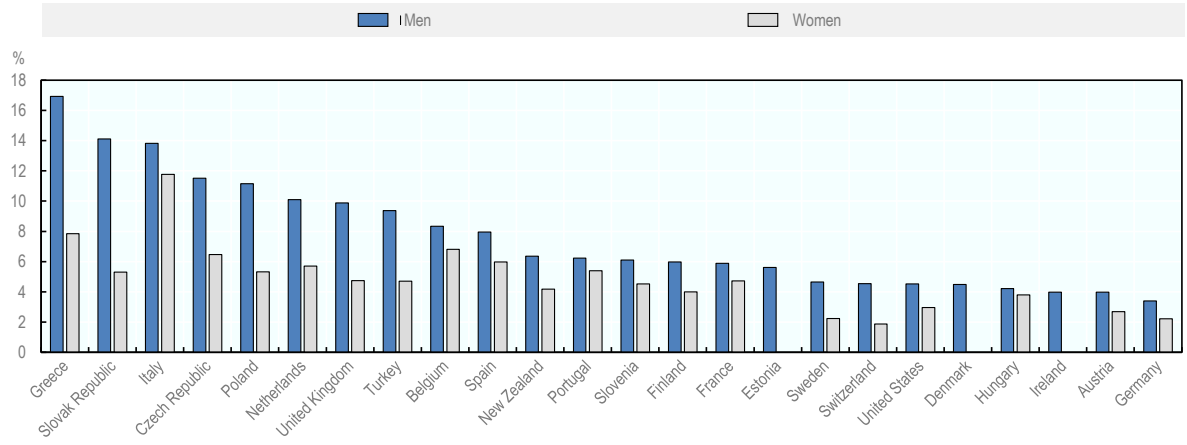
Youth and seniors are active in entrepreneurship

The Slovak Republic has a higher proportion of youth in entrepreneurship than is the case in most other OECD countries. About 14% of employed men between 20 and 29 years old were self-employed in 2018, only about half a percentage point less than for the general population. Young women were even more entrepreneurial than an average woman in the Slovak Republic, with more than 8% self-employed as compared to 5% in general population (Figure 2.30)

Figure 2.30. Entrepreneurial activity of youth by gender

Share of self-employed in the population of 20-29 year old population of employed, in 2018



Note: Data for shares of female entrepreneurs in this age group in the Slovak Republic, Hungary, and Austria are from the latest available dataset in 2017.
Source: OECD (2020), Social Protection and Well-being database (accessed on 7 March 2020).

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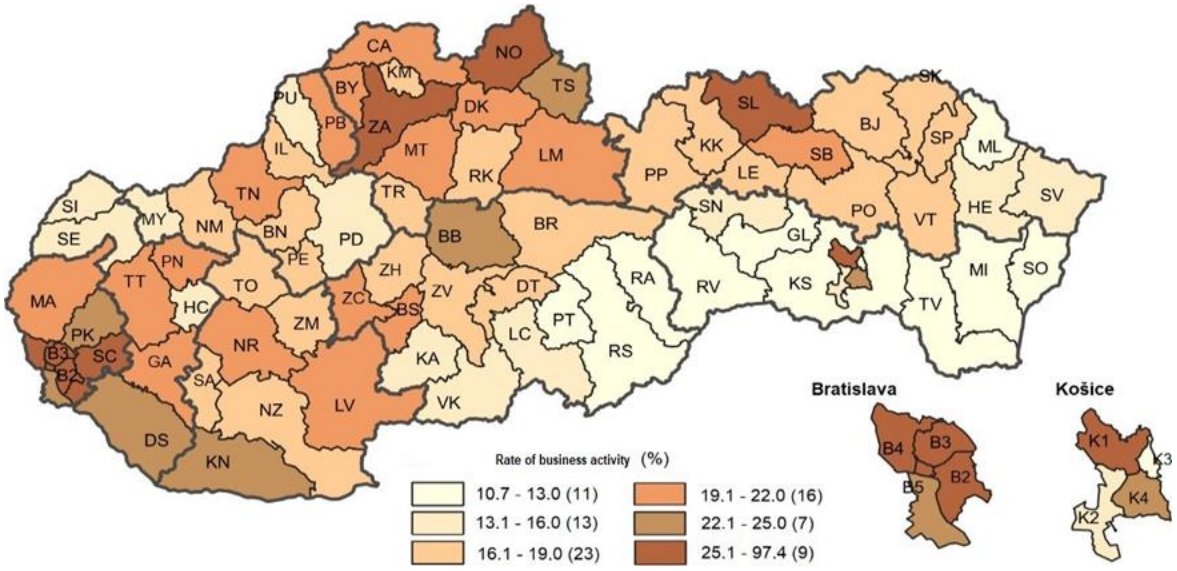
In relative terms, older people also constitute a comparatively large share of early entrepreneurial activity. For most countries, levels of early-stage entrepreneurship increase with age, and then typically decline for the age categories 45 to 54 years and especially for 55 to 64 years. In the Slovak Republic, the young population up to 34 years tends to be more active in new than subsequent age cohorts, then the rates decline, but plateau at relatively high levels at older age. About 5% of adults in the age category 55-64 in the Slovak Republic are involved in starting a business, behind Switzerland or the United States, but higher than in most other countries (Bosma, 2020).

Spatial variations in SME and entrepreneurship activity

There are important spatial variations in rates of SME and entrepreneurship activity across the regions and local districts of the Slovak Republic. There is a high concentration of business entities in Bratislava Region, which accounted for approximately one in five (21.9%) of all active SMEs in 2018. There is a more even spread in the total number of SMEs across the other regions of the country, ranging from 13.7% of all Slovak active SMEs in Žilina region to 9.5% in Trenčín region.

The highest rates of entrepreneurial activity, i.e. the number of active SMEs per head of economically active population, are in the local districts of Bratislava, Košice and selected districts of northern Slovak Republic. Higher rates of entrepreneurial activity are generally found in the regions of western and northern Slovak Republic, while lower rates are found in eastern Slovak Republic and southern central Slovak Republic (see Figure 6.2) (SBA, 2018). One of the issues is that the number of enterprises in remote rural areas has tended to grow less rapidly than in more accessible rural areas of the Slovak Republic, while much of the Slovak Republic is rural. Only the Bratislava region is a truly urban region in which conditions for entrepreneurship tend to be more favourable (Lazíková et al, 2018).

Figure 2.31. Business Activity across Local Districts of the Slovak Republic in 2018



Source: SBA (2018) Report on the State of Small and Medium-Sized Enterprises in the Slovak Republic in 2018

There are also differences in the extent to which disadvantaged groups of the population are engaged in entrepreneurship in the different regions of the country (women, seniors, youth). In particular, Bratislava, Trnava and Nitra regions have the highest rates of inclusion for female entrepreneurship, but the lowest inclusion rates for seniors and youth. Košice, Banska Bystrica, Zilina and Presov are the regions with the greatest inclusion of young people. This indicates the need for regional level entrepreneurial policies to address issues of inclusion.

Conclusions and policy recommendations

The Slovak Republic economy has the highest share of micro firms among all OECD countries. Over the years, the group of micro firms and firms with no employees has grown in size, while the number of small firms has shrunk. In addition, the productivity of SMEs is low, and has been in decline in the smallest firms.

The economic progress of the Slovak Republic over the past two decades has been largely driven by large firm trade and inward foreign direct investment. Multinationals produce a large share of output, employment and are responsible for a large share of exports. Better connections to global value chains and better direct export performance could support the development of domestic SMEs.

The Slovak Republic should encourage policies that facilitate SMEs and start-ups to scale up, grow, be more innovative and active in foreign markets. Policies should also support SMEs to improve their productivity, and should focus on improving efficiency, the adoption of new technologies and improving production processes, and enhancing skills, including managerial skills. R&D financial assistance and other innovation policies should also be used to help SMEs and start-ups to innovate, especially if they are fast-growing.

Box 2.2. Key policy recommendations on SME and entrepreneurhsip performance

- Encourage policies that allow firms to scale up and grow.
- Take action to facilitate the process of business transition, including for family-owned businesses.
- Promote policies that increase productivity in existing SMEs, especially among micro and very small firms and service sector SMEs.
- Promote policies that support SMEs to become more active in foreign markets, including markets further afield than the European Union.
- Consider the adoption of additional measures to stimulate innovation activities among SMEs, especially for medium-sized enterprises.
- Improve the overall business environment to tackle the perception that entrepreneurship opportunities are relatively weak and that it is hard to start a business.
- Adress the larger than average gap in entrepreneurship rates by gender for employer enterprises.

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3. The business environment for SMEs and entrepreneurship in the Slovak Republic

This chapter describes the strengths and weaknesses of the business environment for SMEs and entrepreneurs in the Slovak Republic. It first considers macroeconomic conditions in the Slovak Republic, and then provides a description of the regulatory environment, followed by the innovation system. This chapter also describes education and skills that are relevant for SMEs and entrepreneurship, and investigates issues related to infrastructure policy, as well as the tax system for SMEs and the access to finance environment. The chapter also describes the environment for foreign direct investment and trade. It concludes with policy recommendations related to the business environment.

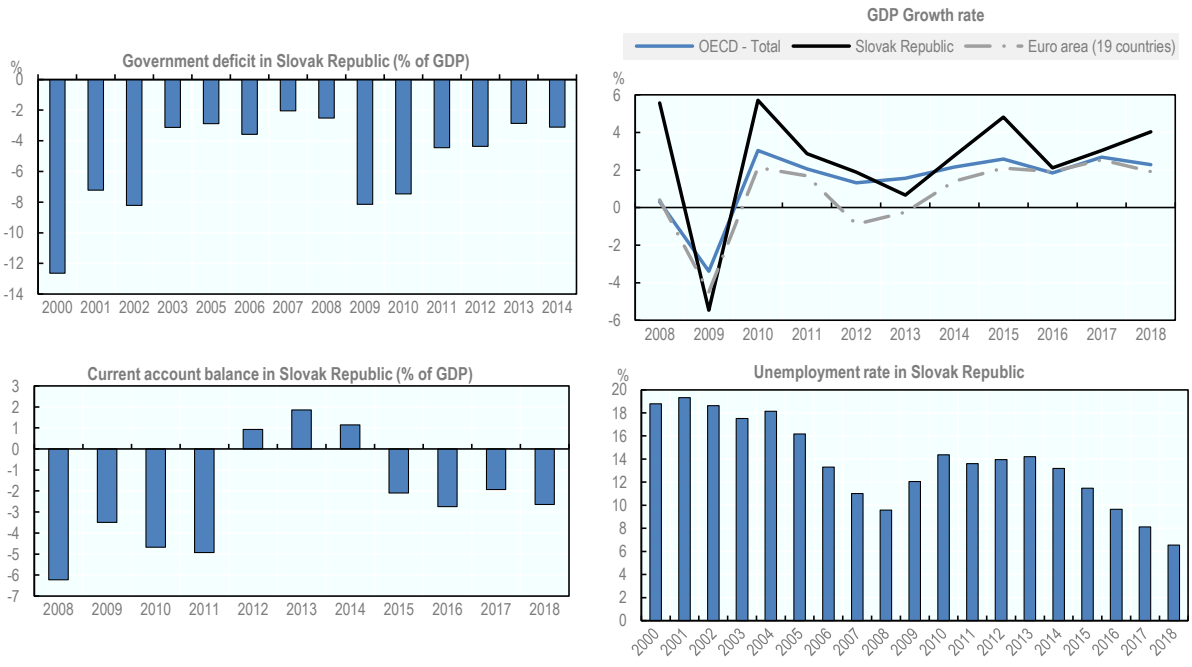
Macro-economic conditions

Pre-COVID-19 macroeconomic conditions were favourable to SME growth

Macroeconomic conditions during the pre-COVID-19 period were broadly favourable to SME and entrepreneurship development. GDP growth in the Slovak Republic stood at 4% in 2018 and had been positive since 2009, with average yearly growth rates of over 3%. Furthermore, GDP per capita increased by 80% over the two decades to 2018. The government deficit reached only 1% of GDP. The current account deficit was 2.6% of GDP in 2018 (Figure 3.1).

Unemployment stood at an all-time low in the history of the Slovak Republic going into the COVID-19 crisis, with an unemployment rate of 6.1% in 2019, which had steadily decreased since 2013 (Figure 3.1). However, low unemployment levels revealed significant skills shortages and skills mismatches in the labour market, with adverse impacts especially for SMEs, which are often unable to invest in workforce training or match the wage rates of their larger counterparts. One possible remedy is to attract Slovak emigrants. Almost 10% of Slovaks lived abroad in 2016, twice the average share across OECD countries (OECD, 2019a).

Figure 3.1. Macroeconomic conditions in the Slovak Republic



Source: OECD (2020) National Accounts database; OECD (2020), Balance of Payments databa; and OECD (2020), Employment database

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COVID-19 represented a big shock to the Slovak economy

The economic impact of the COVID-19 pandemic has been severe with GDP shrinking by some 6.3% in 2020, despite forceful public measures to contain the spread of the virus and mitigate the damage done to the economy (see Box 3.1 for an overview of the most pertinent measures aimed towards SMEs and entrepreneurs). Recovery is anticipated, with recent OECD growth forecasts of 2.7% in 2021 and and 4.3% in 2022.

Box 3.1. Measures to assist SMEs in the aftermath of the COVID-19 crisis

After declaring a state of emergency on 15 March 2020, the Slovak government adopted legislation to defer income taxes on 18 March. The government announced a further set of measures to help companies and the self-employed on 29 March. The measures include;

- The state will pay 80 percent of the employee's salary in companies that have had to close during the pandemic health crisis;
- State financial contributions will be made to the self-employed and employees in companies that recorded a drop in revenues. In April, the state will contribute EUR 180 per employee for salaries in companies whose revenues dropped by more than 20 percent. Companies with a more than 40-percent drop in revenues will receive EUR 300 per employee from the state. Those whose revenues dropped by 60 percent will receive EUR 420 per employee, and those with more than 80 percent drop will receive EUR 540;
- EUR 0.5 billion will be made available to guarantee bank loans to employers to be able to finance their businesses;
- Employees in quarantine and parents who are at home with their children will receive 55 percent of their gross salary from the state;
- The payment of payroll taxes will be delayed for firms whose revenues drop by more than 40 percent;
- The deadline for paying income tax advance payments for those with a revenue drop of more than 40 percent will be postponed. Entrepreneurs will start paying the advance payments as of October, and;
- Companies will be able to include loss carry back since 2014 if they have not yet used a loss carry back.

On 14 April, the government announced further measures, including the introduction of a short-time work scheme to support workers' pay at companies that have suspended operations or whose revenue has dropped. The state will pay up to 80% of wages of employees, but not more than EUR 880 per employee per month, to companies affected by the crisis.

On 28 April, the government approved the use of EUR 1.2 billion from unspent EU funds to compensate for the COVID-19 outbreak, EUR 330 million of which would be for small businesses.

In addition, the Act on Temporary Protection of Entrepreneurs became effective from June 2020 providing temporary protection from bankruptcies consisting of:

- Temporary protection for bankruptcy petitions for companies hit by the COVID-19 crisis;
- The possibility of postponing the obligation to file for bankruptcy;
- Suspension of executions started after 12 March 2020 (in the case of commitments arising from business activities);
- The impossibility of commencing the exercise of a lien belonging to the undertaking;
- Prohibition on offsetting related receivables;
- A ban on contracting by contractors for delays between 12 March and 12 May 2020 related to the spread of Covid-19 and non-threatening contractors;
- Extension of the time limits for enforceability by legal acts and for the exercise of the right against an entrepreneur under temporary protection;

- The possibility to give priority to liabilities related to the maintenance of the company's operations;
- Support for fresh capital financing.

The government has also introduced new temporary protection for entrepreneurs from the beginning of 2021 to create room for "informal" corporate restructuring, lowering the cost and duration of the procedure.

Source: OECD 2020b and written correspondence from experts from the Ministry of Justice

The regulatory environment

Frequent regulation changes increase the administrative burden on smaller firms

Slovak small firms spend on average 221 hours per year handling bureaucratic requirements, according to estimates by the Institute of Economic and Social Studies in the Slovak Republic. Furthermore, surveys by the Slovak Business Agency (SBA) show a large majority of business owners (86% in 2018) reporting that frequent changes and amendments to the legislation influence their functioning and future growth. Each year, Slovak entrepreneurs must keep track of approximately 50 amendments to the key 15 business laws. In 2018, there were nearly 500 regulation proposals, with one-third of them affecting the business environment (Table 3.1). Impact assessment procedures are frequently by-passed, and a commenting period, along with the introduction of an ex-post evaluation procedure could improve the quality of future regulatory proposals.

Table 3.1. Business environment regulation in 2018

	Frequency and size in 2018
Regulation proposals	499
Documents with impact on business environment	143
Documents with calculated costs for business	22 (15%)
Total costs for the business environment	EUR 216.2 million

Source: SBA (2019).

The Slovak Republic is well ranked across the OECD countries in the EU on engaging stakeholders in the regulatory management of primary laws and subordinate regulations (OECD, 2019b). The relatively good ranking comes from the introduction of a standardised procedure, which involves publishing all legislative drafts and their impact assessments on the governmental portal www.slov-lex.sk. There, the general public can submit written comments, and ministries are obliged to provide written feedback. The authorities have made significant efforts to involve businesses (and SMEs in particular) in early stage consultations (OECD, 2020). Although not always successful, it is an example of good practice among OECD countries.

The introduction of a regulatory impact assessment procedure (RIA) in 2008 aimed to improve the regulatory environment by requiring assessment of the impact of regulatory proposals. Under the procedure, the government should assess the estimated economic impacts on a wide range of economic actors, including government, business, environment, and competition authorities in the country. However, the process still lacks proper implementation in practice. The ministries have few

incentives to comply with better regulation policies and regulatory proposals are often evaluated only once they are developed. In addition, only 15% of the regulation proposals in 2018 included estimated cost on businesses (Table 3.1).

In 2018, the government of the Slovak Republic adopted the Better Regulation Strategy (RIA 2020) Act, which aims to improve the quality of laws, eliminate redundant regulation, improve the process of introducing and reviewing regulations, and decrease bureaucratic complexity by eliminating a regulation with each new regulation (one-in-one-out method) (SBA, 2019). The outcomes of the measures will depend on the implementation and adoption of the targets proposed by this strategy. The Slovak Republic founded the Better Regulation Centre in 2015 as a further effort to reduce the disproportionate regulatory burden on businesses and improve the overall business environment. As a stand-alone unit within the SBA, the Regulation Centre builds on the EU Small Business Act for Europe initiative.

The implementation of the Better Regulation Strategy crucially hinges on the administrative and analytical capacity of key ministries and government bodies, including from the subnational level. This could be achieved by streamlining and centralising oversight and providing training to improve regulatory management practices (OECD, 2020c).

The Slovak Republic lags behind in ex-post evaluation of regulations (OECD, 2019b). Proper assessment of outcomes after implementation of regulations on different types of firms and other economic actors would help policy makers understand the behaviour and size of the impact over time, evaluate what works, and generate rigorous and better-tailored regulations in the future.

Gold-plating increases administrative burden

Gold-plating refers to the incorporation of costly and unnecessary rules and regulatory obligations above the requirements of the European Structural and Investment Funds (ESIF) or EU regulations. High administrative burden can then result in lower attractiveness of the ESIF funds, discouraging potential applicants, and raise costs for firms. In practice, it can be difficult to differentiate gold-plating from bureaucracy that originates in existing structures and gold-plating can be involuntary (Böhme et al., 2017). Often, countries might choose to interpret the regulatory framework more narrowly to protect themselves from a possible misunderstanding of the regulations.

In a government assessment, almost in one-third of evaluated directives (120 out of 400) the Slovak legislation introduced additional regulatory measures on the top of EU requirements. Most of the additions concerned more ambitious and progressive regulatory attempts, but in 30 of the cases, the increased requirements were unfounded (Ministry of Economy of Slovak Republic, 2019).

In another example of gold-plating prevalence in the Slovak Republic, anti-fraud investigations by the European Anti-Fraud Office (OLAF) detected that the financial impact of irregularities during the 2014-2018 period in EU countries related to EU ESIF expenditures was by far the highest in the Slovak Republic, concerning nearly 20% of all EU funds (Table 3.2). Irregularity refers to any infringement of a provision of Community law coming from an act or omission and is reported by national authorities in the Member States that oversee the ESIF Operational Programmes to be then investigated by the OLAF.

Table 3.2. Irregularities in the European Structural and Investment Funds and their financial impact

Number of irregularities and their financial impact, 2014-2018.

Member State	Member States		OLAF	
	Detected fraudulent and non-fraudulent irregularities	Financial impact as % of payments	Investigations closed with recommendations	Financial recommendations as % of payments
Spain	10995	3.31	7	0.43
Romania	5563	3.23	66	0.4
Poland	5103	1.89	22	0.12
Italy	4117	1.33	21	0.35
Hungary	2886	1.31	52	3.84
Portugal	2723	2.04	10	0.42
Czechia	2665	2.86	7	0.06
United Kingdom	2596	0.57	6	0.05
Greece	2206	2.5	17	0.31
Slovakia	**1649**	**19.29**	**14**	**2.29**
Germany	1567	0.31	4	0.37
France	1291	0.3	10	0.1
Ireland	1120	1.88	0	0
Lithuania	1110	2.05	3	0.11
Bulgaria	1072	1.92	27	0.42
Netherlands	777	0.79	4	0.04
Latvia	517	2.36	1	0.01
Estonia	412	1.58	0	0
Austria	370	0.37	2	0.02
Belgium	315	0.46	1	0.02
Slovenia	261	1.59	1	0.14
Croatia	189	0.95	2	0.34
Sweden	175	0.2	0	0
Finland	155	0.12	0	0
Denmark	144	0.27	0	0
Malta	91	2.53	0	0
Cyprus	82	0.74	0	0
Luxembourg	2	0.02	0	0
Total	50153	2.01	277	0.45

Source: European Anti-Fraud Office (2018), https://ec.europa.eu/anti-fraud/about-us/reports/olaf-report_en.

Improvements can be made in administrative procedures to start a business

The Slovak Republic ranked 45th among 190 economies in the World Bank's "Ease of Doing Business" index in 2020. Despite its score improving, the Slovak Republic fell from its 42nd position in 2019, failing to progress in business regulation reforms as fast as some other countries.

Among individual indicators making up the overall score, the Slovak Republic ranked among the top ten countries for ease of administration on trading across borders (1st) and registering property (8th place). One of the most problematic areas of business regulations concerns starting a business (118th place) (Table 3.3). The Slovak Republic requires 7 procedures for new business start-up as compared to an average of 4.9 in OECD high income countries, while the process lasts over 21 days, as compared

to 9 days across the OECD (World Bank Group, 2020). The Slovak Republic's performance remains weak in this area despite some recent reforms, such as abolishment of the requirement to obtain and submit information on tax arrears in 2019, which speeds up the business registration process.

Table 3.3. Easy of Doing Business in the Slovak Republic

Ranking and scores for business regulations and their enforcement in 2020

Topics	DB 2020 Rank	DB 2020 Score	DB 2019 Score
Overall	45	75.6	75.4
Starting a Business	118	84.8	82.0
Dealing with Construction Permits	146	59.4	59.3
Getting Electricity	54	83.3	83.2
Registering Property	8	90.2	90.2
Getting Credit	48	70.0	70.0
Protecting Minority Investors	88	56.0	56.0
Paying Taxes	55	80.6	80.6
Trading across Borders	1	100	100
Enforcing Contracts	46	66.1	66.1
Resolving Insolvency	46	65.5	66.9

Source: World Bank Group (2020).

Insolvency procedures are costly in terms of time and money, disincentivising second chance entrepreneurship

Business failure is increasingly seen as offering learning a learning process on which entrepreneurs build their experience. Giving entrepreneurs a "second chance" quickly after they go bankrupt is therefore one of the principles of dynamic entrepreneurship policy. The insolvency procedures in the Slovak Republic are the longest in the EU, leaving ample space for policy initiatives that would facilitate early restructuring of SMEs in difficulties and improve the regulations affecting the re-start possibilities of entrepreneurs facing bankruptcy.

The Slovak Republic has one of the least favourable environments for resolving insolvency among EU countries and has seen only limited progress over the past ten years on second-chance entrepreneurship indicators (European Commission, 2019). For example, Slovak insolvency procedures can take up to 4 years, compared with an EU average of approximately 2 years. Furthermore, the cost of recovering the debt can amount to up to 18% of the value of the debtor's estate; the second highest value among the EU countries, where the average is 10%. Rrecent reforms have been made to the insolvency regime, as highlighted in box 3.1, and their impact on second chance entrepreneurship need to be closely monitored and readjusted if necessary.

The innovation system

Weak academic research performance and academic-business cooperation holds back innovation

The Slovak Republic is classed as a moderate innovator on the European Innovation Scoreboard, and its innovation system performance ranks among the tail end of EU countries on many measures (Table 3.4). There are some areas where the Slovak Republic performs relatively well, in particular on

"Sales impact" (with a high shares of technologically advanced and innovative products in total exports) and "Employment impacts" (with a high share of total employment in high growth enterprises). However, the Slovak Republic ranks well below the EU average values on a range of other innovation system performance measures, especially in terms of academic research performance, the involvement of public innovative activities with the private sector, and innovation within SMEs. Investments in R&D also lag behind. Currently, manufacturing, dominated by multinational firms, is the major source of R&D in the business sector, indicating a lack of diversification of innovative activities (European Commission, 2019b).

Table 3.4. Innovation performance in the Slovak Republic and the EU

	EU (28 countries)	Slovak Republic		EU	Slovak Republic
	Actual values			Values normalised to 2011 EU levels	
FRAMEWORK CONDITIONS					
Human resources					
New doctorate graduates	2.1	2.0		145.2	138.5
Population completed tertiary education	39.8	36.4		119.4	94.0
Lifelong learning	10.9	3.4		102.1	24.0
Attractive research systems					
International scientific co-publications	1070	648		145.4	84.1
Scientific publications among top 10% most cited	11.5	4.7		109.5	34.9
Foreign doctorate students	20.3	8.7		95.6	40.5
Innovation-friendly environment					
Broadband penetration	18.0	13.0		200.0	144.4
Opportunity-driven entrepreneurship	3.6	1.4		129.5	54.4
INVESTMENTS					
Finance and support					
R&D expenditure in the public sector	0.68	0.40		92.5	40.2
Venture capital investments	0.149	0.011		129.3	9.3
Firm investments					
R&D expenditure in the business sector	1.36	0.48		114.6	39.1
Non-R&D innovation expenditure	0.86	0.75		116.8	105.4
Enterprises providing ICT training	23.0	18.0		126.7	93.3
INNOVATION ACTIVITIES					
Innovators					
SMEs with product or process innovations	34.3	19.5		97.1	42.8
SMEs with marketing or organisational innovations	35.6	20.0		85.3	32.3
SMEs innovating in-house	28.1	16.8		90.0	38.4
Linkages					
Innovative SMEs collaborating with others	11.8	8.2		106.8	70.1
Public-private co-publications	81.7	28.5		117.3	38.4
Private co-funding of public R&D expenditures	0.05	0.02		96.0	62.2

Intellectual assets					
PCT patent applications	3.53	0.63		90.9	16.3
Trademark applications	7.85	4.43		111.4	66.6
Design applications	4.17	1.76		92.2	38.9
IMPACT					
Employment impacts					
Employment in knowledge-intensive activities	14.2	10.6		109.0	62.8
Employment fast-growing firms innovative sectors	5.2	7.3		101.2	149.8
Sales impacts					
Medium & high-tech product exports	56.3	67.3		107.9	138.7
Knowledge-intensive services exports	68.4	38.3		103.2	41.9
Sales of new-to-market and new-to-firm innovations	12.96	20.27		97.0	169.3

Note: Normalised values related to an EU average in 2011 normalised to 100.
Source: EU (2019), European Innovation Scoreboard 2019 dataset, https://data.europa.eu/euodp/en/data/dataset/european-innovation-scoreboard-2019.

In particular, low R&D spending and weak business engagement with higher education institutions (HEIs) are holding back the commercialisation of research in start-ups and knowledge transfer to SMEs. Despite programmes dedicated to incentivise innovation spending and create linkages between HEIs and businesses, such as the Ministry of Economy's innovation vouchers programme, current programme funding levels are limited. In addition, SMEs often find it difficult to apply for such support.

Innovation and R&D policies are fragmented and are not well implemented

Public action on innovation in the Slovak Republic is guided by the country's Smart Specialisation Strategy. The first Smart Specialisation Strategy covered the 2014-20 period, and is now in the process of renewal for 2021-2027. The 2014-20 Strategy focused on four key areas of economic specialisation: (1) Automotive and mechanical engineering industries; (2) Consumer electronics and electrical equipment; (3) Information and communication technologies and services, and (4) Production and processing of iron and steel. It also sought to introduce the following key innovation policy reforms: (1) Merge eight R&D&I government agencies into two, (2) Reverse shares of support to basic and applied research to 1:2 by 2020, (3) introduce a mandatory indicator of state support to R&D as a share of GDP in the State Budget Law, and (4) re-organise HEIs and transform the Slovak Academy of Sciences. However, despite being among the first EU member states to develop its smart specialisation strategy, administrative delays hae postponed its implementation, and the allocated budget has been only partially spent and there has been little demonstrable impact on overall change in innovation system performance (Balaz, Frank and Ojala, 2018). These issues need to be addressed in the implementation of the 2021-2027 strategy.

In addition, the innovation policy support landscape is fragmented across different government Ministries and agencies. The Ministry of Economy has multiple mechanisms in place to spur innovation, including financial support of innovative projects, innovation vouchers to develop cooperation between firms and universities and research institutes, industrial cluster support, and start-up visa support that grants temporary residence permits to those foreign entrepreneurs who intend to develop an innovative product on the Slovak market. The need to improve coordination is exemplified by the competition (rather than cooperation) among different public bodies to access EU structural and investment funds. In somewhat similar fashion, the government collaborates with a large number of research entities in

the country, which leads to a dilution of limited resources. Public-private cooperation would benefit from the establishment of wider research units spanning different universities (OECD, 2019a).

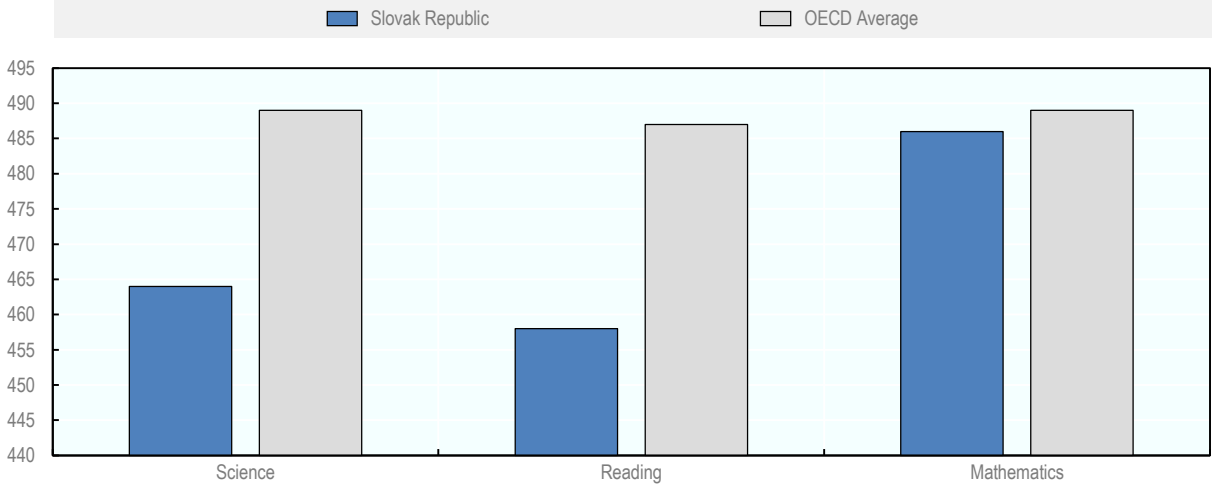
Educational attainment and skills

Slovak pupils score below the OECD average in science and reading

Slovak 15-year olds lag behind the OECD average in their competences in science, reading and mathematics, as measured by the OECD programme for international student assessment (PISA), and the gap is especially high in science and reading (Figure 3.2). The Slovak Republic displayed the largest deficit with respect to the OECD average in reading scores, only ahead of Greece and the OECD countries in Latin America in 2018.

Figure 3.2. Performance of 15-year olds in science, reading, and mathematics

Mean PISA score in each subject in 2018.



Source: OECD (2021c), Science, Reading, and Mathematics performance (PISA) (indicator). doi: 10.1787/91952204-en

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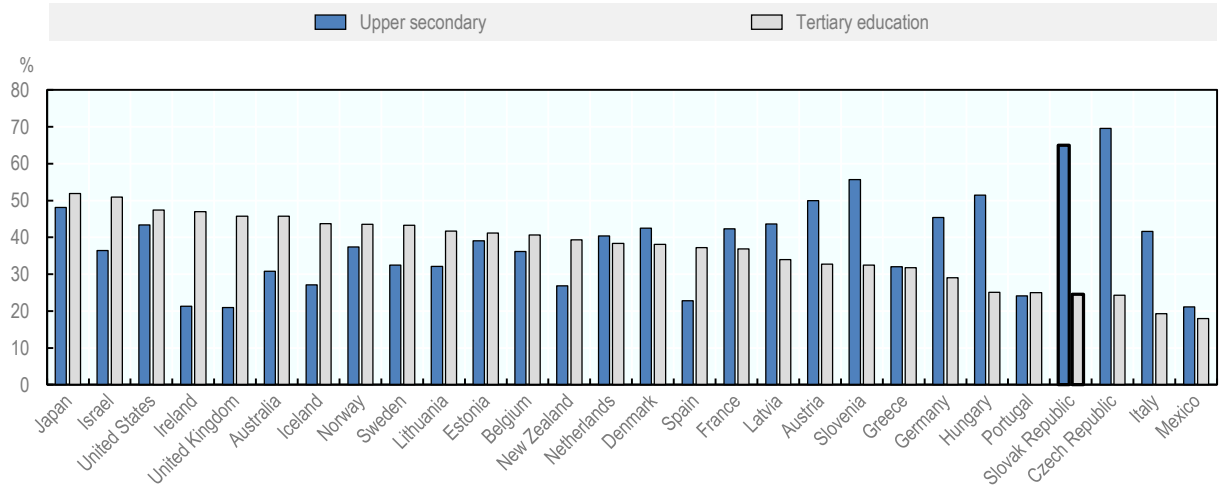
The Slovak Republic has a low share of the workforce with a university education

Only approximately one-quarter of adults in the Slovak Republic have a university degree, compared to about 37% across the OECD countries (Figure 3.3). On the other hand, the younger generations are closer to the OECD average.

Figure 3.3. Educational attainment of adults

Percentage of 25-64 year olds by educational attainment in 2018.



Source: OECD (2020d), Education at Glance database.

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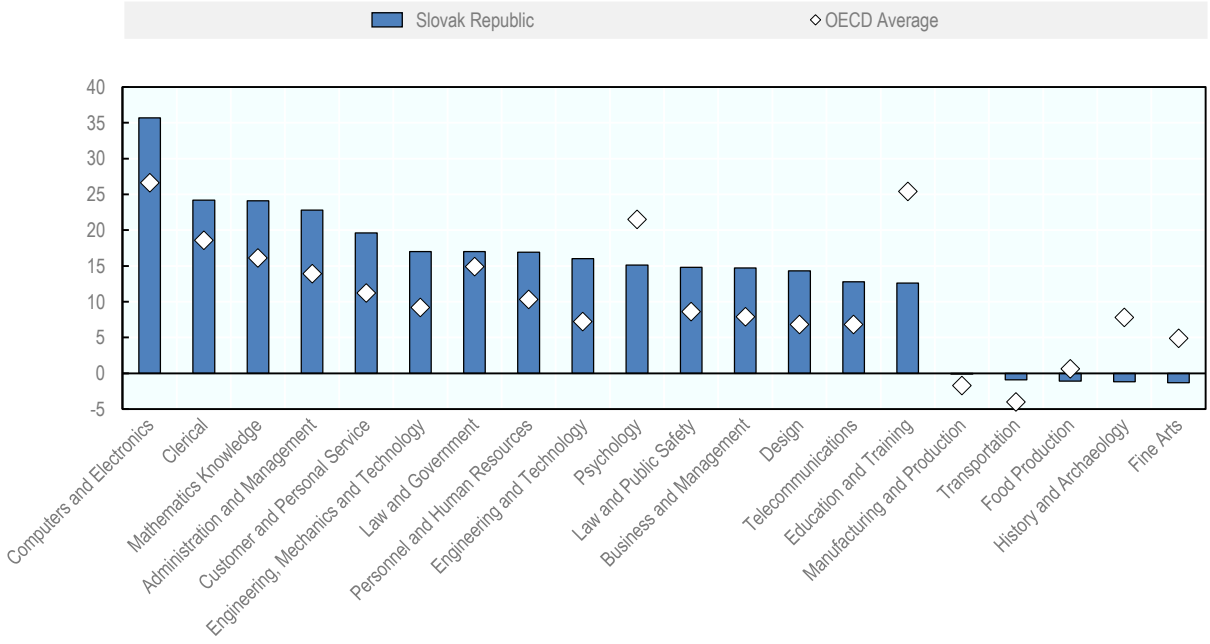
The relatively low skill levels are associated with a relatively high risk of job loss through automation. More than 60% of jobs in the Slovak Republic can be considered as being at risk of being automated, the highest share among the OECD countries (Nedelkoska and Quintini, 2018). The Slovak Republic has built its economic success in part on automobile and electronic industries, and these will likely undergo automation of large parts of the production process, reducing employment of the less-skilled workforce. Upgrading skills that can be used across a variety of tasks and jobs, promoting flexibility, teaching soft skills, and investing in increasing managerial capability will help prepare the workforce for the future automation challenges and build additional strength in diversifying the labour market.

Many sectors face significant skill shortages, especially in ICT and electronics

The Slovak labour market suffers from skills shortages in specific areas, which will affect SME development. In particular, Slovak skills shortages in computer sciences and electronics are greater than the OECD average. Technical knowledge in other areas is in short supply as well: the Slovak job market needs more employees with knowledge and expertise in mathematics, but also engineering, mechanics, and technology, as well as employees with clerical, administrative and management knowledge (Figure 3.4). A shift towards science-based study programmes, and especially training in computer sciences, and business administration programmes could help to cover the shortages and prepare the Slovak Republic for future labour market needs. The skills shortages could also be addressed, at least to some extent, by retaining talent in the country and attracting back the emigrated workforce and attracting in foreign talent.

Figure 3.4. Skills shortages and surpluses in the Slovak Republic and the OECD

Score of shortage or surplus by knowledge area, 2015.



Note: Only the first 15 highest skill shortages and 5 highest skill surpluses in the Slovak Republic are displayed out of a total of 39 categories. Positive values indicate skill shortage while negative values point to skill surplus. The larger the absolute value, the larger the imbalance. Results are presented on a scale that ranges between -100 and +100. The maximum value reflects the strongest shortage observed across OECD (31) countries and skills dimensions.
Source: OECD (2017a), Labour: Skills for Jobs dataset.

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SMEs also suffer from gaps in the availability of soft skills, in particular in oral and written comprehension. Many employees have insufficient verbal abilities, oral expression, and deductive reasoning skills. This holds especially true in the information and communication sector, professional, scientific and technical activities sector, and administrative and support service activities, but is less of a problem in the manufacturing sector (Table 3.5).

Table 3.5. Missing skills in the largest SME sectors in the Slovak Republic

Score of skill shortage (positive) or surplus (negative) in 2015.

Skills	Wholesale and Retail Trade	Manufacturing	Construction	Prof., Scientific and Tech. Activities	Admin. and Support Service Activities	Transportation and Storage	Accomodation and Food	Information and Communication
Oral Comprehension	4.2	-1.7	2.6	10.3	7.4	4.9	9.9	23.0
Written Comprehension	3.8	-0.9	2.8	9.7	6.9	4.4	7.7	22.5
Verbal Abilities	3.9	-1.0	2.8	9.7	7.1	4.5	8.6	21.3
Oral Expression	4.1	-1.4	2.7	9.9	7.0	4.7	10.0	21.4
Deductive Reasoning	3.6	-1.0	2.6	8.9	7.5	4.2	7.7	21.2
Written Expression	3.5	0.2	3.0	8.7	7.1	3.9	6.7	18.4
Inductive Reasoning	3.2	-1.1	2.4	8.1	7.4	3.9	6.7	19.4
Reasoning Abilities	3.1	-1.0	2.2	7.6	5.7	3.6	6.9	18.2
Information Ordering	3.2	-1.8	2.1	7.8	4.7	3.9	7.3	19.9
Near Vision	3.5	-3.0	1.8	8.3	4.6	4.3	7.9	19.4
Speech Recognition	3.3	-1.3	1.7	7.7	5.2	3.7	8.3	16.0
Cognitive Abilities	2.7	-1.0	1.9	6.6	5.3	3.2	6.0	15.3
Quantitative Abilities	2.4	0.2	1.8	6.1	3.0	2.7	4.4	14.3
Flexibility of Closure	2.2	-1.7	1.7	5.5	6.4	2.8	5.0	13.3
Attentiveness	2.2	-1.6	1.1	5.0	5.6	2.9	5.7	11.6

Note: The sectors displayed and the largest in terms of employment in SMEs. Positive values indicate skill shortage while negative values point to skill surplus. The larger the absolute value, the larger the imbalance. Results are presented on a scale that ranges between -100 and +100. The maximum value reflects the strongest shortage observed across OECD (31) countries and skills dimensions.
Source: OECD (2017a), Labour: Skills for Jobs dataset.

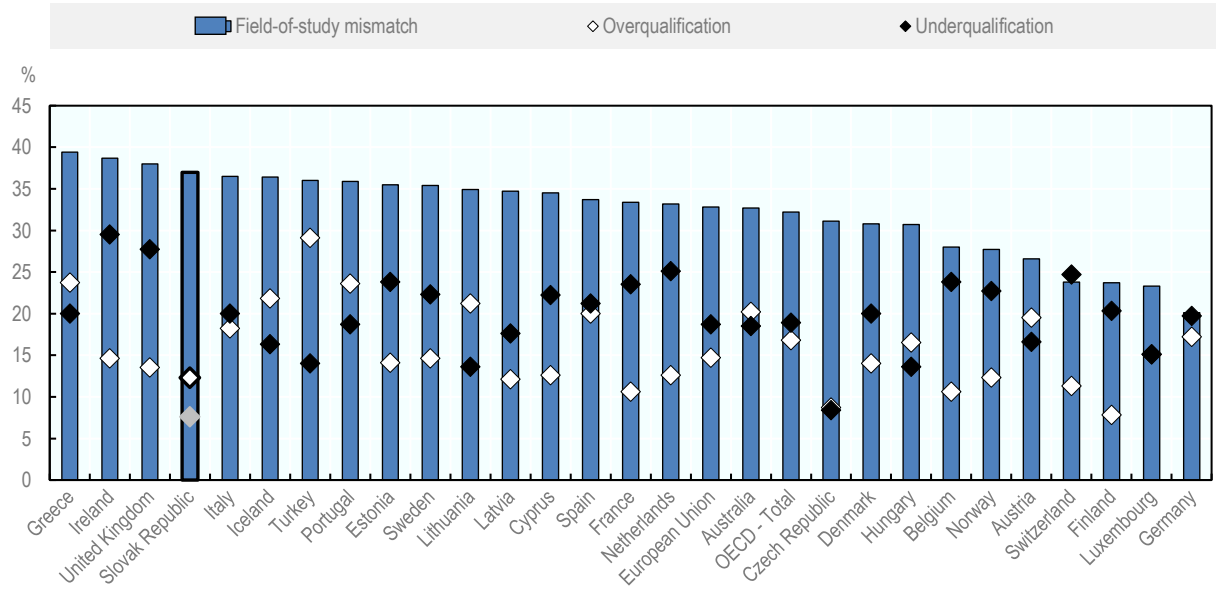
Graduates in the Slovak Republic are less likely to find job in the field of their studies

There appears to be a mismatch between skills produced through the education system and labour market needs. In 2016, 37% of adults worked in fields different from their educational qualification (Figure 3.5). On the other hand, only 8% of adults worked in positions for which they were underqualified, and only 12% were overqualified, both among the lowest qualification level mismatches in the OECD area. This suggests a need for more and better university study programmes in areas including business administration, IT, communication and engineering, as well as greater offers of specialised courses within existing study programmes.

Closer cooperation between universities and the private sector could help achieve a better match between university skills output and labour market needs. Business inputs could help align curricula to business needs. In addition, internship programmes for university students in enterprises are relatively uncommon and in practice largely reserved for larger enterprises. More internships in SMEs would give the opportunity to students to get practical experience and create connections with employers before graduation.

Figure 3.5. Mismatch between skills and employment, Slovak Republic

As a share of workforce in 2016



Source: OECD (2017a), Labour: Skills for Jobs database

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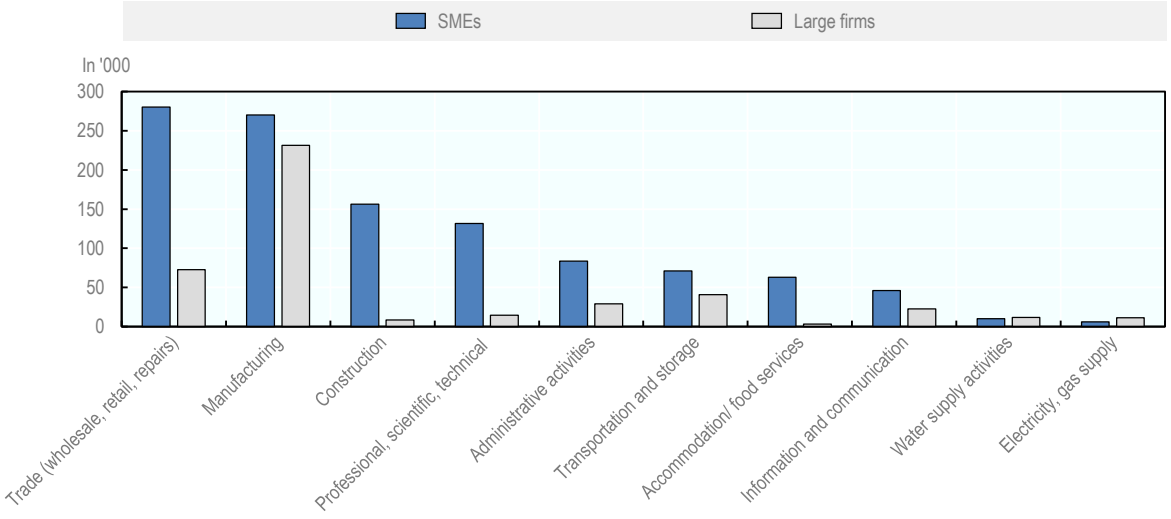
Figure 3.6. Fields of study in tertiary education in the Slovak Republic and OECD

Share of 25-34 year-olds by field of study in 2018



Source: OECD (2020d), Education at a Glance database.

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Several countries have a dedicated body to keep track of the supply and demand of skills in the (regional) labour market, such as skills councils. These bodies can be helpful in minimising the skills mismatch. Australia's Industry and Skills Committee is an example (Box 3.2). A skills council at a

national level in the Slovak Republic could help build cooperation between the government, trade unions and entrepreneurs and expand their engagement in skills policies. It could serve as a platform to understand the future skill needs and construct a coordinated and possibly cross-sector approach to vocational education and training. Its possible establishment could build on the legislation introduced in 2018, Act on Quality Assurance in Higher Education, which brings employers, graduates and research institutions together to review the content of study programmes (OECD, 2020e).

Box 3.2. Skill councils can reduce the skill mismatch: example from Australia

Skill councils or committees are employer-led organisations, often organised within specific industries or regions, which support employer participation in the implementation and direction of vocational education and training. Among the objectives of a skills council or committee are minimising skills shortages and supporting productivity growth.

Description of the approach

The Australian Industry and Skills Committee (AISC), composed of nominated industry leaders, ensures that the training system responds to the needs of industry in a timely fashion. The Committee relies on specific Industry Reference Committees in communicating industry skills requirements and supporting the development and review of training packages. Currently, the AISC operates through eight cross-sector projects to address common skills needs and optimise efforts of individual industries.

The AISC's mission is to reduce complexity in the vocational education and training (VET) system, improve mobility through recognition of qualifications between occupations and address the issue of low enrolments in some courses. In addition, the Committee coordinates the development of new training products that would help trainees to acquire new or emerging skills needed by industries. The AISC also creates space for different industries to exchange on the issues of opportunities that new technologies bring and consider the implications of technology change for new competency requirements for their sectors. They also generate case studies about good practices in the VET system that can then serve as a dissemination tool on good practices.

The eight cross-sector projects are as follows:

- **Automation and Digital Skills**: VET's role in responding to digital change across industry and its impact on the workforce;
- **Big data**: development of training in Big Data as a cross-sectoral skill in capturing, interpreting and taking advantage of data that are too large to process through traditional database and software methods;
- **Cybersecurity**: development of skills in cyber security where professionals in different industries can cope with advanced threat response, risk management and other emerging cyber challenges;
- **Supply chains**: development of skills and competencies sets for industry employees in order to support mobility across industries, increasing efficiency and productivity across diverse industries;
- **Environmental sustainability**: adjustments to VET programmes to ensure that the workforce is equipped with skills focused on environmental sustainability;
- **Teamwork and communication**: generating skills in teamwork and communication among the workforce across industries;
- **Inclusion of people with disability**: addressing poorer education and employment outcomes for people with disability through VET;

- **Consumer engagement through social media**: identifying, updating and developing training packages to ensure the provision of skills for a wide range of industries for consumer engagement through online and social media.

Relevance to the Slovak Republic

A functioning skills council in the Slovak Republic would serve as a communication tool between industry and ministries developing skills policies and would provide timely requests, suggestions, and cooperation to influence the direction of vocational training. It would serve as an opportunity for the direct participation of entrepreneurs in the discussion on skill needs. Skill councils should have representation from enterprises of all sizes, including small firms.

The skills council could function in such way that it would consider current needs and give advice for designing and reshaping vocational training for each industry, but should also take into future skill needs, similar to the AISC's approach. This would allow for intra-industry skill creation, greater flexibility of the labour force and possibly foster closer cooperation and linkages between sectors.

Source: (Australian Industry and Skills Committee, 2020)

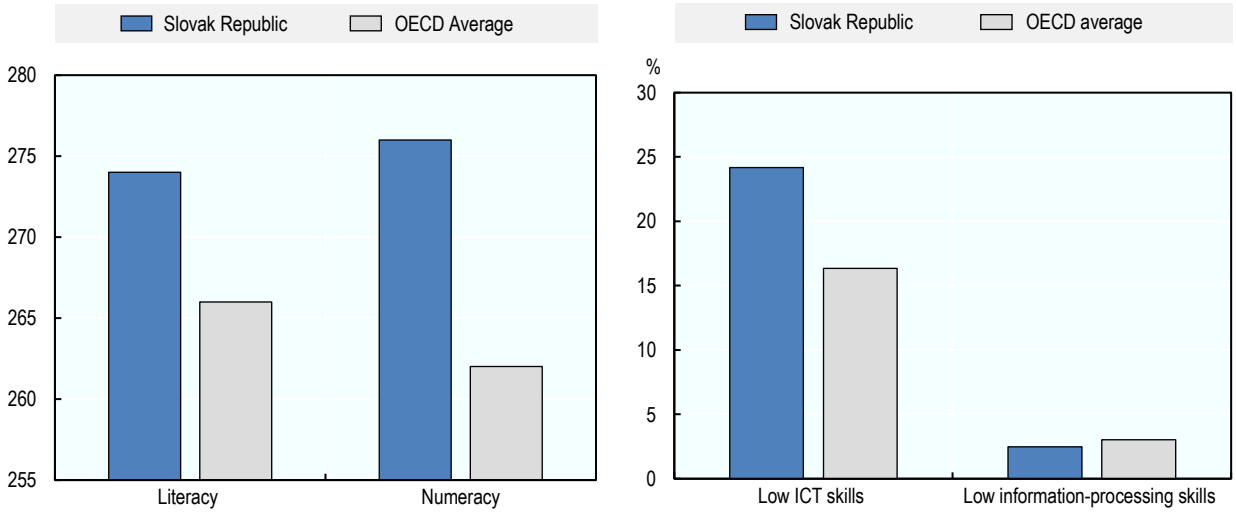
The Slovak Republic operates a dual education system based on the template of the vocational education systems in Austria, Germany, and Switzerland. It functions on the principle of closer cooperation between employers and vocational schools, with the goal of combining theoretical and practical education and enabling young people to acquire skills that match employer needs. In 2018, 490 employers and 85 vocational schools were participating in the system of dual education, but only about 200 employers participated actively (SBA, 2018). The Act on Vocational Education and Training, adopted in 2015, aims to increase the motivation of entrepreneurs to participate and have a voice in the training system. This should support the coordination of vocational training in line with labour market needs and increase the employability of VET graduates. Tax incentives aim to stimulate employer participation in the programme. However, as the SBA concluded in a study in 2018, employers often remain reluctant to participate in the dual education system. The firms cite financial, personnel-related, administrative difficulties that prevent them from entering (SBA, 2018).

Compared to other OECD countries, adults are less likely to participate in education

In contrast to the relatively weak competence levels of Slovak 15-year olds, adults score above the international averages on literacy and numeracy in the OECD Programme for the International Assessment of Adult Competencies (PIAAC) (Figure 3.7). Slovak adults perform particularly well in numeracy skills, with fewer adults falling in the lowest level of the numeracy test than the OECD average, and 12.6% scoring in the highest level (level 4 or 5) compared to a 10.9% across the OECD countries in 2018. The area where Slovak adults underperform compared to the OECD average is ICT skills. A quarter of Slovak adults have low ICT skills, 8 percentage points more than across the OECD, although most adults pass the information-processing skill test (Figure 3.8). This underlines the missing ICT knowledge demanded by SMEs, and could be improved by the provision of targeted adult training courses.

Figure 3.7. Adult skills

Scores in literacy and numeracy among adults and percentage of adults with low ICT skills, in 2018



Source: OECD (2018), Survey of Adult Skills (PIAAC).

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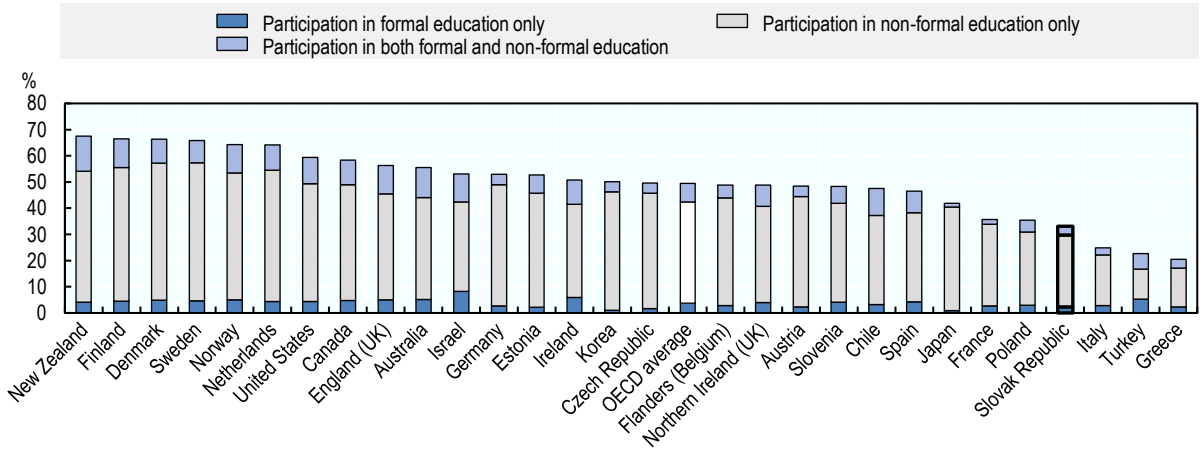
There is ample space for the government to improve the governance of adult learning, build a coherent long-term vision of adult learning, and make clear connections between goals and policies to create a well-functioning system of adult education. Despite an effort to define and establish a national life-long learning strategy, such as the Lifelong Learning Strategy initiative introduced in 2011, many support mechanisms do not exist or are not fully implemented. Achieving the goals formulated by the strategy requires strengthening the governance system and greater involvement of national government and ministries, as well as local administrations. Currently, general public also places limited importance to life-long learning and measures to raise awareness of the importance of lifelong learning and the opportunities for training among the population also need to be taken (OECD, 2020e).

About one-third of adults in the Slovak Republic continue their education, mostly in form of non-formal education, which is a relatively low proportion in an international context. Furthermore, those adults in the Slovak Republic who do engage in adult learning mostly follow foreign language courses and there are significant gaps in ICT training and training for soft skills such as management and customer relation skills.

Figure 3.8. Adult learning

Share of adults participating in education, 2012/2015



Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Source: OECD (2020e), Skill Strategy Slovak Republic.

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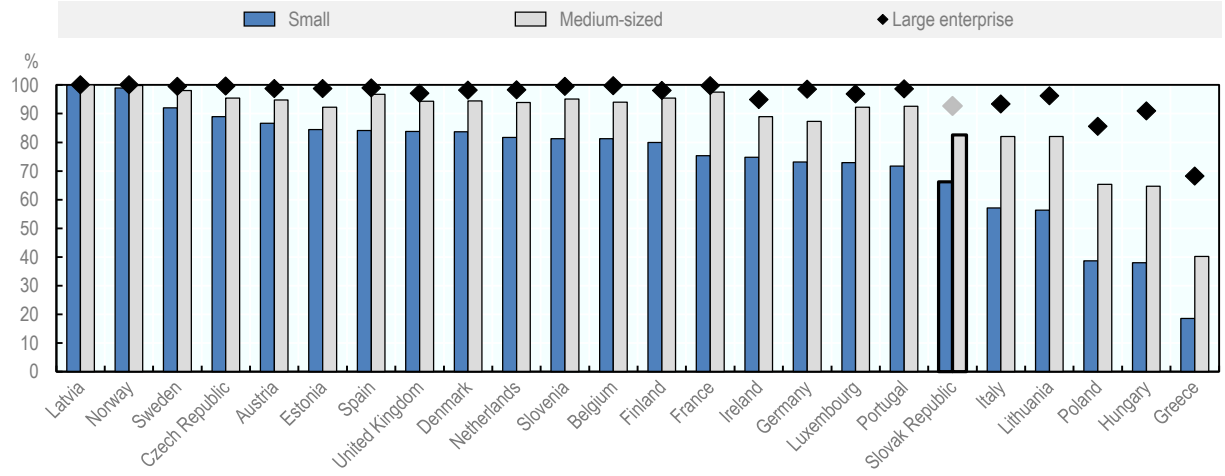
The most frequent reason reported by enterprises for not providing continuous training is that they do not have any (additional) skill needs (reported 82% of SMEs that do not provide any training) or because they hired new staff that matches the skill needed (reported by almost half of non-training firms in the Slovak Republic). One-third of enterprises not offering training report that the reason is their high workload and lack of time allocated to participate in training, followed by cost reasons. In the Slovak Republic, 30% of firms have no time for staff to participate, and 31% cite high cost of training courses.

Figure 3.9. Enterprises providing continuous vocational training

Share of firms by size class in 2015



Source: Eurostat (2020), Education and Training in the EU database

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Vocational traning is not well developed in the Slovak Republic. SMEs might not be fully aware of the importance of training and upgrading skills and competencies that help to improve productivity and adaptability to changing environment. Two-thirds of small firms in the Slovak Republic provided training in 2015, in contrast with 75% in the OECD. A higher share of medium-sized firms train their workforce in the Slovak Republic; 83% as compared to 88% across OECD countries (Figure 3.9). In addition to a lower occurrence of training, the intensity of training is lower. Employees in Slovak small firms spent about 4 hours in CVT courses per 1 000 hours worked, whereas in medium-sized firms the training intensity was about 5.5 hours per 1 000 hours worked. This contrasts with countries such as Ireland, where 13 hours in small and 10 hours in medium-sized firms are dedicated to training. The Slovak Republic performs better, however, than countries such as Greece or Hungary where SMEs dedicate only up to 0.2% of worktime to training (or less than 2 hours per each 1 000 hours) (Eurostat, 2020).

Entrepreneurship education receives only marginal attention in the educational system

The education system can contribute to developing entrepreneurial attitudes and entrepreneurial skills such as the ability to build teams, communication and motivation skills, mentoring and development, but also engagement in entrepreneurial activities. However, the formal education system in the Slovak Republic provides little entrepreneurship education and the country lacks a specific entrepreneurship education strategy, even if it addressed the topic extensively in the National Youth Strategy 2014-20. Non-profit educational organisations have tried to fill in the gap left by the formal curriculum. As an example, Junior Achievement Slovakia organises practical training programmes in schools to support entrepreneurial and economic thinking and support youth employment. In addition, both the Ministry of Economy and the SBA are planning to introduce schemes that would develop activities focused on improving entrepreneurial education (OECD, 2020d). Already in 2018, the SBA had about 30 projects to help create new business ideas and educate the general public on business-related topics.

Attracting Slovak migrants living abroad could bring back skills and support entrepreneurial activities

Returning migrants are a potential source of qualified workforce, networks and capital, which could contribute to entrepreneurship activity and help tackle the skill deficit. Close to one in ten Slovaks live abroad, one of the highest proportions among OECD countries (OECD, 2019a). Various diaspora programmes could increase cooperation with Slovak communities abroad, encourage return migration, exchange knowledge and promote networking. Other countries with large diaspora communities have often pursued policies in this area. For example, Lithuania organises labour market information fairs abroad, organises visits to scientific institutions to highly qualified researchers or facilitates return by offering services to returning migrants through a one-stop-shop portal.

In 2015, the Ministry of Education introduced a grant scheme for experienced professionals returning to the Slovak Republic, but this has been discontinued. LEAF, an NGO, runs the Slovak Professionals Abroad programme in the absence of government programmes at scale.

Infrastructure

Transport infrastructure investment is unevenly distributed across the territory

The Slovak share of GDP spent on total transport infrastructure investments exceeds most other OECD countries at about 1.2% in 2017 (OECD.stats). Since the 1990s, infrastructure investments have focused on developing high-speed motorways in the western and northern part of the country. This has

been important in development of industrial activity and attracting foreign investments in these regions. Indeed, research finds clear correlations between local economic indicators such as lower unemployment and transport investments in the districts (Habrman and Žúdel, 2017).

While infrastructure investment has focused on the motorways, the remaining road network has deteriorated for the past two decades and the transport infrastructure remains uneven or incomplete, contributing to significant disparities between regions, with the Eastern and Southern regions lagging behind. The perception of road infrastructure quality is among the lowest among OECD countries. Similarly, rail transport provides inadequate quality and is underused. An uptick in car ownership and use has led to decline in rail travel, and fewer resources for maintenance and upgrade are dedicated to rail infrastructure (OECD, 2019a).

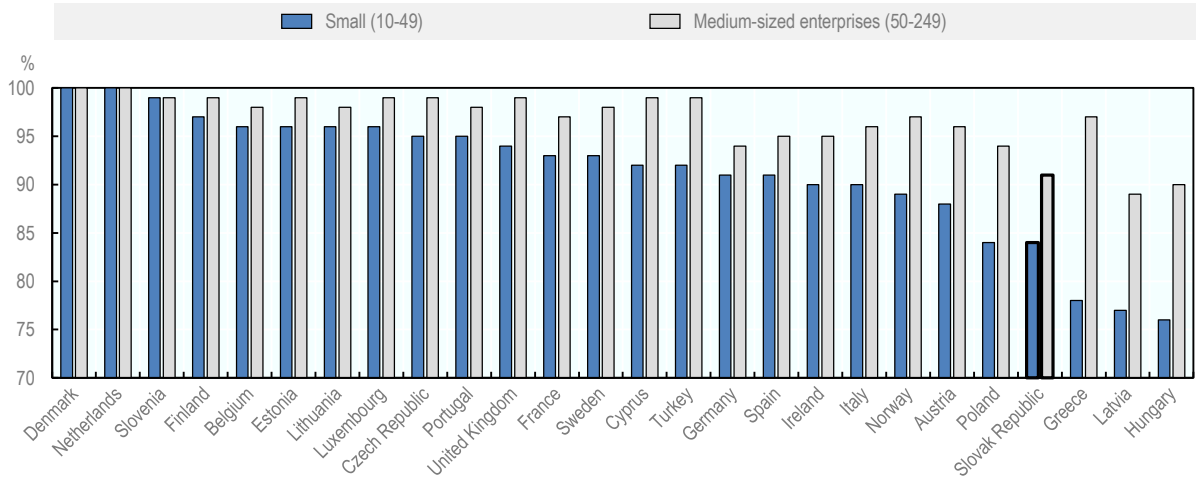
Broadband connectivity among SMEs is low, and few small firms use a fast connection

Digital infrastructure, along with human capital and a supportive regulatory framework, is one of the necessary drivers for digital transformation, as set out in the digital strategy of the Slovak Government for 2019-30. However, the Slovak Republic has one of the lowest levels of investments in ICT as a share of GDP in EU countries. Over time, insufficient investments lead to lagging availability and speed of broadband connections. In 2019, 84% of small firms and 91% of medium-sized firms used a digital subscriber line (DSL) or other fixed broadband connection, as compared to 91% for small firms and 97% of medium-sized firms across European countries as a whole (Eurostat). In addition, the share of SMEs with a broadband connection has stagnated in recent years.

Only a small share of SMEs use a fast internet connection: 13% of small firms and 17% of medium-sized firms had a connection with a download speed of at least 100 Mb/s in 2019, despite high adoption of cloud services among SMEs, which ideally require higher download speeds. For medium-sized firms, this is the lowest value among European countries (Figure 3.10).

Figure 3.10. Enterprises with broadband connection by size

Percentage of enterprises that use DSL or other fixed broadband connection in 2019



Note: Only the non-financial sector is considered.
Source: Eurostat (2021), Digital Economy and Society: ICT Usage in Enterprises Database, https://ec.europa.eu/eurostat/web/digital-economy-and-society/data/database.

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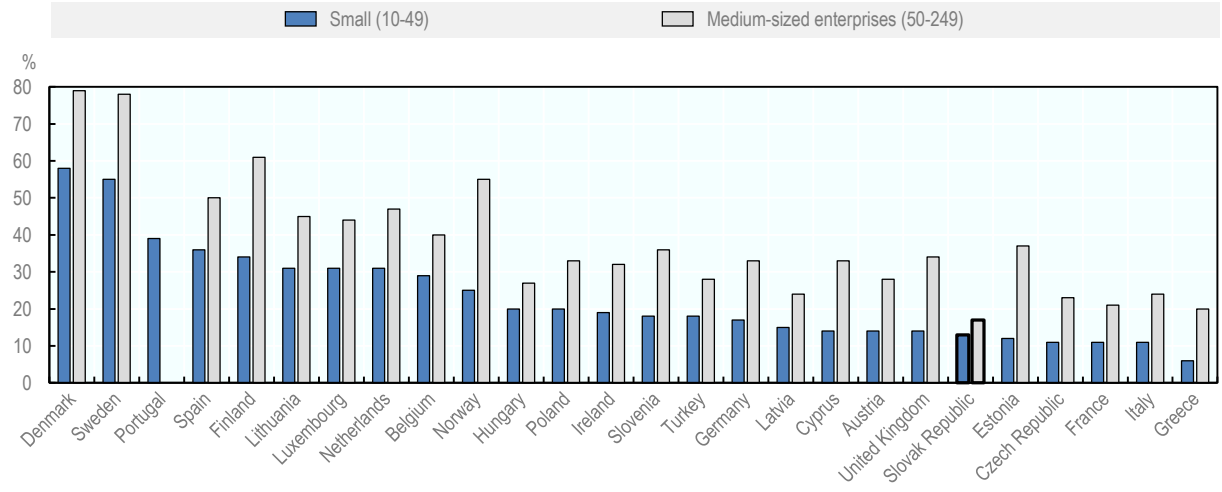
Figure 3.11. Enterprises with fast internet connection by size

Share of enterprises with contracted download speed of the fastest fixed internet connection is at least 100Mb/s in 2019



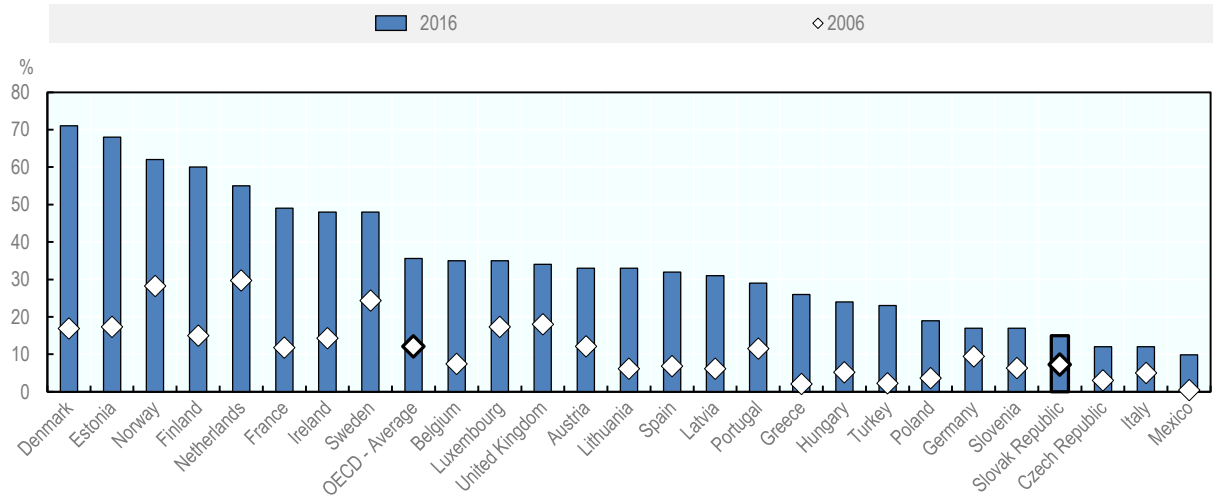
Note: Only firms from the non-financial sector are considered.
Source: Eurostat (2021), Digital Economy and Society: ICT Usage in Enterprises database, https://ec.europa.eu/eurostat/web/digital-economy-and-society/data/database.

StatLink https://doi.org/10.1787/888934247723

The Slovak Government could do more to harness the full potential that digitalisation offers. In 2016, 15% of individuals had used the internet to send completed forms to public authorities within recent months. In contrast, over 60% of individuals used internet for forms with public authorities in Nordic countries (Estonia, Denmark, Finland, Norway) (Figure 3.12). However, the Slovak Government has shown that progress in e-government practices can be achieved in relatively short time. In 2018, only 20% of firms were registered to fill their tax online, but following an awareness-raising campaign and assistance offered to individuals at the tax centres, the tax authorities were able to collect nearly 100% of tax filings online in the following year.

Figure 3.12. Digitalisation of government in the Slovak Republic

Percentage of individuals who used the internet for sending completed forms to public authorities in the last 12 months



Source: OECD (2021d), Government at a Glance database.

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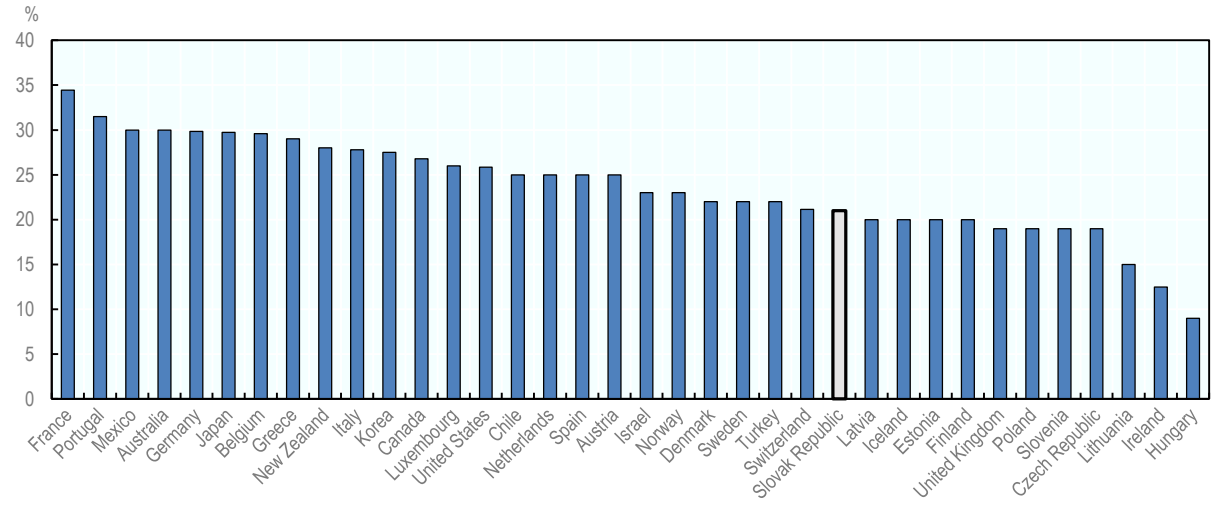
Taxation affecting SMEs

Corporate taxation is low and a lower rate regime has been introduced for the smallest firms

Corporate taxes are generally low in the Slovak Republic. The standard corporate income tax rate in the Slovak Republic was 21% in 2020 for corporate taxpayers with taxable revenues above EUR 100 000. This is lower than in most OECD countries, where the average was 24% in 2018 (Figure 3.13). A major tax reform in 2004 introduced a flat tax rate, replacing a system of corporate, income, dividend, and VAT tax rates between 10 to 38 per cent. This reform lowered the corporate tax rate from 25% to 19% on average, and broadened the tax base by eliminating most exemptions, for example for newly established firms. In the following years, the tax rates underwent multiple adjustments, reaching a rate of 21% in 2017 (Remeta et al., 2015).

Figure 3.13. Statutory corporate income tax rates

Combined corporate income tax rate in 2018



Note: This figure shows 'basic' (non-targeted) central, sub-central and combined (statutory) corporate income tax rates for resident corporations. Where a progressive (as opposed to flat) rate structure applies, the top marginal rate is shown. Tax rates targeted to specific industry or income types are not shown in the table.
Source: OECD (2020f), Public Sector, Taxation and Market Regulation: Corporate Tax Statistics database.

StatLink https://doi.org/10.1787/888934247761

In addition, the Slovak Republic introduced a lower tax rate regime for the smallest firms in 2020. This involved a reduced corporate income tax of 15% for all self-employed people, entrepreneurs and corporations with income revenues less than EUR 100 000. Lowering the tax rate for micro firms can potentially increase their retained earnings, resulting in higher investment, growth and productivity. However, imposing tax breaks can also incentivise entrepreneurs to stay small. Research has shown that firms tend to keep their size under the threshold set by size-contingent policies. For example, the distribution of French firms shows that employment regulations for firms with 50 and more employees, represents a possible barrier to firm growth: the number of firms with 50 employees is half of the count of number of firms with 49 employees (Garicano, Lelarge and Van Reenen, 2016). It is therefore possible that the introduction of the lower tax rate will incentivise the self-employed and micro firms to remain small and report earnings under the threshold of EUR 100 000, even if they have higher growth potential. The impact of the reduced Slovak Republic tax rate for the smallest firms should therefore be carefully evaluated.

Only a handful of other countries have preferential rates for very small enterprises, and these schemes have had mixed results. The United Kingdom abolished its preferential rate in 2015 and introduced instead more targeted measures such as support to cover financing gaps for start-up businesses. A less distortive alternative to the recently established rate in the Slovak Republic could be a preferential tax rate for the first part of the business income, and a higher level after a threshold, as described in an example from Canada in Box 3.3.

Box 3.3. Corporate tax rate reduction for smaller profits firms: An example from Canada

Description of the approach

The federal small business tax rate, also called the Small Business Deduction (SBD), is a special tax regime for Canadian small firms. The eligibility and tax rate imposed depend on the tax capital of the firm and the level of business income. The special regime applies to firms with taxable capital of less than CAD 15 million and is applied on the first CAD 500 000 of active business income. The tax rate rises progressively with income, and the portion of income it is applied on reduces progressively with taxable capita, as shown below.

Taxable capita	Tax rate
Less than CAD 10 million	• First CAD 500 000 of active business income: small business tax rate of 9% (after the small business tax deduction of 19%, in combination with a federal tax abatement of 10%) • Over CAD 500 000: general business rate (15%)
CAD 10-15 million	• Small business tax rate on a portion of the income, which gets proportionally smaller as the amount of taxable capital increases. • The rest is taxed at the general business rate (15%)
More than CAD 15 million	• General business rate (15%)

Factors of success

The goal of the SBD is to provide small firms with more after-tax income for reinvestment and expansion. The preferential tax rate for small business can also cover some of the regulatory compliance costs that small businesses bear disproportionately. The actual impact is difficult to evaluate for lack of a suitable control group.

Obstacles and responses

There are concerns about the cost efficiency of the measure. Spending that currently goes towards the SBD could be allocated to measures that might possibly be more effective in encouraging job creation and increases in economic activity, such as tax credits and deductions for business expenditures by small business, reduction in payroll taxes, and improved access to financing for small businesses.

Relevance to the Slovak Republic

Using the Canadian system of tax deductions, small firms would lose the incentive to keep their income under the threshold in order to qualify for the exemption. Only the first part of the income would be taxed at a lower rate, while remaining income can be taxed at the standard corporate tax. However, the challenge of defining the qualifying business threshold remains. A careful evaluation of the impact of the current incentives will give policy makers information about the cost and benefits of the preferential tax rate at varying thresholds. More targeted assistance should also be considered if the goal of the tax measures is to generate job creation, business growth, or assist in covering the financing gap for the most dynamic firms.

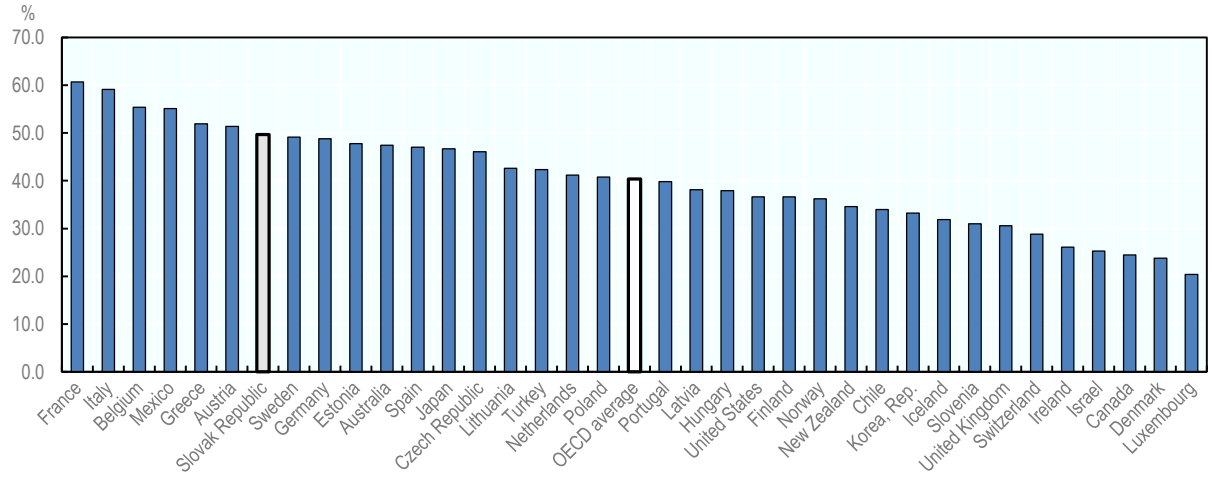
Source: (OECD, 2016)

The tax structure relies heavily on social security taxation, possibly discouraging firms from hiring

Despite comparatively low corporate tax rates, Slovak firms pay about half of their profit as taxes and other contributions in 2019, about 10% more than OECD average (Figure 3.14). This is mainly due to the high rate of social security charges. Contributions into social security system represent 44% of the total tax receipts in the country, compared to about one-quarter in the OECD. In contrast, taxes on personal income, profits and gains represent only 10% of profits (where the OECD average is 24%) (OECD, 2019a). The heavy dependence of tax revenues on employment taxation in the Slovak Republic may be a factor in the high share of micro firms without employees in the Slovak Republic.

Figure 3.14. Total tax and contribution rate

As percentage of profit in 2019



Note: Total tax rate measures the amount of taxes and mandatory contributions payable by businesses after accounting for allowable deductions and exemptions as a share of commercial profits. Taxes withheld (such as personal income tax) or collected and remitted to tax authorities (such as value added taxes, sales taxes or goods and service taxes) are excluded.
Source: World Bank (2019), Doing Business database, http://www.doingbusiness.org/

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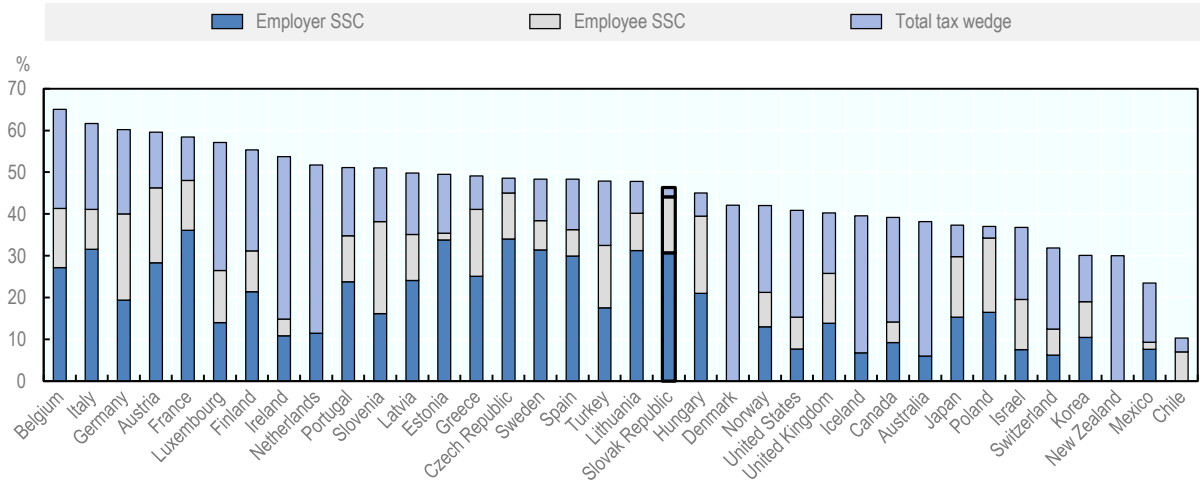
Employee social security deductions and income taxes, including any local and central-government income taxation, added up to 46% of total labour costs in 2018, with the Slovak Republic ranked aound the median of OECD countries (Figure 3.15).

Figure 3.15. Taxation on labour

Total tax wedge (income taxes and social security charges) as a share of labour cost of an average wage in 2018



Note: The tax wedge is the combined central and sub-central government income tax plus employee and employer social security contribution taxes, as a percentage of labour costs defined as gross wage earnings plus employer social security contributions. The tax wedge includes cash transfers.
Source: OECD (2020e), Public Sector, Taxation and Market Regulation: Tax Database.

StatLink https://doi.org/10.1787/888934247799

Policy makers could consider reforms that would make make employment as attractive as sub-contracting. Until recently, the tax wedge for the self-employed was about 25% lower than for employees. The Slovak Government introduced measures in 2013 to reduce the discrepancies between the labour taxation of the self-employed and employees. However, as the self-employed can deduct their costs from taxable income and can choose other advantageous tax opportunities, employees continue to be interested in becoming independent contractors for their firms, which might be a factor in the high share of the self-employed in the economy (Remeta et al., 2015).

Tax incentives for employment are focused on marginalised workers

Slovak enterprises can benefit from employment tax incentives for hiring marginalised workers. The tax incentives are provided to firms in areas with a high local unemployment rate. In 2020, they amounted to up to 40% of the labour cost of marginalised workers for between three months and two years. Other employment incentives include hiring support in regions with high local or regional unemployment and incentives for employing workers with a disability. These tax incentives serve mainly in support of reintroducing the long-term unemployed to the labour market. Analyses are required to identify the effectiveness and efficiency of these measures.

Tax credits for innovative investments doubled between 2018-20, likely making R&D support more appealing to small enterprises

Tax credits are also offered to firms for investments in R&D. Between 2018 and 2020, the volume of R&D tax credits doubled. In the fiscal year 2020, these tax credits amounted to the double of the R&D costs incurred in this period. Spending on R&D, while still small compared to other OECD countries,

has risen over the past decade and policies are increasingly inclusive with about 17% of small firms and 16% of medium-sized firms investing in R&D as shown in Chapter 2. Some 150% of R&D costs incurred in 2019 could be deducted from the tax base, up from 100% in 2018. Before 2018, the deduction was capped at 25% for the qualifying R&D expenditure and 50% for labour costs. In 2015, a hybrid R&D tax allowance was introduced that extended the R&D support from grant recipients to tax incentive support, increasing total business R&D expenditures (OECD, 2019c).

Such incentives will likely help increase R&D investments, on condition that information is disseminated on the application process and requirements, especially to smaller firms, as well as ensuring that procedures are administratively accessible. The design of the scheme is discussed in more detail in chapter 6.

There is potential for a tax break for equity investments in small firms

The Slovak Republic could consider introducing tax breaks for equity investments to help fast growing firms obtain necessary capital. The take-up of equity finance in the Slovak Republic is very low, especially among SMEs (with none of the surveyed enteprises according to SAFE survey in 2019 using external equity). At the same time, there are few tax incentives that would spur equity investments. At the corporate level, tax systems often favour debt financing over equity financing due to the deductibility of the costs of debt finance against the income of the corporation, in contrast with non-deductible equity finance. The difference of the tax rates in the Slovak Republic on the equity and top corporate bonds is 14%, (Harding and Marten, 2018). Equity investments could be encouraged in a form of tax credit, which would make equity investments comparable in terms of after-tax returns with investments in bonds.

SME access to finance

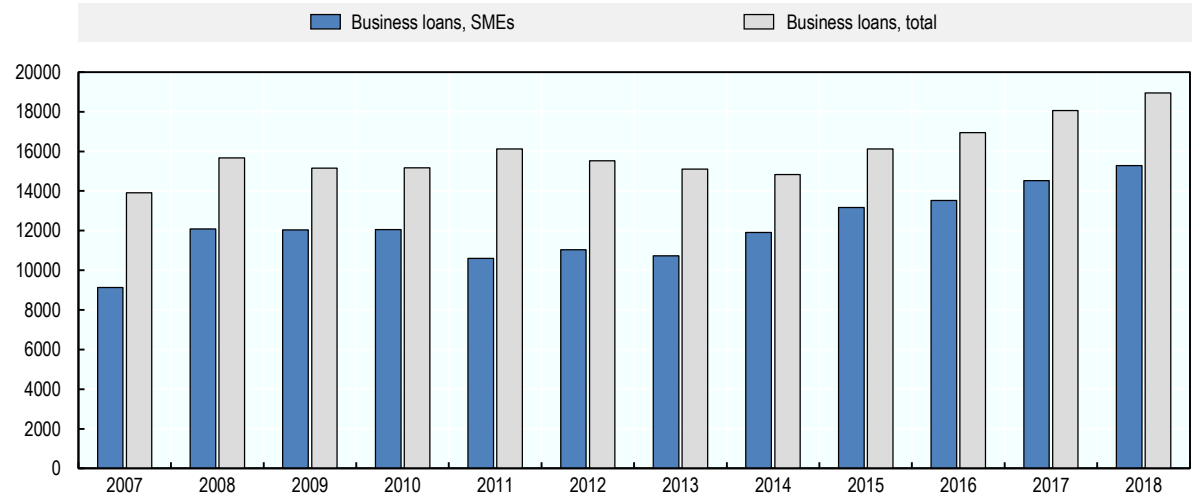
There is a strong reliance on straight debt

Slovak entrepreneurs rely heavily on traditional means of financing, including savings, family funds, reinvested capital, bank loans, bank and credit overdrafts, debt securities and factoring. In 2019, 81% of SMEs used traditional financing methods to obtain credit, with 35% using a credit line, bank overdraft or credit overdraft within the last 6 months and another 20% more than 6 months ago (EC, 2019).

Business loans to SMEs increased by 4.1% between 2017 and 2018, following the trend of the previous years, although they declined in 2019 for the first time since 2014 (Figure 3.16). The long run increase has been driven by greater long-term loans. About 40% of SMEs report taking on a bank loan.

Figure 3.16. Business loans by SMEs in the Slovak Republic

Total amount, in millions of EUR



Source: Data from Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard (OECD, 2020).

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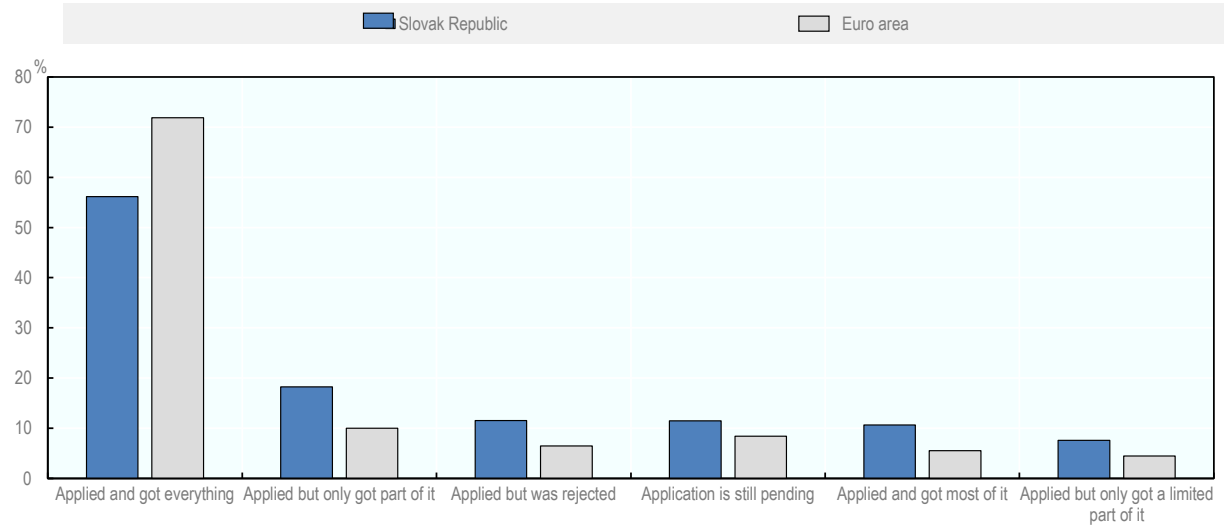
Approval rates for bank loans are low in the Slovak Republic as compared to other EU countries. In 2019, only 56% of Slovak entrepreneurs who applied for a loan received the full amount requested, in contrast with 72% of firms across the Euro area. Slovak applications are also more frequently rejected. In addition, the rejection rate of 12% in the first half of 2019 was double the rate in the Euro zone (Figure 3.17). Despite lower loan approval rates, entrepreneurs tend to report access to bank financing as being satisfactory. By 2019, interest rates on loans for SMEs had fallen to their lowest level for the past decade, to 2.9%, down from 5.5% in 2007 (National Bank of Slovakia).

Figure 3.17. SME approval rate for bank loans in the Slovak Republic and Euro area

Weighted percentage of responses in the first half of 2019



Note: Remaining responses: "Do not know" and "Applied but refused because cost too high" are the least frequent answers among surveyed firms, with 0% to 2.6% share.
Source: European Central Bank (2020), SAFE - Survey on Access to Finance of Enterprises, https://www.ecb.europa.eu/stats/ecb_surveys/safe/html/index.en.html.

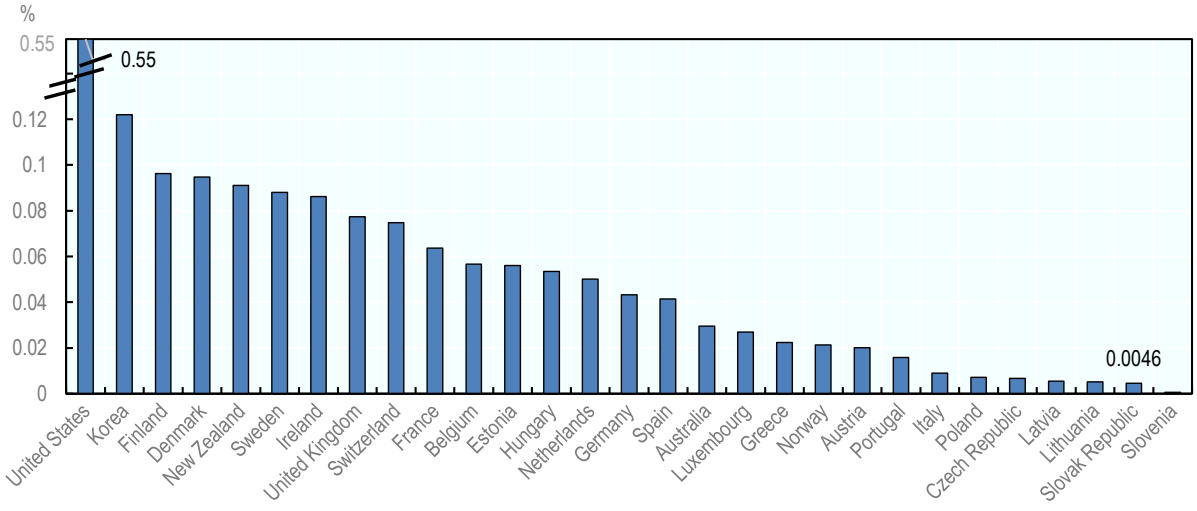
StatLink https://doi.org/10.1787/888934247837

Alternative forms of financing to debt are generally underdeveloped. For example, 95% of SMEs do not use equity capital, 10% more than the EU average. This contrast with 57% of SMEs that were not using bank loans, and 43% not using bank overdrafts (51% and 46% in the EU, respectively). The share of venture capital investments in GDP in the Slovak Republic is among the lowest in the OECD. Venture capital investments amount to 0.0046 of GDP in the Slovak Republic, only ahead of Slovenia among OECD countries, where venture capital stands at 0.06% of their GDP on average (Figure 3.18). There were only six transactions in 2018 (3 by the Slovak Investment Holding and 3 by the Slovak Business Agency via the National Holding Fund). In 2019, 15 transactions were realised in a total volume of EUR 30 650 000.

A comparative study of SME market gaps and market failures among EU member states indicates that, while the debt finance gap is relatively limited, there appear to be significant market failures at play when it comes to equity finance markets. While additional policy interventions on the supply side would support innovative SMEs to access more equity financing, there is also a clear need to improve the quality of projects that can be presented to equity funds. Only 3% of the Slovak SMEs consider equity financing as a relevant form of financing, in contrast with one-quarter of SMEs in Croatia or Slovenia. A combination of demand and supply side factors restrict equity markets (EC/EIB, 2019).

Figure 3.18. Venture capital investments

In US Dollars as a share of GDP in 2018



Note: Venture capital is made up of the sum of early stage (including pre-seed, seed, start-up and other early stage) and later stage venture capital. As there are no harmonised definitions of venture capital stages across venture capital associations and other data providers, original data have been re-aggregated to fit the OECD classification of venture capital by stages.
Source: OECD (2020g), Enterprise Statistics Database.

StatLink https://doi.org/10.1787/888934247856

Volumes of venture capital funding declined significantly in 2017, following the closure of funding support of the EU and European Investment Bank Group's initiative "Joint European Resources for Micro to Medium Enterprises" (JEREMIE) for the 2007-2013 programming period. Venture capital investments recovered in 2018, almost doubling the size of the funding of the previous year, but remaining below the level of previous decade. The majority of the investments supported development in established SMEs, including expanding production capacities, developing market potential, or product and service development. Supporting start-up activities and seed investments represented about 40% of the total venture capital investments over past decade (Table 3.6).

Table 3.6. Venture capital investments in SMEs in the Slovak Republic

In millions of Euros

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Seed	0.22	3.85	2.1	0.66	0.87	1.19	0.06	1.2	1.69	4.45	0.2	0	1.1
Start-up	0.05	0.45	3.9	10.9	4.8	0.2	0	1.72	5.65	9.63	1.3	0.4	2
Development	6.77	3.69	8.37	0.46	5.8	5.59	8.93	6.05	3.5	3	1.5	5	27.6
Total	**7.04**	**7.99**	**14.37**	**11.42**	**11.47**	**6.98**	**8.99**	**8.97**	**10.84**	**17.08**	**2.91**	**5.4**	**30.65**

Source: OECD (2020h). Report on the state of SMEs in the Slovak Republic.

A well-functioning angel network or syndicate can bring large benefits to the early stage finance eco-system by enabling investors to diversify their risks by investing in a (potentially wide) portfolio of projects. While no reliable data exists, interviews with key stakeholders indicates that business angel activities are modest in the Slovak Republic, co-investment relatively rare and the angel network has a low profile. The country still lacks a dedicated governmental business angel funds programme that

would generate more early-stage financing sources. The Slovak Business Angel Network, established in 2011 by the Young Entrepreneurs Association of Slovakia, the Slovak Venture Capital and Private Equity Association, and the Slovak Business Agency, aimed to fill this gap. Its aim was to offer matchmaking services between viable projects in need of equity and (potential) angel investors, provide networking opportunities for investors in the Slovak Republic, organise events and forums, and pre-select potential business projects on their merits and investment-readiness, yet their activity has stalled.

The government may want to consider (re)introducing measures to strengthen the angel network as a cost-effective and non-distortive way to stimulate the early stage equity market. This could take the form of tax incentives or credits for investors in start-ups. It could be accompanied by logistical and financial support for the angel investment network, which would help match finance demand and supply.

A 2017 study on tax incentives, commissioned by the European Commission, finds that these often positively impact equity investments for start-ups and SMEs and play an increasingly important role in the policy mix among EU governments and beyond. The Slovak Republic does not have such a tax relief in place, and could reconsider piloting one. The Seed Enterprise Investment Scheme (SEIS) in the United Kingdom is considered as a best practice example considering its scope, qualifying criteria and administration (See Box 3.4).

Box 3.4. Seed Enterprise Investment Scheme in the United Kingdom

Description of the approach

The Seed Enterprise Investment Scheme (SEIS) is an investment incentive initiative designed to boost economic growth in the United Kingdom by stimulating equity investments in new enterprises with growth potential. It also includes a platform linking start-ups and (potential) investors, allowing new firms to promote their company to potential investors and offering investors a convenient way to search for investee companies.

Besides its start-up and investor matching potential, SEIS supports investments through tax incentives. The scheme provides the investors with an upfront tax credit for investments in young companies, a capital gains tax deferral for reinvestment, a capital gains tax exemption for chargeable gains realised on disposal, and loss relief on more favourable terms than the baseline tax system for capital losses realised on disposal. Targeting entrepreneurial firms, SEIS combines age, size and specific sector exclusions.

Factors for success

The particularity of the Seed Enterprise Investment Scheme as compared to similar schemes across different countries, lies in its combination of tax incentives, its well-targeted qualifying criteria, administrative procedures, and stability, earning the highest score in a study on effectiveness of tax incentives for venture capital by European Commission. Evidence on the impact of the SEIS states that about one-quarter of the investments in EIS would not be made in its absence.

Important factors of success are:

- Government investments are indirect, as the investments are made by the private sector, which avoids the problematic of the government “picking winners”.
- The tax relief is generous and widely advertised in the financial press, resulting in a high level of investor awareness and participation.
- The scheme is reviewed and adjusted periodically to keep up with the evolving needs of its beneficiaries.

Potential difficulties

The complex rules of the investment scheme may dissuade its use in some instances. Some investors are deterred by the complexity of the rules or by the maximum equity stake limit that they are allowed to take in the SEIS companies under the eligibility rules.

Relevance for the Slovak Republic

Given the limited size of the early-stage investments and underdeveloped business angel investor community in the Slovak Republic, the government could establish a scheme that would offer tax credits for investments in new firms with high potential so as to de-risk these investments. Another support mechanism to new firms is establishing a platform where new firms could obtain visibility and potential investors could browse project proposals. To motivate the equity investors, the restrictions and procedures should be straightforward and proportionate.

Source: (European Commission, 2017)

Raising financial literacy among entrepreneurs can improve their ability to obtain funding

In addition to barriers on the supply side of the finance market, financial literacy of the population is lagging behind other countries. The OECD's PISA scores evaluating financial literacy of 15-year olds ranks Slovak Republic among the lowest performers, only ahead of Chile, Peru and Brazil.

Furthermore, the offer of financial education for Slovak entrepreneurs remains fragmented. Financial literacy programmes are currently on offer by both non-government and government bodies, including the Financial Literacy Support Strategy of the National Bank of Slovakia, adopted in 2019. In schools, financial education was incorporated into curriculum of existing courses in primary and secondary schools since 2009, and teacher training on financial education has been carried out by non-profit organisations. The current training programmes follow a one-size fits all approach providing basic education with a focus on the needs of consumers. There seems to be a paucity of relevant programmes targeting (potential) entrepreneurs and small business owners.

While no specific comprehensive data exist about the financial skills and acumen of entrepreneurs and business owners, there appears ample room for improvement. Research indicates that many innovative SMEs across the globe with a solid business model encounter difficulties in presenting their case to (potential) outside investors in a transparent and reliable way, and this situation is probably no different in the Slovak Republic. Investment readiness programmes are a relatively well-established policy response to such demand-side barriers in equity markets for SMEs (Boschmans and Pissareva, 2017). These programmes involve a combination of individualised training, mentoring and coaching for a relatively limited number of "high-potential" ventures, often in combination with other support measures such as innovation vouchers and grants. Enterprise Ireland is a case in point of a government body that takes a comprehensive approach to raising the number of companies that can successfully attract private equity (See Box 3.5). The Slovak Republic could set up a similar scheme.

Box 3.5. Boosting entrepreneur investor readiness and funding in Ireland via high-potential start-ups support

Enterprise Ireland offers numerous programmes targeted to support "high potential start-up" (HPSU) companies. HPSUs are identified as start-up businesses with the potential to develop an innovative product or service that can then be sold on international markets. They can be at feasibility stage, investor ready stage or growth stage.

Description of the approach

At each of the firm development stages, Enterprise Ireland assists entrepreneurs in acquiring skills and knowledge for further development.

- **Feasibility stage:** Support to develop the business idea or proposal to the "investor ready" level.
  - HPSU feasibility grant to support the development of an innovative start-up and development of an investor-ready business plan by covering costs such as salaries, consultancy fees, foreign travel, or trade fair costs.
  - Innovation voucher to work with a local college to solve a technical problem.
  - New frontiers entrepreneur development programme offers mentoring, incubation space, or scholarship payment to accelerate the growth, develop skills, and create contacts needed to start and grow a company.
  - Mentor grant matches a new entrepreneur with an experienced business mentor.

- **Investor Ready Stage**: Support to raise investment.
  - Competitive Start Fund: Investment of EUR 50 000 of equity designed to accelerate the development of the company by supporting achievements in commercial and technical milestones (evaluating international market opportunities, building prototype).
  - Innovative HPSU Fund: Equity investment to HPSU entrepreneurs on a co-funded basis to support the implementation of company's business plans.
- **Post-investment stage**: Support focused on exploring new international opportunities and continued development of the management team:
  - Numerous funds and vouchers: Market discovery fund, mentor grant, innovation voucher.
  - Workshops: Excel at export selling.

Over a period of 10 years, Enterprise Ireland assisted about 1 000 HPSUs. It supported investments of more than EUR 122 million between 2015 and 2019. The success underlines the organisation's goal of development of the next generation of business leaders and making the country a suitable place to start and scale up a business.

Relevance to the Slovak Republic

Adopting a combined approach of training and matching with equity co-investors could help Slovak entrepreneurs throughout the early stages of their life cycle. This approach may be more efficient than individual programmes that prepare the entrepreneur for the investment stage, which are separated from raising the funds to finance the company. In the first stage of conception of the idea and creating links with universities or technology centres, specialised training or consultations could guide the entrepreneur to generate a solid business plan, understand its potential and develop skills necessary to raise funding. This would prepare entrepreneurs for raising investments at each stage of company growth, and recognise and act upon the opportunities of markets, better understanding the potential. Such a programme could also develop networks and generate entrepreneurial culture.

Source: (Enterprise Ireland, 2020a) and (Enterprise Ireland, 2020b).

Trade and foreign direct investment

Business environment conditions are supportive of Slovak SME exports

Over the past two decades, the openness of the Slovak economy has increased steadily, with exports and imports reaching over 90% of GDP (Giorno, 2019). Business conditions are supportive of trade. The Slovak Republic had one of the best performances among 190 economies on the "Trading across Borders" indicator of the World Bank Doing Business index, alongside other Central-European countries (the Czech Republic, Hungary, Poland, and Slovenia). Slovak exporters and importers face zero costs to comply with documentation and border restrictions take only about one hour, to the benefit especially of SMEs. Slovak SMEs are nonetheless less likely to export than their counterparts in many other OECD countries.

Success in attracting FDI fails to translate into productivity spillovers for SMEs

The Slovak Republic has been very successful in attracting foreign direct investment (FDI). By 2016, foreign-owned firms in the Slovak Republic employed more than one in two manufacturing workers, despite not being numerous (only 1.6% of all Slovak manufacturers). This share was larger than in any other OECD country, where an average of approximately one-third of the manufacturing workforce is employed by a multinational firm (OECD, 2020a). Most of the investors come from Germany and other European countries, although FDI from Japan and the United States increased between 2010 and 2016.

Similarly, investors from other countries contributed to a 24% growth in employment in multinational manufacturing firms and a 54% growth in MNE employment in service sectors between 2010 and 2016, or about 105 000 jobs in total (Table 3.7). Furthermore, it is estimated that more than 80% of the total value of exports and imports is generated by foreign-owned exporter accounts in the Slovak Republic (OECD, 2015).

Table 3.7. Origin of largest foreign direct investments in the Slovak Republic

Number of multinational enterprises (MNEs) and employment in MNEs in 2016 and MNE employment growth by sector 2010-2016.

	Manufacturing			Services		
	Number of MNEs	Employment in MNE	Growth 2010-2016, %	Number of MNEs	Employment in MNE	2010-2016, %
Germany	244	76496	52.9	329	46856	91
United States	53	31121	78.1			
Austria	98	12978	-2.8			
Czech Republic	103	11956	30.7	487	15950	N/A
France	59	11514	37.8			
Italy	91	11158	2.3			
Japan	18	8368	112.9	30	996	N/A
Netherlands	48	7513	-61.9			
Switzerland	51	6611	8.4			
United Kingdom	42	5720	-7.2			
Belgium	40	5691	52.8			
Total	1113	249935	23.6	2372	163905	53.6

Note: Top countries with FDI that employed at least 5 000 employees in the Slovak Republic in 2016.
Source: OECD (2017b), AMNE database.

Inward foreign direct investment (FDI) may raise the productivity of domestic firms through knowledge spillovers. However, knowledge spillovers largely rely on supply relationships between domestic companies and multinationals. These supply relationships are relatively limited in the Slovak Republic, as measured by the value-added content from domestic firms in MNE exports. For example, transport equipment, the main exporting industry in the Slovak Republic, generates over one-quarter of gross exports, but adds only 40% of value locally, placing the Slovak Republic on the bottom of the distribution of domestic value added in the OECD (OECD, 2019a). It is not only local manufacturing SMEs that fail to participate in the creation of value added of foreign firms. Multinational firms and exporters also rely on foreign services at a greater intensity than in other countries. For example, domestic services value added contributed only 26% of gross exports, in contrast with an average of almost 40% in small OECD economies in 2014 (OECD, 2019a)..

One reason is the type of FDI that locates in the Slovak Republic. Many multinational firms in the Slovak Republic are focused mostly on the assembly of imported intermediate goods, which can be achieved with minimal interaction with local suppliers. The Slovak Republic could target investments higher up the value chain that would engage in more local content in their product, foster the development of local enterprises, and could help to diversify the economy.

Another issue is perceived weaknesses of potential domestic suppliers related to product quality, production efficiency, and workforce skill. Raising the availability of skilled labour through education and on-the-job training and improving management skills could help address these issues.

Conclusions and policy recommendations

Macroeconomic conditions in the pre-COVID-19 period have been favourable to business growth in recent years. However, the current crisis that has resulted from the COVID-19 pandemic is creating new short-term vulnerabilities for SMEs and start-ups. The Slovak Government has introduced a strong policy response to support small firms to survive this crisis.

The regulatory environment for SMEs and entrepreneurship in the Slovak Republic is strong in many areas when compared with OECD averages, including the system of regulatory impact assessment. However, there are also areas of weakness, in particular concerning relatively burdensome business start-up regulation. Another concern for Slovak small firms is the issue of frequent changes and amendments to small business legislation.

In terms of innovation, the Slovak Republic is labelled only as a moderate innovator by the European Innovation Scoreboard and ranks at the tail of the OECD rankings on various measures of innovation intensity among SMEs. Innovation spending has been increasing over past decade and R&D tax credits represent a key support mechanism introduced recently. However, lack of innovation spending and business engagement with higher education institutes holds back the commercialisation of research by SMEs and start-ups.

The availability of a skilled workforce remains a central challenge for SMEs in the Slovak Republic. Skills shortages relate to digital and business services skills and to soft skills such as management and oral expression. Improving the availability of these skills sets among university graduates and the existing SME workforce via on-job training, can lead to higher productivity and innovation among SMEs. The government could also step up efforts to attract skilled workers from abroad, especially the large Slovak diaspora living in other countries.

The transport network has improved substantially in recent years, although the infrastructure is stronger in the west of the country, which has had an impact on the location of some business investments. Increasingly, digital infrastructure is an additional key requirement for SME and entrepreneurship development and further investments are required across the country.

Revenue generation through the Slovak tax system is relatively weighted to social security contributions compared with property taxes and taxes on personal income and profits. The relatively high tax on labour might be connected to the relatively large share of firms without employees in the Slovak Republic. Corporate taxes are generally low and a lower regime for the smallest firms was introduced in 2020.

Slovak entrepreneurs rely heavily on traditional means of financing their capital, including savings, family funds, reinvested capital and bank loans. Slovak firms make little use of alternative sources of financing. Equity markets are largely undeveloped. To support investments (especially for innovative activities) and entrepreneurial dynamics, the Slovak Republic could consider introducing tax breaks for equity investments to help fast growing firms obtain necessary capital. Financial literacy among the Slovak population is generally low, and there are indications of a decline in recent years.

Trade and foreign direct investments have played a major role in development of the economy of the Slovak Republic. Foreign direct investment can domestic firm productivity through knowledge spillovers in particular. However, this will require additional efforts for domestic companies to create supply relationship with multinationals.

The following recommendations are proposed based on the assessment of the business environment for SME and entrepreneurship development.

Box 3.6. Key policy recommendations on the business environment for SMEs and entrepreneurship

Regulatory environment

- Fully implement the RIA 2020 Strategy to improve the overall culture of evaluation of regulations.
- Streamline and centralise regulatory oversight and provide training facilities to improve regulatory management practices.
- All governmental proposals, including initiatives of members of parliament, should undergo the same legislative procedures and involve engagement with stakeholders, allowing enough time for discussion and collection of comments.
- Review existing regulations and their usefulness on a systematic basis.
- Adopt simplification procedures to decrease administrative burden by continuing to upgrade electronic documentation procedures.
- Carefully monitor the impact of the recent modifications to the insolvency procedure and consider taking additional action to reduce the time required and cost of bankruptcy.
- Limit gold-plating by ensuring all new legislation introduces only the necessary amount of regulations.

Innovation and R&D

- Improve the coordination of the various public stakeholders active in the innovation sphere.
- Pool different academic research initiatives and create larger research units, which could act as focal points for public-private innovation partnerships.

Education/skills

- Establish skills councils to assess skills needs, ensure the representation of SMEs within them, and create a mechanism for SMEs to influence the curriculum to address skills shortages.
- Increase SME participation in apprenticeship programmes.
- Minimise costs and barriers to participation of SMEs in vocational education and training programmes and boost the variety of course offerings to include digital skills training, management capabilities training, and improving soft skills such as communication.
- Engage with diaspora communities and develop outreach programmes to attract back skilled Slovaks living abroad.

Taxation

- Carefully review possible unintended consequences of lower corporate tax rates for micro firms.
- Reduce the tax incentive for self-employment by ensuring a similar tax burden from social security contributions on self-employed income as on employment income.
- Assess the impact of the recent expansion of the R&D tax credit and adjust if necessary, increase awareness among SMEs of available R&D tax credits and ensure administrative clarity in the application and follow-up process for the tax credits.

SME access to finance

- Establish investment readiness programmes to prepare entrepreneurs to access finance at all stages in the development of their firm.
- Introduce tax incentives or exemptions for early stage equity investors to support the development of alternative forms of financing for innovative and growth potential SMEs and start-ups.
- Improve financial education in the population with appropriate financial training initiatives.
- Support co-funding of early-stage equity investments.

Trade and foreign direct investment

- Strengthen the emphasis of FDI attraction efforts on more knowledge- and skill-intensive investments with greater potential for domestic innovation spillovers.
- Increase the capacity of domestic firms to participate in global value chain networks by ensuring the availability of a qualified workforce and strengthening management capabilities in SMEs.

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4. The Strategic Framework and Delivery Arrangements for SME and Entrepreneurship Policy in the Slovak Republic

This chapter assesses the strategic framework and delivery arrangements for SME and entrepreneurship policy in the Slovak Republic. It examines the key strategic documents setting out SME and entrepreneurship policies and programmes, the co-ordination of the policy across different government actors, and consultation and dialogue on policy development with the private sector. It also examines the policy mix or portfolio of SME and entrepreneurship interventions as indicated by the budgets by type of intervention and policy target group. The chapter discusses monitoring and evaluation arrangements for SME and entrepreneurship policies and programmes. It also examines arrangements for delivery of policy support to SMEs and entrepreneurs, including the key policy delivery organisations and the accessibility of SMEs and entrepreneurs to public support. Policy recommendations are offered in all of these areas.

The SME and entrepreneurship policy framework

The SME Support Law provides a basic legal framework for SME policy

A legal framework for policy support to SMEs and entrepreneurs first came into force in the Slovak Republic on 1 January 2017, in the form of the Act No. 290/2016 on Supporting SMEs (and amendment to the Act No. 71/2013 Coll. on provision of subsidies within the competence of the Ministry of Economy). The Act aimed to create a better business environment for SMEs and the appropriate conditions for active application of the Small Business Act for Europe (SBAfE) principles and the EU Entrepreneurship 2020 Action Plan in the Slovak Republic (SBA, 2018). It defines the beneficiaries of SME support to include start-ups, existing micro, small and medium-sized enterprises, and the general forms and methods of providing support. The Act further outlines the types of support to be provided by the Ministry of Economy or its delegates. These include:

- direct support (e.g. financial instruments, subsidies, and non-repayable contributions);
- indirect support (e.g. entrepreneurship education, business information, professional advice and training to improve business skills and growth, vouchers, participation in business promotion events, etc.);
- preservation and development of traditional industries, crafts, and folk art;
- support for projects of associations to develop and support SMEs;
- the development of venture capital companies;
- R&D assistance;
- support for product, process and service innovation; and
- improvements to the business environment.

Lastly, the Law includes a section on better regulation and the requirement for undertaking the SME Test to assess the impact of proposed legislation and regulations on SMEs.

A significant portion of the Law lays out the application process, requirements and evaluation criteria for SMEs to benefit from public support.

The Ministry of Economy is rendered the accountable authority for implementation of the Law, including planning, co-ordination and directing support to SMEs, with authority to designate other legal entities, under contractual arrangements, to carry out support activities on its behalf. One of the significant targeted responsibilities of the Ministry of Economy is “better regulation” with the objective of reducing the disproportionate regulatory burden on SMEs through the conduct of tests of the impact on of legislative proposals and regulations on SMEs.

The Ministry of Economy is also required under the SME Support Law to produce an annual report on the state of SMEs in the Slovak Republic presenting findings from systematic monitoring of the SME sector and proposed measures to reduce the regulatory burden on SMEs. This task is delegated to the Slovak Business Agency (SBA) and results in publication of the annual “Report on the State of Small and Medium Enterprises in the Slovak Republic”, and a complementary annual report on Activities of the SBA Better Regulation Centre (BRC).

Unlike the SME laws in many countries, the Slovak Republic SME Support Law does not include a description of the institutional structure or oversight mechanism for ensuring its implementation beyond naming the Ministry Economy as the mandated authority. In other countries, an SME law would commonly stipulate the creation of an interministerial committee, consisting of the key ministries implicated in the development of SME and entrepreneurship policies, to oversee the development of an SME policy agenda and implementation workplan.

The EU Operational Programme on Research and Innovation has guided much of the SME and entrepreneurship support

The EU Operational Programme on Research and Innovation (OP R&I) 2014-20 is the key strategic document put together by the Slovak Government detailing the main SME and entrepreneurship policy actions to be taken in this period, and up to 2023 when the programme will finish. The document focuses on policy measures that include some EU funding, but this represented the great majority of SME and entrepreneurship support measures in the Slovak Republic. It is also focused on research and innovation measures, whereas some other EU Operational Programmes also include some SME and entrepreneurship policy support (e.g. the Operational Programme Human Resources and the Integrated Regional Operational Programme). However, very good information can be obtained from the OP R&I on the main SME and entrepreneurship policy measures. A new, single, operational programme for the Slovak Republic for 2021-2027 called OP Slovakia is being prepared, which will become the document covering the main EU-funding of SME and entrepreneurship policy actions in the future.

The main objectives of the OP R&I were to create a stable innovation-friendly environment for all entities and to promote the efficiency and performance of the research, development and innovation systems to reinforce competitiveness, sustainable economic growth and employment (MoESRS and Ministry of Economy, 2014). Its SME and entrepreneurship policy priorities and objectives seek complementarity and synergy with the objectives of the National Reform Programme, the policy principles of the SBAfE, and other national strategies and operational programmes.

The development of the SME and entrepreneurship policy component benefited from a consultation process with input from many stakeholders and analysis undertaken by the government to identify the barriers and market failures impacting on SME and entrepreneurship development, including on the creation of new firms. The analysis included a diagnostic of the state of SMEs in the economy, assessments of Slovakia's progress (or lack thereof) in implementation of the SBAfE, and analysis of unaddressed gaps from the predecessor Operational Programme Competitiveness and Economic Growth 2007-13, particularly in the support structure for SME development, including its fragmentation, weak co-ordination, and lack of specific instruments and forms of support targeting SMEs, and insufficient focus on entrepreneurship/new firm creation. In these ways, the SME component was developed in alignment with what would be considered good practice in OECD countries. One of the aims of the OP R&I is to provide a common programme document for ministries responsible for state policies in the fields of education, R&D, innovation, and SME support in order to foster greater co-operation and synergies in the innovation system.

Two of the four thematic priority axes of the OP R&I are specific to SMEs: "Enhancing the competitiveness and growth of SMEs" and "Developing competitive SMEs in the Bratislava Region". The remaining two priority axes, related to "strengthening research, technological development and innovation", target support for the research activities of research-intensive firms, including SMEs, within collaborative partnerships with research institutions. The Managing Authority for the OP R&I is the Ministry of Education, Science, Research and Sport (MoESRS) in co-operation with the Ministry of Economy.

The SME-related axes have three major foci: (1) stimulating and supporting the creation of new innovative enterprises, i.e. start-ups; (2) increasing the competitiveness of existing SMEs in the development phase; and (3) increasing the internationalisation possibilities of existing SMEs, both in terms of export potential and participation in global value chains. Strategic policy objectives and expected results are associated with each priority axis (see Box 2.1).

The specific policy objectives include:

- Promoting entrepreneurship as a career choice and raising public awareness of the benefits of entrepreneurship;
- Encouraging the creation of start-ups by disadvantaged social groups (women, young people, seniors, persons with disabilities, Roma) and increasing their representation in the total number of entrepreneurs through targeted and tailored business support;
- Contributing to the establishment of new innovative SMEs, start-ups and spin-offs;
- Increasing the survival rate of new businesses during the first three years of business by providing systematic professional counselling and mentoring support to new entrepreneurs, including the related infrastructure of advice centres, incubation and training facilities, financial intermediation, online platforms, etc;
- Ensuring start-ups and existing SMEs have access to capital and diversified forms of funding (grants, loan programmes, venture capital funds, informal investors), including in the Bratislava Region;
- Supporting SMEs, including in the creative sector, to penetrate and succeed in foreign markets, including creation of a comprehensive system of support for the internationalisation of SMEs (to address the limited scope, lack of co-ordination, and low take-up by SMEs);
- Promoting the development of higher value-added knowledge and smart specialisation-based SMEs through the provision of professional advisory services and expert counselling, seminars/ workshops, networking, etc;
- Stimulating the use of electronic business tools by SMEs and the adoption of digital technologies in their business activities;
- Increasing the competitiveness and performance of SMEs through support for development of quality management systems, certification processes, attaining technical standards in production and services, and introduction of systems and standards in line with EU and international requirements;
- Creating favourable conditions for SMEs in line with the SBAfE to enhance their growth and innovativeness, including monitoring the business environment in line with the “Think Small First” principle;
- Increasing the innovation performance of SMEs by making specialised counselling available to them through a network of technology consultation offices (an objective of Investment Priority 1.2: “Promoting business investment in research and innovation”).

The majority of the EUR 2 267 billion OP R&I spending was allocated to the Research, Development and Innovation thematic objective (79.22%) with 17.69% allocated to the SME Competitiveness and Growth priority (EUR 401 million, of which EUR 24.6 million was allocated to supporting SME competitiveness in the Bratislava Region).

Box 4.1. Results to be achieved in the SME Competitiveness and Growth priority of the OP R&I 2014-20

This box outlines the strategic objectives of the OP R&I 2014-20 related to SMEs and entrepreneurship.

Strategic objective 3.1.1: Enhance the growth of new competitive SMEs.

Comprehensive support solutions leading to an increase in the creation, development and accelerated growth of innovative technological SMEs, including start-ups and spin-offs all over the Republic, including those founded by disadvantaged groups; systemic support during the initial business stages, and the creation of appropriate conditions for the growth of competitiveness of SMEs and for reducing the extent of their disappearance (e.g. increase in survival rate); improved access to finance and venture capital for new SMEs.

Strategic objective 3.2.1: Grow internationalisation of SMEs and increase use of possibilities offered by the EU Single Market.

A comprehensive system of support for the internationalisation of SMEs and the penetration of Slovak SMEs in foreign markets, including markets in countries outside the EU, leading to increased export potential of SMEs; improved links between domestic SMEs and suppliers of large multi-national corporations; and improved conditions for increasing the innovation potential and competitiveness of SMEs, in particular in high and medium high-tech manufacturing and knowledge-intensive services sectors for the implementation of activities in the common market.

Strategic objective: 3.3.1 Increase the competitiveness of SMEs at the developmental stage.

Increased growth, innovation and competitiveness of established SMEs, increased added value and productivity of SMEs, and improved links and co-operation between domestic SMEs and suppliers of large multi-national corporations.

Strategic objective: 4.1.1 Increase the share of profit-making SMEs in the Bratislava Region.

Support for the creation and development of innovative technological firms in the Bratislava Region, including start-ups, spin-offs, and creative enterprises, and their acceleration to enter the next phases of their life-cycle; increased survival rate of new enterprises; conditions created for the application of social innovation and entrepreneurship by disadvantaged groups.

Source: (MoESRS, 2014).

The OP R&I is mainly structured around realising policy aims of the National Strategy for Smart Specialisation.[1] The OP R&I also integrates the SME and entrepreneurship priorities embedded vertically as a secondary emphasis in a number of national strategies, programmes and projects funded at the ministry or agency level through the state budget or ESIFs, for example:

- the Smart Industry Initiative (e.g. increasing digital awareness of SMEs and take up of digitalisation of production and operational processes to meet the principles of Industry 4.0);
- the 2030 Digital Transformation Strategy for Slovakia (e.g. increase the digital skills and level of digitalisation of SMEs to improve their competitiveness) [2];
- the National Employment Strategy (e.g. promote sustainable self-employment, start-ups and job creation in all sectors of the economy; and support the maintenance of employment in SMEs, the upgrading of SME workers, and inclusion of disadvantaged groups (e.g. women, youth, Roma);

- the Regional Development Strategy (e.g. increase the share of SMEs in the regions and the competitiveness of SMEs in defined sectors according to regional specifics; support industrial services and marketing capacities of SMEs in the process of their internationalisation and increased export activity; and provide systematic support for promotion of employment in SMEs and trades, particularly in promising sectors; provide access of entrepreneurs and SMEs to comprehensive and co-ordinated services.

For the most part, the OP R&I was implemented through national projects, such as the

- Supporting the establishment and development of the National Business Centre in Slovakia;
- Support for the Internationalisation of SMEs;
- Let's Innovate (inovujme.sk);
- the National Development Fund II; and
- the National Start-up Support scheme 2017-20.

SME policy priorities in the OP R&I are well-formulated but lack the comprehensiveness of a national SME strategy

While it is positive that SME and entrepreneurship issues and actions were given a strong place in the OP R&I, the document in itself is incomplete in terms of serving as a comprehensive SME and entrepreneurship development strategy for the Slovak Republic.

As an example, it does not specifically include a pillar on improving the legislative and regulatory environment for SMEs (which is addressed in the SBAfE and the SME Support Law and inherent in the activities of the SBA Better Regulation Centre). There is room for policy improvements in this area, as the time required to start a business is one of the longest in the EU; the efficiency of resolving commercial disputes in the courts is low; the single point of contact for start-up procedures is perceived as inefficient; and databases to prevent public administrations from requiring information from SMEs that is already available need to be better interconnected (European Commission, 2019a).

It is also not inclusive of entrepreneurship education policies (also included in the SBAfE principles and an area which the European Commission deems underdeveloped at all levels of the educational system and in need of more attention; European Commission, 2019a). A policy to introduce entrepreneurship in the educational curricula at the level of elementary and secondary schools and universities would promote business thinking and ultimately support the development of more capable start-ups.

Although the programme targets disadvantaged social groups (young people, women, persons with disabilities, Roma), there are no explicit policy targets for inclusive entrepreneurship or concrete policy directions for increasing their participation in SME and entrepreneurship activity, as recommended by the OECD (OECD, 2018a). Women, for example, comprise about one quarter of natural person entrepreneurs, suggesting room for the implementation of policy support to increase their level of participation (SBA, 2019a), which could include more targeted promotion, outreach, and availability of information, financial literacy training, and start-up financing (OECD, 2018a).

The OP R&I also does not include any policy direction for the adaptation of public procurement, a significant market, to be more inclusive of SMEs. While improvements have been made to the public procurement process by shifting to an e-procurement platform, reducing the number of days to pay suppliers, and increasing the number of public tender calls split into smaller lots so that SMEs have greater opportunities to compete, the Government still lacks a comprehensive and impartial state aid policy to support SMEs in the public procurement process (European Commission, 2019a).

A national SME and entrepreneurship policy strategy would provide an integrated vision across government and add clarity to policy priorities and directions

The Slovak Republic's SME and entrepreneurship policy focus is woven into several strategic documents and not the outcome of a comprehensive national SME and entrepreneurship policy framework. In addition to the OP R&I, this includes the Digital Transformation Strategy and the Regional Development Strategy for example. A clear overarching, cross-government SME and entrepreneurship strategy could lead to improved co-ordination of policy action and implementation as well as help with future absorption of ESIFs.

One of the reasons that can be put forward for not having an explicit SME and entrepreneurship strategy is that SME and entrepreneurship issues could be covered by a generic business development policy, given that 99% of the private enterprises in the country fall within the definition of an SME. This would imply that generic policies for business development are equivalent to SME and entrepreneurship policies and are adequate to meeting the needs of SMEs and large firms alike. However, there are many reasons for implementing SME and entrepreneurship-specific policy (e.g. the vast majority of enterprises are micro in scale and not growing, SMEs have low management skills and capabilities, SMEs have low level of integration of digital technologies, investment in R&D, investment in training, and low levels of competitiveness, etc.). The European Commission (2013) indicated that the SME policy framework should address the low competitiveness of SMEs by fostering entrepreneurship, supporting new business models, promoting the internationalisation of SMEs, and improving access to financing. To a great extent these are still policy priorities in the Slovak Republic. This supports the rationale for a targeted policy and strategy to strengthen SMEs, but one that also targets different kinds of SMEs with appropriate measures, e.g. start-ups, micro-enterprises, traditional SMEs, innovative SMEs, growth-oriented SMEs, as each group may face unique (as well as generic) challenges.

A more transparent elucidation of the SME and entrepreneurship policy framework could be achieved through formulation of an overarching national entrepreneurship and SME strategy document that would lay out the vision, strategic objectives, quantifiable targets, policy pillars (e.g. access to finance, access to markets), related programme actions, responsible actors, institutional structure for its implementation, and a monitoring and evaluation framework. Developing such a strategy would require the collaboration of all ministries and agencies as well as consultation input from SME stakeholder groups.

Box 4.2 highlights the development of a national SME strategy by the Hungarian government in 2019, which has supported policy leadership and coherence in the country. Other country experiences, for example from Ireland, also point to the value added of developing a more cohesive and unified approach to government support, which can help to ensure that SMEs of all sizes and across all sectors and different types of entrepreneurs and potential entrepreneurs receive a consistent level of support, facilitating a greater number of them to increase their productivity and growth. This can also create political visibility for the SME and entrepreneurship policy agenda and the particular issues facing micro, small and medium businesses, and thus help to secure the political buy-in needed to resource the implementation of an ambitious framework.

Box 4.2. The Hungarian approach to formulating a national SME strategy

Description of the approach

In 2019, the Ministry for Innovation and Technology prepared the "Strategy for Strengthening Hungarian Small and Medium-Sized Enterprises 2019-30" as a strategic planning document targeting the entire sector of micro, small and medium enterprises in the country. The impetus behind the development of the strategy was to set the main directions of entrepreneurship and enterprise development in line with the Ministry's economic development strategy and in light of the transition to a technologically-driven and competitive environment for SMEs.

The aim of the strategy was to specifically address the challenges of increasing the productivity level of Hungarian SMEs by stepping up their innovation capacity to produce more innovative products/services of higher added value, facilitating closer collaboration between SMEs and research organisations, promoting the digitalisation of Hungarian SMEs, and developing the necessary skills and competences of entrepreneurs and SME workers. The strategy would also ensure co-ordinated actions through harmonisation of government programmes and assistance schemes for supporting SMEs and co-operation with non-governmental stakeholders.

The overall objectives of the strategy are to strengthen the value creation capacity of enterprises with high growth potential and provide a predictable operational framework for the entire SME sector. The secondary objectives are to boost the productivity of SMEs, increase the added value generated by Hungarian-owned SMEs, and increase their export capacity. Baseline and targeted values were set for each of the secondary objectives to enable monitoring of the strategy's success in meeting higher-level targets.

The strategy considered and built on the investment and financing programmes and sectoral strategies of the Ministry for Innovation and Technology, the innovation ecosystem strategies and programmes, the Research and Innovation Strategy, the Digital Start-up Strategy, the Government's plans for finalising the system of vocational training and adult education, the National Export Strategy, and relevant development programmes of other ministries, as well as the policy and competitiveness plans of the Chamber of Commerce and Industry and national entrepreneurs and employers' associations. The Strategy was also harmonised with the "Programme for a More Competitive Hungary" drawn up by the Ministry of Finance and the Competitiveness Council, which previously had included a separate section on elaboration and implementation of an SME strategy.

Factors of success

The Strategy for a Competitive SME Sector is structured on seven policy pillars:

- creating an SME-friendly regulatory and taxation environment;
- developing the business environment for SMEs and means of e-governance solutions;
- strengthening the development capacity of SMEs and enhancing their performance in innovation and digitalisation;
- improving SMEs' access to finance and appropriate funding facilities;
- promoting the internationalisation of SMEs;
- investing in SME skills and strengthening entrepreneurial culture; and
- supporting the succession of businesses (e.g. securing the generational change that the vast majority of Hungarian SMEs will soon need to undergo).

The strategy outlines the intervention logic for each of the pillars, specific objectives and associated (quantifiable) key performance indicators, the list of implementation actions under each of the pillars, and identification of the lead ministry/agency for implementation of each policy measure/action.

The strategy also prescribed the establishment of an "entrepreneurial consultation system", whereby business associations, chambers and other relevant representative SME associations are regularly consulted vis-à-vis opportunities, challenges, needs and opinions important to policy refinements and programme adjustments.

Obstacles and responses

In Hungary, many ministries and government agencies develop policies targeting and affecting SMEs and entrepreneurs, which may in turn lead to a fragmented and overlapping policy landscape without clear objectives and coordination.

This harmonisation of government programmes for supporting SMEs is one of the important functions of the overarching national SME strategy. The co-ordination function in policy implementation is improved as a result of joint development of annual action plans, centralised collection of statistical data on usage of different programmes and associated expenditures (useful for programme monitoring and evaluation), and annual reporting on implementation progress. This helps secure the conditions for co-ordinated action, avoidance of redundant actions and duplicative programmes across different ministries, and hence increases the likelihood of achieving the strategic objectives.

The co-ordination function is further ensured through establishment of the Inter-ministerial Strategic Managing and Monitoring Body represented by the State Secretary for Economic Planning and Regulation and Deputy State Secretaries of each involved ministry. This body meets every three months and is responsible for monitoring the implementation of strategic actions, providing a forum for administrative consultations on implementation, and general oversight.

Relevance for the Slovak Republic

Similar to the Slovak Republic, Hungary is reliant on EU funds for much of its programme funding. One of the purposes of formulating a comprehensive SME strategy was to enable the Hungarian government to appropriately allocate the remaining resources of the Operational Programme Economic Development and Innovation 2014-20 to SME development priorities and establish a policy path and framework for assigning EU funds to Hungary's SME development objectives during the 2021-27 EU financial programming period. An SME and entrepreneurship strategy would equally serve the Slovak Government.

Source: (Ministry for Innovation and Technology, 2019)

Co-ordination of SME and entrepreneurship policies across central government ministries and agencies

A number of ministries and agencies are involved

In the Slovak Republic, a number of ministries are directly or indirectly involved in the SME and entrepreneurship policy agenda (Table 4.1). Managing this policy interdependence can be very challenging for governments. Good practice guidelines for the effective management and co-ordination of entrepreneurship and SME policy suggest three institutional priorities (OECD/UNDP, 2004):

- a special department, or dedicated focal point, charged with the leadership and overall management and co-ordination of SME and entrepreneurship policy and programmes;
- a mechanism for inter-ministerial co-ordination to promote policy coherence;

- mechanisms for co-ordinating policy and practice between central and local governments and linking national, regional and local policy development efforts.

The Slovak Republic could enhance its co-ordination of SME and entrepreneurship policy by addressing these institutional priorities within its own policy structures.

Table 4.1. Main national SME and entrepreneurship policy actors in the Slovak Republic

Ministry/agency	Key areas of responsibility linked to SME and entrepreneurship policy measures
Ministry of Economy	Central state body for policy related to creation of a supportive business environment, support of SMEs, and domestic and foreign trade. Key role in developing and implementing the National Smart Specialisation Strategy and the OP R&I.
Slovak Business Agency (SBA)	A quasi government agency. Provides policy input to the Ministry of Economy based on surveys and consultations with SMEs, in particular on reforms to the business environment to reduce administrative and regulatory burden on SMEs. Implements the SBAfE in the Slovak Republic. Promotes the "Think Small First" principle, implements the "SME Test" to measure the impact of regulatory proposals on SMEs, and operates the Better Regulation Centre.
Ministry of Finance	Responsible for tax policy, some of which is directed to SMEs (e.g. a special tax base for SMEs to improve the business environment for micro-enterprises, a simplified accounting regime for micro and small enterprises; tax relief and tax credit scheme to incentivise SMEs to undertake R&D activity).
Ministry of Education, Science, Research and Sport	The central state administration body for elementary, secondary and higher education, educational facilities, lifelong learning, as well as for the creation and implementation of state science and technology policy, including co-ordination, legal and financial instruments in science and technology, and strategic and conceptual documents in the field of science and technology. It provides R&D incentives to entrepreneurs; supports co-operation of R&D-oriented SMEs on international projects aimed at developing new products, processes and services, and funds development projects supporting training for teaching staff in the fields of financial literacy and entrepreneurship in education.
Ministry of Labour, Social Affairs and Family (MLSAF)	Responsible for state policy on employment and skills, including active labour market policies to increase employment, mitigate regional disparities, reduce youth and long-term unemployment, encourage self-employment, support new job creation, and maintenance of employment in SMEs, as well as enhanced workforce skills and support for disadvantaged groups. Main implementer of the National Employment Strategy. Supports demand-based company training of employees to enable the acquisition of new skills (not specific to, but inclusive of SMEs' employees). Offers (free) entrepreneurship training limited to unemployed persons seeking employment.
Ministry of Justice	Responsible for the business registration legislation; plans to introduce new business registration process by 2022. Will manage the new online business registration.
Ministry of Interior	Operates the Point of Single Contact - a national e-government portal where Slovak entrepreneurs are able to apply online for a license to start a business.
Ministry of Foreign Affairs	Policy support for the internationalisation of SMEs by facilitating the entry of SMEs onto foreign markets and providing assistance in establishing contacts between Slovak SMEs and foreign partners through diplomatic offices in other countries (information, missions, matchmaking opportunities).
Ministry of Agriculture and Rural Development	Responsible for the Rural Development Programme 2014-2020, involving investment support to SMEs in the food and agricultural sectors.
Ministry of Culture	Responsible for policy to promote cultural industries, including support to SMEs in the creative fields and the engagement of SMEs in cultural preservation and restoration projects (e.g. Audio-Visual Fund, Art Support Fund).
Ministry of Environment	Policy support for SMEs in Operational Programme Quality of Environment and Environmental Fund (e.g. waste management, energy efficiency, eco-management/labelling, greening).
Slovak Guarantee and Development Bank (SZRB)	Under the Ministry of Finance, responsible for policies to ensure access to SME and entrepreneurship financing through direct loans to SMEs and state-backed guarantees for bank loans to otherwise unbankable SMEs and start-ups; also for policies to promote equity investments in SMEs (includes 100% ownership of Slovak Investment Holdings (SIH) which delivers the National Development Fund (venture capital)).

The Ministry of Economy is the lead ministry, but does not have an SME and Entrepreneurship Policy Unit in its organisational structure

The Ministry of Economy is the central body of the state administration responsible for support to SMEs, including for implementation of the SME Support Law. Its authority also covers policies related to the business environment, industrial development, domestic and foreign trade, enterprise competitiveness,

and innovation. It oversees implementation of the OP R&I 2014-20 through its support agencies: the Slovak Business Agency (SBA), the Slovak Investment and Trade Development Agency (SARIO), and the Slovak Innovation and Energy Agency (SIEA). Attention is given to SMEs by the Business Environment and Innovation Department of the Ministry, however, unlike state ministries responsible for SME and entrepreneurship policy in many countries, the Slovak Ministry of Economy does not have a dedicated SME and entrepreneurship policy unit in its structure. Clearly, the Ministry places an emphasis on the integration of SMEs and entrepreneurship into its national sectoral strategies. However, the Ministry could provide important policy leadership on SME and entrepreneurship development by establishing a specialised SME and entrepreneurship policy unit and giving it responsibility for ensuring policy directions and measures affecting SMEs are adequately integrated across the various departments and sections of the ministry, as well as for co-ordinating the integration of SME and entrepreneurship actions in the policies and strategies of other ministries. The example of the Entrepreneurship Development Department from the Kazakhstan Ministry of National Economy serves as an example of such a policy co-ordination unit (see Box 4.3).

Box 4.3. The creation of the Entrepreneurship Development Department in the Ministry of National Economy, an example from Kazakhstan

Description of the approach

In Kazakhstan, the 2006 Law on Private Entrepreneurship authorised the creation of a "competent body on entrepreneurship" to carry out the conduct of state policy on private entrepreneurship. To comply, the government chose to establish the Entrepreneurship Development Department (EDD) within the Ministry of National Economy by virtue of a ministerial order.

Created in 2008, the EDD has wide responsibilities with a clear mandate for co-ordinating the range of entrepreneurship and SME policies and measures across government, including in the areas of business environment and regulatory reforms at the State level and co-ordination of the state regulatory agencies on the implementation of regulatory impact analysis. The EDD is also responsible for developing policy proposals in favour of SME development and organising and co-ordinating the fulfilment of state support measures for development of small businesses.

Specifically, the EDD is accountable for:

- Conducting analysis of the business and investment environment for the development of private entrepreneurship and analysis of the state of development of entrepreneurship in general and by region;
- Preparing summary analytical materials and draft reports to higher state bodies, including the Presidential Administration, Parliament, other state bodies and non-governmental organisations;
- Co-ordinating the work of government bodies to improve the business environment and improve the position of Kazakhstan in the Doing Business ranking;
- Organising meetings of the Co-ordinating Council for Entrepreneurship and the Council of National Investors (government bodies) and other advisory bodies on related issues;
- Developing proposals for the formulation and implementation of a state policy for the development of private entrepreneurship (financial and non-financial support measures) and improvement of the support infrastructure;
- Participating in the development of proposals for the development and implementation of entrepreneurship support programmes and measures for financing and lending to private enterprises;

- Implementing measures to form a system of training, retraining and advanced training of personnel in the field of small business;
- Creating the conditions for the participation of small business in state programmes of innovation, investment, industrial development, and internationalisation;
- Providing advisory assistance to central and local government bodies and approving draft strategic plans of central government bodies and territorial development programmes regarding SME development;
- Contributing to the formation and development of small business infrastructure in the regions;
- Promoting state policy on the development and support of private entrepreneurship; organising and co-ordinating the implementation of state measures to support and develop entrepreneurship;
- Monitoring the effectiveness and quality of state support of private enterprises;
- Preparing and submitting to the Government of the Republic of Kazakhstan the annual report on entrepreneurship development.

The EDD also has authority with respect to requesting and receiving necessary information from other ministries, departments and agencies of the government in order to carry out its tasks and effectively fulfill its co-ordination role.

Relevance for the Slovak Republic

The creation of such a unit or section in the Slovak Ministry of Economy would help to provide policy leadership on the SME and entrepreneurship development agenda, and allow for a more holistic, objective approach to SME and entrepreneurship policy. This would be particularly useful for drafting and implementing a national SME and entrepreneurship policy/strategy document.

It could also play a central role in the development and promotion of an SME support portal by coordinating with other government ministries and agencies. It would also be well placed to oversee implementation of the SME Test, particularly where this requires cooperation from counterparts in other government ministries.

Source: OECD (2018b)

Establishing an interministerial SME and entrepreneurship policy co-ordination platform would enhance policy coherence

In addition to the designation of a focal point for SME and entrepreneurship policy leadership inside the government, good practice guidelines also point to the importance of establishing a mechanism for inter-ministerial co-ordination to promote policy coherence across government (OECD/UNDP, 2004). A common approach in many countries is the formation of a higher-level inter-ministerial SME and entrepreneurship policy committee or council (as in the State Council for SMEs from Spain example described in Box 4.4). The role of this mechanism is to manage the horizontality of entrepreneurship and SME policies across government and to define the role of different departments and the mechanisms by which policies and programmes will be co-ordinated.

In the Slovak Republic, SME and entrepreneurship policy lacks a national co-ordination approach. Ministries review the SME Support Law to see if they want to have a project or programme in line with the directions set out in the Law and then provide for this in their funding budget for the upcoming period. This suggests that SME policy is implemented in a “siloed” approach.

The practice of implementing cross-government co-ordination mechanisms for key policy areas is not foreign to the Slovak Government. For example, the Government created the Government Council for Science, Technology and Innovation (GCSTI), chaired by the Prime Minister, as a co-ordination and advisory body to oversee implementation of the Strategy for Smart Specialisation. The Council consisted of the Ministry of Economy (competencies in the area of innovation, entrepreneurship support and SMEs), the Ministry of Education, Science, Research and Sport (competencies in the area of science), the Slovak Academy of Sciences, and representatives of regional and local governments, academia, employers' organisations and business associations, and industry. The work of the GCSTI was supported by the Co-ordination Group of partnering organisations, which was responsible for the preparation of programmes, plans and actions, co-ordination and synchronisation of activities, and monitoring of outcomes. This could be a model for a co-ordination mechanism for SME and entrepreneurship policy.

Box 4.4. The Inter-ministerial State Council on Small and Medium Enterprises, Spain

Description of the approach

The State Council on Small and Medium Enterprises is attached to the Spanish Ministry of Industry, Commerce and Tourism. It is the official body for the planning and co-ordination of all policies and measures of the various ministries and public administrations affecting SMEs, including the facilitation of their creation, growth, and competitiveness. It aims to foster dialogue and co-ordination and includes representatives of all the relevant ministries as well as representatives of SMEs.

The Council is regulated by Royal Decree 962/2013, approved by the Council of Ministers. It is responsible for: monitoring the evolution, problems and policies affecting SMEs; developing recommendations and proposals on priorities, mechanisms, actions and regulatory changes necessary to increase SME activity and competitiveness; informing the multiannual SME support plan; co-ordinating the various support programmes carried out by the different competent bodies and harmonising the eligibility criteria and service standards for support to SMEs; and monitoring the application of the Small Business Act for Europe in Spain to enable the evolution of policies in line with the principles of the Act.

The Council is chaired by the Ministry of Industry, Commerce and Tourism, with the heads of the General Secretariat of Industry and SMEs and the Directorate General for Industry and SMEs each holding vice-chair positions. It consists of: 13 members representing ministerial departments of the General State Administration, representatives of eight State agencies (e.g. State Society for the Management of Innovation and Tourism Technologies, Centre for Industrial Technological Development, Spanish Patent and Trademark Office, Spain Export and Investments, Official Credit Institute), one representative for each autonomous region, a member representing the Local Administrations, the business and labour organisations representing SMEs, and the Chamber of Commerce and Industry.

The Council operates through two organs:

- The Plenary body of the Council, composed of all members, acts as a consultative and advisory body on all matters affecting SMEs. It promotes public-private dialogue in order to provide greater rationality and efficiency to SME policies and to formulate proposals for actions. It meets at least once a year.
- The Permanent Commission, chaired by the Directorate General of Industry and SMEs, which comprises representatives from the Ministry of Industry, Commerce and Tourism, and the Ministry of Energy, Tourism and Digital Agenda. The Permanent Commission may establish

working groups. It is responsible for co-ordinating and enforcing the work approved by the Plenary body. It reports periodically to the State SME Council on the progress of the strategic framework, informs about possible risks affecting its effective implementation, and proposes actions to be developed with the strategic framework.

Factors for success

A Monitoring Office has responsibility for regular monitoring of the status and evolution of the Strategic Framework. This involves collecting information on the results from each line of action, informing the working groups of any risks or problems requiring attention, and proposing the re-orientation/redesign of Strategic Framework actions.

Finally, the State Council has appointed an Advisory Board of SME stakeholders, business leaders, and SME support organisations to provide policy input on the problems facing SMEs and possible solutions to be studied by the working groups/State Council.

Relevance for the Slovak Republic

The establishment of an inter-ministerial SME council would foster a higher level of co-ordination of SME and start-up policies and measures at the national level and provide great benefit to the Ministry of Economy in carrying out its policy development and co-ordination responsibilities. The composition of such a council would be much smaller than that of Spanish government, but could minimally comprise representatives from the Ministry of Economy, the Office of the Deputy Prime Minister for Investment and Informatisation, the Ministry of Finance, the Ministry of Education, Science, Research and Innovation, the Ministry of Agriculture and Rural Development, the State Guarantee and Development Bank, the Ministry of Labour, Social Affairs and Family, the Slovak Business Agency, local administrations, and key business and SME associations.

The Committee should meet at least twice a year to review and discuss policy priorities and objectives and agree to an annual SME and entrepreneurship action plan to achieve these objectives. The functions of the Committee could be very similar to those of the State Council on SMEs in Spain.

The establishment of such a body can provide a platform for structured engagement between small business owners, their representative bodies, innovation, academia, government agencies and Departments/ministries. Inviting membership from across government ministries ensures that overlapping agendas are identified and exploited. The formation of such a body can facilitate shared learning and ensure a cohesive approach towards the delivery or relevant financial and non-financial supports to the SME ecosystem. This body, or a version of it, could also potentially serve as an effective implementation group for a future SME and entrepreneurship strategy, or could feed into a higher level Ministerial council set up for this purpose.

Source: Minsterio de Industria, Comercio y Turismo (2013; Ministerio de la Presidencia, Relanciones con las Cortes y Memoria Democrátia (2014); Ministry of Industry, Commerce and Tourism (2019)

Consultation and dialogue with SME and entrepreneur stakeholders

In addition to horizontal and vertical policy co-ordination, good practice in the design and implementation of SME and entrepreneurship policy dictates an effective mechanism for consulting with SMEs and entrepreneurs on their concerns and needs, soliciting input on the types of assistance and support needed to address these concerns, and inviting policy recommendations (OECD/UNIDO, 2004).

The Slovak Republic has a well-established practice of stakeholder consultations on legislative proposals and national policy and strategy documents

In the Slovak Republic, it is a legal requirement to consult with stakeholders, including SMEs, when new legislation is being drafted, and to have a four-week period for comment by stakeholders after the legislation is prepared and before it is enacted. Consequently, there is a high degree of consultation on legislative and regulatory proposals. Carrying out such consultations with SMEs is one of the key activities of the SBA Better Regulation Centre. The SBA also carries out periodic surveys of SMEs for evidence-based input on their operating challenges, the responsiveness of the business environment to their needs, and use of government support programmes. The results of these surveys, a form of consultation, are fed into the policy process for consideration.

The Government also has a well-developed practice of consulting with stakeholders on development of national policy and strategy documents. This is evident from the many examples of conducting consultations with stakeholder groups on draft strategy documents (e.g. National Economic Strategy, Strategy for Smart Specialisation, Industry 4.0 Strategy, the OP R&I) with the chambers, business associations, employers' organisations and Slovak Entrepreneurs Union, even consulting with them a second time on action plan components. For these purposes, the Government may make use of a Consultation Platform and Discussion Forum Working Groups. Online platforms are also employed to publish formal calls for input on measures to improve the business environment.

Improvements could be made to strengthen consultation input from small businesses

In the Slovak Republic, there is no formal consultation mechanism or process for policy dialogue with SMEs and entrepreneurs on general policies affecting them, which is common in many OECD countries. Although the government requests to meet with stakeholders on new legislative proposals and economic strategies, the membership in the chambers and the Slovak Entrepreneurs Union is comprised of mostly large enterprises and does not necessarily adequately represent the perspectives and interests of micro and small enterprises, in particular, which have first-hand knowledge of market conditions and of the impacts that government policies have on their businesses.

International practice points to further consultation options available to the Slovak Government to increase the influence of SMEs and entrepreneurs on policy and programme development. These could take the form of consultative business forums and councils or advisory panels consisting of those business associations specifically representing micro-enterprises, SMEs, and rural, women and young entrepreneurs (UNCTAD Secretariat, 2005). Ministries responsible for SME and entrepreneurship development may also create effective local/regional platforms for the articulation of SME and entrepreneurship interests.

A common mechanism for soliciting the input of SMEs and entrepreneurs on the policy agenda at the national level is the establishment of a formal SME Advisory Council. Generally aligned with the ministry responsible for SMEs or a higher-level inter-ministerial council/committee on SMEs, these councils might be viewed as national "think tanks" for the promotion and development of SMEs and entrepreneurship. They may be asked to examine any number of issues, such as the execution of a SME and entrepreneurship policy framework, the review of current policies, strategies and plans, advice on innovative strategies and interventions, advice on making structural changes to the institutional landscape to be more efficient and cost-effective in delivering services to SMEs and entrepreneurs, and advising on emerging SME and entrepreneurship issues and recommending corrective measures.

The membership of these advisory councils is generally quite broad, including entrepreneurs, chambers of commerce and industry, small business associations, associations of entrepreneurs, SME support organisations, and independent experts. In fact, the SME laws, in countries where they exist, will generally specify that such advisory committees be formed, stipulate the composition of membership,

and outline the major functions, although the specific details will vary by country depending on their context and needs.

To enhance mechanisms for consulting with SMEs and entrepreneurs, the Ministry of Economy should consider creating an SME Advisory Council that is inclusive of all SME associations in the Republic, such as the Slovak Association of SMEs, Slovak Association of Crafts, Entrepreneurs Association of Slovakia, and the Young Entrepreneurs Association in addition to the Chambers of Commerce and Industry, employers' organisations, and sector associations.

Increased dialogue between the public sector and SMEs and entrepreneurs could also be included in the Smart Specialisation initiatives discussed in chapter 7.

The SME and entrepreneurship policy mix and portfolio

This section discusses analysis of the policy mix and portfolio for supporting SMEs and entrepreneurs and the allocation of resources to different SME and entrepreneurship policy supports. The policy mix refers to the aggregate of SME and entrepreneurship policy measures or instruments and the way they interact to achieve policy goals. Policy mix issues include the range of policy instruments i.e. the "breadth", the balance between use of the different types of instruments (e.g. direct and indirect measures, supply or demand mechanisms), and the different targets of policy and policy instruments (e.g. audiences, policy areas), i.e. the "focus" (European Commission, 2008). A policy mix/portfolio analysis helps in identifying the weighting given to each policy instrument or target audience and whether this suggests an uneven balance in the allocation of budget resources (e.g. an over concentration in one category versus another) given the policy priorities.

The Ministry of Economy is the largest supporter of state aid to SMEs

In 2018, SMEs accounted for 34.77% of total state aid granted, amounting to EUR 159.27 million, an increase of 8.48 percentage points over 2017 (SBA, 2019a). The Ministry of Economy was the largest state aid supporter to SMEs (41.9% of its state aid expenditure/EUR 60.6 million), followed by the Ministry of Agriculture and Rural Development (91.3% of its state aid/EUR 45.6 million) (Table 4.2). However, the share of state aid to SMEs varies considerably by ministry or Fund. In total, more than 75% of the state aid to SMEs is managed by the Ministry of Economy, Ministry of Agriculture and Rural Development, and Ministry of Education, Science, Research and Sport taken together.

Table 4.2. Percentage of state aid by ministry and share to SMEs, 2018

Provider	Amount of state aid (Euro, in millions)	Distribution - total state aid (%)	Share of the state aid for SMEs	Amount of state aid to SMEs (Euro, in millions)	Distribution - state aid to SMEs (%)
Ministry of Economy	144.52	31.18%	41.93%	60.60	38.05%
Ministry of Agriculture and Rural Development	49.96	10.78%	91.29%	45.61	28.64%
Ministry of Education, Science, Research and Sport	19.03	4.11%	86.60%	16.48	10.35%
Audio Visual Fund	9.50	2.05%	100.00%	9.50	5.96%
Customs Office	126.30	27.25%	7.26%	9.17	5.76%
Environmental Fund	10.00	2.16%	53.86%	5.39	3.38%
Ministry of Defence	4.31	0.93%	100.00%	4.31	2.71%
Art Support Fund	2.53	0.55%	85.38%	2.16	1.36%
Agency for R&D Support	2.50	0.54%	84.18%	2.10	1.32%

Fund for Support of Culture of National Minorities	1.53	0.33%	99.88%	1.53	0.96%
Ministry of Labour, Social Affairs and Family	3.95	0.85%	26.08%	1.03	0.65%
Ministry of Environment	56.50	12.19%	0.95%	0.54	0.34%
Tax authorities (T1)	17.81	3.84%	1.74%	0.31	0.19%
Office of the Government	1.75	0.38%	14.29%	0.25	0.16%
City of Stará Lubovna (culture)	0.26	0.06%	100%	0.26	0.16%
Ministry of Culture	0.04	0.01%	100.00%	0.04	0.03%
Ministry of Finance (tax relief, investment incentives)	7.57	1.63%	0.00%	0.00	0.00%
Total amount of state aid	*463.48*	*100.00%*	*34.77%*	*159.27*	*100%*

Notes: The table does not include the total amount of state aid from the Central Office of Labour, Social Affairs and Family in 2018, which totalled EUR 96.48 million, out of which EUR 92.60 million was granted to SMEs (95.9%) through support for active labour market measures, including supporting disadvantaged persons, self-employment, and the creation of new jobs and maintenance of existing jobs and employees (e.g. allowances, training funds, etc.) (as reported in SBA, 2019a, *Report on the State of Small and Medium-Sized Enterprises in the Slovak Republic in 2018,* p. 52).
Source: Antimonopoly Office of the Slovak Republic (2019), "Report on provided state aid in the Slovak Republic for 2018", May, Bratislava, pp. 26-27 (in Slovakian), http://www.statnapomoc.sk/wp-content/uploads/2019/06/Sprava.pdf/

Micro-enterprises comprise the majority of recipients of de minimis aid

In 2018, de minimis aid to SMEs reached about EUR 152.4 million, 70.9% of the total aid (Table 4.3). The main beneficiaries were micro-enterprises (less than 10 employees), which accounted for 60% of all interventions in 2018 and 70% in 2017, which is however, much below their share of 97% in the population of active enterprises in the economy. Small enterprises (no more than 50 employees), accounted for almost 14% of beneficiaries in 2018, while medium enterprises accounted for 3.5% of the interventions and 7.3% of the aid volume (although their share of active enterprises is only about 0.5%). In 2018, the Scheme to support the competitiveness and growth of SMEs[3] (in the form of grants) was one of the most significant, accounting for more than 40% of the total aid provided (EUR 86.54 million to 566 SMEs) (SBA, 2019b). However, SMEs also benefit from tax incentive schemes, which are in addition to de minimis aid schemes.

Table 4.3. The use of de minimis aid by size of enterprise, 2017, 2018

Size of enterprise	Year	Volume of aid (EUR)	Share of aid volume	Number of interventions	Share of interventions
	2018				
Micro		81,652,448	38.0%	13,383	60.0%
Small		54,956,946	25.6%	3,095	13.9%
Medium		15,759,282	7.3%	776	3.5%
Subtotal MSME		*152,368,676*	*70.9%*	*17,254*	*77.4%*
Large		2,256,366	1.1%	218	1.0%
Unspecified		60,257,003	28.0%	4,828	21.7%
Total		*214,882,045*	*100.0%*	*22,300*	*100.0%*
	2017				
Micro		78,107,944	63.2%	24,213	70.1%
Small		23,909,598	19.3%	5,486	15.9%
Medium		6,974,066	5.6%	1,385	4.0%
Subtotal MSME		*108,991,608*	*88.2%*	*31,084*	*90.0%*
Large		1,699,658	1.4%	284	0.8%
Unspecified		12,983,421	10.5%	3,180	9.2%
Total		*123,674,687*	*100.0%*	*34,548*	*100.0%*

Notes: The de minimis aid schemes cover a broad range of policy programmes. The include, for example, the SME Competitiveness and Growth Scheme, the Support Scheme for Industrial Cluster Organisations, Scheme to Support the Development of Creative Industry, the Innovation Vouchers Scheme, the Start-up Support Scheme, the Family Business Support Scheme, the Scheme to Support Energy Audits in SMEs, the Audi Visual Fund, the Art Support Fund, the First Loss Guarantee Scheme, the Scheme to Support Social Inclusion, Employment and Employee Training (includes self-employment allowances and training), the Scheme to Support an Increase in the Standards of Performance and Functionality of MSMEs, etc.
Source: SBA (2019b), "Analýza inštitútu pomoci de minimis na Slovensku", February, pp. 73-74, http://www.sbagency.sk/sites/default/files/analyza_institutu_pomoci_de_minimis_na_slovensku.pdf/; based on data from the Antimonopoly Office.

The allocation of funding to policy intervention categories – a missing component of the policy mix analysis

Although much programme data is provided by the Antimonopoly Office (Antimonopoly Office of the Slovak Republic, 2019) and the SBA reports (e.g. SBA, 2019a, b), which offer a good picture of state spending by firm size and by government ministry, published accounts do not present the data by area of policy intervention. An additional useful component in analysing the policy mix would be an examination of the allocation of funds between categories of policy interventions, for example, to SME financing programmes, to entrepreneurship training for start-ups, or to SME export development. This situation could be addressed in future years by adopting the policy portfolio approach described in the next section.

Policy portfolio analysis

One of the major challenges in managing entrepreneurship and SME policies across government ministries and agencies is ensuring that the set of selected programmes and projects is the most appropriate for meeting strategic objectives and that available budget is directed to the activities that produce the greatest returns to public investment. A policy portfolio approach is a useful tool for meeting this challenge.[4] The premise of the approach is that entrepreneurship and SME policy measures, in the form of programmes or projects, can best be seen as a broad “portfolio” of different programmes (rather than as stand alone, or *ad hoc* projects), each with a strategic aim or objective in line with the government’s current policy priorities.

The approach involves examining the spread and mix of entrepreneurship and SME support interventions (strategies, programmes and projects) across different strategic priorities of the

government, the different stages of SME and entrepreneurship development, and the range of focus areas where public policy intervention by government is most likely to be effective in correcting market and government failures. It also consists of an analysis of the distribution of government spending by main policy area (e.g. entrepreneurship and business management training, access to finance, market expansion, innovation, etc.) and main targeted populations (e.g. potential and nascent entrepreneurs, new start-ups, micro-enterprises, innovative SMEs, high-growth firms, etc.). The approach is helpful in understanding whether government spending across SME and entrepreneurship policy areas is balanced, reflects government priorities, and addresses the main development challenges faced by start-ups and existing SMEs. It is also helpful in clarifying to government-wide actors where policy effort is being focused and in comparing results across activities. Used in conjunction with the monitoring and evaluation of programmes, it can help channel government resources into the measures with the greatest social and economic benefits. The proposed approach is described in Box 4.5 and presented as a framework that can be used for organising (and monitoring) the SME and entrepreneurship policy portfolio in the Slovak Republic.

Box 4.5. Portfolio analysis of SME and entrepreneurship policy – explanation of the approach

Description of the approach

The basic framework for a policy portfolio analysis entails classifying all SME and entrepreneurship policy measures into policy categories and the stages of entrepreneurship and SME development that the measures address and attributing policy expenditure (and if possible policy impact information) to each category of policy and life cycle stage addressed.

Focusing on the entrepreneurship/enterprise life cycle allows development of an integrated set of supports to take "would-be" entrepreneurs from the pre-nascent stage to start-up, expansion and internationalisation. These supports might include education and training, advice and counselling, and access to finance, as common examples. This life-cycle categorisation is important because nascent entrepreneurs are, for example, more likely to need entrepreneurship training and advisory/mentoring support, while an established SME is more likely to warrant strategic government interventions to promote productivity through technology upgrading, innovation, or internationalisation support. Thus, tailored policy responses are needed to address the specific needs of each life cycle target. The resulting portfolio framework (a matrix of cells reflecting the types of policy measures by development stages of the entrepreneur/enterprise) can be adapted to the country's particular policy context.

The first step is to prepare a mapping of all relevant policy measures and programmes, with each policy/programme assigned to a main policy focus and a stage, or stages, of enterprise development that the policy measure appears to target. Budget figures would then fill the cells (see table below) based on the list of projects and budgets from all programmes. Thus, the total for cell 1A would represent the total budget for all programmes/projects which provide entrepreneurial learning or training to pre-nascent entrepreneurs. The information enables an assessment of the extent to which the budgets per policy category and enterprise development stage appear balanced with the needs in each area.

Proposed portfolio framework for SME and entrepreneurship policy intervention

	Policy and Programme Categories (focus areas)					
Enterprise Segments (A-G) (enterprise development stages)	1 Education training, human capital development	2 Information knowledge	3 Finance	4 Market access/ development	5 Technology innovation	Total by business stage
A Pre-nascent	1A	2A	3A	4A	5A	
B Nascent	1B	2B	3B	4B	5B	
C Start-up	1C	2C	3C	4C	5C	
D Operation	1D	2D	3D	4D	5D	
E Growth	1E	2E	3E	4E	5E	
F International	1F	2F	3F	4F	5F	
G Adjust exit	1G	2G	3G	4G	5G	

If coupled with an impact evaluation of government programmes, the policy portfolio analysis can help direct expenditures to the policy areas where the government spending is more effective. This requires the systematic evaluation of the different policy interventions, preferably through cost-benefit analysis, assessing the actual impacts of the interventions on core objectives, for example, job creation, business start-up rates, SME growth, increases in productivity, etc.. This makes it possible to assess the relative success or usefulness of the measure, identify gaps in policy support, and determine areas where a reallocation of resources could improve the performance of the whole budget portfolio.

The portfolio analysis therefore aims to help identify where there are relative gaps in programme support, and where a reallocation of resources could improve performance of the whole policy portfolio.

Nevertheless, a policy portfolio analysis should recognise that different interventions have different objectives and that, according to government priorities, certain objectives may be worthy of greater spending than others.

Success factors

The policy portfolio categorisation facilitates the evaluation of programme/project performance by allowing more precise identification of the target segments (such as start-ups, high-growth SMEs), increasing transparency in the allocation and management of the entire budget portfolio, clarifying which market failures policy funds are being invested in, and identifying policy/programme gaps, thus producing a more informed approach to the design and implementation of national SME and entrepreneurship policy measures.

By way of example, a policy portfolio analysis undertaken in 2010 in the framework of the OECD Review of SME policy in Thailand revealed gaps in the funding of projects related to the pre-nascent, start-up and enterprise growth stages, as two-thirds of the budget expenditures (excluding financial assistance programmes) was directed to existing SMEs. It also revealed that the bulk of the SME Development Agency's total project budget (again excluding finance measures) was spent on education and training, with considerable gaps in the internationalisation stage and in support of technology and innovation. Gaps in addressing the needs of start-ups and the growth-phase of existing SMEs were identified as requiring further attention by the government and have since been responded to.

Obstacles and responses

The biggest initial challenges in adopting the policy portfolio approach are preparing the inventory of all entrepreneurship and SME policy measures/programmes, doing a proper categorisation of the policy measures by focus area and enterprise target group, and sorting out the assignment of total budget allocations across the categorisations by ministries/agencies. These challenges can be overcome by assigning the ministry or office responsible for SME and entrepreneurship policies with the leadership role in collecting and sorting the necessary input information in co-operation with the relevant ministries and agencies.

Another obstacle in applying the policy portfolio approach is undertaking an evaluation of the effectiveness of programmes and projects to determine the appropriateness of the budget allocation across the portfolio. For systemic evaluation, information on costs and benefits needs to be collected for each policy category (1-5) and each enterprise segment (A-G) to enable comparisons of the cost effectiveness across the portfolio. Whether a government intervention is justified (i.e. whether the benefits actually exceed the costs) can only be resolved by an ongoing evaluation process. In this regard, undertaking ex-ante and ex-post evaluations of the impact of different programmes will inform the policy analysis about the benefits of different interventions and the actual effectiveness of budget expenditures (OECD, 2007). This will assist in identifying ways of shifting the portfolio of spending to areas where it might deliver a higher economic or social return on a given investment.

Relevance to the Slovak Republic

Adopting the approach would be helpful to the Ministry of Economy in identifying possible gaps or misallocations in the SME and entrepreneurship policy mix, taking into account the spread of policy measures and programme activities relative to objectives and needs, and in evaluating the effectiveness of the overall SME and entrepreneurship policy portfolio. Thus, the approach could assist in correcting any programme gaps or duplications across departments and agencies, and determining the extent to which the policy mix corresponds to the perceived needs of the SME sector and to the government's overall strategic objectives.

Source: (OECD, 2011)

As a final note, it is likely that some SMEs will benefit from more than one programme intervention. The SME Support Law stimulates that applicants to each programme support must provide their business identification number. The availability of this data should make it possible for the government to determine the programmes used by the individual SMEs. This availability is enhanced by the Central Register for the Registration and Monitoring of de Minimis Aid, established by the Government in 2016, which records data on the aid provided to individual entities by the aid provider (ministry or agency). This enables the Government and aid recipients to keep track of the total amount of aid provided per enterprise, the main goal being to monitor the ceilings on the amount of financial aid per recipient. However, this system could also be very useful in identifying the different aid schemes being accessed by each participating SME. Amassing of this data would serve two purposes: to identify the actual number of different SMEs benefiting from the programme support (which would be a smaller number than if separately tallied by programme), and to identify the pathway of individual SMEs through the various programme supports.

Monitoring and evaluation

The OP R&I is subject to monitoring and evaluation during its implementation. However, the indicators specific to the SME competitiveness investment priority are primarily output-related, e.g. number of SMEs supported, number of SMEs receiving grants and financial support, number of SMEs participating in counselling and training programmes or supported through SME counselling centres, number of SMEs receiving support to launch new products, number of SMEs engaged in EU programmes, etc. Targets for each of these values were set in the OP R&I document, with a requirement for annual reporting. Another set of indicators was established at the macro-level of “expected impacts” (outcomes), such as increases in employment (additional 4 140 jobs); increased share of SMEs in total exports (by 4.4%); increased share of SMEs in value added of business sector (by 5%); number of enterprises receiving business support (12 790); number of supported new enterprises (5 090, out of which 1 362 are start-ups or spin-offs); and improved links between domestic SMEs and large multinational corporations. However, it does not provide for comprehensive reporting on the impact of the various programmes.

The annual Report on the State of SMEs in the Slovak Republic provides a breakdown of the number of micro-enterprises, small enterprises and medium enterprises supported by the various policy interventions, along with the allocated expenditure. This indicates that the Government has capacity in monitoring the implementation progress of SME and entrepreneurship policy measures and programmes and collecting the relevant documentation from the various policy delivery actors. However, there does not appear to be a rigorous approach to programme evaluation to answer the key question of the impact and effectiveness of support interventions.

While potentially adequate on monitoring progress on the implementation of policy supports and programmes, the Slovak Republic is less developed in the conduct of formal impact evaluations of policy programmes. A useful starting point would be annual reporting by the SBA on budget allocations to programme areas and target groups, as per the policy portfolio approach. In addition, reliable evaluations of individual policy actions need to be undertaken. In this context, the guidance offered by the OECD Framework for the Evaluation of SME and Entrepreneurship Policies and Programmes could be followed (OECD, 2007).

The need for a formal monitoring and evaluation framework is further enhanced within the context of an overarching SME and entrepreneurship strategy. This would require formulation of quantifiable outcome-based performance indicators for each of the policy target groups, pillars and actions of the strategy.

Policy delivery arrangements for national SME and entrepreneurship support programmes

Policy delivery refers to the way in which policies and programmes are implemented on the ground, which involves not only making SMEs and entrepreneurs aware of relevant programmes, but also ensuring that they have access to business development support. For example, policy supports could be delivered by government entities or contracted out to private sector intermediaries for delivery on behalf of the government. This section briefly describes and assesses the delivery arrangements for entrepreneurship and SME policy measures in the Slovak Republic, i.e. the organisations involved in delivering policy measures and the policy implementation arrangements.

Although a number of ministries and agencies in the Slovak Republic deliver entrepreneurship and SME policy programmes (see Figure 4.1 for a categorisation of delivery agent by general type of policy support), the main deliverers are agencies of the Ministry of Economy. The Slovak Business Agency (SBA) is the most dominant in providing services to assist SMEs and entrepreneurs in starting and developing their businesses. Other key agencies under the Ministry of Economy are also active in delivering policy support, particularly programmes related to innovation and internationalisation support, such as the Slovak Investment and Trade Development Agency (SARIO) and the Slovak Innovation and Energy Agency (SIEA). The policy delivery arrangements of these agencies are assessed below, supported by detailed descriptions and assessments of specific SME and entrepreneurship programmes in subsequent chapters of this report.

Figure 4.1. Schematic of the main policy delivery structures for SME and entrepreneurship support in the Slovak Republic

Source: OECD elaboration.

The delivery of SME and entrepreneurship financing measures is concentrated in a small number of key public entities

The primary deliverers of public policy financial support to SMEs are the Slovak Guarantee and Development Bank (SZRB) (direct loans, guarantee products, micro-credit, venture funds), the EXIMBANK (export credits, guarantee, and insurance products), and the Slovak Business Agency (micro-credits, venture capital investments). Over time, the Government has moved away from grant funding to other support mechanisms, such as the credit guarantee scheme, although grant

programmes are still in place, mostly to support SME R&D projects (agencies under the Ministry of Education, Science, Research and Sport) and export activity (Ministry of Foreign and European Affairs). However, take-up of financing schemes by SMEs appears quite low. In 2018, the SZRB granted 525 direct loans to SMEs and provided credit guarantees to only 268 SMEs. In 2018, EXIMBANK supported the export activity of only 39 SMEs, which is a rather modest number (SBA, 2019a). A limitation of the EXIMBANK support is that an SME must be in business for at least three years to qualify for financial support.

The European Investment Fund (EIF) allocates credit lines to commercial banks in the Slovak Republic for relending to micro-enterprises and entrepreneurs, plus a Microfinance portfolio guarantee programme. From the public perspective, the SBA and the SZRB are the primary micro-credit providers. The SBA programme targets micro and small enterprises with fewer than 50 employees, but demand is low. From 2013 until the end of 2018, only 2 164 micro-loans had been issued, totalling EUR 40.75 million (in 2018 alone, the SBA made 66 micro-loans with a total value of EUR 1.54 million) (SBA, 2019a). In delivering these micro-loans, the SBA co-operates with the Europe Enterprise Network Regional Advisory and Information Centres (RPICs) to provide information to local micro and small enterprises and facilitate the entrepreneur in completing the loan application process.

Venture capital in the Slovak Republic is at a very nascent stage of development, thus justifying the role played by Slovak Investment Holding (SIH) to stimulate private sector investors. The majority of the SIH venture funds is channelled through banks and other financial intermediaries through guarantee and loan products, and a significantly lower proportion as equity or quasi-equity to privately-managed venture capital funds.

A myriad of pubic entities deliver business advisory support

A relatively large number of public entities are involved in providing various forms of business advisory support to start-ups and SMEs through advice and information centres. These are predominantly within the domains of the Ministry of Economy and the Ministry of Education, Science, Research and Sport, but also include support centres under the Ministry of Foreign and European Affairs, and centres established as part of the Europe Enterprise Network (see Figure 4.1, Panel A). The provision of innovation and internationalisation support services are dominant (SIEA Regional Consultation Centres, SARIO Trade Points, “POCE” exporter contact points under the Ministry of Foreign and European Affairs), while others focus more generally on supporting the development needs of entrepreneurs and SMEs (SBA regional offices, National Business Centres, Regional Advisory and Information Centres).

With offices in the eight regions of the country, the SBA is an entry point for new entrepreneurs and SMEs, as well as a delivery point for a full range of financial and non-financial support services to entrepreneurs and SMEs at the national, regional and local levels. It implements several SME and innovation-focused policy measures and programmes in support of start-ups and SMEs along the development cycle (see chapter on SME and entrepreneurship programmes). Through its affiliation as a member of the Enterprise Europe Network (EEN), it provides SMEs with access to tools to support foreign trade. An important development starting in 2017 was launch of the network of National Business Centres (NBCs), a one-stop-shop for innovative enterprises in all eight regions with a particular focus on SMEs.[5] Managed by the SBA, the NBCs provide a broad portfolio of information and supplementary services, including training, expert consultancy, mentorship, and co-working spaces to aspiring entrepreneurs (including disadvantaged social groups), new start-ups, and established SMEs in different stages of their life cycles. It has the complementary objective of providing an interface for entrepreneurs, R&D and academic institutions and intensifying R&D co-operation between academia and industry, and enhancing innovation activities of technology-based SMEs, and co-ordinating support for the potential transfer of R&D into business practice.

The presence of NBCs in each of the regions provides at least some consistency in availability and clustering of basic support services and reduces possible gaps in delivery of state support programmes in the regions. However, the NBCs are recent and have low awareness among potential users in the regions, thus more aggressive promotional efforts are needed. Co-located with SBA offices, demand should eventually rise and recent data indicate that the uptake is increasing.

Advice and counselling to entrepreneurs and SMEs on start-up issues, the development of business plans, financing mechanisms, project and financial management, and development of human resource capacity is also offered by the Regional Advisory and Information Centres/*Regionálne poradenské an informačné centrum* (RPIC), non-profit entities established in the regions as part of the Europe Enterprise Network in the Slovak Republic.

SMEs seeking export advisory and support services (see Figure 4.1, Panel D) can access the Slovak Investment and Trade Development Agency (SARIO) regional offices and Trade Points, which serve as a contact point for SMEs seeking to enter foreign markets and in need of support to engage in export activity and penetrate foreign markets. SARIO is a government-funded allowance organisation that works under the supervision of the Ministry of Economy. It is responsible for increasing foreign investments in the Slovak Republic, as well as developing the exporting activities of Slovak companies with the support of economic diplomats from the Ministry of Foreign and European Affairs. The growth of SMEs through internationalisation activity is one of SARIO's priorities, realised through the National project "Support of the internationalisation of SMEs 2017-23", a component of the OP R&I[6] geared to strengthen the internationalisation capacities of SMEs and increase the degree of their participation in international cooperation activities. The SME support is mainly provided through participation of Slovak SMEs in trade fairs and trade missions, the pro-export training centre, supply chain opportunities, etc.) The implementation of this national project is coordinated by SARIO, with SBA as the partner organisation

The exporter/internationalisation service of the Ministry of Foreign and European Affairs Business Centre (known as "POCE") operates primarily through the "Let's Do Business Abroad" portal to distribute information about tenders, fairs, exhibitions and new business opportunities, and through an email box and telephone hotline to answer the questions of SME exporters and provide "first aid" in resolving their export-related problems. The use of online information-sharing platforms is an excellent model for other support centres, and potentially offers a complementary channel to the on-site delivery of business support services.

Innovation support is provided by a number of agencies (see Figure 4.1, Panel C), which tend to be specialised in particular areas of technology and innovation services. The Slovak Innovation and Energy Agency (SIEA) focuses on supporting and developing the innovation potential of Slovak companies. The SIEA Regional Innovation Centres (RICs) (located in five cities) deliver innovation support measures and tools to entrepreneurs and SMEs, promote a pro-innovation culture, and facilitate the exchange of information between research institutes and universities and SMEs. They were created in 2017 under the National Project Inovujme.sk as spaces where Slovak entrepreneurs can participate in innovation workshops and access consultants who will help them find solutions to obstacles in the innovation process and mentor them in implementing their innovative ideas. In addition, there are Business Innovation Centres (BICs) in five Slovakia regions (Banská Bystrica, Bratislava, Prievidza, Spišská Nová Ves, and Košice). The BICs, an initiative of the European Commission, offer business counselling/consulting, investment consulting, information on (and linkages to) financing, technology transfer, advice on EU programmes, and networking opportunities.

The Intellectual Property Office (IPO) delivers free tailor-made pre-diagnostic services to SMEs on their industrial property rights, but the outreach is small, with only 32 SMEs participating in this service in 2018 (SBA, 2019a). However, through its partners, the IPO creates awareness among SMEs of industrial rights protection through the Office for Innovation Information and Advisory (INNOINFO)

points, which are established in business incubators, regional advisory and information centres, technical universities, and five regional departments of the Slovak Chamber of Commerce and Industry (SCCI) located in Bratislava, Trenčín, Banská Bystrica, Prešov and Košice. This partnering approach extends the reach of the service considerably.

The Slovak Centre of Scientific and Technical Information (SSTIC) (under the Ministry of Education, Science, Research and Sport) operates the National Information System for Supporting Research and Development in Slovakia, which provides access to electronic information resources through the National Portal for Technology Transfer targeting R&D institutions, technology transfer offices, and companies, and the Business Navigator Portal providing industrial and business information and resources to SMEs. The SSTIC is an information partner with the National Business Centres project.

SME access to support programmes could be improved

The presence of several support centres offering diverse or complementary support services can create challenges for entrepreneurs and SMEs in identifying the point of service most appropriate to meet their specific needs. It also creates challenges for the government in terms of ensuring officers staffing the centres are adequately knowledgeable and able to provide quality services, as well as fully aware of the services offered by other centres so appropriate referrals can be made to clients.

Enhance awareness of the National Business Centre to increase the level of take-up by entrepreneurs and SMEs

The launch of National Business Centres (NBCs) in each of the eight regions as a one-stop contact point for entrepreneurs and SMEs and a broad range of services is a positive development, although more promotion is needed to create awareness of the centres and their services. In 2018, the NBC in the Bratislava Region dealt with only 1 419 unique enquiries, and NBCs with only 1 242 unique enquiries (SBA, 2019a). These are relatively small numbers considering the number of potential users who might find benefit from accessing the NBC service offerings.

Greater co-operation between policy delivery actors can be built through a support ecosystem approach

There is some evidence of collaboration between some of the SME and entrepreneurship support organisations. For example, the SBA partners with SARIO on delivery of the Support of Internationalisation of SMEs National Project, the Slovak Centre of Scientific and Technical Information maintains permanent representation in the Front Office of the NBCs and the NBCs also house INNOINFO points. However, to a great extent, the SBA and other agencies deliver their own projects. Although there may be some cross-referral of clients, there is no integrated approach to the handing-off of clients from one organisation to another.

The lack of cooperation between support providers and stakeholders has been identified by the European Commission as a crucial issue to be tackled in the Slovak Republic, arguing for the need to establish an “ecosystem” approach, especially within the context of “start-ups” and innovation (European Commission, 2017). A 2017 European Commission report recommended the adoption of an ecosystem approach to policy support for entrepreneurship in the form of a “Connecting Hub”. This would connect the different stakeholder nodes (business centres, incubators, research centres, government agencies which provide the instruments, financial intermediaries, etc.) and serve to stimulate knowledge exchange, contacts and mutual and reciprocal learning amongst organisations supporting start-ups. This could be extended to support of both start-ups and existing SMEs.

The Hub would collect the main SME and start-up support activities – including brokering, matching, facilitation, and other support services – under the same common virtual umbrella, as well as creating

new joint resources and online information. It would focus on connecting and offering practical support to the relevant policy actors in the start-up ecosystem. It would also play a pivotal role in gathering statistics about the entrepreneurial ecosystem, monitor its evolution and measure progress within the ecosystem, thereby contributing to evidence-based policymaking. Cooperation between the stakeholders within the ecosystem is key, as interacting with each other enlarges their scope and impact and enables more cohesive support to each other's clients (European Commission, 2017). A follow-up European Commission report indicated that slower than expected progress had been made on the "start-up ecosystem" and that the Connecting Hub would not be established (European Commission, 2018a). However, the recommendation to establish the "Hub" should be re-examined.

Delivery of support to enhance digitalisation skills and capacity appears to be underdeveloped

Raising the digital capacity of SMEs is a priority of the OP R&I, and yet there is limited evidence that SME and entrepreneurship support organisations are delivering this policy support to their clients. This gap could be addressed in a number of ways. The SBA could be tasked with integrating advisory and counselling support in the area of SME digitalisation, co-ordinating with a network of advisors and technical experts to support the offer as part of the SBA and NBC services. As suggested in the chapter on SME digitalisation issues, the NBC could offer a "digital service package" to entrepreneurs and SMEs. Further, chambers of commerce, employers' organisations and SME associations could be engaged to raise awareness of the digitalisation issue, diffuse knowledge, provide peer learning opportunities, and promote good practices to their members.

The Slovak Republic Digital Transformation Strategy called for the establishment of a Digital Innovation Hub (DIH) to serve as a one-stop shop to help innovative start-ups and SMEs become more competitive in their business/production processes, products or services by using digital technologies (Office of the Deputy Prime Minister for Investments and Informatisation, 2019b). The DIH would connect the various infrastructure and actors in the digital industry promoting digital innovators/developers and creative entrepreneurs, and the scaling of their digital businesses. It would connect together universities, research and technology centres, incubators and accelerators, cluster organisations and industry associations, as well as providers of digital training, financing for businesses introducing digital innovation, state-supported labs where innovators can test, improve and scale their innovation digital solutions, and providers of advice and consultancy on how to successfully digitalise business processes, such as the SBA, National Business Centres, Regional Innovation Centres, and Regional Information and Advisory Centres.

In this regard, the Digital Innovation Hub should be closely linked with the policy support for the SMEs and start-ups more generally (i.e. the "connecting hub" as described above). The European Commission continues to emphasise that the setting up of Digital Innovation Hubs would aid in increasing the take-up of digital trends and the adoption of digital business practices by SMEs (European Commission, 2019b). The government should proceed with plans to support the creation of these digital hubs, as discussed in the chapter on SME digitalisation initiatives in this report.

Actions are needed to address the low-take up SME support programmes

There are notably small numbers of SMEs and start-ups participating in many of the Slovak Republic SME and entrepreneurship support programmes, as set out in SBA (2019a). For example, there were only 75 entrepreneurs in the SBA Start-up Support Scheme, 16 companies in the SBA Family Business Support Scheme, 16 SMEs in the SBA Incubation Programme, and 190 in the Support for the Internationalisation of SMEs programme.[7] On the other hand, 1 746 SMEs received services from the SBA Growth Programme, and a total of 1 966 non- or pre-entrepreneurs took part in the SBA Acceleration Programme.

In response to a survey of 1 000 SMEs regarding their use of support programmes, the SBA reported the lack of information about support possibilities as a major deterrent to use of such programmes (SBA, 2019, pp. 127-128). Only 16% of SMEs in the survey had made use of any kind of support in the previous 12 months (e.g. subsidy, loan, guarantee, EU funds, consultancy, mentoring, information services, etc.). More than two-thirds of the SMEs had not even attempted to obtain public support and another 15% tried but were not successful. Additional obstacles included the rigorous administrative requirements of the application process, the demanding compliance conditions, and the long applicant evaluation procedures.

The SMEs indicated a relatively low level of satisfaction with the support they received, with 45% expressing dissatisfaction. However, about two-thirds of the surveyed SMEs indicated their intent to make use of public support programmes in the future, with growing interest in the use of consultancy and information services.

An integrated and comprehensive online portal for SME and entrepreneurship support can be an important tool

The government should take steps in increasing promotion of support programmes and facilities among SMEs and start-ups in response to these low programme uptake levels. This could be facilitated by establishing a national SME and entrepreneurship support portal, with a mapping of all programmes by service provider and stage of the business lifecycle. There does not currently appear to be a comprehensive SME and entrepreneurship support portal, which would make information on entrepreneurship and SME support programmes and other resources available online in a readily accessible and searchable format, i.e. an integrated roadmap of supports by stage of entrepreneurship or business development and organisational provider. The SBA website includes an annually updated, downloadable guide to SME support initiatives in the Slovak Republic[8], but this is not an interactive search portal such as is common in many OECD countries. The Ministry of Economy also has a website link to provide a quick overview of SME supports and which institutions or central state administration bodies need to be contacted[9], however, it stops short of being a comprehensive SME support portal. Other websites or portals, such as the “Let’s Do Business Abroad” portal of the Ministry of Foreign and European Affairs and the Business Navigator Portal of the Slovak Centre of Scientific and Technical Information are examples of stand-alone electronic sources of relevant information for SMEs that are not connected to an integrated SME and entrepreneurship support information platform.

In addition to improving information on programme availability, efforts should be undertaken to reduce the administrative requirements and burden in the application process for programme support.

Conclusions and policy recommendations

Opportunities exist for the Slovak Government to strengthen aspects of its SME and entrepreneurship policy development, co-ordination and delivery based on international good practices such as found in many OECD countries.

One of the key tools that could be used to strengthen policy development in this area would be the creation of an overarching national strategic document on SME and entrepreneurship policy outlining the key policy directions, objectives, targets and actions. Currently, SME and entrepreneurship policy and programme actions are largely woven into the various Operational Programmes supported by the European Structural and Investment Funds ESIFs. This details many of the key actions, in conformity with the SME Support Law and in line with the SBAfE principles, howeverit does not provide comprehensive coverage of the SME and entrepreneurship policy agenda at a strategic level.

At the same time, efforts are needed to design stronger SME policy co-ordination mechanisms, both within the Ministry of Economy and at the interministerial level. The Government has developed a strong policy consultation culture. This is demonstrated by its commitment to consulting with the private sector during the design of national strategies and with SMEs to assess potential undue administrative and compliance burden during the process of drafting new legislative and regulatory proposals. This consultation approach on strategies and regulations could be extended and applied to a formal mechanism for soliciting policy input from SMEs and entrepreneurs on a wider range of SME and entrepreneurship policy development issues.

The delivery of business support to SMEs and entrepreneurs is developing, with the establishment in recent years of a number of centres offering information, advisory, consultancy and network facilitation services. Improvements to this system could be made by creating more awareness among entrepreneurs and SMEs of their availability, and developing an “ecosystem” approach to achieve stronger co-ordination of the service providers. An integrated and interactive web portal directed at SMEs and entrepreneurs would also create greater transparency about the type and scope of available support services and the support-providing organisations.

The government has strengths in monitoring the implementation progress of SME and entrepreneurship strategies and programmes, but could benefit from greater efforts to carry out more rigorous impact evaluations.

Based on the assessment of the SME policy governance and delivery arrangements, the following recommendations are proposed.

Box 4.6. Key policy recommendations on the strategic framework and delivery mechanisms for SME and entrepreneurship policy

- Develop a national SME and entrepreneurship development strategy setting out policy objectives, targets, strategic pillars addressing the major challenges facing new entrepreneurs and existing SMEs, tailored approaches to fostering start-ups and enterprise scaling-up, and a monitoring and evaluation framework.
- Establish a higher-level inter-ministerial council to oversee development and implementation of a national policy to support SME and entrepreneurship development.
- Create an SME and Entrepreneurship Policy Unit in the Ministry of Economy with responsibility for co-ordinating policy development and measures among other relevant ministries and agencies.
- Establish a higher level inter-ministerial Council on SME and Entrepreneurship Development.
- Establish an SME Advisory Committee or Council including SMEs and entrepreneurs and their representative organisations, SME support organisations, and independent experts to provide policy input to the Minister of Economy and the higher level inter-ministerial Council on SME and Entrepreneurship Development.
- Formulate a regularised public-private policy dialogue mechanism inclusive of SMEs and entrepreneurs that expands beyond the issue of better regulation.
- Adopt a policy portfolio approach towards the management and evaluation of SME and entrepreneurship policy and support across state ministries and agencies, identifying policy expenditures and impacts by type of policy intervention and type of SME and entrepreneurship target group.
- Establish connecting hubs in the entrepreneurship support ecosystem to bring together the various organisations offering support to SMEs and start-ups.
- Design and publish an integrated, and interactive SME and entrepreneurship policy web portal to inform SMEs and entrepreneurs about support possibilities

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Notes

[1] The National Strategy for Smart Specialisation includes a brief SME diagnostic section, recognising the insufficient level of innovation activities of SMEs and outlines policy objectives to increase the innovation capacities of SMEs, the percentage of SMEs introducing new products, processes, marketing and organisational innovations, and the dynamics of start-ups and spin-off business creation, particularly in higher technology areas; and seeks to improve supplier linkages of local SMEs with large multinational enterprises in key sectors, improve co-operation between SMEs and research institutions, and improve access to start-up capital for new, innovative businesses (Slovak Republic, 2013).

[2] The Digital Transformation Strategy and action plan lack specific targets for SMEs apart from the performance indicator to "increase the share of small companies that made an e-commerce sale in the past 12 months", and are unclear as to how SMEs could be reached (Office of the Deputy Prime Minister for Investments and Informatisation, 2019).

[3] The objective of the scheme was to increase the establishment and development of innovative, technological SMEs in the Slovak regions, and the number of competitive SMEs.

[4] The concept of the entrepreneurship and SME policy portfolio approach was first introduced by the OECD as an analytical tool in the review of entrepreneurship and SME policies in Thailand (OECD, 2011) and has since been promoted for use by OECD members at meetings of the OECD Working Party on SMEs and Entrepreneurship.

[5] EUR 46 million of EU Structural Funds was allocated to the NBCs for SME programmes.

[6] With effect from 13 December 2019, European Commission, decided to approve the merger of the Operational Programme Integrated Infrastructure (OPII) with the Operational Programme Research and Innovation (OP R&D). The content and funding of the original OP R&I remain unchanged after the transfer to the Integrated Infrastructure OP.

[7] Excluding the number of participating SMEs supported by SARIO through the Support for the Internationalisation of SMEs programme.

[8] See: http://www.sbagency.sk/podpora-msp-v-sr-sprievodca-iniciativami/

[9] See: https://www.economy.gov.sk/podnikatelske-prostredie/zivotne-situacie-podnikatelov/

5. SME and entrepreneurship programmes in the Slovak Republic

This chapter assesses SME and entrepreneurship development programmes in the Slovak Republic. The programme areas covered are business development services, innovation, internationalisation, entrepreneurship training, SME skills development, access to finance, public procurement and inclusive entrepreneurship.

Business development services

This section focuses on programmes of non-financial support to SMEs and entrepreneurs in the form of business advice.[1] The largest single provider of publicly-funded business development services is the Slovak Business Agency (SBA)[2], a not-for profit organisation tasked with delivering a number of public support support measures for SMEs and entrepreneurs on behalf of the Ministry of Economy. In 2018, the SBA had an average of 268 employees and worked with 419 external trainers and mentors/coaches to deliver services to SMEs and entrepreneurs.

The SBA implements a number of business development services programmes for SMEs and start-ups, as summarised in Table 5.1 below.

Table 5.1. Business development services offered by the Slovak Business Agency

Non-financial programmes (advisory and consulting)	Objective and target (type of firm)	Number of enterprises supported (2018)
Acceleration programme	For entrepreneurs intending to start a firm (e.g. based on R&D results, etc.)	1 297 unique participants
Incubation programme	Incubation services for new and existing firms	16 SMEs
Internship programme	Internships for graduates with existing SMEs with growth potential	63 SMEs
Growth programme	Services for existing SMEs with ambition to grow and export to EU and non-EU markets	SMEs < 3 years old – 1128 clients SMEs > 3 years old – 618 clients
Start-up Support Scheme (2017-20)	Component 1: Funding for participation in events focused on innovation and technology (national or abroad) Component 2: Consultancy and expert advisory services Component 3: Advisory services and foreign internships for entrepreneurs	Component 1: 33 SMEs or entrepreneurs Component 2: 17 SMEs and 7 entrepreneurs Component 3 : 5 SMEs
Family Business Support Scheme (2017-20)	Provision of counselling services to family businesses for generational exchange, transfer of ownership, development, etc.	19 SMEs
Enterprise Europe Network (EEN) services	Advisory services to SMEs including for international co-operation, access to EU funds and participation in EU programmes	180 SMEs

Source: SBA (n.d.)

The SBA funding for business support services amounts to approximately EUR 2.5 million per year from the State Budget and approximately EUR 80-90 million per year from the European Structural and Investment Funds (ESIF) for the period 2017-23. In addition, project funding via the European Union's Interreg, Horizon 2020 and other programmes is secured on a competitive basis.

In 2014-15, the SBA launched a pilot National Business Centre (NBC) Project[3] in the Bratislava region[4], with funding of some EUR 10 million from the European Regional Development Fund (ERDF) (OP R&D). The NBC pilot was then continued under the National Project NBC-II (total budget of approximately EUR 25 million for the period 2017-23) and subsequently extended by the creation of NBC offices in the seven other regions (Trnava, Trenčín, Nitra, Žilina, Banská Bystrica, Prešov and Košice), through the NBC in Regions Project (total budget of approximately EUR 58 million in the period 2017-23). The budgets are broken down by programme as detailed in Table 5.2.

Table 5.2. National Business Centre programmes – budget 2017-23 by programme (in EUR)

#	Programmes:	NBC Bratislava	NBC in the regions
1	Front Office	3 790 916.37	5 914 453.34
2	Acceleration programme	3 506 467.63	5 210 161.01
3	Incubation programme	2 901 366.94	2 699 406.90
4	Internship programme	4 536 524.92	8 639 350.94
5	Growth programme (incl. Internalisation in Bratislava region)	7 588 696.45	17 652 948.47
6	Creative point	3 168 851.26	2 107 335.58
7	Internationalisation (financed by the national project "Promoting the Internationalisation of SMEs")		15 400 000.00
	Total	25 492 823.57	57 623 656.24

Note: The amount mentioned in the "Promoting the Internationalisation of SMEs" covers the part of the SBA only and not the SARIO component.
Source: SBA (n.d)

The NBC has a staff of 211, of whom 17 work at Project level, 42 are experts for the NBC Bratislava region and 152 work as experts in the other 7 regions (the number of staff per region is approximately 20). In addition, the NBC initiative can call on over 1 030 external consultants who provide services to entrepreneurs (including pre-creation of a business) and SMEs. Hence, a positive element of the SBA NBC Projects is that they help mobilise and connect SMEs and entrepreneurs with private sector experts and consultants who are used to delivering services to firms.

The objective is to provide comprehensive support to SMEs for development and to people interested in starting their own business. The mission of the NBC network is to implement the concept of a one-stop-shop offering a portfolio of information and supplementary services to SMEs and entrepreneurs. The Acceleration, Incubation, Internship and Growth programmes, which aim to cover the life cycle of a business from its establishment to growth in the domestic or foreign market, are delivered via both of the NBC Projects (i.e. the Project for Bratislava and the Project for the seven regions). In total, in 2018, the NBC business development services via the programmes were used by 1 419 SMEs and entrepreneurs Bratislava and the regions. In more detail, these programmes provide the following types of assistance:

- The **Acceleration Programme**: is aimed at and designed for people interested in starting up businesses. It aims at building interest in entrepreneurship, increasing motivation for creating new business ideas and developing basic entrepreneurial skills. The programme offers professional counselling (up to 10 hours of individual consultations), business skills (25 hours split over 5 working days), a Summer School (25-hour intensive programme over five days, focused on one pre-selected topic), and activities aimed at development of business potential such as increasing awareness about entrepreneurship as a career alternative and presenting business success stories and good business practice.
- **The Incubation Programme**: the goal is to support and develop start-up firms, thereby increasing their odds to surviving the first, most critical years of doing business. The programme is designed for entrepreneurs who register their business within the three years prior to submitting their application for support and meet the definition of an SME. Applicants for the Incubation Programme can choose between physical or virtual services. Companies accepted into the programme benefit from individual consulting services during the first year of membership up to a maximum of 30 hours per semester. The second service is individual professional counselling, up to a maximum of 24 hours in one semester and up to 144 hours during membership in the incubator. Companies may stay in the incubator for up to 3 years.

During this period, companies are subject to regular evaluation of their activity. Upon completion of the programme, the incubated company should have sufficient capacities to allow it to leave the incubator's preferential environment and develop on the market on its own. In 2018, 11 start-ups were hosted in the physical incubation space during the course of the year, and a further 5 were admitted at the end of the year.

- The **Internship Programme**: is designed to assist innovative companies and aspiring entrepreneurs to obtain experience in doing business in foreign markets via counselling services from foreign experts and mentors. The target group of support is companies at least 3 years old (sole traders, limited liability companies, joint-stock companies) in various sectors. The programme supports three types of 'internship': a three-month stay in a business incubator, professional institution or technology park in Israel, Singapore or the United States; one week of training at the NBC and one month abroad in another EU country; or a 5-day participation at an international conference or workshop in another EU country. In total, 8 SMEs were supported in 2017, and 63 SMEs in 2018. According to the SBA, the impact on enterprises is visible in terms of higher turnover and, in certain cases, job creation and establishment of contacts of Slovak companies with foreign companies/institutions through participation in international expert events abroad.
- The **Growth Programme**: offers support to SMEs with a potential to grow, innovate, increase their market share, expand beyond the Slovak market or strengthen their competitiveness, conclude business partnerships and penetrate foreign markets. Services provided include short-term counselling aimed at solving operational issues (a total of 10 hours during a period of four months), long-term individual advice in areas such as marketing; finance; business law and legislation; management; export and internationalisation; electronic business (up to 80 hours per SME); and funding for participation of registered clients of the NBC in selected fairs, presentation events and exhibitions (based on calls for applications with funding provided for travel and subsistence, event fees and transport of exhibits). SMEs in the programme can also receive advice on access to EU funding programmes, etc. During 2018, 41 SMEs were selected to receive support for participating at international business events in cities such as Barcelona, Lisbon or London.

In addition to the advice given by permanent staff, the NBC provides business mentoring services by mobilising a pool of external experts. The NBC facilities in Bratislava offer a co-working service (applicant entrepreneurs can be hosted for up to four months) and also has a 'fab lab' type facility: Creative Point[5], which is open to entrepreneurs and SMEs as well as individual 'makers' (hobbyists). The facility provides access to equipment suitable for prototyping, such as 3D printers, lasers, CNC milling machines, scanners and plotters, to develop skills and creative ideas.

The SBA also delivers the **start-up support scheme**, funded by the Ministry of Economy. This programme is structured in three main components:

- Component 1: support is provided via customised advisory services and support for the participation of persons interested in starting their own business or who have just started their own business in national and international events focused on innovation, technology and start-ups.
- Component 2: this offers consultancy and expert advisory services for preparing a feasibility study, finishing product development or preparing a functional prototype, including testing and introductory presentation; it also supports marketing and feasibility work, including a campaign for testing of the business idea and prototype with real potential clients and support on pricing, marketing research, creating a product team and other related activities.
- Component 3: this offers consultancy and advisory services related to internships as well as expert evaluation of applications for foreign internships by new entrepreneurs.

The programme is aimed at people interested in becoming entrepreneurs and for entrepreneurs who have recently started their own business (start-ups in the first five years of their activities). Initially, only component 1 was launched, in 2017, via a call for participation in national and international events focused on innovation, technology and start-ups. Some 46 beneficiaries were selected and attended 30 events. Participants were provided an indirect aid in the form of the reimbursement of 100% of their costs related to participation in the events (including travel costs, accommodation costs, participation fees or exhibition stand costs, reimbursed in advance). The total aid provided in 2017 amounted to some EUR 400 000. In 2018, all three components were delivered, and the total aid provided amounted to some EUR 1.1 million in favour of 75 beneficiaries.

A significant number of Slovak SMEs are family businesses and sustainability of these businesses is a key issue[6]. The **Family Business Support Scheme (2017–2020)**[7] aims to support the development of family business and their management of key business milestones, such as the process of generational exchange, managing family and work relationships, transfer of ownership relations, etc. The scheme aims to reduce the risk of business failure during (or as a result of) a generational or ownership transfer. SMEs that met the definition of a family business were able to apply for the following services free of charge (without co-financing):

- Provision of professional consulting services - consulting, mentoring and coaching;
- Elaboration of studies, market research, proposals of measures to improve the position of the family business on the market, concepts, strategies, etc. and related advice;
- Participation in seminars, lectures, trainings, etc. on the topic of family business;
- Reimbursement of costs related to participation in fairs, conferences and other international events (travel costs, accommodation expenses, participation fees).

The SBA launched a pilot call for applications in 2018 and 31 applications were received, of which 21 applications were approved by the evaluation committee. In total, 19 applicants signed a support contract, representing a total budget of EUR some 410 000 (expenditure in 2018 was some EUR 340 000). The main objective was to help family businesses address succession issues, notably in terms of company management (managerial succession), development of the potential of family business members (individual development, team development, corporate culture) and succession in terms of property.

The SBA is also one of the partner organisations involved in delivering the European Enterprise Network (EEN) service in the Slovak Republic[8]. In 2018, the SBA budget for EEN activities was some EUR 48 000. The SBA implemented information and assistance services aimed at developing international SME cooperation in the field of entrepreneurship for innovation and research. In 2018, nine international SME cooperation agreements were concluded. In 2018, 180 SMEs were supported by the SBA and 10 international co-operation events with 159 SMEs were organised.

Box 5.1. Structuring advisory services into a package of support for business ecosystems: The Finnish experience

Description of the approach

In Finland, an approach designed to boost so called 'business ecosystems' has been adopted by the national enterprise support agency, Business Finland. Rather than delivering services to individual companies on an ad hoc basis, Business Finland has developed an integrated system of 'thematic' programmes through which it offers its business development, internationalisation and innovation-funding services as packages. The packages are customised in accordance with the goals and target groups of each programme. The advantage is that the programmes develop networks, or ecosystems, which enable the participants to resolve common challenges and learn from their peers.

A dedicated programme has been developed for 'Sustainable Manufacturing Finland'. This reflects the importance of manufacturing industries are to the Finnish economy. According to Technology Industries of Finland, its member companies employ 300 000 people directly and 700 000 people in total. This equals to about 30% of the entire Finnish labour force. The technology industry makes up 51% of Finnish exports.

The programme is targeted to manufacturing ecosystems. Although the programme covers all manufacturing industries, emphasis is placed on machine tool industries, (opto) electronics and photonics, and companies in the industrial digital transformation sector. Companies and research organisations of all sizes are invited to participate in the programme. The aim is to foster collaboration that provides industry with new solutions to increase efficiency, productivity and environmental friendliness. Five types of key services are provided to businesses involved in the programme:

1. Promoting innovation nationally

The programme helps companies to renew their businesses and to encourage cooperation. This means helping companies in finding partners, creating networks and developing plans and actions for renewal. The best projects and ecosystems will be funded. The programme helps in the development of the projects before applying for funding. The programme encourages business to find solutions in cooperative groups or networks through the Co-innovation Funding. However, companies can also apply for support individually, e.g. by TEMPO funding.

2. Promoting innovation internationally

The programme helps companies to utilise European cooperation networks and EU funding instruments (e.g. Horizon 2020) for companies and research organisations. Participating in the programme projects is a good way to develop expertise in collaboration with international research units and companies. The programme also helps firms to find partners outside Europe, for example in the USA and Japan.

3. Exploring new markets and business contacts for business groups

The programme helps companies to find partners and build networks with companies, research units and universities to share their ideas and innovate together. Initially, the target countries of the programme are Germany, France, Poland, and Japan, although more target countries are expected to be added.

4. Attracting foreign experts to industry

Business Finland's Talent Boost programme is intended for manufacturing companies operating in Finland looking to hire highly-skilled professionals companies. Talent Boost connects companies and professionals by providing events, materials and funding and coordinating team resources to create shared services. Talent Explorer Funding can be used to hire an expert in order to obtain new

information and expertise to help a company make progress in a new international market. Companies can also get help to assess their organisation's capabilities in recruiting international talents. Based on an analysis, they can receive a Talent Boost Index report that describes the readiness and maturity of their organisation, and how to develop the multiculturalism of their business.

5. Business opportunities for foreign companies in Finland

The programme helps foreign companies to find partners and business opportunities within Finnish business ecosystems. Foreign companies can receive support in starting a new business in Finland.

6. Material audit

A Material Audit investigates the amount of waste generated by business operations, the costs of the waste, and measures for reducing waste. Business Finland provides Material Audit funding. The Material Audit is carried out according to a systematic model developed by Motiva and performed by auditors trained by Motiva.

Factors of success

This programme is targeted at developing business ecosystems as a network of firms and organisations aiming for international success. The focus on supporting business ecosystems develops a team effort with common goals, where ecosystem members seek solutions to common problems. The focus on ecosytems also emphasises the objective of value creation and the fact that an ecosystem needs to be more than the sum of its parts. The vision is that by supporting networks of firms and related organisations in business ecosystems, Finnish know-how will be exported to international markets, and new markets and business models will created with Finnish expertise at their hearyt.

Relevance for the Slovak Republic

The Business Finland ecosystem approach would appear highly relevant as a model for the next phase of business advisory services and linked funding instruments in the Slovak Republic since it provides a model for a more targeted and collaborative approach to allowing key business ecosystems to grow and develop, whether established or in emerging niches. It would foster a shift away from the current fragmented delivery of support across a number of agencies to individual firms, with limited targeting of support on key segments of the Slovak economy.

Source: Business Finland.

Entrepreneurs and SMEs are selected for business development services support via calls for participation in the various programmes. The less complex (less costly) the services, the easier the procedure for applying. More costly services (such as the internship programme) go through a three-stage process of formal checks (whether the company is solvent, etc.), expert assessment of the application and then final selection by a programme committee. There is no specific targeting of priority sectors or firms with specific growth potential, etc. Rather the approach is based on ‘expressed needs’ of SME applicants or ‘hot topics’ (e.g. support for compliance with GDPR) for training and information events.

Furthermore, it appears there is not a standard business diagnostics method used to assess business needs, nor a system for tracking progress of firms in terms of business development plans based on the interventions. With a view to ensuring more tailored services, it would be worth considering introducing an online business autodiagnostic tool to help increase awareness of services and orient SMEs to the right services (see also the thematic chapter on digitalisation).

There is limited evidence on the impact of the suite of SBA/NBC business advisory programmes (e.g. such as impact of services provided on growth of turnover, exports or jobs in supported firms). Even

data on the sectoral distribution of beneficiaries, etc., is not available. Tracking of the use of funds by supported businesses is limited to checking compliance with EU State Aid rules (de minimis). There has not yet been an evaluation of the current SBA programmes or the NBC projects, although the Ministry of Economy has indicated its intention to commission an assessment. There is some basic monitoring information on programme participation. Hence, all entrepreneurs and SMEs that participate in events, receive consultancy, etc. are invited to complete a survey to gauge their satisfaction with the service and encouraged to provide suggestions for future support or topics for events, etc. However, only those receiving more substantial support, such as through the internship programme or incubation services are followed more closely and expected to provide data on growth in turnover, etc. Full evaluation would require in addition comparison with a control group of non-supported firms.

Overall, the business advisory system appears fragmented, as discussed in chapter 4 (three main agencies involved plus additional operators in fields such as export finance, technology transfer, etc.). Due consideration should therefore be given to a rationalisation of the business support agencies structure (e.g. in line with good practice models such as Enterprise Estonia, Business Finland, Scottish Enterprise, etc.). At the current time, the extent of information exchange between agencies on firms supported is, essentially, limited to formal notifications related to State Aid. It is recommended to consider switching to an approach based on client management of a portfolio of companies identified for their growth potential, as used in other enterprise and business support agencies in Europe. This would offer a more structured means to assist firms and would enable a targeting, monitoring and tracking of support including for specific types of entrepreneurs (including disadvantaged groups), regional clusters or national priority sectors (such as the smart specialisation priorities), or firms operating in key supply/value chains.

In addition, the Slovak authorities could consider introducing a voucher scheme to encourage SMEs to use business diagnostic services.

Innovation programmes

This section summarises the main programmes and initiatives to support innovation in SMEs. The main programmes are financed through the OP R&I, which was integrated into a new OP Integrated Infrastructure (OP II) in 2019.[9] R&D and innovation support are covered by Priority Axes 9 to 13 of the OP II, which are managed by the Ministry of Economy and the Ministry of Education, Science, Research and Sport, with the Slovak Innovation and Energy Agency (SIEA)[10] acting as an implementing agency. Since 2015, SIEA also fulfils the role of the Technology Agency in accordance with the Research and Innovation Strategy for Smart Specialisation of the Slovak Republic (RIS3 SK).

The SIEA administers OP II calls aimed at supporting innovation and technology transfer and supporting technology and applied research. The Priority Axes 3 and 4 of the original OP R&I foresaw support to SMEs for innovation and competitiveness worth EUR 401 million during the period 2014-23 and this has been transferred over to the OP II. The amount of contracted projects was EUR 357 million by end 2018. The projects mostly support simple technology transfers and product and process innovations by SMEs in addition to the national projects for business environment. These schemes are well run and have met with significant interest by potential applicants. However, it is noteworthy (Baláž et al, 2019) that there are no specific instruments in favour of high growth innovative enterprises.

By contrast, there has been limited programme support for strengthening synergies between science and industry. The key planned measure (OP R&I call for the Industry R&D Centres) was not fully implemented and ties between business and universities remain underdeveloped. Slovak Universities derived 4.7% of their total resources from business research in 2006 and only 1.9% in 2016 (Baláž et al, 2019). An approach to stimulating stronger innovation linkages between public research activities (through HEIs and public research bodies) and SMEs would be to make certain publicly-funded R&D

grant schemes conditional on science-business collaboration, including collaboration with SMEs. Furthermore, the government could consider making some state applied research funding conditional on including a business partner in the proposal. This approach could be considered for certain state programmes of support to R&D, or a programme could be created specifically targeting industry-science linkages, with involvement of SMEs a favourable criterion for funding decisions.

There is also a Slovak Agency for the support of Research and Development (SRDA) although it is focused on funding scientific research with only a limited scheme for R&D support to business through a de minimis (state aid regulation) scheme. In 2018, only EUR 2.5 million was disbursed to 36 entities, the majority in Bratislava region.

The SIEA also implements several national projects within the OP II. Through the national project Support for the Development of the Creative Industry in the Slovak Republic, micro firms and SMEs can use creative vouchers for the services of architects, designers, marketers and programmers[11]. The total budget for the project is some EUR 13 million (for 2017-23), with a target of 1 500 creative vouchers to be funded (to a maximum value of EUR 10 000 per voucher).

As part of the national project Increasing the Innovation Performance of the Slovak Economy[12], entrepreneurs can sign up for an innovation workshop or they can ask for mentoring in implementing their innovative ideas. All-day innovation workshops are available for students. Two consulting centres are being established to provide innovation advice to companies. Any Slovak business entity that meets the conditions for the provision of state aid can request advice. An individual support package will be provided based on the current development, skills, competencies and market needs of the applicants, who will be assigned a consultant, a consulting centre staff member and a mentor-expert during the entire process. Consultation centres have been open in Bratislava and Banská Bystrica and operating in pilot mode, and workplaces are being prepared in Nitra, Žilina and Košice. The total budget for this programme is EUR 32 million, disbursed as non-financial aid (consulting services, etc.) to firms.

There is also support for business R&D through tax relief. This accounted for 45% of total government expenditure on support for business R&D in 2017 (OECD, 2019). However, the Slovak Republic has one of the lowest rates of direct government funding and tax relief funding for R&D in the OECD, with total government support for business R&D at only 0.02% of GDP, declining during the period 2006-17, while in the OECD as a whole it increased. Until 2015, R&D tax incentives were provided exclusively to recipients of public funded grants. In 2015, a hybrid (volume and incremental) tax allowance was introduced. However, there is no differential advantage provided to SMEs through the R&D tax credit. The carry-forward period is 4 years, implying a lower tax subsidy rate for loss-making firms over the R&D tax credit period 2015-19.

A marked increase in implied marginal R&D tax subsidy rates occurred from 2018. The volume-based allowance increased to 100% of qualifying expenditure, from a previous 50% of labour costs and 25% of other expenditure, and the base amount for incremental expenditure is defined as the qualifying expenditure over the two previous years. A constraint, however, is that claimants for R&D tax credit must prove that the firm really performs R&D and publish their R&D projects before claiming R&D tax credit. There are 2 main conditions:

1. The company must create an internal simple entry document for every R&D project for which it claims the applicable costs for tax deduction. The document must contain the date, project start and end dates, the goals that they want to achieve with the project and the estimated costs for the project for each year. The document must be approved by a person who can act on behalf of the company.
2. The company must separate the R&D costs for each project into individual analytical accounts. The company applies the tax deduction in the tax declaration by filling out an annex to the tax return which contains data from the entry document and the applicable deduction.

These measures limit the attractiveness of the R&D tax credit particularly for small Slovak firms that rarely do formal R&D. The result is that most tax credits are claimed by medium-sized and large firms. Some 49% of the total tax deductions were claimed in the fabrication of basic metals in the tax year 2017. This fact is explained by 42 R&D projects (EUR 18.18 million) that were developed by US Steel based in Košice. The automotive industry claimed 10%, electrical engineering 8% and the ICT sector 7% of the total tax deduction (Baláž et al, 2019). The Ministry of Finance publishes a list of firms claiming tax credits and the amount of support as well as some brief details on the R&D project supported, but without any analysis (sector, etc.). In 2018, there were some 260 firms claiming tax credits according to the official list.

In short, the R&D tax credits, even after the recent reform, are mainly attracting larger (foreign) firms. This reflects their capacity to comply with the necessary procedures. However, in all likelihood they would conduct much of the R&D in the absence of a tax credit, raising the issue of additionality of the subsidy. There is no specific support for SMEs or start-ups (indeed loss-making firms such as early-stage firms have a lower tax subsidy rate). It is therefore recommended to review the R&D tax credit scheme with a view to increasing the impacts on young innovative firms (start-ups and spin-offs) and making the R&D tax credit more attractive for domestic SMEs.

Internationalisation programmes for SMEs

Supporting SME internationalisation is a further key target of the OP II (and formerly of the OP R&I), as funded from European Structural and Investment Funds between 2017 and 2023. A foreign economic relations strategy provides a framework for such interventions[13], and an Advisory Council to the Government to support exports and investments reviews implementation on an annual basis. A number of State agencies intervene in support of export promotion but also international technology transfer, supply chain linkages, etc. These include the SBA, the Slovak Investment and Trade Development Agency (SARIO) and EXIMBANKA as well as services provided via economic diplomacy channels.

The Ministry of Foreign Affairs and European Affairs operates a 'Business Centre' within the section of economic cooperation and also supports businesses through the network of Slovak embassies. A 'Let's Do Business Abroad' section on the Ministry Web site provides basic information to exporters and a weekly newsletter is compiled by the business centre to alert exporters to tenders, opportunities and news in foreign markets. Business information per country is provided and exporters can contact economic diplomats in many third countries.

EXIMBANKA SR[14], the Official Export Credit Agency, provides consulting services free of charge to Slovak companies (regardless of the size of their business) seeking to internationalise their activities, in addition to a range of banking, guarantee and insurance products (see also the section below on access to finance). The advice provided to individual exporters focuses on assessment of the degree of risk of the export partner and recommendations for optimal financing structures, especially export insurance, etc. The bank has developed a guidance document, the Slovak Exporter's Manual, which provides an overview of how to select business partners, check creditworthiness, payment terms, etc. EXIMBANKA organises a series of events and presentations to companies, mainly SMEs, exporting or considering the possibility of expanding their activities beyond the domestic market. It also runs Export Clubs, which are informal half-day events bringing together exporters with representatives of relevant state and commercial financial institutions.

SARIO, an agency of the Ministry of Economy, is focused on increasing the inflow of foreign direct investment and linking foreign direct investors to Slovak suppliers while promoting Slovak-based companies in their effort to compete in international markets. Since 2014, SARIO maintains a portal for exporters (https://export.slovensko.sk/) with the goal of providing comprehensive information on state support for exporters, and in particular to be a single contact point for Slovak businesses searching for

export information. The portal provides information tailored to either 'Starting Exporters' or 'Established Exporters'[15]. For the former, this covers market selection (basic information on foreign markets and market research, export strategy and how to assess risks, etc.) and market entry (logistics, payment methods, pricing, insurance, etc.).

In addition to the web portal, SARIO operates a number of specific support initiatives for SMEs through the National Project Support of Internationalisation of SMEs. This project is implemented in the framework of the OP II and targets an increased internationalisation of SMEs, notably by exploiting opportunities within the EU's Single Market. It is co-ordinated by SARIO in partnership with the SBA.

One of SARIO's main activities in this project involves supporting the participation of SMEs in international ehhibitions. It supports missions to market destinations such as St Petersburg, Oslo and India. It is planned to carry out 70 business missions (40 abroad and 30 in the Slovak Republic) and fund 75 stands at fairs and exhibitions (70% in EU Member States and 30% external to EU) during the period 4th quarter 2017 to 3rd quarter 2023. SARIO concentrates its support on organising the mission rather than the direct travel costs of participants. However, if the overall costs of a business mission do not exceed the set budget, then travel costs of the participants' group can be covered as well. SARIO also provides services related to organisation of national stands at international fairs and exhibitions abroad. These stands give the opportunity to Slovak SMEs to present their production and business offers, to get an overview of technical and technological development in the given industry area and to establish business contacts with the goal of concluding contracts and exporting products abroad. SARIO covers the cost of developing a joint exhibition stand under the slogan 'Good Idea Slovakia' (e.g. Electronica Munich in November 2020).

Moreover, SARIO organises pre-event advisory meetings for those participants that attend trade fairs, business missions and sourcing events abroad. The goal of these meeting is to provide advice which will include basic information on the territory, instructions regarding the event, relevant contacts to partners in the territory, advising with financing and insurance of exported goods or services in the given territory, advising regarding credit worthiness of business partners in the territory, etc. (https://www.sario.sk/en/support-smes/pre-event-advisory-meetings). Slovak SMEs can also receive individual consultations on events which, based on their characteristics, would be most suitable for their participation.

SARIO also organises an Export Academy within the project to increase the knowledge of SMEs on techniques and practices in foreign trade. The Export Academy organises seminars in the regions and at SARIO headquarters in Bratislava on topics such as optimising exporter websites for search engines, Linkedin profiles and most recently managing the COVID-19 impact. The focus is on developing 'hard skills', i.e. techniques and operations in foreign trade, as well as 'soft skills', for instance negotiation skills in contact with a foreign partner, communication, presentation, and cultural differences and customs in territories of interest. An integral part of the Export Academy is advice based on shared information, practical trainings and successful examples from practice (https://www.sario.sk/en/support-smes/export-academy).

Another important strand of the project is Supply Chain Development, aimed at building a systematic approach to supply chains and increasing the degree of involvement of Slovak SMEs in supply networks, including by increasing their competencies. This initiative should identify gaps in supply chains as well as the untapped potentials of established Slovak SMEs in specific industries. This should identify potential for increasing exports by SMEs and reducing imports of commodities. In the first phase of implementation, the goal is to identify the needs of original equipment manufacturers (OEMs) and their key suppliers (Tier 1 and Tier 2). This knowledge will give an idea of what companies at the lower end of the supply chain (and companies currently off the grid) need to achieve in order to move to the top.

SARIO also has the ambition to create a comprehensive database tool mapping current supply chains, the untapped potential of Slovak SMEs and the long-term requirements of key customers. SARIO will ensure regular updating of the interactive database and the data published in it. New interactive elements will be gradually added to the database system in order to ensure the active involvement of members of the target group in the database in the form of updating their own data and using the tools offered and to ensure the sustainability of the database.

SARIO is also preparing a series of Business Link events to develop co-operations between customer and supplier firms in supply chains. Events can be tailor-made for the foreign or domestic partner within the framework of discussions on future subcontracting cooperation and closed to the public, or they can be wider professional conferences open to business and the expert public including panel discussions and presentations in the presence of professionals from practice. The events aim to identify available production capacities in Slovak SMEs and opportunities for sales. For attendees from abroad there are information seminars about business and investment opportunities, mergers and acquisitions projects, creating joint ventures and about cooperation in the area of technology use (https://www.sario.sk/en/support-smes/sourcing-and-cooperation-events).

These initiatives represent a comprehensive support system for SME internationalisation. However, the links with the general business advisory services provided by SBA and the innovation support by SIEA are not clearly articulated. In addition, the management of client relations and the follow-up of firms post support does not seem to be optimal (e.g. use of Excel for tracking client data). A client management system would be valuable to share information on businesses supported with advisory services across all agencies (SARIO, SBA-NBC, SIEA, Eximbanka, etc.).

Furthermore, in line with the Business Finland business ecosystem example (Box 5.1), it is recommended to shift to a much more focused approach for internationalisation support built around clusters or supporting supply chain development by providing services to a group of SMEs working to jointly target new markets.

Entrepreneurship training programmes

This section focuses on entrepreneursip training outside the formal education system, e.g. start-up weekends, bootcamps, short courses for budding entrepreneurs, and entrepreneurship training in incubators. Various business associations are active in promoting entrepreneurship, including various entrepreneurship skills development activities, including the Entrepreneurs Association of Slovakia (ZPS)[16], the Young Entrepreneurs Association of Slovakia (ZMPS)[17], the Junior Chamber International Slovakia (JCI)[18], etc. Activities include promoting entrepreneurship prizes such as the Young Innovative Entrepreneur Competition organised under the auspices of the Deputy Prime Minister for Investment and Informatisation in 2019. The associations also organise events for their members, often sponsored/co-hosted by businesses (notably business service companies). For instance, JCI runs an annual business bootcamp for young entrepreneurs.

The ZPSis working with the SBA activities to support entrepreneurship skills development in four areas: a scheme to support business education to be implemented by the SBA; a proposal for 14 methodologies for the development of selected skills; building an ecosystem of individuals and organisations with the aim of increasing the quality of entrepreneurship teaching; and a platform for consultation with the educational community on next steps. In particular, at the initiative of ZPS, a draft support programme for business education was prepared and submitted to the MESR for approval at the of end 2019. The programme aims to provide support in the form of education, courses, excursions, visits to companies, foreign internships and home trainings aimed primarily at supporting entrepreneurial skills of the general public, but also at pupils and students and graduates and educators in the formal education system.

Various coworking and incubator spaces organise and promote entrepreneurship skills development, mainly through workshops or mentoring activities. An example is the TUKE start-up and incubator centre at the Technical University of Košice, with links to the Regional Hub of the European Institute of Innovation and Technology (EIT). TUKE also runs an Innovative Idea Competition for innovative ideas, projects and business solutions from young innovators. Similarly, the University Technology Incubator at the Slovak University of Technology in Bratislava runs a series of events that help build entrepreneurship skills, including Hackathons. Companies hosted by the incubator are required to attend at least half of the events.

There are a number of co-working spaces located in Bratislava and regional cities that are also involved in organising events aimed at entrepreneurship skills. Examples are start-up weekends at HubHub[19] in Bratislava and the 3-month Academy of Business School programme at the Kruháč co-working space. Another example is the Uplift Accelerator programme[20] run as part of the ImpactHub co-working venture in Bratislava, which provides a 4 month complex acceleration programme, linked to potential investment of up to EUR 200 000 investment for selected start-ups and a EUR 10 000 cash prize for the best team. The start-ups receive advice from 50 or more top industry experts, mentors and successful entrepreneurs. The accelerator targets start-ups and teams mainly in the field of Urban Innovation and Blockchain.

Many events are aimed at the digital tech sector such as Measure Camp[21] and the Butterfly Effect[22]. The Butterfly Effect aims to nurture talent for business and entrepreneurship, and motivates young people to stay in, or return to, and professionally grow in the Slovak Republic. Interdisciplinary teams work on real-world projects under the supervision of experienced professionals from several partner companies – so they learn by doing and from their mistakes. This initiative is more aimed at app and games developers than entrepreneurs, per se.

Junior Achievers Slovakia also organises a range of events and actions to promote entrepreneurship to young people and to some extent to the general public alongside its support to entrepreneurship education in the formal school system. For instance, the Young Leader event is intended for the most successful graduates of JA Slovakia educational programmes from all over the Slovak Republic. It takes place over four days, during which participants have the opportunity to : discover the secrets of successful leadership, improve their managerial, communication and presentation skills through interactive workshops and indoor and outdoor activities led by experienced instructors; and improve their team decision-making and crisis management skills. Another example is the Mini Innovation Camp, which JA Slovakia runs in cooperation with the Bayer Fund and the IUVENTA - Slovak Youth Institute. The Mini Innovation Camp is an intense experience for students that stimulates their creative and innovative abilities. Students work on a real challenge in mixed 3-member teams seeking to find the best solution on a given topic and present it to a professional jury.

In addition, the SBA supports entrepreneurship skills development. In 2018, the SBA supported more than 30 projects with the aim of creating new business ideas for the general public and educating them on business issues. Similarly, the SIEA is implementing the National Project Inovujme.sk (Increasing the innovation performance of the Slovak economy)[23] including a number of activities aimed at promoting innovation and entrepreneurship. For instance, an Innovation Day event took place in February 2020 as one of the prizes for the winners of the Young Creator competition. Innovation Days took place at the Secondary Vocational School of Mechanical Engineering in Kysucké Nové Mesto and at the Secondary Vocational School of Information Technologies in Banská Bystrica with more than 190 students from the secondary schools taking part. Finally, there are a number of dedicated websites and news services aimed at start-ups and entrepreneurs including https://slovakstartup.com/ which has the mission “to substantially contribute in putting the Slovak Republic on the global map of start-ups and innovation along with creating long lasting buzz about our start-up ecosystem”.

Compared to other countries, see for instance the Irish case in Box 5.2, the Slovak approach to entrepreneurship training and skills development seems rather fragmented and depends on ad hoc projects and events delivered by various organisations with limited coordination. There is a strong rationale for the development of a national entrepreneurship training and skills initiative to consolidate funding and ensure synergies within a single multi-annual programme with clear objectives (e.g. addressing varying propensities to become an entrepreneur across different parts of the Slovak population – peope in lagging regions, women, socially disadvantaged groups, etc. – and supporting new entrepreneurs in key exporting sectors or emerging innovative or high potential niches in the economy).

Box 5.2. Developing entrepreneurship skills and training: the Irish approach

Description of the approach

Enterprise Ireland and Science Foundation Ireland (SFI) support entrepreneurship training aimed at incubation, early-stage entrepreneurship and high growth firms.

Since 2016, SFI has been co-operating with the US National Science Foundation (NSF) through the I-Corps programme to organise boot camps where Ireland-based teams travel to the United States and engage in a six-week customer validation process. Furthermore, academic researchers who are awarded an SFI Technology Innovation and Development Award are offered entrepreneurship and commercialisation training.

Enterprise Ireland finances New Frontiers, Ireland's national entrepreneur development programme, delivered at local level by the Institutes of Technology. The New Frontiers Programme provides help and support to accelerate pre-start up business development and to equip entrepreneurs with the skills and contacts they need to start and grow a company. The support provided includes training in all areas of business including financial management, market research and validation, business process, patenting, product development, sales training. In terms of geographical distribution, 85% of entrepreneurs who receive pre-start-up entrepreneurial training via New Frontiers receive their training in the regions outside Dublin.

Relevance for the Slovak Republic

In order to tackle the issue of building entrepreneurial skills and knowledge in an integrated and comprehensive manner, various countries have developed initiatives that provide a systematic approach tailored to the learning and development needs of individual entrepreneurs. Ireland is a good example as it has developed a set of programmes and schemes at national level that cover the spectrum of entrepreneurship training needs.

SME workforce skills development programmes

This section assesses support for SMEs to recruit skilled labour or train their workers, such as graduate placement schemes, apprenticeship placements, SME training networks, subsidies for SMEs to train or host apprenticeships, etc.

To help tackle sectoral and regional skills gaps in the Slovak Republic, the National Project Sector-driven Innovations towards an effective Labour Market in the Slovak Republic was launched in April 2019. It is funded via the OP Human Resources, with total eligible expenditure of some EUR 19.8 million for the period April 2019 to February 2023. The aim is to improve adaptability of employees and enterprises via measures focused on smart industry, identification of vulnerable professions and

anticipating skills needs driven by technological change and sector innovation. Through the project, skills needs are assessed by 24 sector skills councils[24] which mobilise some 600 people. The sector skills councils are voluntary independent professional associations of experts monitoring labour market needs in the key sectors of the national economy and making recommendations to adjust the lifelong learning system. There is also an overall Sectoral Skills Council, which mobilises representatives of ministries, regions and business federations. Its role is to analyse future needs and develop a competence framework for each sector. The development of the sector skills councils seems to be a positive step as long as it is informed by analysis and forecasting of skills needs and results in joint actions by employers and training organisations to adjust the offer of training to SME needs.

In addition the OP Human Resources has supported a call for actions aimed at the Development of Sectoral Skills, on the initiative of the Ministry of Labour, Social Affairs and Family (MLSAF). The objective is to stimulate the submission of business-led, 'demand-oriented' projects. The call closed in May 2019 and 176 applications were received, of which 111 were approved. The initial allocation for the call was EUR 10 million but the funding was increased, given the demand, to EUR 14.5 million. Through these demand-driven projects, employees (including recruited job seekers) are enabled to acquire new skills through targeted internal company training. The MLSAF is following up with a similar call under the title Development of Sector Skills II.

A key element in the efforts to encourage SMEs to invest more in continuous training is the implementation of the revised Act on Vocational Educational and Training (VET) of June 2018. The Act further develops work-based learning via a dual style apprenticeship system, first introduced in 2015. New measures seek to improve the attractiveness of the system and encourage more SMEs and vocational schools to join and thereby increase the number of students in the dual system.

In particular, the following measures were taken:

- Administrative requirements were reduced. This related to simplyfing the process of certifying companies for providing practical training in the dual system, removing deadlines for applications, provision for honest declarations to replace official verifications, and removal of the obligation to undergo further certification when increasing the number of students in dual VET.
- The share of practical training that can be carried out by another employer certified for dual education was increased. This measure targets SMEs which do not dispose of their own capacity to meet material, technical, spatial and personal requirements to provide practical training. As a result it is possible for businesses to carry out all the practical training outside own premises.
- Direct payments to employers providing practical training for students were introduced to make the financial incentives more effective. In addition to the tax exemptions, businesses can receive direct cash payments per student per year. In the case of SMEs, direct payments can effectively complement the tax exemptions, since SMEs often cannot make use of them (e.g. due to a low tax base).
- Financial cuts to VET schools resulting from the shift of practical education to companies were eliminated. The financial cuts represented a serious barrier to entry into the dual system for VET schools, making it difficult for them to cover the costs of teachers in classes mixing students participating in the dual system and students from the standard system.
- The upper limit for the student allowance paid by employers was abolished. This measure aims to motivate more students to take part in practical training provided by employers (within or outside the dual system), given that employers are often willing to pay a higher allowance to students than the maximum limit formerly set (i.e. the minimum wage).

Despite such developments, the ability of SMEs to attract and retain employees with the right skills is problematic in the Slovak Republic. Improvements have been made in national curricula, including educational standards, and new programmes have emerged in sectors where experts of the State Institute of Vocational Education, respective VET colleges and employer representatives cooperate closely. However, no systemic solution to skills gaps is in place yet (CEDEFOP, 2018).

One example of a 'systemic' approach is the Digital Coalition initiative[25], the national coalition for digital skills and occupations of the Slovak Republic. The Coalition is an initiative of the IT Association of the Slovak Republic and the Office of the Deputy Prime Minister for Investment and Informatisation. Founded in Septemebr 2017, it has 21 founding members. Its goal is to mobilise across a range of public, private, academic and civic organisations and institutions to improve the digital skills of citizens, IT specialists, employees and students in education. In 2019, the Digital Coalition had 83 members with more than 232 commitments to action. Members join the Digital Coalition voluntarily and free of charge by acceding to the Digital Coalition Members' Memorandum while making commitments to manage the impact of Industry 4.0 on human resources (the digital transformation of society), in particular by supporting digital skills[26]. In relation to these objectives, the State Institute of Vocational Education's 2019 work programme contained a task aimed at identification of Industry 4.0 relevant competences and analysis of new VET programmes related to Industry 4.0 requirements.

Overall, the Slovak system for SME workforce skills development is in need of further reinforcement building on the recent developments and ensuring that the outputs of the sectoral skills councils are fed into improved training programmes that enhance both technological and soft skills in SMEs. Enhancing skills for integration of new technologies, international marketing, etc. within domestic SMEs operating in international value chains should be a priority. Enhancing continuous vocational training will be critical for the Slovak economy to maintain its competitiveness and it is not yet clear if the changes to the dual-apprenticeship scheme will be sufficient to encourage SMEs to invest more.

A potential learning model for a more systematic approach can be found in Germany. As part of the Allianz Industrie 4.0 initiative in the German State of Baden-Württemberg, the Ministry of Economy, Labor and Housing promotes the establishment of learning factories 4.0 at vocational schools in order to prepare specialists and young people for the requirements of Industry 4.0. In the learning factories, students are introduced to the operation of systems based on real industry standards. The learning factory 4.0 is a laboratory that is similar in structure and equipment to industrial automation solutions, in which the basics for application-related processes can be learned. The target populations of the learning factories 4.0 are trainees in dual training courses in the fields of metal and electrical engineering, as well as participants in technical schools or in further education courses / training courses from medium-sized companies.

SME access to finance

The "Manifesto of the Government of the Slovak Republic 2016-2020" outlined the main policy directions of the previous government, installed in 2016. It highlighted the importance of facilitating access to finance, and suggested a modal shift from grant financing to other support mechanisms and an increasing role of the Slovak Guarantee and Development Fund and the Slovak Investment Holding. This is in line with recommendations by the European Commission (see, for example, European Commission, 2019a). The Slovak Republic would be advised to continue this trend going forward.

Eximbanka

Eximbanka is the import-export bank of the Slovak Republic and is part of the Ministry of Finance. The organisation provides:

- A variety of export insurance products, covering a range of risks that commercial insurance companies are typically hesitant to cover. Of particular relevance for this report is the eMSP, the insurance for short-term export receivables for the risk of non-payment. This is one of the few products in the Eximbanka portfolio reserved to SMEs. Compared to many other targeted policies to support SMEs in the country, the procedure is quite light and the application process fast, marking it as a good practice for other public authorities in the Slovak Republic.
- Export financing facilities. This again covers different credit lines. One of them is a loan from the European Investment Bank (EIB), a credit line specifically for SMEs and Midcaps (i.e. companies with employees within the 250 - 3 000 range). These are concessional loans for investment projects and operational capital.
- Bank guarantees against the insolvency of exporters' business partners.

In 2019, Eximbanka's financial support (covering the above instruments) amounted to around EUR 3.4 billion. In terms of volumes, 90% of this amount flows to large companies (as they also account for the clear majority of export activities, especially to export destinations outside of the EU, which often required tailored support).

Eximbanka cannot support companies that have been on the market for less than three years on the premise that they are typically not ready to enter foreign markets. International experience, however suggests that there is likely to be a non-negligible number of start-ups active in foreign markets in the Slovak Republic. In Sweden, a country of almost twice the population size as the Slovak Republic, out of 15 000 start-ups created between 1998 and 2011, around 3 500 exported within the first three years of their existence. For around 360 of these firms, the so-called "born globals," export activities represented more than 25% of their sales volume. The 2015 export strategy emphasised the importance of such companies and typically does not exclude young firms and start-ups from financial support (mainly provided through EKN and SEK – government bodies broadly similar to Eximbanka) (Ferguson, Henrekson and Johannesson, 2019). There appears to be no compelling reason to exclude start-ups and young companies from Eximbanka's support package.

The Slovak Guarantee and Development Bank

The Slovak Guarantee and Development Bank (Slovenská záručná a rozvojová banka – SZRB) was established in 1991 and is owned by the Ministry of Finance. Its mandate is to support SMEs in need of finance. The SZRB has its headquarters in the capital and has nine regional branches. The SZRB lends to SMEs (as well as to towns and municipalities and a limited number of other legal entities). At the end of 2018, the organisation issued 644 direct loans to SMEs for a total value of EUR 115 million, with a total outstanding loan portfolio of EUR 303 million. This includes micro-loans to target groups (women entrepreneurs, young entrepreneurs and student entrepreneurs), a dedicated programme for agricultural firms and an overdraft facility (SZRB, 2018).

To be eligible for the microfinance from the SZRB, SMEs must generate no more than EUR 7 million in annual turnover and EUR 5 million in profit. The SZRB provides short- and medium-term loans greater than or equal to EUR 5 000 at relatively low interest rates, depending on applicants' credit risk. Micro-loans are provided for working capital and investment purposes and provide SMEs with coverage for co-financing EU grants and developmental projects (OECD, 2020).

It also provides bank guarantees for companies which lack collateral. In 2018, the Bank approved 268 guarantees totalling EUR 29.2 million with a total outstanding portfolio of EUR 78.4 million. Almost three-quarters of the guarantee volume was for bank guarantees for loans provided by commercial banks (i.e. *Tatra banka, a.s.* and *Slovenská sporiteľňa, a.s.*) and the rest for more niche products. Up to 55% of the loan value was guaranteed by the SRZB (SZRB, 2018).

The Slovak Investment Holding (SIH)

The Slovak Investment Holding (SIH) is a wholly-owned subsidiary of the SRZB created in 2014. It runs various revolving support mechanisms for SMEs in need of finance under the form of loans, guarantees and equity. Some 3% of the European and Structural and Investment Funds (ESIF) were allocated to the SIH during the 2014-20 programming period, mainly through the so-called National Development Fund 2 (whereas the National Development Fund provided support during the previous programming period). Support to SMEs is part of the mandate of the SIH, in addition to transport infrastructure, energy efficiency and waste management projects, and the social economy.

SIH is a fund of funds, holding a portfolio of investment funds, including funds managed by the European Investment Fund (EIF). The SIH manages EUR 900 million, the majority of which is channelled through banks and other financial intermediaries through guarantee and loan products, and a significantly lower proportion as equity or quasi-equity to venture capital funds. The SIH also makes direct co-investments (i.e. alongside private investors) in a selected number of SMEs, typically for relatively large tickets (Slovak Investment Holding, 2018).

The risk-sharing instrument for innovative SMEs focussing on capital and quasi-capital instruments, won the “fi-compass competition” in 2019, a European competition for ESIF-supported financial instruments. It is a novel instrument introduced at the end of 2017 and the SIH has invested in around a dozen companies by the end of 2019. Its activities could be scaled up and expanded to a larger number of companies.

The Central Europe Fund of Funds

In 2018, the European Investment Fund (EIF) and the International Investment Bank (IIB) created the Central Europe Fund of Funds (CECoF), together with public partners from Austria, the Czech Republic, Hungary, the Slovak Republic and Slovenia. It is a regional fund of funds of EUR 80 million, which aims to mobilise investments in the aforementioned five countries of at least double that amount by investing in around 8 venture capital and private equity funds active in the region. The asset management subsidiary of the Slovak Guarantee and Development Bank (SZRB AM) acts as the partner from the Slovak Republic for this initiative.

The Slovak Business Agency

Since 1997, the Slovak Business Agency (SBA) runs a micro-finance programme offering credit facilities of between EUR 2 500 and 50 000 with a duration of between six months and four years.[27] Micro-firms and small firms (as defined by the European Union definition of employing fewer than 50 employees, having an annual turnover up to EUR 10 million or annual balance sheet of no more than EUR 10 million, and meeting the criterion of independence) are eligible. The rates are on preferential terms at an average rate of around 5% (without a state aid element) and creating jobs represents a primary rationale for the programme.

In 2018, 66 SMEs benefited from microcredits, averaging EUR 23 280, and totalling EUR 1.5 million. Between 2013 and the end of 2018, a total of 9.6 million was lent as micro-finance by the SBA (OECD, 2020).

The SBA micro-loans are financed from its own resources (based on the state programme) and are linked to education, mentoring, consulting and also to support in the field of international activities. This combination of financial and non-financial support, together with the more lenient lending conditions makes the scheme distinct from the micro-finance facilities of the SRZB.

In addition, a specialised subsidiary company of the SBA, the National Holding Fund (NHF), provides equity or quasi-equity investment to high-potential start-ups and SMEs. In 2018, the NHF made three

new investments for a value of EUR 0.45 million. Since the start of the programme, it provided funding for a total of EUR 91.6 million, which has been used to support 212 SMEs.

Overall, there are a number of areas where further policy actions can be undertaken to further strengthen access to financing for SMEs and entrepreneurs.

First, the Slovak Guarantee and Development Bank would be advised to allocate additional funding to the SIH for financial instruments with a repayable character in the next programming period. In particular, it could further strengthen its role to support venture capital and other equity instruments in the country. Incentives to investors in venture capital funds investing in SMEs and entrepreneurship can be also considered as well as further support to public-private venture capital funds can be considered. As chapter 4 of the publication highlights, the equity market in the country is limited, both in the number of operations, as well as in terms of the average ticket size.

Second, while the EIF selected 4 investment fund managers (Espira Fund I, Enem Tech III, Ascendant Buy-Out Fund and Evolving Europe Principal Investments Fund) for the CEFoF with an allocation of EUR 35 million, the SZRB AM has not designated a fund manager, despite promotional activities in the Slovak Republic (OECD, 2020). The selection of a qualified fund manager will prove critical for the successful implementation of the fund of funds.

Third, there are multiple public venture capital funds, administered by different parts of the government. In addition to the NHF and Slovak Development Fund, the Innovation and Technology Fund and Eterus Capital are also in operation. These funds are small, making only a handful new investments every year. There seems to be no compelling reason for the current arrangement, and it may prove cost-effective to rationalise these different funds and administer them by one parent public organisation. This does not impede the co-existence of several funds, for example focusing on certain sectors or stages in firms' life cycles, as long as they each have sufficient scale to manage efficiently and professionally. The Small Business Administration in the United States, for instance, co-invests in small businesses through so-called Small Business Investment Companies (SBICs). SBICs are licensed by the Small Business Administration, which also matches private investments (2 USD for every 1 USD of private investments).

Public procurement for SMEs

According to the Small Business Act for Europe (SBA) Fact Sheet, developed by the European Commission, the performance of the Slovak Republic in terms of the accessibility of its public procurement for SMEs is in line with the European average. It acknowledges important improvements in recent years, most notably the simplification of procedures and the introduction of quality award criteria (European Commission, 2019a).

The Office for Public Procurement (UVO by its acronym in Slovak) is the central State administration institution responsible for public procurement in the country and also checks if procurement procedures are law-compliant. It also provides training and guidance to the various contracting authorities active in the country (including on how to facilitate SME access), as well as advisory services to (small) businesses that want to take part in a tendering procedure.

In compliance with the EU directive on public procurement of 2014, the procedure has several features that facilitates smaller businesses to participate, for example the practice of digitalising most of the application process, and breaking large contracts into smaller lots, making them more accessible to smaller businesses. Several procedures, such as the low value contract procedure, were also simplified in recent years. Possibly as a result, SMEs increasingly participate in public procurement contracts, both in terms of the number of contracts as well as in euro terms. In 2018, 94.3% of public procurement

contracts were awarded to SMEs, accounting for 62.7% of overall contract value (for a total amount of slightly over EUR 3 billion).

While public procurement procedures generally perform well, the number of contracting authorities, estimated to number 6 700 in total (as of August 2020), many of them operating at the regional and municipal level, may be too high to be fit for purpose. The relatively high number of contracting authorities, especially for those who issue tenders on an irregular basis, is perceived to negatively impact their level of professionalisation in some instances. The Slovak authorities could encourage joint public procurement tenders for this reason. A key consideration is that this should be done on a voluntary basis. Another concern is that this consolidation should not overly increase the size of contracts, which would make them less accessible to SMEs.

Other possible avenues to raise the expertise of contracting authorities involve introducing a certification system, for example modelled on the Hungarian approach. In Hungary, the Department for Public Procurement Control checks the eligibility, accountability and technical aspects of every public procurement procedure within five working days, and issues certificates to the contracting authorities if no irregularities are found (Nyikos and Soós, 2017). In addition, tendering documents and procedures could possibly be more standardised and harmonised.

At the same time, tendering processes in the Slovak Republic often select winner bidders on the basis of prices as the only criterion. While a price-only criterion has its advantages, in particular its simplicity, it does not allow qualitative considerations, innovations or the full life-cycle costs for requirements with long operating lives to be taken into account (OECD, 2016). In addition, there is some evidence that a strong focus on price makes the tendering process less accessible to smaller enterprises. Most EU Member States therefore most often take other selection criteria into consideration (European Commission, 2019b). The Slovak Republic, the UVO in particular, could encourage the inclusion of qualitative criteria in public procurement procedures. In recognition of this observation, the UVO has initiated the Responsible Public Procurement project in March 2020 in collaboration with the OECD. Part of the ambition of this project is to stimulate the use of the “Most Economically Advantageous Tender (MEAT)” among contracting authorities.

In addition, it would be useful for the Slovak government to provide a single platform through which all public procurement must pass. This would support public procurement from SMEs by standardising all procurement processes and making them fully transparent.

Furthermore, SMEs often struggle to access calls for higher value added, innovative procurement. In such cases, pre-commercial procurement calls may be targeted to support SMEs in undertaking the R&D required to compete for such larger calls.

Finally, an OECD review, conducted in 2017, highlighted that, while the Slovak Republic is an early adoptor of an e-procurement procedure, its digital environment could be improved in several ways. In particular, it found that the current system lacks clarity in terms of governance, legislation, processes and systems. The rules in place could be simplified, made more user-friendly, and could cover the full end-to-end process more comprehensively (OECD, 2017). The UVO is aiming to set up a project to fully implement the recommendations of the OECD review.

Entrepreneurship programmes for under-represented social groups

Countries often have specific dedicated programmes in place to encourage business activities among groups in society that are under-represented in entrepreneurial activities such as women, youth, people with disabilities, seniors and the unemployed. This section provides an overview of the main policies and programmes in this area.

Female entrepreneurship

The gender gap in entrepreneurship in the Slovak Republic is slightly above the OECD average. Between 2014 and 2018, 2.4% of Slovak women were new business owners relative to 4.7% of men, which were both slightly below the share across OECD countries (3.0% of women and 4.8% of men) (OECD/EU, 2019). There are many factors that explain this gender gap in business creation. This includes, for example, fewer women reporting that they have the skills and knowledge to start a business (41.8% of Slovak women report having the skills and knowledge to start a business relative to 59.5% of men) (OECD/EU, 2019). Moreover, recent surveys in the Slovak Republic highlight that the most frequently cited barriers to business creation cited by women are social isolation (28.7%) and access to finance (27.5%) (Pilkova et al., 2017).

In response to the identified obstacles faced by women entrepreneurs, a small number of tailored programmes have been launched. These tend to focus on supporting access to finance, but some recent regulatory changes have also sought to improve access to childcare for self-employed women. Entrepreneurship training programmes and incubators are available, notably through the Slovak Business Agency (SBA). While some of these programmes conduct targeted outreach to (potential) women entrepreneurs, the programmes themselves are not typically tailored to the needs of women entrepreneurs. This gap could be filled by strengthening entrepreneurship networks and peer-learning opportunities for women, particularly outside of Bratislava. Some inspiration can be drawn from the ACORNS initiative in Ireland, which provides group-based coaching and training in rural areas (Box 5.3)

Enhancing the cross-sector emergence of new Women Business Angels across the EU

The SBA is currently implementing the international project “Enhancing the cross-sector emergence of new Women Business Angels across the EU” with several partners in Germany, Greece, Poland and Spain. The project has four specific objectives:

1. Better understand the success factors, obstacles and challenges that women face in becoming business angels in the European Union;
2. Increase the diversity of women business angels and the number of sectors that benefit from their investments;
3. Increase the number of ready-for-investment women entrepreneurs’ projects;
4. Effectively match women business angels and women entrepreneurs, including through a cross-border investments network and supporting the emergence of women business angel associations and clubs.

The initiative is structured around three main activity blocks: (i) information, awareness raising and communication activities which aim for change in the mind-sets of potential female entrepreneurs; (ii) training and mentoring activities to prepare novice Women Business Angels through peer-learning and practical training; and (iii) community-building, matchmaking and networking activities to recruit new Women Business Angels and match women entrepreneurs and Business Angels.

Woman Entrepreneurs of Slovakia

There is an annual contest of the “Woman Entrepreneur of Slovakia”, organised by the SBA, celebrating successful women entrepreneurs. There are also other events promoting economic and social successes of women. However, more can be done in entrepreneurship education and training programmes to promote a positive image of women entrepreneurship. Presenting a gender-neutral image of entrepreneurship, showcasing success stories and demonstrating the various possibilities of

entrepreneurship (e.g. part-time entrepreneurship, social entrepreneurship, team entrepreneurship) could help to motivate young women to consider entrepreneurship as a career option.

Regulatory changes

Support for women's entrepreneurship has been strengthened in recent years. An important regulatory change was made in March 2017 (Amendment No. 40/2017 to Act No. 448/2008 on Social Services), which is expected to facilitate access to childcare for women entrepreneurs by relaxing the conditions for using public childcare.

Box 5.3. Accelerating the Creation Of Rural Nascent Start-ups (ACORNS), Ireland

Description of the approach

The ACORNS programme, funded by the Department of Agriculture, Food and the Marine through the Rural Innovation and Development Fund, has been designed to support early-stage female entrepreneurs living in rural Ireland, i.e. female entrepreneurs who have recently started a business, which has less than two years sales, or who are at an advanced stage of setting up a business. The ACORNS initiative is built around on interactive round-table sessions, which are led by "Lead Entrepreneurs," i.e. female entrepreneurs based in rural areas who have been successful, and can serve as role models.

The programme commences with a two-day development Forum where participants meet each other, their Acorns Lead Entrepreneur and their round-table group for the first time. The Lead Entrepreneur and their group of eight peers meet subsequently in separate round tables focused on thematic topics on six occasions and the programme concludes with a second two-day development Forum. In addition, past participants are invited to join the "ACORN Community" and can enter the Further Development phase, which includes:

- Two round-table sessions with their ACORNS Lead Entrepreneur;
- An opportunity to attend topic based workshops relevant to their development;
- Further networking opportunities;
- Development of individual participant profiles;
- Tracking of progress against agreed goals and milestones.

There are almost 160 early stage female entrepreneurs currently being supported through ACORNS. The initiative was the runner-up in the European Enterprise Awards 2018. Investing in Entrepreneurial Skills and was specifically mentioned by the SME Assembly in the Manifesto for the Development of an Innovative Europe.

Success factors

The main success factor is the quality and enthusiasm of the Lead Entrepreneurs. It is important to develop selection criteria for the Lead Entrepreneurs to ensure that they have an appropriate level of experience and success. This will help make the scheme attractive to potential participants. However, the criteria cannot be so strict that volunteer Leads are discouraged from becoming involved.

Second, it is critical to design and implement an appropriate selection process for participants. The Irish experience shows that demand for participation in the initiative exceeds the number of available slots. To maximise impact, participants should be selected according to their motivations and the potential of

their businesses for growth. It is important to include women entrepreneurs who are open to growth but not yet achieving it.

It is also important to use champions to promote the scheme. The popularity of the initiative in Ireland is due to two factors. First, both participants and Lead Entrepreneurs have been acting as champions and promoting the initiatives whenever they can. Having this support from those involved in the initiative helps send a credible message to those who may be potentially interested in participating. At the same time, the Irish initiative has benefited from extensive press coverage. It is therefore important to have a communication plan and to co-ordinate at least some of the outreach efforts by the champions.

Finally, it is important to monitor the impact of the programme. ACORNS closely monitors the business activities of participants and continually seeks to improve the support offerings. This includes informal monitoring as well as a regular survey at the end of each cycle. It is important to benchmark the progress and to feedback these results into the initiative.

Obstacles and responses

The principal challenge faced is to maintain the number, calibre and commitment of the Lead Entrepreneurs. Lead Entrepreneurs are identified through other programmes such as Going for Growth, as well as past participants of the ACORNS initiative. Their sustained commitment has acted as a reference to others being approached to volunteer. Over time it has become clear that the Leads are enthused by the progress that they observe the participants make over the cycle. They are centrally involved in reviewing and developing the initiative, and have developed a very strong network among themselves

Relevance to the Slovak Republic

Most of the programmes that seek to develop entrepreneurship skills for women entrepreneurs in the Slovak Republic are generic programmes that are not typically tailored to the needs of women entrepreneurs. Moreover, there is a gap in the number and quality of support offers in Bratislava relative to other cities. This Irish initiative provides a blueprint for how tailored support for women entrepreneurs could be delivered in a relatively low-cost way by leveraging knowledge and experience of volunteer Lead Entrepreneurs.

Source: Acoms (2021)

Programmes for the unemployed

In 2018, about 1.5% of the unemployed in the Slovak Republic intend to return to work through self-employment, which is slightly below the average for European Union Member States (2.4%) (OECD/EU, 2019). Nonetheless, a suite of support offers is available to the registered unemployed through the Office of Labour, Social Affairs and Family. This includes entrepreneurship training, coaching and grants. However, the total number of beneficiaries using the available entrepreneurship training and coaching declined 69.3% between 2012 and 2017. Accordingly, the availability of entrepreneurship training and coaching has declined in recent years.

Grants for starting in self-employment for the unemployed

The grant is part of active labour market measures under the auspices of the Office of Labour, Social Affairs and Family. The value of the grant is EUR 3 578, on average, but the amount is adjusted in regions in response to relative levels of regional unemployment. To qualify for the grant, applicants must be registered as unemployed for at least three months and are required to submit a business plan with their application. After receiving this grant, the self-employed person cannot return to the unemployment registry for three years. Applicants are encouraged to complete an entrepreneurship

training programme that is offered by Office of Labour, Social Affairs and Family. The training covers basic accounting, business planning and administrative obligations. However, it is not mandatory and take-up is low (IZ, 2016). In 2017, 2 667 people received the start-up grant, which was an annual increase of 36%. Out of the recipients, 48.1% were women.

A similar grant programme exists for people with disabilities who are registered as unemployed (based on the Act on Labour Services nr. 5/2004). This grant is 20%-33% higher than for the unemployed in general. The obligation to remain self-employed has been reduced to two years (compared to three years for the unemployed). In 2017, 77 people (55% of them women) received this grant. The total spending on this contribution in 2017 was EUR 393 153.

Youth entrepreneurship

Slovak youth (15-30 years old) were about as likely as the overall population (15-64 years old) to be new business owners between 2014 and 2018 (3.8% for youth vs. 3.6% for the population) (OECD/EU, 2019). The rates for youth and adults are approximately equal to the OECD average.

Entrepreneurship support for youth has largely been focussed on the development of entrepreneurship education. Entrepreneurship education is now delivered as part of the curricula in secondary and tertiary education. This is complemented with more hands-on entrepreneurship training offered by non-governmental organisations (e.g. Young Entrepreneurs Association of Slovakia). While often high quality offers, these initiatives tend to be located only in large cities, or near universities.

The SBA and public employment offices also offer entrepreneurship trainings that are heavily used by youth. While the training is not always tailored for the needs of young entrepreneurs, the SBA tailors the format and content of training courses based on needs of those enrolled in each programme.

University incubators

Higher quality support for high potential youth entrepreneurs is available through university-based incubators. Nearly one-fifth of business incubators are operated by universities. Use of this type of support requires that at least one member of start-up team be a university student or recent graduate. These incubators are well-connected to other entrepreneurship support providers and they can direct students to other support services if they are not available at the incubator.

Conclusions and policy recommendations

The Slovak Republic operates a wide range of programmes targeted at SME and entrepreneurship development, principally funded with support of the European Structural and Investment Funds. Overall, they represent a comprehensive and well-structured support system. However, there are certain areas where stronger support would be justified, such as increasing the commercialisation of research from HEIs and public research institutions and increasing support for women and youth entrepreneurship. There are also areas where programme management and co-ordination could be improved, such as in introducing stronger client management systems for business development services and SME internationalisation. Policy recommendations based on the assessment of this chapter are set out below.

Box 5.4. Key policy recommendations on SME and entrepreneurship programmes

Business development services

- Consider introducing an online business autodiagnostic tool to help increase SME awareness of available business development services and orient them to the right support.
- Introduce a client management approach to business development services to identify and monitor support impacts on a portfolio of companies identified for their growth potential or other characteristics (such as entrepreneurs from disadvantaged groups, SMEs in regional clusters or national priority sectors).

Innovation support

- Strengthen innovation support provided by universities to SMEs, for instance by expanding the Support of Research and Development programme, including outside of the capital region.
- Make the R&D tax credit more SME-friendly by simplifying the administrative procedures and introducing specific provisions for SMEs and start-ups.

Internationalisation programmes

- Expand the Supply Chain Development activities of SARIO.
- Provide a "value chain" of support for exporting companies at every step in the business development process by streamlining the currently fragmented system.
- Introduce a client management system that facilitates sharing information on businesses supported by various agencies.

Entrepreneurship training programmes

- Streamline and rationalise initiatives to provide entrepreneurship training outside of the formal education system.

SME workforce skills development programmes

- Ensure that the outputs of the sector skills councils are fed into improved training programmes that enhance both technological and soft skills in SMEs.
- Evaluate the impact of recent changes to the dual apprenticeship scheme on SME participation and readjust if necessary.

Access to finance programmes

- Change programme entry criteria to enable Eximbanka to provide financial support to companies on the market for less than three years.
- Scale up the activities of the Slovak Investment Holding, especially its equity and quasi-equity operations.
- Select a qualified fund manager for the activities of the Central Europe Fund of Funds overseen by the asset management subsidiary of the Slovak Guarantee and Development Bank.
- Rationalise public venture capital and private equity funds.

Public procurement programmes

- Encourage the inclusion of qualitative criteria in public procurement procedures.

- Raise the expertise of contracting authorities through a certification system and encouraging joint public procurement tenders.
- Address potential shortcomings regarding the e-procurement procedure.

Entrepreneurship programmes for under-represented social groups

- Strengthen entrepreneurship networks and peer-learning opportunities for women, particularly outside of Bratislava.
- Expand support for youth entrepreneurship outside of the formal education system.

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Notes

[1] Programmes providing exclusively financial support are assessed in the access to finance section of this chapter. In some cases, the programmes reviewed mix finance and advice and in these cases the advisory services component is covered in this section.

[2] http://www.sbagency.sk/

[3] See: https://www.npc.sk

[4] See: https://www.npc.sk/sk/podpora-zriadenia-rozvoja-narodneho-podnikateskeho-centra/

[5] See: https://www.npc.sk/sk/services/specialne-sluzby-creative-point/creative-point or https://www.facebook.com/CreativePointNPC

[6] See: study available in in Slovakian: http://www.sbagency.sk/sites/default/files/3_studia_rodinneho_podnikania_na_slovensku.pdf

[7] See: http://www.sbagency.sk/rodinne-podnikanie-0

[8] See: https://www.een.sk/en. Other partners are the BIC Bratislava, the Slovak Chamber of Commerce and Industry, the Regional Advisory and Information Centre Presov (RPIC) Prešov and the Slovak Centre of Scientific and Technical Information (SCSTI).

[9] From 13 December 2019 onwards, the European Commission approved the merger of the Operational Programme Integrated Infrastructure (OPII) with the Operational Programme Research and Innovation (OP R&I). The content and funding of the original OP R&I remain unchanged after the transfer to the Operational Programme Integrated Infrastructure.

[10] See: http://en.siea.sk/

[11] See: https://vytvor.me/

[12] See: https://www.inovujme.sk

[13] See: https://www.economy.gov.sk/obchod/podpora-exportu/strategia-vonkajsich-ekonomickych-vztahov-sr-na-obdobie-2014-2020 (in Slovakian)

[14] See: www.eximbanka.sk

[15] See: https://www.sario.sk/en/exporters/assistance

[16] See: https://www.zps.sk/en/

[17] See: https://zmps.sk/en

[18] See : http://www.jci.sk/

[19] See: https://www.hubhub.com/en/education/#twinc

[20] See: https://uplift.sk/

[21] See: https://bratislava.measurecamp.org/

[22] See: https://butterflyeffect.sk

[23] See: https://www.inovujme.sk - funded via European Regional Development Fund in the Integrated Infrastructure Operational Programme.

[24] See: www.sustavapovolani.sk/sektore_rady

[25] https://digitalnakoalicia.sk/

[26] See also https://ec.europa.eu/information_society/newsroom/image/document/2019-32/country_report_-_slovakia_-_final_2019_0D31C79C-EC95-A759-9A4EFF789FEB2FB2_61219.pdf

[27] The programme was suspended in 2010 and re-established in 2013.

6. The local dimension of SME and entrepreneurship policy in the Slovak Republic

This chapter assesses differences in regional conditions for entrepreneurship and SME development within the Slovak Republic and the regional-level policies aimed at supporting development in the whole country. It assesses regional conditions for SME and entrepreneurship development and considers current arrangements for the tailoring of SME and entrepreneurship policies to different regional needs. A number of policy recommendations are proposed.

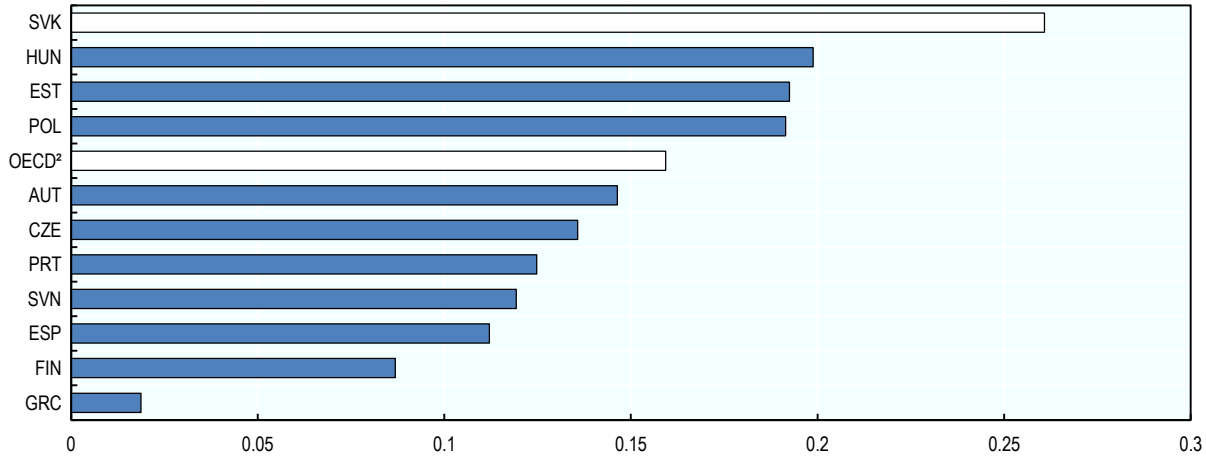
Spatial variations in SME and entrepreneurship development conditions

There is a strong west-east divide in the amount and quality of SME and entrepreneurship activity, as shown in chapter 2 of this report, with better SME and entrepreneurship performance in the more prosperous and urbanised parts of the country. This section reviews the regional variations in the business environment for SME and entrepreneurship development in the Slovak Republic that underpin these differences, providing insights into how policy can strengthen SME and entrepreneurship performance across the country. Important regional differences are identified in business environment conditions for SMEs and entrepreneurship in terms of regional inequalities, regional competitiveness, regional regulations, regional FDI levels, the presence and strength of business clusters, and the role of higher education institutions (HEIs) in supporting regional development.

Regional inequality

The Slovak Republic has some of the most significant regional economic disparities among the OECD countries, as indicated by Figure 6.1. These disparities have deepened in the last 20 years. There are sharp differences between high levels of per capita GDP in Bratislava and neighbouring Trnava region, the intermediate performance of the rest of the western part of the country, and the lagging central and eastern regions (Figure 6.2). Labour market performance also exhibits sharp regional imbalances in the Slovak Republic (OECD, 2017). To address skill shortages, regions in the Western Slovak Republic have sought to recruit workers from abroad in significant numbers in order to maintain and further expand production. Unemployment has also decreased significantly in the regions of Central and Eastern Slovak Republic but the Banská Bystrica, Košice and Prešov regions still have three times the registered unemployment rate of the Bratislava region. The favourable macroeconomic development of the last two decades has brought high growth in economic activity and household income to all regions of the Slovak Republic, but this has not reversed the regional disparities.

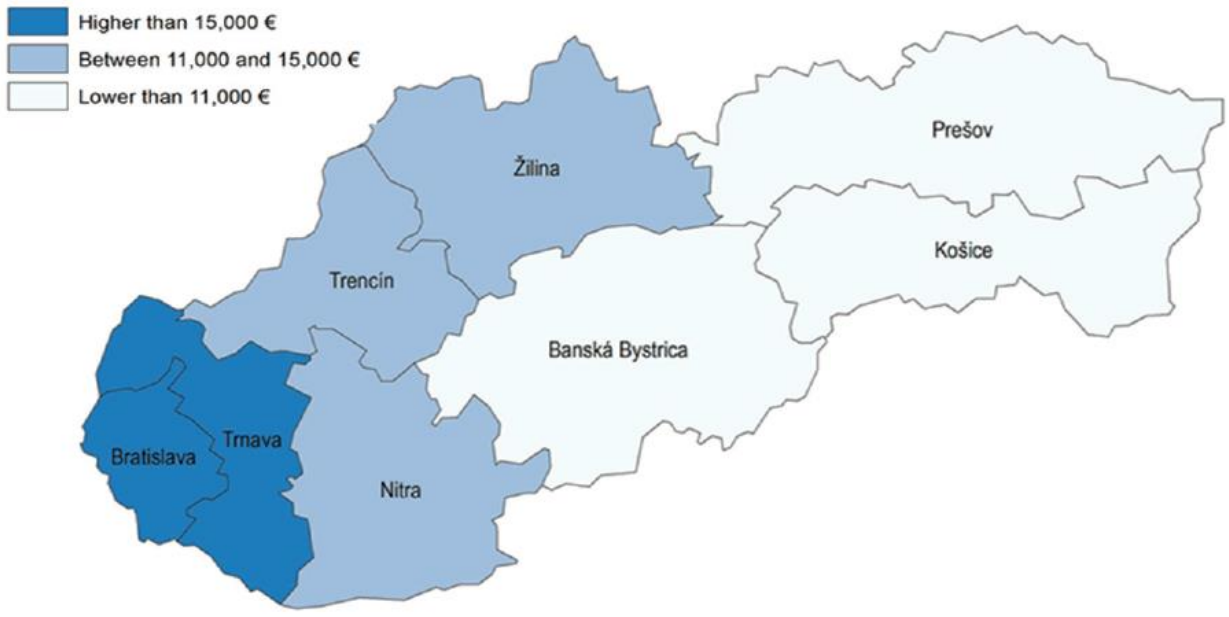
Figure 6.1. Regional Economic Inequalities – A Gini Index of Inequality of GDP per Capita across Regions



Source: OECD (2017), OECD Economic Surveys: Slovak Republic 2017, Paris: OECD

StatLink https://doi.org/10.1787/888934247875

Figure 6.2. GDP per Capita, 2014, current prices

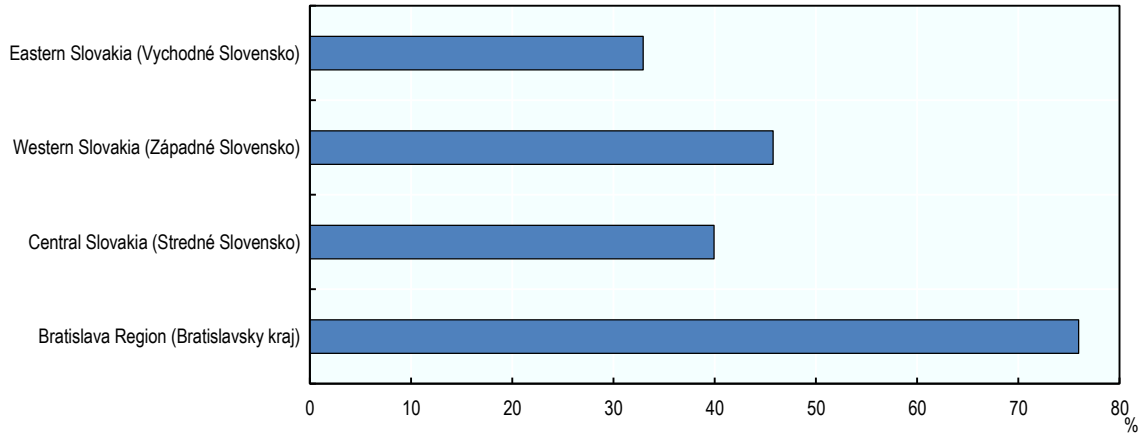


Source: OECD (2017), OECD Economic Surveys: Slovak Republic 2017, Paris: OECD

Regional competitiveness

There are also important underlying differences in the competitiveness of each region which affect SME and entrepreneurship performance and regional inequalities more broadly. Figure 6.3 shows the relative competitiveness of each NUTS 2 region based on the EU Regional Competitiveness Index, which includes more than 70 indicators at the NUTS-2 level across the EU covering the following competitiveness pillars: macroeconomic stability; infrastructure; basic education; higher education; labour market efficiency; business sophistication; and innovation (Annoni and Dijkstra, 2019). The Bratislava region is significantly more competitive than the other three regions, with Western Slovak Republic (the region surrounding and adjacent to Bratislava) being the next most competitive followed by Central Slovak Republic, with Eastern Slovak Republic by far the least competitive.

Figure 6.3. Competitiveness of Slovak Regions 2019



Source: Annoni and Dijkstra (2019), EU Regional Competitiveness Index 2019.

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The weak competitiveness of the regions in the east of the country is rooted in three key constraints.

First, changes in regional production. These involve:

- A large decline in production and employment in heavy industry (coal mining, metallurgy, mechanical engineering and chemicals), which was the dominant industry, and remains a major part of the economic structure in specific regions (Košice, Žilina and Trenčín Regions).
- The slowdown of production in the textile and electronics industries, seriously impacting upon the economy and employment (Prešov, Košice and Trenčín Regions).
- The decrease in the number of people working in agriculture, which had a relatively high share of economic output in rural regions (Nitra, Banská Bystrica and Košice Regions).
- The concentration of tertiary sector economic activity in large cities, especially Bratislava (Rievajova and Klimko, 2018).

These challenges suggest a requirement for regional strategies and systems that can activate entrepreneurship and new forms of economic activity. These regional strategies and systems could formally integrate current and new cluster initiatives to ensure they have clear support platforms that will allow them to the opportunity to grow further. Weaknesses will need to be addressed in capacities for strategic planning at regional level.

Second, weakness in human capital and labour market operation. These involve:

- Poor labour force mobility between regions, which is connected with limitations on finding housing near work and poor access to public transport, leading to negative effects in areas with low population density.
- Lack of development of suitable skills for new economic conditions in the east, due to educational and cultural traditions.
- Weak SME workforce and management skills in economically weak regions.

One important policy response to these issues should be the increased availability of education attuned to entrepreneurship, especially at the school level.

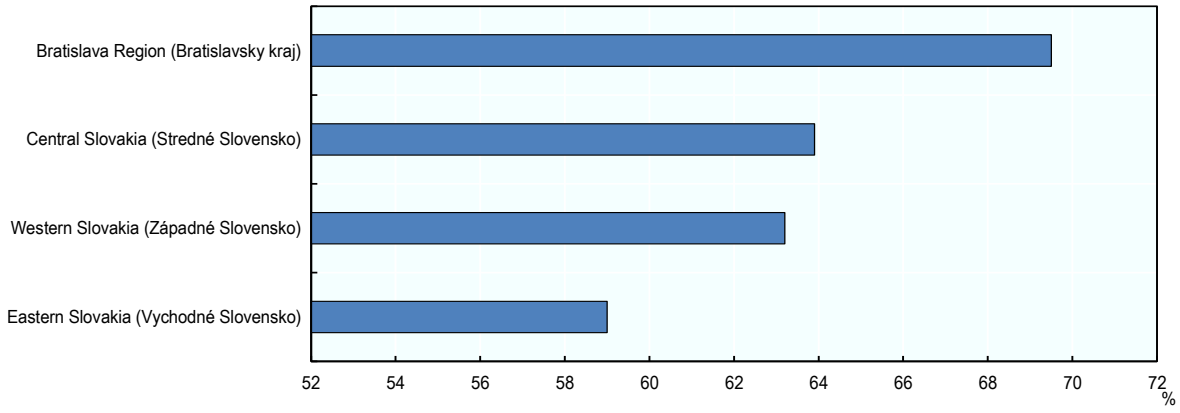
Third, infrastructure deficiencies and derelict environment: These involve:

- Competitiveness in the east is held back by distance from important EU trading partners and European transport corridors.
- This is exacerbated by an incomplete network of motorways and dual carriageways slowing transport and forming barriers to access to central and eastern regions (SBA, 2018). The investment focus since the early 1990s on expanding the motorway network and upgrading the rail network around the capital and northwest of the country have increased these disparities (OECD, 2019).
- Poor local transport infrastructure and the absence of a comprehensive approach to the revitalisation of peripheral settlements in terms of suitable buildings and business facilities.
- The poor state of the environment due to the historical legacy of old and now defunct industries, some of which is the result of the extraction of mineral resources, and the fragmentation of the landscape itself, resulting in transport problems in terms of accessibility and the economic efficiency regions (Rievajova and Klimko, 2018).

Regional entrepreneurial ecosystem quality

Specific conditions for entrepreneurship can be picked up by an assessment of the quality of regional entrepreneurial ecosystems. The Regional Entrepreneurship and Development Index (REDI) seeks to provide a measure of entrepreneurial ecosystems at the regional level. It focuses on entrepreneurial attitudes, abilities, and aspirations, and combines measures of individual perceptions and data on regional institutional conditions (Szerb et al., 2017). Figure 6.4 summarises the disparities in entrepreneurship development conditions across Slovak regions on this measure. It clearly shows the relatively advanced level of development in the Bratislava Region compared to other parts of the nation, as well as indicating a broad west-east divide.

Figure 6.4. Regional Entrepreneurship Development Index



Source: Szerb et al. (2017), Regional Entrepreneurship Development Index

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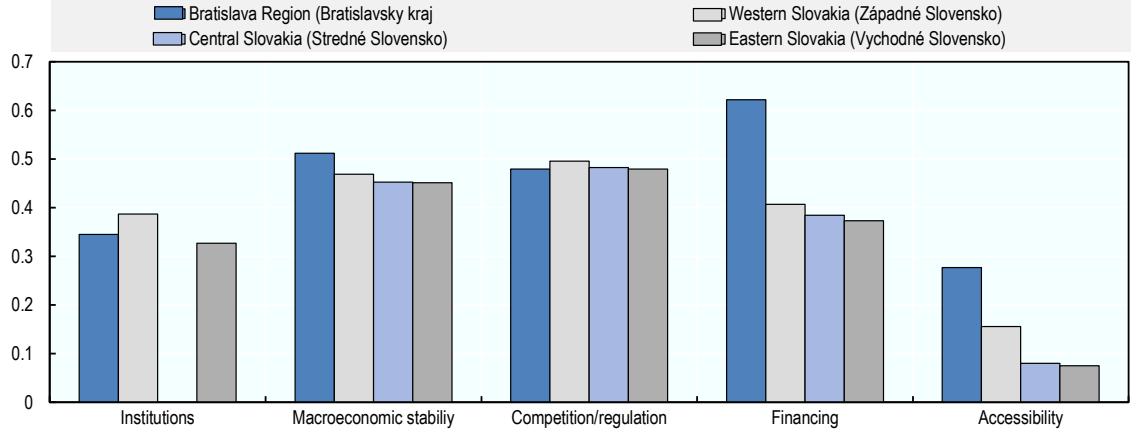
There are some important similarities across the regions in terms of the quality and nature of institutions, competition and regulation. However, accessibility and finance are much more developed in Bratislava (Figure 6.5). Bratislava also tends to be significantly stronger than other regions on measures of business and technological environment (Figure 6.6). From an international perspective, with the

exception of Bratislava, the Slovak regions lag behind regions in other EU countries, with REDI scores toward the bottom of regional rankings. Another notable constraint for the three lagging regions is start-up skills (Szerb et al., 2017), which should represent a high-level regional policy priority.

Figure 6.5. Regional Differences in the Institutional Business Environment in the Slovak Republic



Source: Szerb et al. (2017), Regional Entrepreneurship Development Index.

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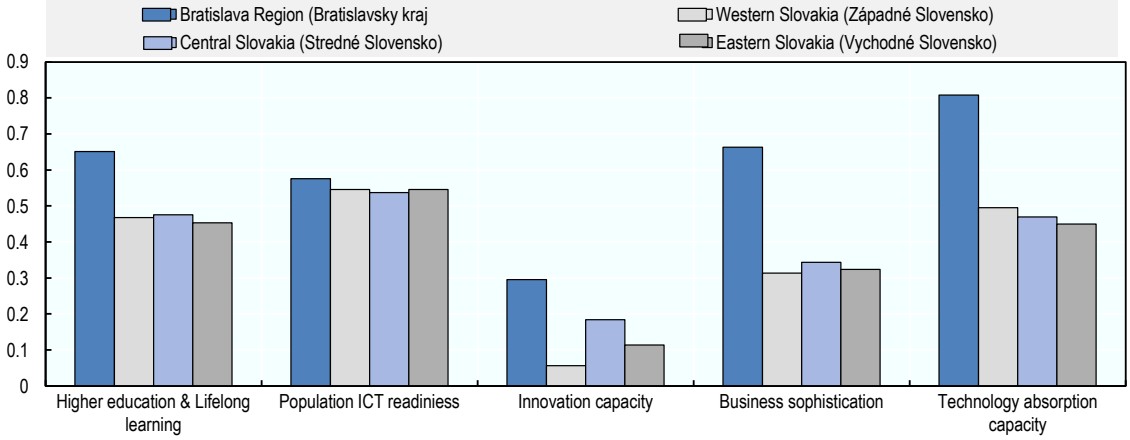
Figure 6.6. Regional Differences in the Business and Technological Environment in the Slovak Republic



Source: Regional Entrepreneurship Development Index

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Regulations and the capability to 'do business'

An important measure of regional conditions for SME and entrepreneurship development concerns the ease with which firms are able to 'do business' in terms of both starting a new business and efficiently operating an existing business. The World Bank's (2018) report on Doing Business in the European Union 2018: Croatia, the Czech Republic, Portugal and the Slovak Republic has found significant differences in regulatory hurdles across the cities of the Slovak Republic. Interestingly, it is found that

due to demand issues, entrepreneurs located in Bratislava are often at a disadvantage compared with their counterparts in other regions, due to the far higher level of demand for public business administration services rather than the underlying quality of services. Notable findings from the survey are:

- Bratislava receives more new business licensing applications than the other assessed Slovak cities combined. Starting a business is easier in Presov or Zilina, where dealings with the tax authority to obtain a tax arrears form and register for VAT take eight days - one week less than in Bratislava.
- Trnava stands out for its performance in registering property, a process completed there in less than a week - three times as fast as in Bratislava or Presov, and the district court in Košice outperforms its peers through faster trial and judgment times.
- The largest variations in regulatory performance among Slovak cities are in the areas of accessing electricity and dealing with construction permits. This is no surprise given that different utility companies are operating in different parts of the country and many construction permit requirements are under municipal control.
- Construction permits are dealt with more efficiently in Presov, which is mainly due to a more streamlined process for obtaining location and building permits and a shorter wait for water and sewerage connection.
- Zilina leads for accessing electricity, with a faster and less costly connection process. In Košice, Presov and Zilina, a warehouse is likely to connect to the low-voltage network, and wait times are shorter and the process is less costly. In Bratislava and Trnava, by contrast, the warehouse is likely to get a medium-voltage connection, which requires the installation of a private substation at a cost of around EUR 28,000. So while getting electricity takes 56 days and costs 55% of income per capita in Zilina, it takes a month longer and costs more than four times as much in Bratislava and Trnava (World Bank, 2018).

Regional unevenness and foreign direct investment

One of the strong drivers of recent economic growth in the Slovak Republic has been the attraction of a large wave of Foreign Direct Investment (FDI), especially investment related to the automotive sector. This FDI has concentrated in the already relatively strong regions and localities, therefore contributing to regional economic disparities and differences in regional opportunities for SME and entrepreneurship development, including for FDI supply chain participation and spillover effects (Rievajova and Klimko, 2018).

Differences in FDI inflows across the regions are quite pronounced, with western regions receiving approximately three-quarters of the total FDI. Such investment is dominated by the Bratislava region, which accounted for 65% of total FDI over the period 2009-2015. This is comparable to the period 1993-2007 when Bratislava region attracted 68% of total FDI. The western regions of the Slovak Republic now benefit from self-reinforcing agglomeration effects of development in the automotive sector in Trnava (PSA) and Žilina (Kia) and supplier networks and electronics in Trnava (Sony) and Galanta and Nitra (Samsung) (Fabuš and Csabay, 2018).

Since 2017, there has been some growth in FDI in the more eastern and central regions, and investment incentives are structured so that they should mainly support weaker regions. Historically aid was directed to more developed regions, largely due to the location decisions of investors themselves rather than national policies (Fabuš and Csabay, 2018). Historically, most incentives have gone to the Trenčín region, followed by Žilina, which along with Trnava has received the most significant investment from the automotive industry. Regions such as Banska Bystrica have received significantly less FDI. Despite

amendments to the Investment Assistance Act, regions such as Prešov have failed to secure any significant investment.

At sector level, FDI has been focused on automotive and mechanical engineering industries; consumer electronics and electrical equipment; ICT and services; and the production and processing of iron and steel. Alongside these, areas are emerging that may become more specialised, in particular: automation, robotics and digital technology; processing and increasing the value of light metals and their alloys; the production and processing of plastics; creative industries; and higher value domestic raw material (Dvouletý et al., 2019). There are opportunities for SME development in these industries as they develop in the Slovak Republic, particularly where there are regional concentrations.

The emergence of business clusters

There has been a growing clustering of industries at regional and local level in the Slovak Republic, catalysed by both FDI and SME development. Key business sectors such as engineering and the automotive industry are concentrated mainly in Bratislava, Trnava, Nitra, Žilina and Košice. In many cases these industry clusters are supported by formal regional cluster organisations, which may have emerged with or without public support. The cluster management organisations include for example:

- Košice IT Valley – Košice, Eastern Slovak Republic (see Pástor et al., 2013 for information on innovation patterns in the cluster).
- Slovak Automotive Cluster – Trnava, Western Slovak Republic.
- Electrotechnical Cluster – Galanta, Western Slovak Republic.
- Slovak Plastic Cluster – Nitra, Western Slovak Republic.

As another example, an aluminium processing cluster is developing in the Banská Bystrica region in central Slovak Republic, although a formalised cluster organisation has not yet been established. The cluster was triggered by an aluminium producer and the Slovak Academy of Sciences founding a research and development (R&D) centre. This has enabled R&D cooperation with local firms and the commercial application of innovative solutions. As a result, the cluster now involves a number of innovative, export-oriented companies.

Furthermore, the Bratislava region is one of the most prominent regions in the EU from the point of view of the concentration of employment in the creative sector. Approximately 5% of the labour force works in these sectors in the region, indicating a significant specialisation. Also, 46 % of Slovak firms in the creative sectors in the nation are located in the Bratislava region.

In general, there has been a lack of systemic public support for the development of the clusters, which have often appeared through a “bottom-up” approach. However, more recently the public sector has begun to help establish and nurture local and regional clusters, particularly for technological cluster organisations. Six cluster initiatives received a Bronze Label from the European Cluster Excellence Initiative (ECEI) in 2013, issued by the European Secretariat for Cluster Analysis. The label was assigned to the following cluster organisations: (1) The Automobile Cluster – Western Slovak Republic, (2) Slovak Plastics Cluster, (3) The First Slovak Machinery Cluster, (4) Košice IT Valley z.p.o., (5) Cluster AT+R, and (6) NEK. A European Bronze Label was also assigned to two tourism clusters – Klaster LIPTOV and Klaster ORAVA. Also, the Electrotechnic Cluster in Western Slovak Republic, which involves the foreign investor Samsung, has increased its activity (Dvouletý et al., 2019).

There appears to be significant potential for policy to enhance and harness these cluster initiatives in the future in support of SME and entrepreneurship development. The case study summarised in Box 6.1 provides some useful pointers in how to develop such a policy, especially the establishment of centres of expertise, encouraging collaboration between centres of expertise and local businesses and local/regional government, and brand building for clusters. In particular, in the Slovak Republic there is

a need to forge new public-private sector relationships at the local level. This could be achieve for example by the establishment of local enterprise partnerships, which provide a means for the public and private sectors to collaboratively formulate and deliver local entrepreneurship strategies.

Box 6.1. Cluster Building – The Emerging Compound Semiconductor Cluster in South Wales, United Kingdom

The compound semiconductor industry in the South Wales region is emerging as an identifiable business cluster that possesses an ecosystem of interdependent companies and organisations (Huggins et al., 2019). Compound semiconductors are a Key Enabling Technology (KET) for the economic growth drivers identified in the European Commission's Horizon 2020 economic growth and reindustrialisation strategy for Europe. Compound semiconductors are at the heart of the high-tech devices used today, from smartphones and tablets to satellite communications and GPS, and the advent of the internet, fibre-optic communication and the smartphone revolution have been fundamentally dependent on compound semiconductor technologies.

In the last 5 years or so, the regional activities in compound semiconductors have rapidly expanded to form an emergent regional cluster with significant interdependencies across a range of organisations across the private sector, public sector, and academic and research organisations. The most notable features of the cluster's recent development involve investments in human capital and innovation. Such a clustered ecosystem business environment is providing benefits to participants and wider economic development benefits for the region.

A significant policy effort has been pursued by regional actors to establish the cluster. Key features of the policy effort are as follows:

Developing New Centres of Expertise – A three-way agreement was made between the private firm IQE PLC (a leading global supplier of advanced compound semiconductor wafer products covering a diverse range of applications), Cardiff University and the Welsh Government to found the Compound Semiconductor Centre in 2015. It is a prototyping facility allowing businesses and academics to demonstrate new technologies based on compound semiconductor materials. It is beginning to position itself as a new European home for product, services and skills development in compound semiconductor technologies. The Welsh Government also set up the Institute for Compound Semiconductors, which is a translational facility to help researchers and industry work together.

Engaging with Local and Regional Government – The local government authority partners in the Cardiff Capital Region (CCR) have also acted as a champion for the development of the cluster through both financial support and international exposure. The CCR City Deal is a programme of activity agreed in 2016 between the UK Government, Welsh Government and ten local authorities in South East Wales to bring significant new economic growth opportunities. The local authorities that comprise the CCR have a stake in the recently established Compound Semiconductor Foundry Limited, with the investment not being a grant or a loan but a commercial investment. The business plan is for the original investment plus interest to be returned to the councils over the lifetime of the project. Specifically, the Regional Cabinet agreed to contribute GBP 38.5 million from the CCR City Deal's Wider Investment Fund towards the establishment by IQE of a major, cutting-edge facility, acting as an anchor in the region for the high-end production of compound semiconductors

Building the Cluster Brand – The cluster represents a relatively bounded group of actors that have jointly branded themselves as 'CS Connected' representing organisations largely located in South Wales that are directly associated with research, development, innovation and manufacturing of compound semiconductor related technologies, as well as organisations along the supply chains that have products and services enabled by compound semiconductors. The CS Connected ecosystem has been

a major catalyst of relationship building both within South Wales and more widely, and it has successfully acted as a brand for the cluster.

Entrepreneurship and new business formation is a central feature of the cluster's strategy, and through the activities of the universities – with a focus on spinout generation – the necessary components are successfully being put in place. By 2019 the principal cluster firms and organisations accounted for around 1 480 jobs, and private sector members accounted for GBP 464 million sales, much of this (over 90%) relating to overseas exports, mostly destined for markets outside of the EU.

Source: Huggins et al. (2019)

Universities and entrepreneurial ecosystems

Universities often play key roles in the development of entrepreneurial ecosystems in the regions in which they are located. Since 1989 the number of universities across the Slovak Republic has increased threefold and they are present across the country. As in other countries, universities therefore offer potential for playing a role in entrepreneurship promotion in the Slovak Republic. Universities in the regions can help support entrepreneurship and SME development locally by introducing more entrepreneurship education, outreach activities that engage with their local communities, and entrepreneurship support infrastructure, notably business incubators. There are, however, a number of ongoing challenges, especially in areas outside of the capital region.

Firstly, university activities are not evenly distributed across the regions. Approximately 38% of students are studying in Bratislava Region, 13% in Košice (13%) and 11% in Nitra, with lower shares in other regions, while Bratislava Region hosts more than one-third of all R&D employees within universities in the Slovak Republic (5 404 employees), with Košice in second place (2 394 employees) and Žilina in third (2 182 employees) (Moravčíková et al., 2017). More broadly, the number and the quality of incubation centres, counselling centres, enterprises with venture capital, and technological centres and parks is relatively limited particularly outside of the Bratislava Region (Rehák and Sokol, 2007).

A second issue concerns funding for entrepreneurship promotion activities in universities. For example, in the area of business incubation:

- Many university-based business incubators struggle with attracting the necessary funding and qualified staff and can offer only a limited set of incubation services. Also, a lack of sufficient success- or revenue-/profit-based earning models means that these operations rely on government funding or local public sector sponsorship.
- Links to investor, entrepreneur and company networks are often limited, and whilst the incubators are university based or affiliated, the support they receive from their institution is often limited.
- Furthermore, other public incubators established and supported by regional governments and municipalities face similar challenges (Andrez et al., 2017).

Third, knowledge spillovers between universities and SMEs are underdeveloped. There is a broad requirement to further develop networks combining universities with entrepreneurs and SME owner-managers. Box 6.2 provides an example of how this institutional thickness can be fostered within regions by closely integrating universities into emerging ecosystems of innovation and entrepreneurship.

Box 6.2. Entrepreneurial Universities and Innovation Ecosystems – The Espoo Innovation Ecosystem, Finland

Espoo is the second largest city in Finland. It is the home of several major companies including computer gaming firm Rovio (which includes the Angry Birds and Slush products), research infrastructure that includes Aalto University, and numerous start-ups and organises the largest start-up event in Eurasia. The University plays a key role in promoting local entrepreneurship and innovation.

As set out by Rissola et al. (2017), the Espoo innovation ecosystem is rooted in an entrepreneurial spirit that has been actively supported and facilitated by the University and the regional and city governments. Espoo is a highly digitalised area, which hosts a society with an open entrepreneurial mind-set, a collaborative culture and a prototyping mentality. The entrepreneurial spirit and participation of all actors is seen as crucial by leading organisations in the local context, something that was not a given in the Finnish context, in which the national culture was long considered to be unsupportive of risk taking and entrepreneurship.

Aalto University was created in 2010 by merging the Helsinki University of Technology, the University of Art and Design, and the Helsinki School of Economics. The objective is to create a single multi-disciplinary institution capable of benefiting from the synergies generated by the combination of diverse disciplines and approaches. Since 2010, Aalto University has substantially improved its cooperation with the cities of the region and the business sectors. It has focused on inter-disciplinarity (science, art and business), excellence in research, tight industrial collaboration, start-up driven innovation ecosystem development, and student participation (student-centric model). This in-depth change is taking place top-down through changes in the organisation of the different departments, and bottom-up with the active contribution by a Design Factory, a Start-up Sauna and privately-run innovation and start-up actors such as the Urban Mill. The Aalto Centre for Entrepreneurship (ACE) is another part of Aalto University, which connects the university's entrepreneurship activities with the surrounding ecosystem of incubators, accelerators, and investors.

In terms of strategic choices and vision, the orchestrating of the Espoo innovation ecosystem involves the interplay of the different actors in the ecosystem. This does not necessarily involve top-down planning, rather it helps to create the bottom-up dynamics that are central to the evolution of the innovation ecosystem. Such orchestrating actors are also important for the governance of the different types of public-private partnership initiatives. In the development of the Espoo innovation ecosystem there are (at least) three such actors. The first and central actor is Aalto University and its leadership. The second is the local government (Helsinki-Uusimaa Regional Council and Espoo City). Third, the national innovation funding agency Tekes is considered by some to have also played an important role, though perhaps less as an orchestrating actor in the system but as a facilitating source of funding.

The role of Aalto University as a leader in the development of the Espoo innovation ecosystem has been underpinned by a number of success factors:

(1) *Investment in hard and soft infrastructure* – the development of high-skilled human capital and research infrastructure in the region.

(2) *Vision and political commitment* – the vision, political commitment and culture of collaboration of Helsinki-Uusimaa Regional Council and Espoo City, which created the conditions for the ecosystem to flourish.

(3) *Orchestration* – the emergence of Aalto University as a strong orchestrating actor that helps generate a shared strategic vision and stimate the synergistic activities of the various actors.

(4) *Bottom-up approach* – a local culture of innovation and entrepreneurship cultivated through active support to the bottom-up drive for innovation in the University and the wider ecosystem.

(5) *Government investment* – financial and policy support from the central government.

(6) *Serial entrepreneurship* – the successful involvement of serial entrepreneurs in financing and mentoring further start-up activities.

In conclusion, the combination of a good balance and interaction between top-down and bottom-up initiatives, based on an open innovation and entrepreneurial model for the University, has been vital for the development of the ecosystem (Rissola et al., 2017).

Source: (Rissola et al., 2017)

More positively, several new initiatives are emerging especially with regard to the development of co-working spaces, such as those attached to universities. Recent evidence also finds that privately-operated incubators are gaining momentum. As their track record develops a number are developing good local entrepreneur, investor and company networks, coupled with relevant international connections (Andrez et al., 2017).

The local tailoring and co-ordination of SME and entrepreneurship policies

This section seeks to assess the extent to which SME and entrepreneurship policy interventions are designed and delivered at regional level. To begin with, it is useful to summarise some of the relevant and historic policy background and changes that have occurred over time:

- In 1993, the former Ministry for Economic Strategy Planning pioneered the establishment of Regional Advisory and Information Centres (RPICs) in all 38 districts of the Slovak Republic, focusing on SMEs. Many of these centres were subsequently transformed into private businesses or incorporated into a network co-ordinated by the National Agency for Small and Medium-Sized Enterprises (NADSME).
- In 1996, the existence of eight counties as territorial and administrative divisions of the Slovak Republic was adopted by the National Council of the Slovak Republic. These replaced the former territorial division from 1960 recognising only 3 regions (Western, Central, and Eastern Slovak Republic). In 2001, Parliament passed the law of self-government of higher territorial units, which laid the foundations for the creation of the present eight self-governing regions.
- In the past, the involvement of regional authorities in active innovation policy was generally weak, but between 2002 and 2008 regional innovation strategies were launched. These were usually co-ordinated by regional self governments or leading regional universities. However, due to insufficient strategic direction and the scarcity of financial resources for implementation, regions struggled to increase rates of innovation.
- The Slovak Innovation policy was based on the programme declaration of the Slovak Government, on the National Reform Program for the years 2006-08 and the National Strategic Reference Framework 2007-2013, coupled with EU operating programmes. These programmes declared the necessity for innovation support, and presented the support initiatives, projects and schemes and plans for creation of a network of regional innovation centres (RICs).
- Prior to the RICs concept, the Slovak self-governing regions had no institutional structures for the management of state and regional innovation policy, nor the institutional framework for linking the development of industry with the results of research and innovations. However, due

to a lack of evidence supporting the sustainability of the concept, the Slovak Government stopped the creation of RICs in 2011.

- The first regional innovation policies began to emerge after 2007, but mostly they were largely plans rather concrete actions to engage regions into EU operating programmes in the period 2007-13 (Rehák and Sokol, 2007; Jasińska–Biliczak and Buleca, 2014; Klement, 2017).

In recent years, the Research and Innovation Strategy for Smart Specialisation of the Slovak Republic for 2014-20 (RIS 3) was declared by the Slovak Government in 2013 as a key policy for supporting research and innovation. The main objective concerns the sustainable growth of the economy and employment in the Slovak Republic through targeted support for research and innovation by respecting regional specialisations (Klement, 2017).

A key actor in implementing this strategy is the Slovak Investment and Trade Development Agency (SARIO), which is an agency receiving contribution from the state budget and is under the auspices of the Ministry of Economy of the Slovak Republic. SARIO is focused on supporting the inflow of investments and supporting the export activities of Slovak companies, and provides services to SMEs from the Slovak Republic and abroad interested in investments or internationalisation. As well as the state budget funds, SARIO has access to EU resources for the National Project "Support for the Internationalization of SMEs", with the national SARIO project exclusively supporting Slovak SMEs based outside of the Bratislava region (SBA, 2018). Part of this strategic approach involves the development of clusters, with the aim being to enhance the competitiveness of members of industrial clusters. It aims to increase the efficiency of their cooperation and to strengthen industrial clusters internationally. In 2018, the national government announced a call for applications for subsidies to support industrial cluster organisations, and approved five applications with a total subsidy volume of some EUR 155 580 (SBA, 2018).

Box 6.3. Regional Smart Specialisation Strategies – Innovative Transformation in North East Romania

Research and Innovation Strategies for Smart Specialisation (RIS3) are intended to promote the economic transformation of EU regions, particularly those that are lagging in development. This example, elaborated by Healy (2016), explores the introduction of the RIS3 approach in North East Romania, one of the EU's least developed regions. Whilst Romania launched a national RIS3, the Regional Development Agency for North East Romania also voluntarily embarked upon a process of developing a regional RIS3 for the North East region.

The concept of smart specialisation was first elaborated in 2008, and emphasises the need for policy makers to make choices as to which technologies or sectors should be supported through public policies. Recognising that the public sector is insufficiently informed to identify those areas of comparative strength, the approach advocates an entrepreneurial focus, building on the knowledge of businesses and other actors. Smart specialisation is built on an entrepreneurial discovery process undertaken by firms and other organisations operating in the economy. That is, a process of self-discovery whereby firms identify what can, and cannot, be produced competitively at a particular time or place.

For many years the region of North East Romania has faced numerous economic challenges resulting from the closure of local industries and the fragmentation of land-holdings in the agricultural sector, providing a substantial requirement for economic development in the region, exacerbated by its peripheral location. As part of the process of transformation, the region independently began to develop its own regional RIS3, led by the Regional Development Agency.

Strong national-regional strategy links - The priorities for the RIS3 were arrived at through both a quantitative and a qualitative approach, building on the heritage of analysis that has helped to develop an understanding of the regional innovation system over the past decade. The RIS3 for North East Romania identified six fields for potential specialisation based on the presence: of human resources; business infrastructure; research & development; innovation; and entrepreneurship. The strategy first raised the profile of the interests of North East Romania. The North East RDA contends that by participating in the national strategy process, and using the knowledge that it had of the region, it was able to develop a RIS3 that is well-correlated with the National Strategy for Research, Development and Innovation, as well as the National Strategy for Competitiveness.

Universities as agents of innovation - The strategy has strengthened collaboration in the regional eco-system especially at a time when the privatisation and liberalisation of both the national and the regional economy has resulted in a hollowing-out of the economic structure, where the applied research functions of large state enterprises have been lost and foreign investments tend not to be in research and innovation functions. The strategy has helped place an emphasis on the ability of the university sector and research institutes to move beyond their traditional role as educators and sources of basic research and to act as key agents of innovation within the region (Marinelli et al., 2017).

Strategy development as a signalling device - Overall, the case of North East Romania demonstrates how a RIS3 exercise can form part of an ongoing learning exercise, whereby knowledgeable parties seek to forge new paths for their organisations and support the transformation of the local economy. The regional RIS3 process, building on earlier activities undertaken in North East Romania, provides a positive learning-by-doing environment. It strengthens an understanding of the regional economy, not only developing an understanding of the role of innovation in economic development but also new combinations of innovation potential. Furthermore, an important function of the exercise in North East Romania has been to act as a signalling device to indicate where the region believes that its strengths lie.

Key lessons from the case

North East Romania has enthusiastically grasped the opportunity to develop a regional RIS3, which has raised the profile of smart specialisation in the region and promoted entrepreneurship and cluster development in a less developed region (Healy, 2016). Similar regional strategies could be developed in the Slovak regions.

The case also illustrates some key success factors for regional strategy development for entrepreneurship and innovation: (1) the need to have strong links between national level and regional level policies and policymakers; (2) the 'new' role of universities as agents of innovation; and (3) the way in which regional strategy and policy development can be used as a device to signal to a wide group of stakeholders the path the region is seeking to follow.

Source: Marinelli et al. (2017); Healy (2016)

With respect to SMEs and entrepreneurship more specifically, between 2017 and 2018 the Slovak Business Authority (SBA), created a National Business Centre (NBC) in each Slovak region. The aim of the NBCs is to provide comprehensive and systemic support and professional advisory services to SMEs, as well as to persons interested in starting their own business (including disadvantaged social groups such as women, the elderly/generation 50+, socially and the physically disabled, etc.). They offer regional one-stop-shops that allow entrepreneurially oriented individuals to acquire information and services.

Furthermore, local and regional authorities prepare medium-term strategic documents, which are municipal and urban development programmes in accordance with relevant laws. The most relevant policies for the promotion of SMEs are those that aim to create partnerships between the public, private

and non-governmental sectors in the field of business development. The aim is to establish a favourable environment for the development of SMEs in cities and municipalities. As part of this policy process, local and regional authorities can potentially invoke variable rates with regard to local taxes and fees, land and space prices, information and counselling.

Through these local financial instruments covering tax incentives, tax relief, the deferral of local taxes and fees, subsidies and loans, municipalities have the possibility to support specific groups of enterprises that are strategically important for a city. In particular, the authorities are able to look favourably upon start-up entrepreneurs, as well as those businesses operating in key sectors with high job creation potential and businesses seeking to innovate. Local government can also lease premises to businesses for reduced rents within the framework of its assets, and provide advisory and information services provided by the RPICs. Complementing these levers, serious policy consideration should be given to the provision of further financial support through grants, interest free loans and tax incentives to encourage entrepreneurship in the weakest regions. Box 6.4 provides information about the approach adopted in Turkey, which may be a potential model for the Slovak Republic to follow.

Box 6.4. KOBIGEL – The SME Development Support Programme in Turkey

Description of the approach

KOBIGEL is operated by KOSGEB, the Small and Medium Enterprises Development Organization of Turkey. Based in the capital, KOSGEB has offices throughout the country and is a key actor for regional development.

The purpose of KOBIGEL is to increase the capabilities of selected SMEs in line with national priorities, which in turn allows them to expand their activities. Beneficiaries of the SME Development Support Programme receive up to TRY 300 000 in grant support and up to TRY 700 000 as interest-free loans.

The selection of beneficiaries happens in three steps. First, the annual "theme" of the support is determined by a Council consisting of KOSGEB's main departments that are responsible for support design to identify the main issue that the programme is meant to address. Second, the project topics, target sectors, eligibility criteria and budget is determined by the Council. This then leads to a call for proposal. SMEs can prepare and apply online for support. As a third step, proposed projects are assessed by committees, which rank the projects and select the best.

Factors of success

The establishment of overall policy objectives and specific themes for the programme plays an important role in determining which projects to select for funding. As an example, the 2017 objective was to identify and support micro-enterprises with growth potential throughout the country. More than 3 000 companies were supported in that year.

The formation of Committees from relevant backgrounds and experience is essential for the success of the programme. KOSGEB is working on the creation of a large country-wide pool of experts and academics.

Obstacles and responses

SMEs may sometimes lack the capabilities to successfully apply. Since the application process for KOBIGEL is open and competitive, this may rule out some beneficiaries and calls for potential support to SMEs to enable them to prepare strong project documentation that better reflect their capabilities.

In addition, both the determination of the "theme" of the support and the implementation takes some time. In particular, the testing of software and software processes more generally are often time-consuming. Finally, the regulation may need regular updates during the planning stage to make the programme run smoothly.

Relevance for the Slovak Republic

A broadly similar programme could be adopted by the Slovak Republic and would serve a dual purpose:

First, such a support measure would boost scale-ups among SMEs, thereby addressing, to some extent, the underrepresentation of larger SMEs in the country. Turkish policy makers consider KOBIGEL as a successful tool to allow the beneficiaries to scale up.

Second, it offers a mechanism to foster economic and industrial objectives, both at the national and regional level. By directing funds to underdeveloped regions, the Slovak Republic could boost regional value chains and smart specialisation strategies. As this chapter argues, grant or direct lending programmes are currently missing in the Slovak Republic as a tool to address regional imbalances, and the adoption of a programme in the same spirit as KOBIGEL could remedy this.

In some districts, support for SMEs has also come in the form of the construction of industrial parks and villages and business incubators. Adequate resources should made available to ensure the further provision of entrepreneurial spaces for co-working, incubation and scale-up activities.

In terms of regional access to finance, the EU National Project on Support of the Internationalisation of SMEs seeks to address regional disparities by providing support for enterprises headquartered outside of the Bratislava region. As part of this approach, the Slovak Business Agency supports Regional Start-up Facilities, which act as a form of public sector venture capital investment, with investments approved to date amounting to approximately EUR 3.7 million and actual investments amounting to EUR 2.6 million.

In order to accelerate the development of lagging regions, the Slovak Government has passed the Law on Support of Lagging Regions (Act No. 336/2015 Coll.), which is partly focused on non-governmental organisations (NGOs), municipalities and SMEs. It operates through a programme of support for the least developed districts with the primary objective being to reduce unemployment in districts with the weakest local economies. The support is currently provided to 18 districts of the Slovak Republic where the unemployment rate is 1.4 times above the national average. The main type of support provided concerns investment in regional infrastructure and in 2018 the amount of expenditure was EUR 15.37 million, which funded 142 projects. Approximately 10% of the beneficiaries were SMEs (alongside enterprises founded by the local government; NGOs; cities and villages; and educational institutions).

Finally, the EU LEADER initiative has provided locally tailored support for the development of SMEs in rural areas in the Slovak Republic in the programming periods 2007–2013 and 2014–2020 (Bumbalová, 2017).

Conclusions and policy recommendations

There are important regional variations in conditions for SME and entrepreneurship development in the Slovak Republic, including attitudes toward entrepreneurship, the quality of regulations, FDI presence, the emergence of clusters, and university and innovation infrastructures, which impact on start-up rates and business growth rates. Generally, there is a west-east divide, which is compounded by the movement of people across regions from the poorer to richer regions. Also, the more recent evolution of the national economy has led to there being an over dependence in some regions on the automotive sector as the primary source of employment and economic activity.

At the same time, it is necessary to support SME and entrepreneurship development in the core region of Bratislava as well as in the less developed regions of the country. To date, Bratislava has developed into a secondary European hub for the technology sector, but whilst some advances have been made, as a whole the ecosystem across the region is not as advanced as leading European counterparts – which is not unexpected given the historic context. Access to talent remains a problem for Bratislava, which is coupled with an on-going brain drain from the nation as whole and is an indication of a perceived lack of opportunity. Košice is also developing as a second national entrepreneurial hub alongside Bratislava, with new co-working spaces opening up and new market developments, suggesting that the roots of an ecosystem are beginning to flourish.

More generally, there is a lack of innovation-driven SMEs and entrepreneurship, which is accentuated in economically weaker regions. A key barrier in these weaker regions is relatively under-developed entrepreneurial ecosystems, including anchor organisations, networks, finance, skills and so on. A further issue with regards to innovation is that there is a lack of absorptive capacity within many SMEs across the regions. Regulations can also be more of a burden for individuals and businesses in weaker regions.

From the policy perspective, the national-regional policy interface is often problematic. This is partly due to the unevenness of power and the fact that there has been a lack of policy patience, with policy changes made before existing initiatives have had the opportunity to bear fruit. In particular, high levels of bureaucracy and policy complexity makes it difficult to foster regional policy approaches. There is also fragmented policymaking across ministries and this has had a negative impact on policies such as Smart Specialisation efforts, as well as making the formulation and implementation of regional and local level policies complex and difficult. In practical terms, there is a lack of funding at the local level, which constrains the effectiveness of implementing local and regional strategies. There is relatively strong and effective political leadership in Bratislava, but in weaker regions there are more issues and challenges.

Some policy initiatives have been introduced to address regional inequalities, such as the programme of action plans for least developed districts. However, the focus of these plans is more on welfare and educational issues rather than directly on entrepreneurship and SME development. Also, the SBA has introduced satellite national centres across the regions providing access to business development support. However, this does not represent regionally-tailored strategies to strengthen regional entrepreneurial ecosystems, which is what is really required to kick start the regional small business economies.

Within the weakest regions there is often a lack of joint commitment across the public and private sectors for the development of regional entrepreneurial ecosystems. In other words, the public and private sectors are not working together effectively. This coupled with a lack of political engagement with the micro and small firm sectors, with policy tending to prioritise larger businesses. However, there are some green shoots, and local authorities are increasingly seeking to become more empowered and embedded in policy formulation frameworks. This may address some of the current challenges.

Perhaps the most promising area for regional entrepreneurship and SME development is the role that industry cluster initiatives are playing in promoting new forms of economic and industrial growth. There are currently 16 certified cluster initiatives that could become a platform for regional entrepreneurial ecosystems, and examples such as IT Valley in Košice give an indication of their potential. Similarly, there is the interesting example of the Trencin region within which there has been an evolution of the regional ecosystem away from textiles to the automotive sector, as well as more service-based sectors such as the creative industries. If these emergent cluster initiatives are to grow and flourish they need to be better organised, and more local autonomy is required, and the capacity and capability of local authorities needs to advance significantly. Furthermore, these authorities themselves need to become entrepreneurially minded with regard to their own policy formulation.

There is also the potential for local universities to play a stronger role in promoting entrepreneurship and SME development through entrepreneurship education and knowledge exchange with regional industry. Again, there are regional and spatial dimensions to such an approach; for example, within the university sector, there is a perception that students studying in Bratislava-based universities are more willing to consider entrepreneurship as a career choice. This suggests that there is a requirement to provide more entrepreneurial education across the nation, but this need is heightened in weaker regions. Also, universities and other educational institutions could increasingly foster entrepreneurship by improving the provision of facilities and infrastructure such as incubators and co-working spaces.

Policy recommendations based on this assessment are set out below.

Box 6.5. Key policy recommendations on the local dimension of SME and entrepreneurship policies

Strengthen business support across the regions

- Ensure the availability of adequate financial, training, mentoring and other business support for entrepreneurs and SMEs in each region, especially with regard to establishing start-ups with growth potential and introducing innovative products and processes.
- Increase the provision of co-working spaces, business incubators and scale-up office space across the regions.

Strengthen cluster organisations

- Support existing and new cluster initiatives by the provision of resources for cluster management organisations, strategy development processes and operational activities.
- Bolster networking activities both within and across cluster initiatives through the organisation of purpose-driven and goal-oriented events and meet-ups.
- Ensure that cluster initiatives are fully integrated into policy support for SMEs and entrepreneurship, and are not considered as standalone activities.

Strengthen the role of universities as regional entrepreneurial ecosystem anchors

- Stimulate universities in lagging regions to provide entrepreneurship education, entrepreneurial spaces and start-up support for graduates.
- Increase the emphasis of universities in lagging regions on providing innovation consultancy and support to regional SMEs.

Involve local actors in regional entrepreneurial ecosystem development strategies

- Establish regional entrepreneurial ecosystem assessments and development strategies for each of the eight regions, and integrate the assessments and strategies with the regional smart specialisation process.
- Support the creation of local partnerships involving local authorities, strategically important enterprises, universities and business support providers to provide local intelligence and consultation for the formation of regional entrepreneurial ecosystem strategies and support the implementation of the strategies.

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7. SME digitalisation initiatives in the Slovak Republic

This chapter assesses policies to support the adoption of digital technologies by SMEs in the Slovak Republic. It assesses the current level of digital development by SMEs in the Slovak Republic and identifies strong and weak points compared with other countries. It also assesses existing Slovak Government interventions to enable SMEs and entrepreneurs to digitalise, including measures to support SMEs that are already innovative and digitally-attuned as well as those that lag behind. It formulates a number of policy recommendations.

SME digitalisation – Why does it matter and what are the policy options?

Digitalisation, productivity and growth performance are closely linked

Digitalisation offers crucial opportunities for business of all sizes and in all sectors to set up expand and innovate. There is a correlation between investments in ICT and digital technologies and business performance indicators such as sales or profitability, especially over the long term (see for example, Ahmad and Murray, 2018 or Ferreira et al., 2019). In particular, the adoption of ICT and digitalisation (including the use of hardware, e-commerce, and software programmes that can help professionalise small business management) is considered as a key driver of firm productivity in the economic literature (Marchese et al., 2019).

A recent study examines cross-country firm-level productivity data and finds strong and robust evidence that digital adoption (more precisely of high-speed broadband internet, simple and complex cloud computing services, Enterprise Resource Planning and Customer Relationship Management software) is associated with significant productivity returns at the firm level (Gal et al., 2019).

Furthermore, structurally, the Slovak Republic has a relative weighting of its SMEs towards the individual entrepreneurs and micro firms, as noted in Chapter 2. Digitalistion is a promising route to scaling up for individual entrepreneurs and micro firms. Digitalisation may also help address the structural problem of relatively weak productivity performance of SMEs in Slovakia compared to OECD peers.

SMEs lag behind large enterprises

At the same time, the adoption rate of digital tools and technologies tends to vary significantly, not least by enterprise size. In the EU28, for instance, 42% of all large companies sell online, compared to 28% of midsized firms and 17% of small firms. As another example, large firms are more than twice as likely to use cloud computing services than small firms across the OECD (OECD, 2019a). As further evidence, a 2018 study conducted in Denmark classified firms active in the country according to their digitalisation status. More than 80% of large firms were highly digitalised, i.e. have adopted at least 7 out of 12 digital technologies, compared to less than 40% of firms of fewer than 50 employees (Danish Ministry of Industry, Business and Financial Affairs, 2018).

In addition, there is some evidence that SMEs that implemented digitalisation projects often do so only on a very modest scale, and so may not fully exploit the potential. A large-scale survey in Germany, conducted in 2018, shows that an increasing proportion of German SMEs have a digital strategy in place, but adopt a very gradual approach. Micro-enterprises in their sample (i.e. firms with one to ten employees), who declare to have implemented digitalisation projects over the last three years, spent less than EUR 10 000 on average for this kind of investment (KfW, 2018).

Key challenges faced by SMEs

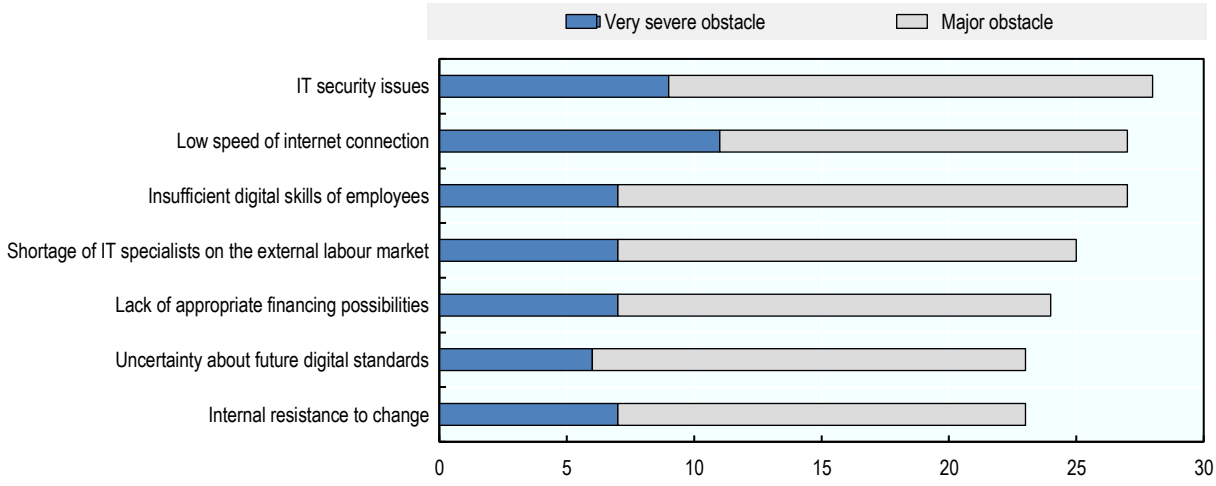
The difficulties SMEs face in this area are manifold. Smaller firms often lack the financial, managerial or skills resources to adopt digital technologies. At the same time, issues related to data protection, privacy concerns and cybersecurity appear significantly more challenging for smaller ventures than they are for large businesses (see, for example, OECD, 2019a for evidence). Finally, digital markets are sometimes characterised as “winner take-all” dominated by few actors with access to abundant data. Such dynamics may it hard for entrants and smaller businesses to compete.

A recent large-scale survey in five European countries (France, Germany, Poland, Spain and the United Kingdom) sheds more light on the hurdles SMEs perceive. First of all, a slight majority of surveyed SMEs consider digitalisation of strategic importance, and for one in three it represents a top priority.

Among these firms, there is a belief that the adoption of new technologies is necessary to secure competitiveness. The study also finds evidence of a strong connection between the importance management attaches to the issue and the actual technology adoption across all types of digital activity and innovation (Abel-Kock et al., 2019).

IT security issues rank foremost among obstacles to digitalisation by SMEs, followed by a lack of sufficient skills among the workforce (with a shortage of IT specialists also often cited). Low connection speed and the dearth of financing possibilities are also commonly cited (Abel-Kock et al., 2019). Figure 7.1 illustrates.

Figure 7.1: Obstacles to digitalisation



Source: Abel-Koch, Dr. Jennifer, Leath Al Obaidi, Sabrina El Kasmi, Miguel Fernández Acevedo, Laetitia Marin, and, Anna Topczewska (2019), "Going Digital: The Challenges Facing European SMEs", European SME Survey 2019, https://www.kfw.de/PDF/Download-Center/Konzernthemen/Research/PDF-Dokumente-Studien-und-Materialien/PDF-Dateien-Paper-and-Proceedings-(EN)/European-SME-Survey-2019.pdf.

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SME digitalisation represents a growing concern for policy makers

The uneven uptake and diffusion of digital technologies represents a major source of the productivity slowdown many high-income countries have faced in recent years, as well as the increasing productivity gap between "frontier firms" and firms that lag behind (OECD, 2019b and Andrews, Criscuolo and Gal, 2016).

This observation has implications for economic growth, regional development, and income inequality. A growing body of research points out that, unless (digital) technology diffusion among businesses improves, income inequalities may worsen, business dynamism suffer and competition decline. Empirical research confirms that policy makers can make a large difference in this respect (Sorbe et al., 2019).

As a result, digitalisation, including for SMEs, is emerging as a key concern for policy makers across the globe. In the OECD SME Ministerial Meeting, which took place in Mexico City in February 2018, 55 countries stressed the importance of enabling SMEs to make the most of the digital transition. As this chapter illustrates, many jurisdictions have recently introduced initiatives to promote SME digitalisation and Industry 4.0 applications.

Policy makers should favour a combination of broad-based policies and narrowly targeted interventions

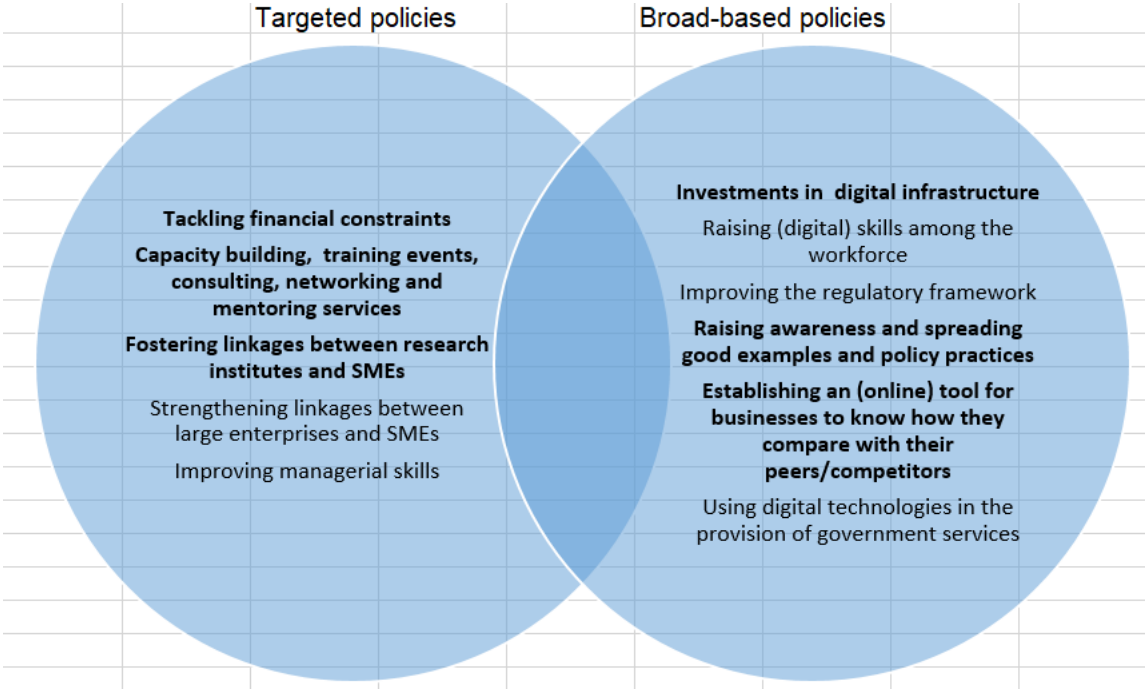
Research shows that firms that were already relatively productive ex ante gain most from the adoption of digital technologies Gal et al., 2019). This observation illustrates the interaction between the use of digital tools and other factors of business success, such as workforce and managerial skills, organisational structure, investments in process innovation, and the overall business model, as documented by Haskel and Westlake, 2017, among others. Policy makers are thus advised to embed support to enable SMEs to digitalise in a wider policy framework. This also raises the question if policy makers aiming to assist firms in adopting digital tools should focus their targeted policies on a relatively small subgroup of companies that are already productive and have high growth ambitions.

This chapter advocates a two-pronged approach to assist SMEs in the Slovak Republic to digitalise. On the one hand, the government should favour broad-based policies that support the diffusion of digital technology across the overall business population in the country. This includes upgrading the digital infrastructure, tackling skills shortages, for example for ICT specialists, designing an appropriate regulatory framework, raising awareness of the issue and introducing a single point of entry for companies seeking public support in this area.

At the same time, more targeted policies, such as vouchers, mentoring or advisory services should ideally be limited to a relatively narrow subgroup of SMEs that are highly motived to (further) embrace digitalisation. This is in line with a recent study on digitalisation support to SMEs from the European Commission. One of the key takeaways is that the motivation of beneficiaries is a vital recipe for success and that they should take the initiative to participate in support programmes. Experiments to select SMEs randomly from the business registry to receive funding and mentoring led to very low take-up rates and were generally not deemed successful (European Commission, 2019a).

Figure 7.2 provides a non-exhaustive overview of possible policies governments can take in this area. This chapter will focus on policy approaches in bold to avoid overlaps with other parts of this publication. For instance, initiatives to foster innovation and R&D among SMEs would very likely positively impact adoption rates of digital technologies, but are already discussed in depth in discussed in chapter 5. In a similar vein, other chapters in this publication provide recommendations to improve in the education system in general, and boosting participation in lifelong learning especially. Other possible policy options, for example related to cybersecurity (such as the implementation of relevant EU directives or the creation of computer security incident response teams) fall well beyond the scope of this review.

Figure 7.2: Policy options to raise SMEs' uptake of digital tools and technologies



Note: Improvements to the regulatory framework notably includes exemptions or specific regulation for SMEs. A well-known example is the General Data Protection Regulation (GDPR). While the general regulation applies to firms of all size, some of the applications do not apply to (all) SMEs. With some exceptions, companies with fewer than 250 employees are not required to keep records of their processing activities, nor do they have to appoint a Data Protection Officer (https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/application-regulation/do-rules-apply-smes_en)

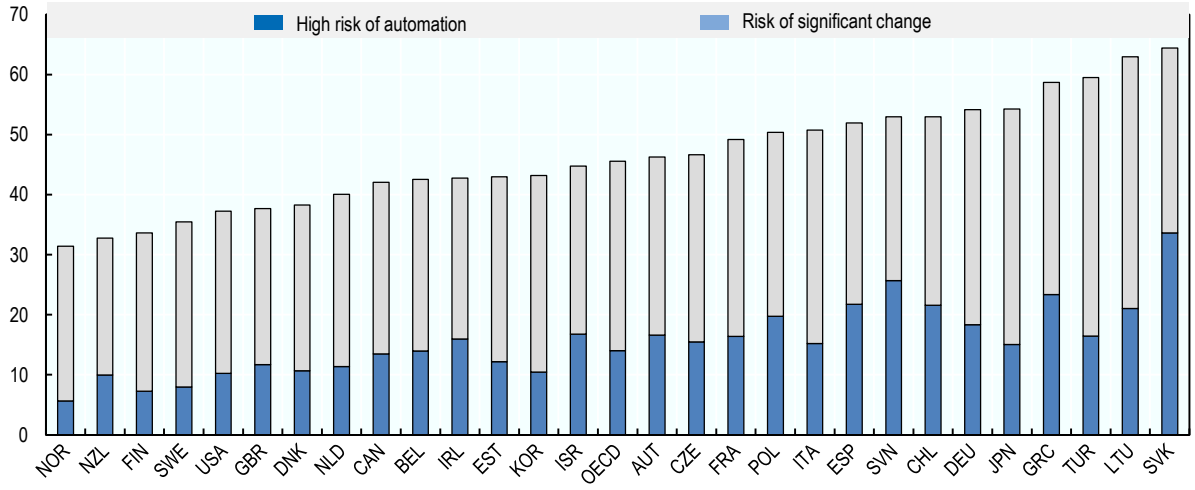
The state of SME digitalisation in the Slovak Republic

The labour market in the Slovak Republic is especially vulnerable

Many governments across the globe have taken action to support digitalisation among SMEs. The vulnerability of its labour market posed by digitalisation and automation represents a compelling reason why this issue should rank as a top priority of policy makers in the Slovak Republic. Fully 34% of all workers active in the Slovak Republic face a high risk of losing their job because of automation with another 31% likely to face significant changes to their job (Nedelkoska and Quintini, 2018). This combined share is higher in the Slovak Republic than among any other jurisdiction for which comparable data are available (see Figure 7.3). Policy makers and SMEs (which employ around two-thirds of the private sector labour force in the Slovak Republic) should therefore be well prepared to face the challenges that digitalisation poses.

Figure 7.3. Risk of job automation

Per cent of jobs at risk, by degree of risk



Note: High risk – more than 70% probability of automation; risk of significant change – between 50 and 70% probability
Source: Nedelkoska and Quintini (2018)

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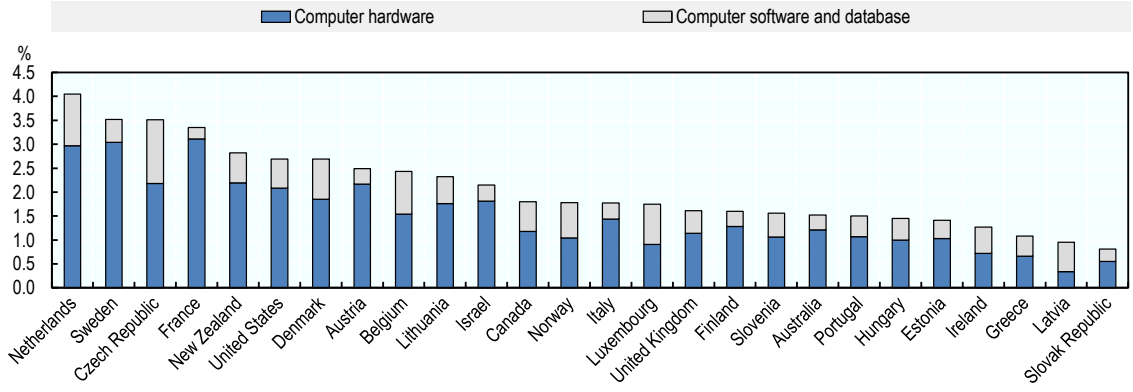
SMEs in the Slovak Republic spend less on ICT and digitalisation than their counterparts in other European countries

There is a very large dispersion in the SME digitalisation performance within Europe. The European Commission groups countries into three different categories based on how much an average SME spends on ICT and digitalisation. SMEs in the "high enabling region" consisting mainly of countries in Northern Europe, spend 2.5 times as much as SMEs in the "modest enabling region," consisting mainly of countries in Eastern and South-Eastern Europe, including the Slovak Republic (with countries in the "modest enabling region" taking an intermediate position). In addition, the gap is not expected to narrow according to estimates of the European Commission. It expects that in 2022 overall spending in the top region will be 12 times as large as spending in the lagging region (Innovation Finance Advisory and European Investment Bank, 2019).

OECD data confirm this picture. In 2017, companies in the Slovak Republic spent an equivalent of 0.84% of GDP on IT investment, below all other OECD countries (see Figure 7.4).

Figure 7.4. Investment in ICT by type

Percentage of total gross fixed capital formation in 2017 or the latest year available



Note: For Denmark, Ireland, Latvia, and Sweden, the data is from 2016. For Germany and Japan, data on computer hardware is not available. For New Zealand and Greece, information is missing for computer software.
Source: OECD (2020), National accounts at glance: Gross fixed capital formation database.

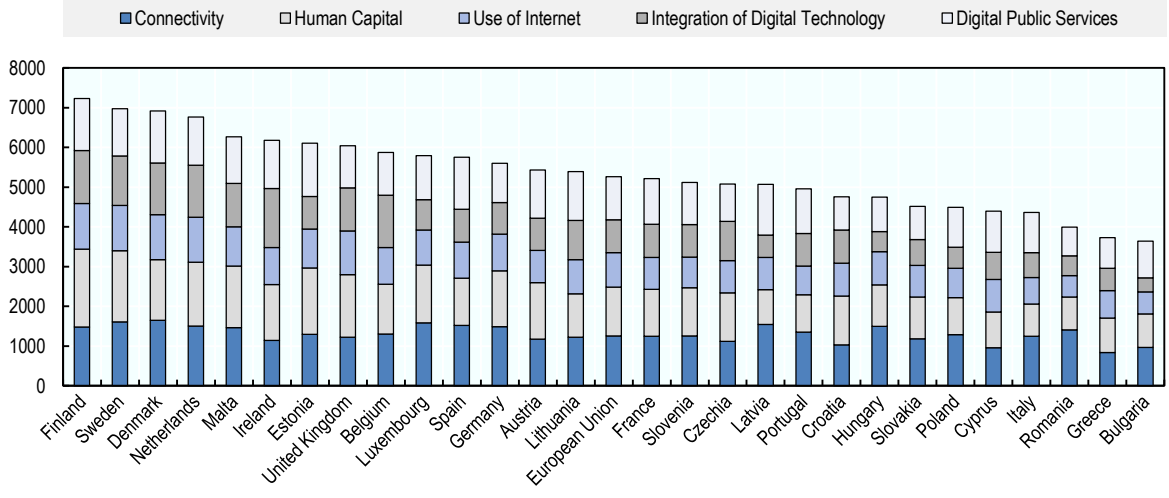
StatLink https://doi.org/10.1787/888934248008

The digital preparedness is relatively poor among businesses in the Slovak Republic

The relative poor performance of the Slovak Republic (and other countries in the region) is reflected in various rankings and data sources. The European Union, for instance, ranks all EU28 countries according to their digital preparedness on an annual basis, called the digital economy and society index (DESI). The Slovak Republic significantly trails leading countries on most dimensions (see Figure 7.5).

Accordng to data from the European Commission, only 13% of businesses in the Slovak Republic is highly digitalised, and 50% has a very low level of digitalisation, compared to 18% and 46% as the EU average (European Commission, 2019b).

Figure 7.5. Digital economy and society index, 2019



Note: Higher scores refer to a better performance.
Source: European Commission (2020), "Digital Single Market", The Digital Economy and Society Index, https://ec.europa.eu/digital-single-market/en/desi

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In a similar vein, the Going Digital Toolkit, developed by the OECD, enables countries to easily identify their weak and strong points when it comes to digital developments. Some 33 parameters, grouped into 7 categories, capture how to assess a country's state of digital development. The Slovak Republic tends to perform below the OECD average, which points to room for improvements and the possibly need for policy makers to step up the efforts.

The access to communications infrastructures, services and data is below average

This section focuses on the infrastructure necessary for companies (as well as citizens) to adopt digital tools and technologies, such as measured by broadband penetration rates. Empirical evidence indicates that investments in fast broadband lead to more ICT investments by firms or all size, and can therefore be considered a key enabling factor of SME digitalisation (Andrews, Nicoletti and Timiliotis, 2018).

OECD data shows a relatively poor performance for the Slovak Republic with scores systematically below the average of the OECD or EU 28 (see Table 7.1). This indicates ample room for improvement. Interestingly, the relatively poor score in terms of access to the digital infrastructure appears unrelated to the regulatory and competitive environment, as there are relatively few barriers to entry and competition services compared to other OECD members (OECD, 2019c).

Table 7.1. Access to digital infrastructure: How the Slovak Republic compare to the OECD average

In 2018

	OECD Average	Slovak Republic	Ranking of the Slovak Republic
Mobile broadband subscriptions per 100 inhabitants	110	86	27th (out of 37)
Fixed broadband subscriptions per 100 inhabitants	31	28	30th (out of 37)
Machine-to-machine SIM cards per 100 inhabitants	16*	12	19th (out of 34)
Share of households with broadband connections	86	79	26th (out of 36)
Share of businesses with broadband contracted speed of 30 Mbps or more	43.6*	33.4	24th (out of 28)

Note: * the EU28 average is used instead due to data constraints.
Source: OECD (2021), own calculations

In addition, improvements in internet connectivity, bright spots such as ultrafast broadband coverage (which is well above the EU average) notwithstanding, have also been weaker in the Slovak Republic than in most other European countries (European Commission, 2019c). The government should make a priority to raise infrastructure investments going forward, including in regions that currently lag behind.

Digital skills among the workforce in the Slovak Republic are slightly below the EU average

Adult skills are regularly surveyed through the OECD Programme for the International Assessment of Adult Competencies (PIAAC) across a broad range of countries. "Problem solving in technology-rich environments" represents one of the three key dimensions that are monitored, alongside numeracy and literacy. It is defined as "using digital technology, communication tools and networks to acquire and evaluate information, communicate with others and perform practical tasks" and the indicator is thus suitable to proxy digital skills (OECD, 2019b). The Slovak Republic scores slightly below average with a mean score of 26 out of 100, compared to the OECD average of 30.

The human capital dimension of the EC's DESI ranking covers both "internet user skills" and "advanced skills and development." Its 2019 results also ranks the Slovak Republic somewhat below the (EU 28) average with an especially low score for the advanced skills and development ranking (European Commission, 2019d). This may be one of the factors behind growing shortages of ICT specialists and other qualified workers. Employers in the IT sector estimate that the labour market could absorb 10 000 additional specialists, a number that is expected to double within five years (OECD, 2019d). At the same time, the Slovak Republic has a larger than average share of the population with at least basic an above basic digital skills, according to a European ranking (European Commission, 2019c).

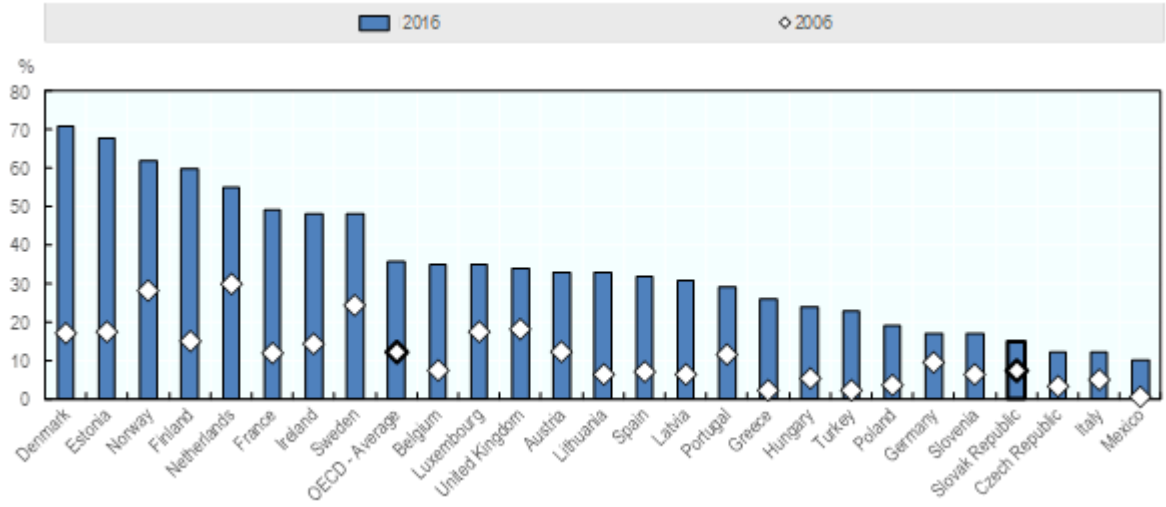
The government is taking steps to digitalise its operations, but further progress would be welcome

The Slovak Government could boost SME digitalisation by setting the right example and digitalising its operations and services, especially in its dealings with (small) businesses. This represents an area where the Slovak Republic is traditionally underperforming compared to most other EU countries.

In 2016, 15% of individuals responded that they used internet to send forms via public authorities within the past months. In contrast, over 60% of individuals used internet for forms with public authorities in Northern European countries such as Denmark, Estonia, Finland or Norway) (See Figure 7.6).

Figure 7.6. Digitalisation of government in the Slovak Republic

Percentage of individuals that used internet for sending filled forms via public authorities in last 12 months



Source: OECD (2020b), Government at a Glance database

StatLink https://doi.org/10.1787/888934247742

However, the Slovak Government made significant progress in e-government services over the last few years. In 2018, only 20% of firms were registered to fill their tax online, but following a campaign to raise awareness and assistance offered to individuals at the tax centres, the tax authorities were able to collect nearly 100% of the tax fillings online. In a similar vein, the business start-up process has been streamlined and made easier thanks to a reform introduced in early 2019.

This relative improvement is also apparent in the "digital public services" ranking of the Digital Economy and Society Index. In 2019, the Slovak Republic ranked 21st of 28 EU member states in this ranking,

9.3 points below the EU average. In 2017, the country ranked 24th with a gap of 11.6 points with the average, indicating that the country has caught up to some extent (European Commission, 2019c). E-government can have important demonstration effects to the economy, and provide platforms, technologies, and standards that facilitate transactions and create opportunities for SMEs.

As another example of recent progress, the government passed a new law on "guaranteed" electronic invoicing in April 2019 (by transposing EU regulation), which will come into force in early 2021 and apply to public contracts. It introduces a structured invoice content based on international standards, which will be issued by budgetary and contributory organisations and public contracting authorities (for amounts exceeding EUR 5 000). In practical terms, this means that invoices do not have to be manually inputted into accounting systems and the need to print, send or email invoices will no longer be necessary. By making this obligatory for all providers of goods and services to government bodies, this introduction also incentivised the business community at large to embrace e-invoicing. The implementation of this law, and its impact on the adoption of e-invoicing by SMEs, should be monitored.

Policy developments in the Slovak Republic

This section provides a non-comprehensive overview of government plans to stimulate digitalisation among Slovak SMEs. It excludes initiatives that impacts SME digitalisation, but are described elsewhere in the publication, most notably in Chapter 5 on government programmes (for example related to skill development and business development programmes as well as innovation policies).

A key take-away of this overview is that the government is aware of the main issues at hand and has developed ample action plans or strategies. Going forward, it will prove crucial to (ii) prioritise the main avenues to improve policy making in this area, (ii) properly implement the selected proposed reforms drawing on the experience from other countries that have taken similar actions in the past, (iii) closely monitor and evaluate the impact of the policy changes and (iv) revise public initiatives accordingly.

After describing some key policy developments, this chapter proposes a limited number of key recommendations that would have significant impact on SME digitalisation for the consideration of policy makers in the Slovak Republic.

The Strategy of the Digital Transformation of Slovakia 2030

The Office of the Prime Minister of the Slovak Republic for Investments and Informatization (ODPMII - *Úrad podpredsedu vlády SR pre investície a informatizáciu*) is he central government body responsible for the coordination of activities arising from the Digital Agenda of Europe. It has established the "Strategy of the Digital Transformation of Slovakia 2030." It articulates an inter-departmental government strategy with respect to digitalisation broadly defined (so thus not only covering SMEs, but also government actors, citizens, large businesses and so on). The ODPMII will serve as the principal coordinator for this strategy.

The 64 page documents outlines a broad vision and direction. The document is inspired by good practices from leading countries, aligned with recommendations of international organisations such as the OECD, and provides some information about the current weak and strong points in the country.

At the same time, it lacks quantifiable and well-defined objectives, key performance indicators and timelines, as well as concrete policy measures on how to improve the current situation. In addition, while the ODPMII will be responsible for the coordination of the strategy, it is unclear how other organisations, both within government and beyond, will be engaged in the process. In other words, the document (or a follow-up document) could specify the institutional responsibilities of the targets (ideally with a budget estimate), and establish a co-ordination mechanism across different ministries. Even

though the action plan (see below) is more concrete in terms of the ambitions and how to measure progress, it would be advisable to draft a more actionable long-term vision as well.

The Action Plan for the Digital Transformation of Slovakia 2019-22

The action plan derives directly from the aforementioned strategy and provides a way forward to implement measures over the period of Q3 2019 until the end of 2022. It identifies four strategic areas:

- The digitalisation of the education system and improving digital skills;
- Creating the basis for a "data economy" and a digital economy in general;
- The digitalisation of public administration;
- The development of artificial intelligence.

This action plan provides guidance for policy makers in the short term. Its recommendations are relatively concrete, and allocates ownership of various measures and includes a timeline. Many of the recommendations refer to the establishment of coordinating bodies, the drafting of proposals and the creation of more digitally attuned regulation. Consequently, the main expected output remain relatively vague.

Some of the recommendations with particular salience for this publication include:

- The establishment of digital innovation hubs, platforms for artificial intelligence and for distributed ledger technology, a competence centre for high-performance computing;
- An analysis of how to improve digital skills, including through life-long learning;
- Improving the digital infrastructure with the ambition, among others, to provide 5G coverage in one big city by the end of 2020;
- The possibility to extend the mandate of the Slovak Investment Holding.

The national Action Plan for Smart Industry

After consultation with various stakeholders and involving several ministries, the government of the Slovak Republic adopted the National Action Plan for Smart Industry in 2018. Part of the document refers to creating better conditions to implement digitalisation and the challenges and opportunities for smaller businesses are explicitly mentioned. Some of the strategic goals in the National Action Plan are also related to SME digitalisation. The plan formulated 35 measures in total and identified five priority areas in need of policy attention to reach these goals, as follows:

- Research, development and innovation;
- Basic principles of IT security implementation of smart industry;
- Labour market and education;
- Reference architecture, standardisation and creation of technical standards, the establishment for a framework for European and national legal conditions;
- Information and promotion.

The National Coalition for Digital Skills and Occupations of the Slovak Republic

In 2017, the National Coalition for Digital Skills and Occupations of the Slovak Republic was established by Deputy Prime Minister Pellegrini, as recommended by the European Commission. As in other countries who have set up a similar arrangement, it aims to improve digital skills among the workforce through the proposal of concrete measures. It bring together partners from various backgrounds such as companies using digital technologies, education and training providers, education and employment

ministries, public and private employment services, associations, non-profit organizations and social partners. On November 2019, the organisation had 83 members in total, which have made various commitments in this area.

The IT Fitness Test

The IT fitness test is a self-assessment test, providing insights into the IT literacy skills and competences of the Slovak population, divided into five categories (internet, security and computer systems, complex tasks, office tools and collaborative tools and social networks). Comenius University, the Technical University of Košice and the IT Association of Slovakia developed the test. The tool has a separate module for primary school students who want to assess their readiness to enter secondary schooling. Between its inception in 2010 and 2019, more than 200 000 individuals self-tested, providing policy makers and other stakeholders with ample information about the main challenges and issues (www.itfitnesstest.sk). The tool indicates that there is ample scope to improve digital skills among different groups in the Slovak Republic, in particular the use of office software.

Conclusions and policy recommendations

1. Improve collaboration with non-government bodies

Non-government bodies often play an important role in providing support, and governments should complement private-led initiatives rather than substitute them. Chambers of Commerce and business associations, for instance, are often very well placed to raise awareness and allow companies to learn from the experience from their peers. Box 7.1, for instance, provides information about the pivotal role of the Federation of Finnish Enterprises in this respect. The SME digitalisation approach in Austria, elaborated in Box 7.3, represents another case in point of how to collaborate with such actors; a key success factor to their approach was a mapping exercise of initiatives (many of them private) that already exist throughout the country and try to replicate and scale up the most successful of them.

In fact, there are many initiatives from private enterprises, business associations and similar organisations to stimulate the digital transition of SMEs in the Slovak Republic (VVA and WikConsult, 2019). Similar to their colleagues in Finland, policy makers in the Slovak Republic could try to set up partnerships with organisations active in the country that have outreach to the business community, and engage them more in the design and implementation of SME digitalisation policies. At the moment, such partnerships appear rare to non-existent, and government actors seem largely unaware of relevant initiatives and actions organisations that represent SMEs (or businesses of all size).

Box 7.1. The Federation of Finnish Enterprises (FFE) support to promote the digital transformation of SMEs

Description of the approach

Finland is considered a front runner when it comes to SME digitalisation with around 80% of Finnish SMEs employing basic digital tools in their day-to-day operations. Nonetheless, a sizeable gap between large and small firms remains for the adoption of more advanced digital technologies such as robotics, artificial intelligence or the use of big data. Survey data indicates that only one in ten Finnish companies are "digitally oriented," i.e. having significantly digitalised some of its functions.

The Federation of Finnish Enterprises (FFE) is trying to narrow the gap. The support can be classified in five categories.

- First, the organisation aims to raise awareness about the opportunities digital tools and technologies can bring. In partnership with other organisations, both from the private and public sector, the FFE organises the *Entrepreneur's Digital School*. This involves a series of events spanning the whole country such as case studies and peer-to-peer learning opportunities for small business owners that are in the early stages of their digital transformation;
- Second, the FFE organises webinars on how to use digital tools and applications. These training seminars can reach a large mass of interested parties at low cost;
- Third, the FFE publishes an instructional online manual, the *Entrepreneur's Digital Guidebook*. This document, freely accessible, provides practical information to various aspects to business digitalisation, and includes links to other information and digital service providers in the country. Similarly, the *Entrepreneur's GDPR Handbook* is a source of information for companies with questions regarding the EU's data protection regulation;
- Fourth, the organisation has several print and online editorial outlets which aims to inform their members, including on digitalisation;
- Finally, the FFE conducts surveys and studies on the issue on a regular basis. They also collaborate with the Ministry of Economic Affairs and Employment for the biannual SME Barometer, which occasionally maps the state of digital transition of Finnish SMEs.

Factors of success

As the largest and most influential business federation in Finland, with a membership of more than 115 000 of enterprises of all sizes and sectors, it has the necessary scale and outreach to raise awareness among a large segment of the Finnish business community. This also makes the FFE a natural representative of SMEs towards the national government, which routinely consults and partners with the organisation when making policies that aim to promote the digital transition of the Finnish economy and public sector.

The FFE consists of 20 regional organisations and nearly 40 local associations, which all work together with deal with their counterparts in regional and local governments in boosting development and deployment of digital tools and skills in SMEs.

In order to sustain its position as a credible stakeholder, the FFE routinely offers fresh and concrete solutions to all levels of government in affairs related to digitalisation. This is done through its policy programmes which the organisation publishes every election cycle, the Digital Platform released ahead of the 2019 national ballot being a recent example.

Obstacles and responses

An umbrella federation like the FFE faces difficulty to represent and serve a field as diverse as SMEs for obvious reasons. The sheer breadth of an all-encompassing phenomenon as digitalisation, which touches every company, industry and region in a slightly different fashion and crosscuts every policy sector, from taxation to education, and level, from EU to national and local, makes it hard to provide concrete services or advice to SMEs.

At the same time, public officials may struggle even more with the same issues of scope and diversity when drafting and deploying their responses to new technology, especially when it relates to the business community. This presents SME organisations like the FFE an opportunity to act as a co-ordinator. It sees its role as a bridge builder between the government and companies, i.e. to voice the concerns of companies and entrepreneurs, raise their awareness, and ensure that policy making in this area is fit for purpose, high-quality and of relevance for (small) businesses. In this way, the FFE and its counterparts elsewhere can provide the government a source of both legitimacy and real-life experience in order to advance the transition to a sustainable digital economy.

Relevance to the Slovak Republic

The Slovak Government could try to establish partnerships with similar organisations in the country to strengthen their role to support SMEs to digitalise. Chambers of commerce and employer associations are well placed to raise awareness of the issues at hand, provide peer learning opportunities, and diffuse knowledge and good practices in a languages SMEs and entrepreneurs can relatively easily understand, as the Finnish experience showcases.

The prime minister's office (or another government organisation) could therefore more actively seek various models to collaborate with private sector organisations. Relatively modest partnerships at the regional level that are deemed successful could be scaled up and established in other parts of the country.

Source: SME United (2019) and written exchanges with experts from the FFE.

2. Establish centres of excellence/digital hubs across the country, embedded within the smart specialisation strategy.

Many countries in the European Union and beyond have developed digital innovation hubs or centres of excellence. They "act as one-stop shops that help companies expand their use of digital technologies to improve business and production processes, products, and services and to increase overall competitiveness. Digital innovation hubs share advanced knowledge and expertise with their customers and provide them with access to the latest technologies. They also guide customers in exploring and piloting digital innovations, and when required, they offer business and financing support to customers to allow them to implement these innovations across the value chain (Innovation Finance Advisory and European Investment Bank, 2019).

A 2019 study found that there are 386 digital innovation hubs spread around EU 28 countries, and that up to 70% of SMEs with a digital project makes use of their services. These hubs are less common in countries where SMEs lag behind in the adoption of digital tools and technologies, mainly in Eastern and South-Eastern European member states. In these countries, there is one such facility for every 10 000 SMEs on average compared to 3 500 in other EU 28 countries. In addition, there are differences in terms of the range of services these hubs offer and how many SMEs are aware of the available support channelled through them (Innovation Finance Advisory and European Investment Bank, 2019).

In fact, one of the proposed initiatives of the "action plan for the digital transformation of Slovakia" is the creation of a network of digital innovation hubs, in recognition that the Slovak Republic is of the few EU

28 member states who have not already created a strong network. In April 2020, there were three digital hubs in the Slovak Republic under preparation, and not a single active one (according to data from the "smart specialisation platform" of the European Commission). Two are based in Bratislava (The Institute of Informatics of SAS and the National Centre of Robotics) and one in Kosice (Technicom).

Establishing fully operational digital hubs represents one of the measures proposed in the "smart industry action plan." The government should proceed with its plans to support the creation of these hubs in the form of (i) networking and match-making services, (ii) the provision of finance and (iii) allocating human resources so as to make these centres fully operational. Box 7.2 describes the approach adopted by Germany, which could be a learning model for the Slovak Republic.

Box 7.2. The Mittelstand 4.0 Competence Centres: Local support for SME digitalisation

Description of the approach

Germany has set up 23 Mittelstand 4.0 Competence Centres across the country and an additional 6 focusing on specific sectors. These serve as companies' regional point of contact for everything related to digitalisation. These centres were set up specifically because of support SMEs, given a widening gap of digital adoption rates between large firms and (a segment of) start-up on the one side and established SMEs on the other. The Mittelstand 4.0 Competence Centres is one of the initiatives under a wider action plan for a widespread adoption of Industry 4.0 in German SMEs.

The Federal Ministry of Economic Affairs and Energy (henceforward the BMWi according to the acronym in German) is responsible for these centres. The BMWi sets forward the overall strategy and procedural guidelines and works closely with various stakeholders in its implementation by establishing discussion groups and expert meetings.

These centres offer support to SMEs interested in digitalisation such as workshops, demonstration plants, guidance on how to make a concept for digitalisation, qualify their employees and provide network opportunities in their region. They "help businesses to first gauge at what stage of digitalisation they are currently at, develop together with the company an individual digitalisation road map and assist it in the selection and implementation of suitable measures. The Mittelstand 4.0 Competence Centres are also at hand to advise companies on whether a technical solution is economically viable and which security aspects must be considered" (BMWi, 2019). The services are provided free of charge and the centres are fully funded by the federal government.

Factors of success

Each centre has its own specialised focus, which is often related to regional strengths, local expertise, and existing clusters. For example, the centre in Augsburg places an emphasis on manufacturing, machinery, metallurgy and vehicles, reflecting the position of the city and area as an industrial hub. The centres have been founded by separate consortiums, which vary from one centre to the next. These consist of higher education institutes, chambers of commerce, various institutions and so on. This approach enables them to cater to specific needs at the local level, and establish close collaboration with partners in the region with the necessary expertise and qualifications.

Another factor of success if that these centres bring together various stakeholders, both from academics (such as the *Fraunhofer* institutes – a research organisation focussing on applied science), as well as from "innovation diffusion partners" such as associations and chambers who have outreach to the business community, knowledge about their needs and can provide practical support.

Each Competence Centre has targets, and once or twice a year, representatives from the BMWi assess whether they have been reached. In addition, the BMWi conducts a survey among stakeholders and

beneficiaries and performs an evaluation every year, based on parameters such as the number of activities, its focus and the outreach to SMEs.

Obstacles and responses

An inherent challenge is how to transfer knowledge from research institutes about technical topics (such as robotics or big data) to entrepreneurs and small business owners in a language they can understand and with practical applications for them. To bridge that divide, the academic staff of the relevant research institutions and partners of the consortiums receive training to workshops by the Mittelstand 4.0 Agency for Communication.

While all centres have internal evaluation procedures, and surveys among its beneficiaries, it is much more challenging to perform a full-fledged impact assessment, in particular to isolate the effect from these centres from other organisations, programmes and activities to promote digitalisation among SMEs. As a result, it is hard to gauge the additionality of this approach.

Relevance to the Slovak Republic

The Slovak Republic could adopt this model and set up a handful of centres in different parts of the country. As in Germany, these centres need to be build on existing strengths, for example by exploring partnerships with (technical) universities, and embedded in smart specialisation strategies and cluster policy. The consortium model, whereby different partners work together to achieve a common goal, also represents a key pillar of the German model should ideally be adopted in the Slovak Republic, as well as the practice to establish common guidelines and opportunities to "train the trainers." As a final recommendation, the activities of these centres should be monitored, compared to pre-set ambitions and beneficiaries' should be surveyed.

Source: BMWi (2019)

3. Create a coordination mechanism to design and implement policy responses related to SME digitalisation

As Chapter four of this publication highlights, policy making in the Slovak Republic is often fragmented and poorly coordinated across different stakeholders when it comes to SME and entrepreneurship support more generally. This appears to hold true for its current digitalisation efforts as well. While the office of the Prime Minister has taken the lead to develop a digitalisation strategy, it is unclear how other ministries and government contribute towards its implementation, and were consulted in the process in the first place. For example, the SBA would be well placed to provide business development services in this area. Nonetheless, they seem not be a partner in the development of the strategy, nor in its implementation.

Coordination and effective implementation of initiatives is especially relevant in this area of SME digitalisation, as this requires involvement of a broad number of different ministries and government bodies, as well as stakeholders outside of the government. Experience in other countries indicates that there are often a large number of public initiatives in place that aim to raise the take-up of digital tools for SMEs. This raises the possibility of wasteful duplication of efforts, gaps in the provision of services, the existence of initiatives that lack scale and are therefore not cost-efficient, and causes difficulties for SMEs who want support to navigate the support landscape. High-level political leadership on governance as well as an effective working-level coordination mechanism will be equally important.

The "action plan for the digital transformation of Slovakia" designates the "Directorate General for Digital Agenda at the Office of the Deputy Prime Minister of the Slovak Republic for Investments and Informatization."

Austria is a good example of a country that aims for a cohesive approach and set up coordination mechanisms through the Austria's Digitalisation Agency (DIA) (see Box 7.3). While the establishment of a new government body to streamline and coordinate policy efforts may not be warranted in the Slovak Republic, the prime minister's office may want to adopt some of the mechanisms employed by the DIA to ensure buy-in and engagement from a broad spectrum of relevant stakeholders.

Box 7.3. Austria's Digitalisation Agency (DIA)

Description of the approach

In 2018, a new Ministry was created in Austria, called the Ministry of Digital and Economic Affairs (*Ministerium für Digitalisierung und Wirtschaftsstandort* or BMDW). This Ministry centralised many federal policy competences related to digitalisation, which were previously scattered across different Ministries. This led to the creation of the "Digital Austria initiative," also in 2018, which aims to streamline policy making in the area. To facilitate and coordinate this process the Digitalisation Agency (DIA) was established in the same year. An overview of key actors and policies in this area provides insights in the need for coordination.

Key government players, aside from the BMDW, at the national level include:

- The *Forschungsförderungsgesellschaft* (FFG, the Austrian Research Promotion Agency),
- the AWS (*Austria Wirtschaftsservice Gesellschaft*) provides certain specific support measures, including a non-repayable grant (open to businesses of all size if the conditions are met),
- The Austrian Federal Ministry of Transport, Innovation and Technology (bmvit);

As in many countries, the government is concerned about the gap in the adoption of digital tools between large firms and SMEs, and have developed initiatives to reduce the disparity. Key programmes in this area are:

- The "KMU digital" programme provides support for SMEs active in Austria. It is a joint project between the BMDW in cooperation with the Austrian Chamber of Commerce (WKÖ). As a starting point, certified consultants will assess the opportunities digitalisation offers to firms that apply for the programme, and how advanced they already are. These consultants would then provide guidance on how to digitise the firm. In addition, funding for participating in training workshops are provided as part of the programme.
- The "Smart and Digital Services initiative" aims to support R&D investments in the service industry and for services as added value for the traditional industries. While it is open to businesses of all sizes and is broader than digitalisation, it represents a relevant programme in this area.
- Austria created a national platform for Industry 4.0, which brings together a very broad number of stakeholders from industry, science, regional and national policy makers, associations, trade unions and NGOs to better manage the digital industrial transformation. Among other activities, it created the Business Model Lab, where ….

In addition to the actors and measures described above (which is far from an exhaustive list), there are a large number of initiatives at the subnational level, both from government bodies as well as from non-governmental organisations. Chambers of Commerce and sector organisations, for instance, play a central role in fostering the take-up of digital technologies among their members.

A key part of the mandate of the DIA is therefore to keep track of relevant initiatives in this area. The conducted a mapping of current initiatives at different regions and by different organisations.

Obstacles and responses

A report from the European Commission indicated that there is scope to prioritise and quantify policy priorities. Currently, the policy targets are not deemed sufficiently clear and quantifiable, which complicates monitoring and evaluating the impact of policy making. In addition, the digital infrastructure lags behind leading EU countries in certain respects, such as the take-up rates of fixed broadband lags behind in Austria compared to, especially in rural areas. This hampers policy efforts to increase the adoption of digital tools among Austrian SMEs (European Commission, 2019b).

Relevance to the Slovak Republic

There are several lessons policy makers in the Slovak Republic can draw from the Austrian model. First, it may prove helpful to map current initiatives to support SMEs' digitalisation efforts (even if they are not officially labelled as such). While it may very well prove impossible to conduct a comprehensive and exhaustive mapping exercise, it is worthwhile to have an overview of the most important measures, also at the subnational level of government and by private actors.

Second, the Austrian approach illustrates the importance of establishing partnerships with relevant organisations and stakeholders. For instance, the AWS (*Austria Wirtschaftsservice Gesellschaft*) is a key institution in the provision of business development services, including in relationship to digitalisation efforts. Their buy-in and commitment is therefore crucial to implement policies and realise goals set by the central government.

Third, the Slovak Republic could step up efforts to draw on policy experiences from across the country, scale up initiatives that work well, pilot them in other regions and fill in gaps in the provision of support measures as necessary.

Sources: Exchanges with experts from the DIA, European Commission (2019e) and Boog et al. (2019).

4. Develop an online diagnostic tool for SME digitalisation in the Slovak Republic

Online diagnostic tools are cheap and accessible, enabling policy makers to reach out to businesses that are hard to get through to otherwise. International evidence indicates that can be an important entry point for businesses in need of support and advice. Often, these tools also enable participating firms to benchmark their performance in several areas, and thus identify potential areas for improvement. As a follow-up step, these tools typically provide information about how to address the identified weak points and direct them to relevant support initiatives and programmes (OECD, 2018).

These auto-diagnostic services can focus on various areas relevant for SME performance, such as on productivity (as in the "Canada business productivity" developed by the Canadian Business Bank) or on innovation (as is the case with "Cotec Portugal) (OECD, 2018). The Slovak authorities may want to establish a similar auto-diagnostic tool, which does not exist at the moment of writing. The SME digitalisation angle could be embedded in a broader toolkit, as in the above examples. Alternatively, a tool with an exclusive emphasis on SME digitalisation could be developed. The French example, outlined below, may serve as a suitable model to follow.

BPIFrance, the French public investment bank, is increasingly focusing attention on SME digitalisation. Its online self-diagnostic tool, *digitalomètre*, represents one of the main trusts to achieve their ambition in this area (among other initiatives). It is on online, free questionnaire for small businesses that takes around 15 minutes. It aims to gauge their "digital matureness," to identify strong and weak points and to make firms aware of possible support programmes tailored to their specific needs and profile. The auto-diagnostic tool is considered by BPIFrance as an essential tool to offer guidance to SMEs that want to take action, but find it hard to know where to start (BPIFrance.fr).

5. Pilot a financial support programme specific for relatively risky or advanced SME digitalisation projects

While SMEs in the Slovak Republic generally find it relatively easy to access credit on private market, experience from other countries suggests that there may be a need for specific support in this area for (larger-ticket) digitalisation projects. Around a quarter of SMEs in five large European countries (France, Germany, Poland, Spain and the United Kingdom) indicate that the lack of financing represents a hurdle, to digitalise, even though the financing conditions for SMEs were generally favourable when the survey took place (Abel-Koch et al., 2019). This provides a potential rationale for policy makers to intervene.

A recent report funded by the European Commission, through the European Investment Advisory Hub, for example, recommends the Portuguese Government to establish a dedicated guarantee facility for higher-risk, transformative digital projects. The document considers this facility would represent a key enabler for the government to drive forward its Indústria 4.0 digitalisation strategy (the existence of various support schemes for SMEs in need of finance already in place notwithstanding) (COTEC Portugal and the European Investment Advisory Hub, 2019).

Reasons why there may be a specific financing gap for digitalisation projects in many countries include:

- The intangible nature of digitalisation projects. Even though digital investments may significantly impact productivity and profitability, the resulting assets are typically very hard to collateralise and banks may be reluctant to provide the necessary financing in the absence of ample tangible collateral (see, for example, Brassell and Boschmans, 2019);
- The uncertainty of the impact of digital investments on firm performance, especially for more advanced, riskier, large-scale and transformative projects;
- Banks encounter difficulties to technically appraise the merits and expected returns of investments in digitalisation technologies, and often perceive that these investments are inherently more risky than investments in tangible assets;
- Many firms lack own funds for this purpose, especially for relatively large-scale projects (COTEC Portugal and the European Investment Advisory Hub, 2019);
- The insufficient availability of risk capital markets in many countries. Investments in digital projects, again especially involving larger tickets and an elevated risk profile, benefit from well-developed capital markets (see, for instance Demmou, Franco and Stefanescu, 2020).

The last bullet point is especially pertinent for the Slovak Republic, which does not have a well-developed (risk) capital market, thereby strengthening the case for government intervention. Venture capital investments in ICT projects for instance, represent 0.0016% of GDP, compared to the OECD average of 0.0184% (https://goingdigital.oecd.org/en/dimension/innovation/), while financial instruments other than straight debt are underdeveloped (European Commission, 2019b).

The Action plan for the digital transformation of the Slovak Republic identifies the high financial burden of introducing new technologies as a key challenge. In addition, it acknowledges that public support in this area has historically been “somewhat low,” and that there thus could be scope for additional action on this front,

Some countries have established dedicated finance facilities for SMEs that want to digitalise for the above reason, often supporting relatively risky and/or large investments. The *KfW Loan for Growth* scheme, established in Germany in 2018, is a case in point of a specific scheme for digitalisation (and innovation) projects. This facility covers up to 70% of the risk by KfW, Germany’s SME bank, in cooperation with the European Investment Bank (EIB) under the Investment Plan for Europe. The scheme aims to support mid-sized enterprises that struggle to attract large-volume financing in the private market.

On October 2019, the European Commission (EC) and European Investment Fund (EIF) launched a Digitalisation Pilot under the COSME Loan Guarantee Facility. It aims to enable financial intermediaries to offer broader and more comprehensive financing to relatively risky digitalisation projects of SMEs through a (counter-)guarantee agreement of up to 70%. The final recipient must fill out a questionnaire to assess eligibility, in particular to ensure that the loan finances digitalisation projects that are relatively transformative. Investments in tangible assets are capped at 40% of the overall financing volume (with the remainder of the loan reserved for investments in intangible assets and/or working capital) (European Investment Fund, 2019).

A third example pertains to the Small Business Digital Champions programme in Australia. Under this scheme, a grant of up to AUD 20 000 can be provided to 100 SMEs active in the country to enable them to “digitally transform”, as well as additional products and services from the corporate partners of the programme. Out of these 100, 15 will be selected to receive business development services (as described in Box 7.4).

The Slovak authorities could possibly collaborate with the EC and the EIF to test the aforementioned scheme and/or pilot a similar programme as in Australia or Germany. A limited pilot project would enable policy makers to gauge whether there is sufficient interest from SMEs and financial intermediaries, which could then possibly be scaled up after an evaluation. Such a programme could possibly fall under the mandate of the Slovak Investment Holding (described in the programmes chapter of this publication), as suggested by the “Action Plan for the Digital Transformation of Slovakia.”

6. Expand business development services (training, mentoring, coaching) both to SMEs in their early stages of digitalisation and to a select number of disruptive innovators

Business development services (BDS) can be defined as non-financial services aimed to entrepreneurs and business owners to raise their managerial capabilities. These services can include mentoring, coaching and training. A distinction for the purpose of this chapter can be made between services aimed at disruptive innovators at the one hand and services for incremental or sustained innovators (OECD, 2018). Anecdotal evidence suggests many SMEs in the Slovak Republic lack the managerial skills, acumen and even awareness to adopt basic digital technologies. At the same time, there is little support to enable more disruptive innovators to digitalise.

The Slovak Business Agency (SBA), discussed in more detail in Chapter three of this publication, has establised a network of National Business Centres. These centres are designed to act as a one-stop-shop, providing various services to SMEs, differentiated by the life cycle of their intended beneficiaries (acceleration, internship, incubation and growth). It is, however, unclear how many business development services are provided through the SBA, nor what impact the provision of these services has on its beneficiaries, although plan to conduct an impact assessment are in the making. In addition, there appears to be no specific services to support SMEs in their digitalisation process.

The SBA could develop dedicated business development services in the area of SME digitisation. Ideally, one programme should focus on companies with ambitious digitalisation plans, and provide more intensive support, while another programme provides more generic advice for the much wider segment of incremental innovations within the SME population. Australia is a case in point of a country that provides both types of business development services. Its approach is descibed in Box 7.4

Box 7.4. Business Development Services for SME digitalisation in Australia

Description of the approach

As part of the Australian SME strategy, developed by the Australian Government Department of Employment, Skills, Small and Family Business, four support pillars to foster SME digitalisation were designed.

Two of these four programmes, one open to a large segment of the small business population, and one reserved for a limited number of SMEs with an ambitious digital transformation plan, are discussed in more detail below.

Another notable initiative is related to e-government. The Bussiness.gov.au website functions as the single point of information and advice for Businesses active in Australia and provides tips, tools, templates, how-to-guides and referral services to help small businesses improve their business sustainability and management practices. For completeness, the fourth pillar concerns the Small Business Innovation Research for Defence Programme. As part of the Next Generation Technologies Fund, this programme also support research undertaken by SMEs and the Defence Cooperative Research Centres strengthen industry-science linkages, particularly with SMEs, to increase research and innovation capability.

The Australian Small Business Advisory Services (ASBAS) Digital Solutions

Small businesses around Australia can access support to grow their digital capabilities through Australian Small Business Advisory Services (ASBAS) Digital Solutions. The services include:

- websites and selling online;
- social media and digital marketing;
- using small business software;
- online security and data privacy.

Through this portal, small business operators can access professional advice at a cost below market prices. The services can be delivered one-to-one or in groups, on-line or face-to-face. Small for-profit businesses with fewer than 20 full time employees are eligible to use the service. It aims to be provide accessible and easy to understand advice to raise the digital capabilities of SMEs across the country.

Small Business Digital Champions

The Small Business Digital Champions Project will provide financial support to 100 Australian small businesses for their digital transformation. Out of these 100, 15 are selected to become a “digital champion”. Each champion is then partnered with a digital mentor, who will guide the company closely throughout its digital transformation process. These are high-profile innovators with a proven track record in digital technologies, often (formerly) employed by large companies, who will provide personal guidance and advice for a period of 12 months.

The mentoring activities are documented online, to enable other companies to draw lessons from their experiences and follow their example. Successful case studies will be disseminated by the Department of Employment, Skills, Small and Family Business. To get broader outreach, the Department also collaborates with 15 selected industry associations who will also share lessons learned and committed to provide advice to their members free of charge.

Factors for success

ASBAS advisors have formal qualifications in information and business related disciplines. They also have at least two years experience in providing digital advice to SMEs. In a similar vein, the mentors

In addition, the government has set clear targets for these programmes, for example in terms of the expected number of beneficiaries, and it is clearly formulated what government body will be responsible for the implementation of the policy. A budget has also been allocated to these organisations to enable them to provide the envisioned support.

A third important take-away is that these initiatives are actively promoted to the business community in partnership with associations and partners at the local level.

Relevance to the Slovak Republic

The Slovak Republic could establish a similar two-pronged approach to provide business development services in the area of SME digitalisation through the Slovak Business Agency. One pillar would consist of providing services to SMEs in the early stages of their digital transformation and the second one of more specialised support to a select number of "high-potential" ventures. Both pillars could be piloted on a modest scale, involving a limited number of SMEs and service providers and scaled up later if proven successful.

The creation of a network of advisors, mentors and coaches represents a key step in this process. The Australian experience, among others, suggest that this requires reaching out to the private sector actors such as large businesses, consultancy and sector organisations who have the required expertise and experience. These experts possibly need to be certified and even trained to ensure the quality of the service delivery.

In addition, the Slovak authorities should ensure sufficient awareness and outreach to the business community. The National Business Centres could be well placed to take up that role, involving referring businesses they come into contact with to the digital service package and liaising on a regular basis with stakeholders from the private and public sector.

7. Increase opportunities to acquire digital skills through on-the-job training and life-long learning activities

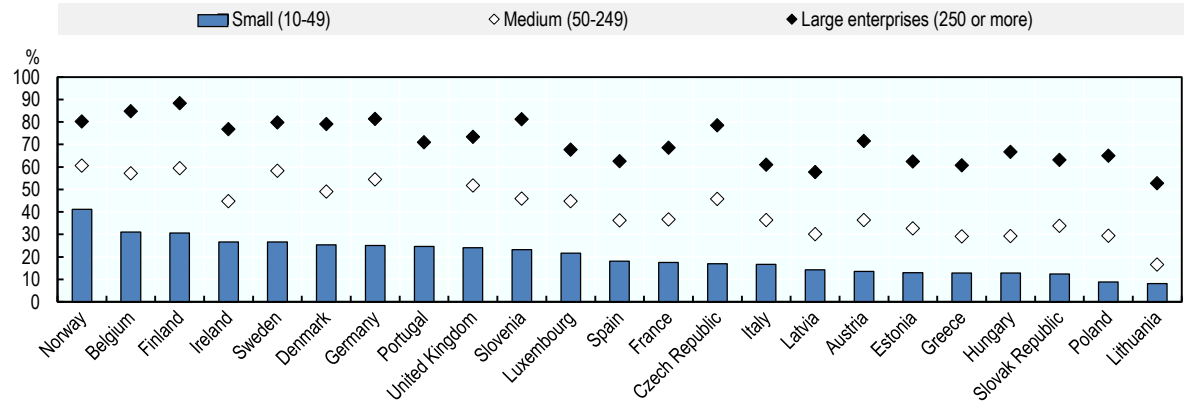
One key area where the Slovak Republic could improve is related to on-the-job training and life-long learning activities, which are directly and positively associated with the adoption of digital tools among SMEs (Andrews, Nicoletti and Timiliotis, 2018). Taking additional initiatives to raise (digital) skills would be timely and relevant, given the large proportion of jobs that will be disrupted by automation and digitalisation in the Slovak Republic. This process will require workers, especially with low or medium skills, to upgrade their skills. There appears to be a strong case for policy intervention, given the proportionally large number of (possible) employees with low to very low digital skills. One out of four Slovak adults are deemed computer illiterate (OECD, 2019d).

Despite the potential benefits to its labour market and economy, the Slovak Republic performs poorly when it comes to the participation of adults in the labour market according to most sources of information. For instance, Eurostat data indicates that in 2019 only 3.6% of the working age population in the Slovak Republic took part in training or education activities over the last four weeks. The EU 28 average stands at 11.2% (Eurostat, 2020).

Data on on-the-job training activities shows a similar picture. In particular, SMEs could do more to provide training to their personnel to develop their ICT skills. Data indicates that 12% of small firms in the Slovak Republic did so in 2019, compared with 20% as the OECD area. Medium-sized firms are more likely to provide ICT training. At the same time, only about one in three Slovak mid-sized companies provided such training in 2019, lagging behind the average of 41% across EU countries (see Figure 7.7).

In addition, many of the training that is on offer in the Slovak Republic is informal or non-formal, and focus on learning-by-doing (OECD, 2019e).

Figure 7.7. Prevalence of on-the-job training



Source: OECD (2020a), National accounts at glance: Gross fixed capital formation database

StatLink https://doi.org/10.1787/888934248046

The Slovak Government and other stakeholders has taken some action to improve digital skills among its workforce in recent years. In 2016, for instance, the country set up the dual education platform. It aims to create partnerships between employers in the form of a learning agreement. It is aimed to make the education system more attuned to the needs of the labour market, including digital needs. The European Social Fund (ESF) and European Regional Development Fund (ERDF) will provide EUR 33.6 million by the end of 2020. The Digital Coalition has a similar ambition through vocational training in 2017, but with a more explicit focus on digital skills and training. It was established by ITC Association in the Slovak Republic. It receives no public funding, however, and its impact is unclear.

The Slovak Republic's National Programme for the Development of Education ("Learning Slovakia") acknowledges the relative paucity of on-the job training opportunities within SMEs as problematic, and is exploring the use of tax instruments to spur on-the-job training activities (Vantuch and Jelínková, 2019). While the government introduced a tax deduction for companies that invest in training their employees, and a subsidy for SMEs through vocational education and training, other financial support mechanisms to encourage employees of (small) firms to participate in adult learning are underexplored in the Slovak Republic (OECD, 2019e). A tax allowance, as currently under consideration by the Slovak Government, could increase the prevalence of on-the-job training, including for digital skills. Given the discrepancy in training opportunities by firm size, the government may want to set eligibility criteria accordingly to minimise deadweight. As an additional consideration, the allowance could be reserved for approved training courses, focusing on transferable skills for which there is a demonstrable shortage in the labour market, such as ICT skills.

In addition, more efforts to stimulate (ICT) training among the unemployed would be welcome. Adult participation rates among adults without work are among the lowest among OECD countries in the Slovak Republic (OECD, 2020a).

Public spending on active labour market policies in the Slovak Republic represented 0.14% of GDP in 2017, compared to an OECD average of 0.34% (https://goingdigital.oecd.org/en/dimension/innovation/).

The Office of Labour, Social Affairs and Family offers some training and mentoring facilities for the unemployed, but activities have decreased in recent years because of cuts of funding. The number of beneficiaries for entrepreneurship training and coaching activities has declined by 69.3% over the 2012-17 period (OECD, 2018b).

The government is piloting vocational and educational training (VET) programmes for the unemployed, often with support from the ESF. The Ready for Work (*Pripravení na prácu*) programme is a case in point. Under this scheme, up to 20 000 unemployed (registered at the employment office) can receive training, especially tailored to the needs of the automotive industry. The most successful applicants will receive further and more specialised training opportunities. REPAS+ and KOMPAS+ are other novel VET progammes, offering courses to facilitate the transition into the labour market. The Slovak Republic is advised to fully implement and possibly expand these programmes. In addition, considering the mounting skills shortages on the labour market, some modules should have a strong focus on ICT and digital skills.

Box 7.5. Key policy recommendations on SME digitalisation

- Stimulate on-the-job training activities to acquire digital skills, possibly through the introduction of a tax allowance for SMEs investing in an approved training course for their personnel.
- Pilot a finance support programme for digitalisation for relatively risky or advanced SME digitalisation projects.
- Expand business development services (training, mentoring, coaching) to selected high-potential SMEs, and more basic services for firms in their early stages of digitalisation.
- Develop an online business diagnostic tool for SME digitalisation in the Slovak Republic.
- Include quantifiable and well-defined objectives related to SME digitalisation in the Strategy of the Digital Transformation of Slovakia 2030.
- Create a cross-government coordination mechanism to design and implement policy responses related to SME digitalisation.
- Improve collaboration with non-government bodies to provide support for SME digitalisation projects.
- Establish Digital Innovation Hubs across the country, as foreseen in the Action Plan for the Digital Transformation of Slovakia, embedded within the smart specialisation strategy, and provide financial, logistical and human resources support to make them fully operational.

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8. Inclusive Entrepreneurship – Focus on the Roma Community

This chapter explores how policy measures for self-employment and social entrepreneurship can help support labour market integration among the Roma community in the Slovak Republic. It shows that the Roma community has low participation in self-employment in the formal economy and explores the reasons. It examines current policies to support Roma people in business creation and self-employment and the barriers they encounter when seeking to access government entrepreneurship-related supports. It also examines the potential for social enterprises to provide a pathway to labour market attachment for the Roma population. It offers a series of policy proposals.

Socio-economic conditions of the Roma

History

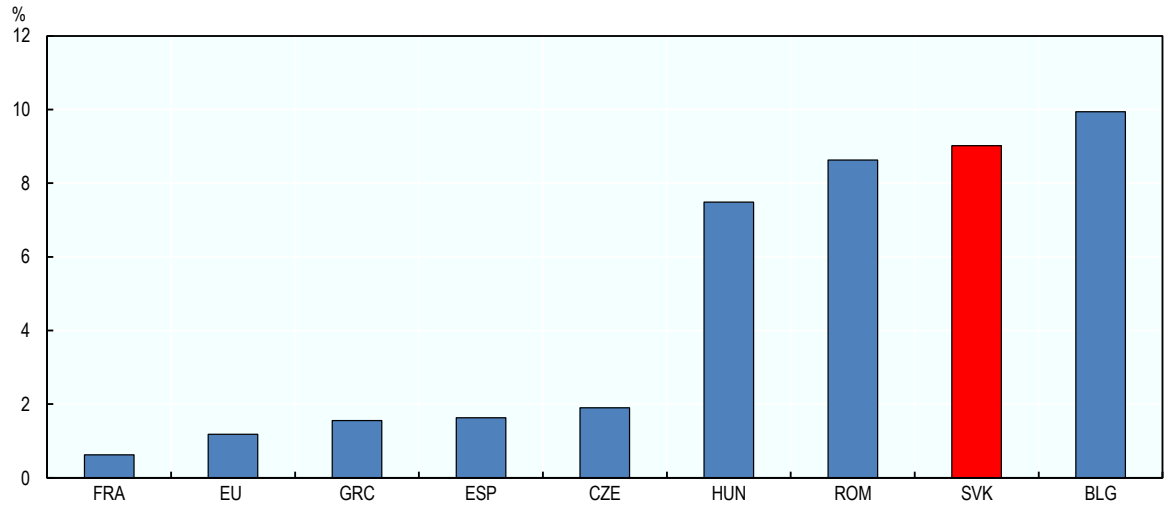
The history of the Roma community in the Slovak Republic is highly complex, with many different interpretations of their arrival and subsequent contribution to Slovak society. A historical review by Matlovičová et al. (2012) found that the first written document about the Roma population in the Slovak Republic was from 1322 and that in 1423 Sigismund of Luxembourg issued a charter which guaranteed certain safeguards and self-government jurisdictions for the Roma community. Matlovičová et al. also noted that across the centuries, attractive places for Roma settlements were on the edges of villages and towns where they could undertake their craft and trade activities and engage in various types of seasonal work. Although the Roma community suffered various levels of persecution, for hundreds of years they typically lived a quiet nomadic existence and supported the work of local agrarian societies.

Macsó's (2018) analysis of the 'Roma question' suggested that the establishment of Czechoslovakia in the early 20th century contributed significantly to increased stigmatisation of the Roma community and the introduction of anti-Roma measures (particularly during World War II). When the Communist Party came to power in 1948, all citizens became legally equal and the state supported the housing and employment of every inhabitant. However, the Roma population had poor levels of education and, as Macsó highlighted, they were only able to work in industrial sectors requiring strong physical labour and as unskilled labourers. Radičová (2002) suggested that the change of the Slovak Republic into a newly independent democratic state in 1993 had a considerable impact upon the Roma population and drifted them economically and socially to the edge of society. Today, the Roma community in the Slovak Republic generally live a marginalised existence and suffer from poor levels of labour market attachment. The challenges towards encouraging the community's population to secure sustainable employment are multifaceted and will require holistic support from multiple stakeholders to address the deep-rooted issues.

Population characteristics

Getting exact details of the population of the Roma community is notoriously difficult due to the nature of their settlements and their preference to avoid data gathering by government when possible. According to the European Commission (2019a), the Roma community is Europe's largest ethnic minority with an estimated 10-12 million Roma living in Europe. Approximately 6 million of the European Roma community are living in the EU, most of them citizens of an EU country. Within this context, an OECD (2019) report exhibited data showing that the Slovak Republic had the second highest share of Roma within any EU country population (see Figure 8.1).

Figure 8.1. Estimated Share of Roma in the EU (2012)



Source: OECD (2019)

StatLink https://doi.org/10.1787/888934248065

The OECD (2019) report projected that there are between 400 000 and 500 000 Roma in the Slovak Republic, accounting for 7-9 per cent of the country's population. According to Vaňo (2002), the estimated number of Roma living in the Slovak Republic at the end of 2001 was 378 950, with the number of females and males being almost a 50:50 share. However, it was highlighted by Vaňo that the age structure of the Roma and non-Roma populations differ remarkably. The share of children aged 15 years and less for the non-Roma population is approximately 17 per cent, but for the Roma population it is almost 37 per cent; meanwhile only 2 per cent of Roma population are aged 65 years and over, but this share is approximately 12.2 per cent for the non-Roma population. Klimovský (2010) found that the highest shares of Roma people (in comparison to the total regional populations) were in the eastern and south-eastern regions. These regions were the weakest in terms of their economic performance (e.g. the Košice Region, the Prešov Region and the Banská Bystrica Region).

Table 8.1. Spatial distribution of the Roma settlements in the Slovak Republic

Region	Number of concentrated Roma settlesments located within the municipal residential areas	Number of concentrated Roma settlements located in the periphery of the municipal residential areas	Number of concentrated Roma settlements that are territorially segregated from the municipal residential areas	Overall number of concentrated Roma settlements
Banská Bystrica	51	40	51	142
Bratislava	7	9	3	19
Košice	52	102	76	230
Nitra	45	13	7	65
Prešov	46	128	80	254
Trenčín	6	5	2	13
Trnava	30	21	10	61
Žilina	9	6	4	19
TOTAL	246	324	233	803

Source: Mušinka, A. et al. (2014), "Atlas of Roma Communities in Slovakia 2013", UNDP Europe and the CIS, Bratislava Regional Centre, Bratislava.

A detailed analysis of the Roma population in the Slovak Republic by Klimovský et al. (2016) found that about 46 per cent live dispersed among the majority population. The remaining 54 per cent live in some form of Roma settlement, which they defined as a minimum of 30 Roma people concentrated into one geographical area. Mušinka et al. (2014) broadly identified three key types of Roma settlements: (1) those located within municipalities; (2) those on the periphery of municipalities; and (3) those segregated from residential areas. Using the publication 'Atlas of Roma Communities', they estimated the number of settlements for the 8 regions as shown in Table 8.1. Scheffel (2004) stated that most settlements exhibit socio-economic characteristics of Third World slums and that basic facilities such as potable water, proper treatment of sewage, reliable supply of electricity, refuse collection, decent housing and access to appropriate school facilities are generally absent. Klimovský et al (2016) noted that there were clear regional differences in the types of Roma settlements and suggested that for the Banská Bystrica region, the dispersed Roma communities among the majority population was typical, but for the Košice region it was more typical to find territorially-segregated Roma settlements away from municipal residential areas. Scheffel (2004) noted that approximately one-third of the dwellings found in settlements consisted of illegally erected huts which lacked the most basic equipment and amenities.

According to interviewees for this review report, the region and type of settlement in which a Roma person was situated significantly influenced their opportunities to secure gainful employment. For example, the Roma ghetto of Luník IX in Košice was highlighted as having substantial economic and social problems, and people who lived there were highly unlikely to be in employment. Meanwhile, interviewees also mentioned that Roma who lived amongst the majority population were much more likely to be in employment and live in a house with indoor water facilities than Roma who were living in settlements.

Social challenges

The stigmatisation of Roma by general society and the poor housing conditions in which they live has generated substantial social challenges for members of the community (Steger and Filcak, 2014). An OECD (2019) report found that the majority of the Roma population are at risk of poverty and suffer from housing exclusion, one-third are illiterate, that Roma people have lower life expectancy than the rest of the population and that they have exceptionally weak upward social mobility between generations. Indeed, the report highlighted that *"the probability that Roma born in concentrated residential areas becoming unemployed or earning less than a minimum wage in irregular work is almost 70%"*. Bosakova et al. (2019) emphasised that poor access to employment, appalling living conditions and low levels of education combine to contribute to a range of avoidable poor health outcomes for the Roma community in the Slovak Republic, which are much greater than that experienced by the non-Roma population (e.g. high prevalence of chronic disease, poor dental health and difficulties in seeing and hearing properly). Table 8.2 exhibits some of the ways in which being a member of the Roma community in the Slovak Republic causes disadvantages that are experienced less frequently by the non-Roma population (EU, 2016). The rise of right-wing political perspectives in recent years has only increased the rates of general animosity and mistrust between the Roma and non-Roma populations, which have further exacerbated the challenges endured by Roma caused by various forms of exclusion from Slovak life.

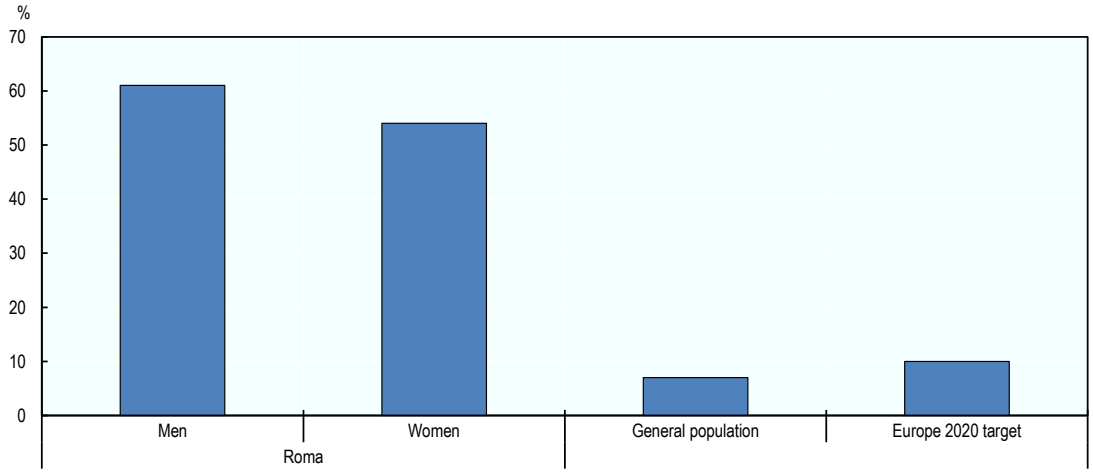
Table 8.2. Selected indicators of Roma exclusion in the Slovak Republic

	General Population	Roma
At-risk-of-poverty rate (%)	13	87
Employment rate, 20-64 (%)	68	25
NEET rate - neither in work nor in education, aged 16-24, (%)	14	65
Drop-out rate from education (%)	7	58
Share of households living without a toilet, bathroom and shower inside the dwelling	0.6	43
Share of households living in areas affected by crime, violence and vandalism	8.7	30

Source: EU (2016)

Another social challenge facing the Roma community in the Slovak Republic is low levels of education. As shown in Figure 8.2, the percentage of early school leavers within the Roma community is substantially higher than found within the general population. An OECD (2019) report stressed that the disadvantages of the education system begin when the children are very young, since only 33 per cent of Roma children attend kindergarten compared with 80 per cent of the overall population. Furthermore, municipalities without a kindergarten tend to be in regions with higher concentrations of the Roma community. The low participation of Roma children in kindergarten is also caused by cultural and financial barriers, and by discrimination. Non-participation in kindergarten will hinder a child's readiness and performance in their primary school environment and so the cycle of disadvantage starts to snowball. Language is a further barrier to progression as many Roma children do not speak Slovak and only 33 per cent consider it their mother tongue, adding additional barriers to integration and learning.

Figure 8.2. Early school leavers, aged 18-24 years (%)



Source: EU (2016), "Second European Union Minorities and Discrimination Survey, Roma – Selected findings", Agency for Fundamental Rights, European Union.

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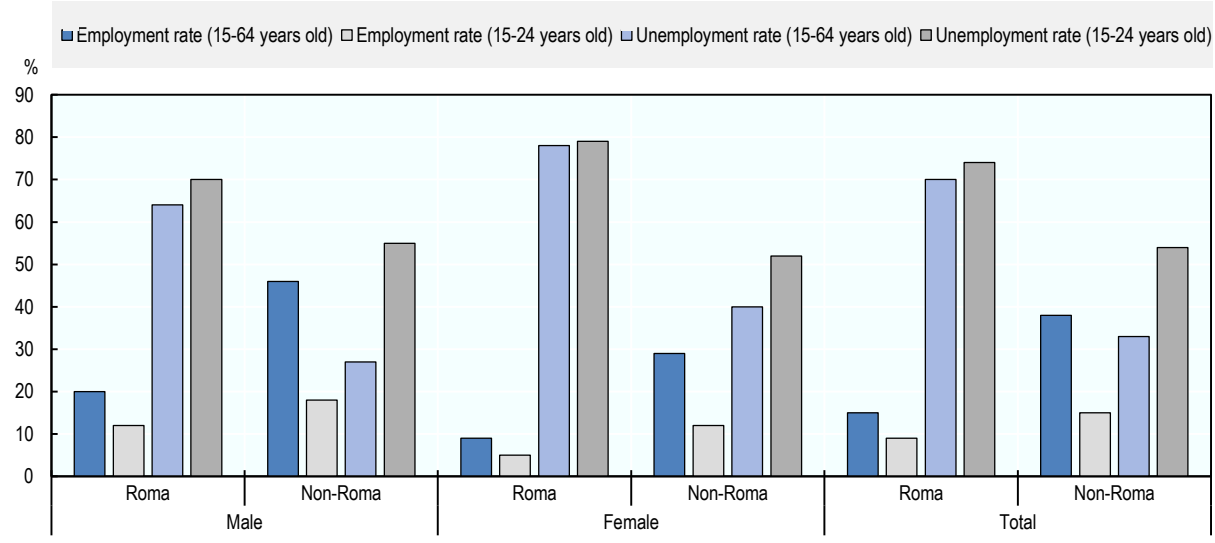
Segregation of Roma children into exclusive classes and schools is frequently evident, as is the practice of 'white flight' of children from the non-Roma population away from schools that have high numbers of Roma children. Friedman et al (2009) found that among pupils in special primary schools completing mandatory education at a level lower than grade nine, Roma account for 80 per cent. They argued that completion of special (as opposed to standard) primary education severely limits options for further education and that Roma graduates of special primary or secondary schools have extremely limited opportunities for finding stable employment. Indeed, they determined that in 2002, the unemployment rate among 15-24 year olds in the Slovak Republic not in education or training was 37.7 per cent, as compared with the EU-25 average of 20.1 percent for the same category of persons. The OECD (2019) report also made note of the considerable over-representation of Roma children in special schools, which are meant to accommodate only children with disabilities. Moreover, the report identified that the completion of education in a special school does not allow children to pursue their education in a regular secondary school, which hinders their opportunity to pursue the type of education that the general population might receive. All of these factors combine to limit the ability of Roma children to enjoy sustained mainstream education and ultimately reduces their labour market activation prospects.

Labour market outcomes

Given the difficulties that Roma experience in terms of low levels of education and poor housing conditions, it is inevitable that they also suffer difficulties relating to labour market activation. Indeed, Bosakova et al. (2019) asserted that Roma unemployment across much of Central and Eastern Europe (CEE) was very high. They estimated the unemployment rates for Roma to be 71.0 per cent in the Slovak Republic, 41.5 per cent in Bulgaria, 40.5 per cent in the Czech Republic, 52.5 per cent in Hungary and 35.5 per cent in Romania. Mýtna Kureková (2015) also declared that the employment situation for Roma was lamentable and that it had worsened over time. A study by the European Parliament: Policy Department A, Economic and Scientific Policy (2016) regarding the social and economic situation in the Slovak Republic found that unemployment gaps between the Roma and non-Roma population are particularly high for women and for young people aged between 15 and 24 years old (Figure 8.2). A UNDP (2012 survey further found that about 38 per cent of the Roma population aged 15-64 had no previous employment experience, while the overall rate in the Slovak Republic for the general population was 21 per cent. A UNDP (2012) household survey focused on marginalised Roma communities and it established that almost 50 per cent of Roma youth had no prior work experience. The report also noted that a relatively large volume of Roma work takes place outside of the official labour market and even formal work activity happens outside of standard forms of employment contracts (e.g. short-term duties, seasonal or casual work). The report clearly highlighted that the share of classic full-time employment was significantly lower among Roma in comparison to the geographically close general population. The report suggested that since less qualified work predominated, it could be assumed that these jobs paid low wages and offered weak social and job protection.

Figure 8.3. Employment and unemployment gaps between Roma and Non-Roma population in the Slovak Republic



Source: European Parliament (2016), Policy Department A, Economic and Scientific Policy

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Mýtna Kureková (2015) contended that factors such as low education levels, lack of skills, stigmatization of low-skilled workers and racial discrimination were the primary reasons for the poor rates of labour market attachment amongst the Roma community. Scholars such as Radičová (2002) have suggested

that the declining rates of employment have been caused by the changing structure of the economy due to a move away from agriculture and heavy industry, which has caused a weakening demand for unskilled and low-skilled workers. Meanwhile, several interviewees for this review report stated that difficulties commuting to work due to poor transport links from Roma settlements or ghettos created additional challenges for Roma seeking or maintaining employment, a factor rarely noted in existing literature. Furthermore, some interviewees declared that concerns by employers around poor personal hygiene (caused by a lack of water facilities in Roma settlement housing), language difficulties and modest social skills also heightened the obstacles to labour market activation. These interviewees also intimated that a potential employer recognising a name or address on a Curriculum Vitae as being Roma frequently meant that an application would be immediately rejected. Overall, the findings from various reports portray a situation of high rates of unemployment, which are particularly bad for young and female Roma. The causes for such circumstances are multiple and complex, ranging from societal attitudes and inadequate official support to low levels of education and poor housing conditions. Breaking the cycle of intergenerational poverty and deprivation is enormously challenging and can only be tackled by many different stakeholders working towards an integrated solution. However, the example of Whirlpool (Box 8.1) offers an excellent illustration of how one large company took a proactive approach to incorporating Roma into its workforce through a targeted initiative.

Box 8.1. Corporate support for the Roma in the Slovak Republic – Whirlpool

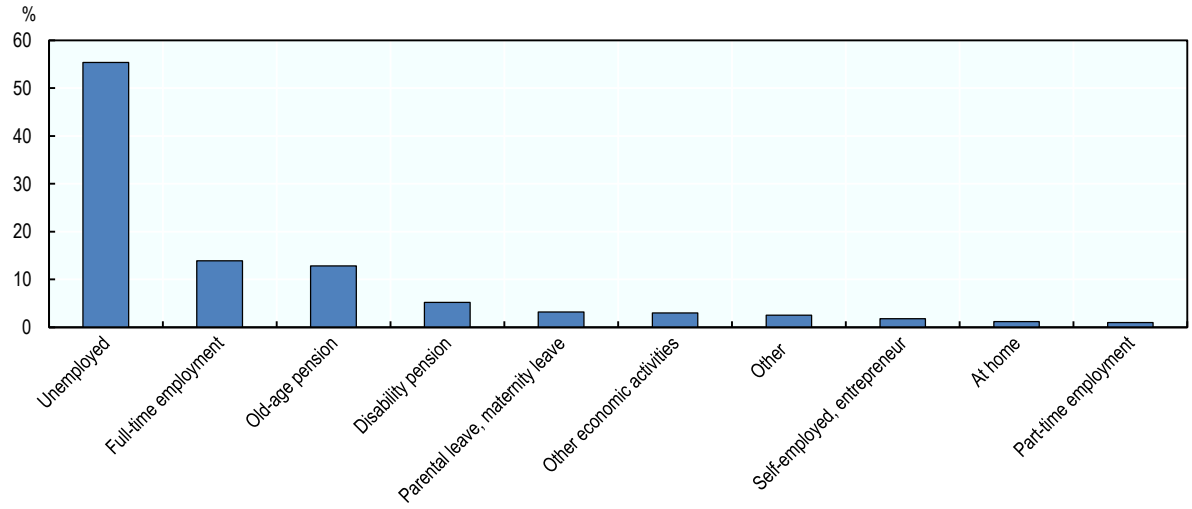
Whirlpool has a manufacturing plant in Poprad, a city in northern Slovak Republic at the foot of the High Tatra Mountains. The company introduced a dedicated initiative to employ workers from the Roma community under its corporate social responsibility remit. It created a customised training programme and awarded certification upon completion as the company would not employ anybody without the appropriate qualifications. The jobs offered were standard full-time contracts, which was viewed as the greatest motivation for the job-seekers. The company found when it treated the Roma equally, it experienced resistance from the workforce initially, but this changed over time. The expectation of arriving on time for work was challenging for some Roma and so they were reprimanded by management, which added to the difficulties of the Roma in adopting to the company's conditions. Matters such as adhering to Health and Safety regulations were not always followed as some Roma were unable to read the signs posted in the various buildings. However, over time Roma employees responded positively to their new conditions and they became fully integrated into the workforce. According to a Business Leaders Forum newsletter in 2017, Roma accounted for about 20 per cent of company's employees at that time. In addition to most Roma being in regular work roles, some also filled various specialized positions.

Source: Interviews conducted during the OECD study visit and Business Leaders Forum newsletter in 2017.

Business creation and self-employment

There are few data available regarding the levels of entrepreneurial activity amongst the Roma community. A UNDP (2012) report analysed the structure of the Roma population aged 15 years and over with experience with work activities during their lifetime by current economic status and found that 1.8 per cent stated that they were self-employed (Figure 8.4). The percentage of self-employed for the geographically close general population was 7.1 per cent, which suggests an outcome that is unlike what happens with other disadvantaged communities where entrepreneurial activity exceeds the mainstream population.

Figure 8.4. Structure of the population age 15+ years with experience with work activities during their lifetime by current economic status



Source: UNDP (2012), "Report on the Living Conditions of Roma households in Slovakia 2010", UNDP Europe and the CIS, Bratislava Regional Centre.

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It is a common trend among minority or disadvantaged communities that they will have higher levels of entrepreneurial activity than the general population, particularly in circumstances where their rates of employment are particularly low due to discrimination. Such trends occur because of the existence of barriers to labour market attachment through employment for people from minority or disadvantaged backgrounds and therefore self-employment may become their only option for generating earned income. However, what is evident in the Slovak Republic is that the Roma community suffers from very high levels of unemployment, yet Roma do not rectify this situation through high rates of entrepreneurial activity. General society has frequently labelled the Roma as being work-shy, but the low rates of entrepreneurial actually might actually mean that such endeavour is happening through the semi-formal or informal economy rather than through the formal economy. Furthermore, due to low levels of education, many Roma are illiterate and so cannot complete official government documents to legally register a business and become part of the national statistics for the self-employed. Indeed, a lack of literacy would also have a strong negative impact on many aspects of running a business (e.g. invoices, emails, accounts, etc.) and may influence the decision of Roma to operate in the informal cash economy rather than through formal business methods. Because of the hidden nature of the informal economy and the reluctance of Roma to engage with government officials, gathering data on this topic is extremely difficult.

Box 8.2. Inspiring role model – Ivan Hriczko

Ivan Hriczko is a member of the Roma community and is a graduate of media studies from Univerzita sv. Cyrila a Metoda v Trnave. While studying for journalism, Ivan worked at the Košice daily paper Korzár and then moved on to the local Košice public TV station Naša. After he finished his studies, he stayed with Naša for two months and then joined Bratislava-based Global TV in April 2000, becoming the first Roma reporter in the Slovak Republic on national television. Thereafter, he became a Director of the Roma Press Agency, a Košice-based news organisation created to address the image of Roma in the Slovak media. More recently, Ivan became Director of Media and Documentary Centre Romakuk s.r.o. which is based in Košice and provides business and management consultancy services. He has

also spent some time working in the Office of the Slovak Government Plenipotentiary for Roma Communities and so he is familiar with the manner in which the national government and its agencies operate.

Among Ivan's clients are people who are submitting proposals to access EU funding, particularly applications relating to the Roma community. He is keenly interested in developing infrastructure support for the region that would benefit the Roma population and he frequently champions the cause of the Roma community with government officials. Ivan estimates that there are approximately 1 000 registered Roma entrepreneurs in the Slovak Republic, but he believes that an even greater number exist in the informal economy. The businesses are primarily in the services and building industries, with many Roma entrepreneurs having started their business while they were working abroad (because they experience less discrimination in other countries). He believes that very few Roma women entrepreneurs exist because of the culture of the community. Ivan suggested that those women who do create enterprises have businesses such as hairdressers and other services that are targeted primarily at women. It is Ivan's ambition to identify other Roma who have graduated from university and started a business, and collectively to establish an Association of Roma Entrepreneurs.

Ivan believes that one of the challenges facing the Roma community in the Slovak Republic is its inability to organise itself into one cohesive movement. He believes that the Roma people needs its own political party which would contest local, regional and national elections, thereby giving a greater voice to the community in the work of municipalities and government. Ivan considers the Roma community to be highly entrepreneurial and proposed that custom-designed entrepreneurship programmes be delivered by Roma entrepreneurs. However, building a pathway to starting a business would also require microfinance loans, mentoring and advisory services on legal requirements. He also advocated that Roma require formal work experience prior to starting a business and this can be achieved most effectively through social enterprises established through local municipalities.

Source: *Interview with Ivan Hriczko*.

Ivan Hriczko (Box 8.2) is an excellent example of a person from the Roma community who has overcome disadvantage and discrimination to become a successful entrepreneur. He dedicates significant energy to supporting other people from the Roma community who are striving to overcome the considerable barriers that Roma face when seeking to become self-employed. Research by Mýtna Kureková (2015) identified some of the challenges that Roma face when seeking to establish their own business as: lack of capital, fear of financial implications if unable to fulfil conditions when receiving self-employment contributions from public funds; inability to meet demand to pay social security contributions for two years; discouragement from labour office staff to use government supports; and little support from labour offices to develop capacity building to increase self-employment skills. Interviewees for this review report noted that one result of these circumstances is that many Roma men travel abroad to start their own business because in other countries their ethnicity would not be recognised and they would be less likely to experience discrimination. However, even when starting a business in another country, the disadvantage of poor education and high rates of illiteracy means that they are still unable to operate their businesses in the same manner as the general population. However, a study by Žarković-Rakić and Vladisavljević (2016) in Serbia revealed that Roma entrepreneurs were less educated and trained to run a business than non-Roma entrepreneurs, had lower levels of entrepreneurial inclination, operated in more labour-intensive sectors with lower technical complexity, created less added value products or services and generated much lower revenues.

In conclusion to this section regarding the socio-economic conditions of the Roma community in the Slovak Republic, it should be noted that they experience extensive deprivation. Poor health, lower life expectancy, high rates of unemployment, abject housing conditions and wretched poverty are common

features that have already been well documented in national and international reports concerning the Roma community. The Office of the Slovak Government Plenipotentiary for Romani Communities is responsible for providing government support for the Roma community and in a monitoring report by the Slovak Republic (2019), it was stated that of 154 activities and measures designed to be fulfilled during 2018, the Office of the Plenipotentiary assessed 85 as 'fulfilled' or 'about to be fulfilled', 54 as 'underway' and 15 as 'unfulfilled'. The report also highlighted that almost EUR 120 million was spent in 2018 on Roma integration in the Slovak Republic. The investment was especially targeted at activities to increase Roma employability and employment (EUR 75 million), educational activities (EUR 30 million) and the area of housing (EUR 7 million). This would suggest that a significant commitment is being made by government and its agencies to address the problems being experienced. However, according to an OECD (2019) report, *"the majority of Roma live in poverty and face social exclusion in almost all aspects of everyday life"*. It appears that the gap between ambition and reality remains a vast chasm.

Constraints on Roma entrepreneurial activity

It has been highlighted by researchers such as Collins (2017) that the Roma community has a long tradition of entrepreneurial activity and has traditionally traded in horses, market trading and recycling. Ringold et al. (2003) submitted that common entrepreneurial activities included salvaging and selling scrap metal, petty trade, and part-time work in agriculture and construction. They also suggested that one of most widespread entrepreneurial activities for Roma was working as musicians.

The work for this review report included interviews with a wide range of people from a variety of backgrounds. It encompassed interviews with Roma entrepreneurs, heads of municipalities, leaders of social enterprises and community centres, representatives of NGOs, business representatives and other stakeholders who had significant experience of working with the Roma community. The analysis that follows is based on the feedback provided from these 28 interviews, together with a review of existing academic literature. Since research on Roma entrepreneurship in the Slovak Republic is extremely limited (indeed on Roma entrepreneurship generally), references to studies regarding other minority and disadvantaged communities are also utilised to provide additional insights and considerations.

Discrimination in the market

Ringold et al (2003) identified discrimination as a significant barrier for Roma in terms of economic activities. This view was supported by interviewees for this study who stated that the prospect of experiencing discrimination in the marketplace was a constant threat for Roma entrepreneurs. Many examples were provided of non-Roma being unwilling to transact business with Roma entrepreneurs once they learned of their background. This situation created two distinct challenges: (a) difficulty in securing supplies; and (b) low customer demand. Because of high levels of mistrust within Slovak society generally of the Roma community, suppliers were concerned that they would not be paid if they gave products / services to Roma entrepreneurs. Potential customers were concerned that they would receive low quality products / services if they contracted with a Roma entrepreneur, so they were unwilling to engage with them. Since the Roma community itself was extremely poor due to low levels of employment, it was unlikely that they could afford the products / services of a Roma entrepreneur. One Roma entrepreneur, whose business was an indoor children's play centre, disclosed that local non-Roma would not bring their children to the play centre because they perceived it would be unhygienic, while local Roma would not bring their children because they could not afford the entrance fee (even when it was reduced to EUR 2 per hour). Her business depended on non-Roma from outside the locality travelling to the play centre as there was no competition within a large radius of the village.

The non-Roma population would frequently perceive the Roma community to be second-class citizens and this further exasperated the problem of discrimination.

Another area of discrimination was non-Roma customers refusing to pay for product / service delivery. They would argue that the product / service was sub-standard (even when verified to be of high standard by an independent observer) and so would either not pay or insist upon a far cheaper rate than originally agreed so that the Roma entrepreneur would effectively make a loss from the transaction. Such incidents were raised on a number of occasions by interviewees. It was stated that the non-Roma believed that the judicial system would not trust people from the Roma community and therefore judges would rule in favour of the non-Roma community if this were taken to court. A non-Roma customer would also know that Roma have very little access to finance and so could not afford to instigate legal proceedings against them. Žarković-Rakić and Vladisavljević (2016) found that Roma entrepreneurs had little knowledge of business law or experience of seeking legal advice to defend their rights, and that one-in-three respondents had claimed that insufficient knowledge of laws and procedures had limited their business operations.

The issue of securing suitable location for one's business was also raised. Many landlords were unwilling to accept Roma as a tenant due to landlords not having trust in the ability or willingness of Roma to pay the rent each month, plus concerns about hygiene and the manner in which the property would be maintained. This frequently meant that the only property that a Roma entrepreneur might be able to secure would be a location that nobody else wanted and had very poor business potential, particularly in businesses such as retailing where passing footfall was critically important.

One of the more interesting outcomes from the interviews was the finding that discrimination can also come from within the community. Some examples were given of Roma entrepreneurs whom their own community perceived to be successful and so members of the community would not do business with the Roma entrepreneur so that "they would not get above themselves". This issue was also relevant to the difficulty of identifying role models from within the community, as Roma who were successful did not wish to promote themselves due to the negative manner in which their community might view them.

Low skills levels

As highlighted in previous sections, the Roma community possess very poor levels of education, with a high proportion being early school leavers. This means that many Roma are either illiterate or semi-illiterate, frequently unable to read or write effectively. This creates a substantial barrier to labour market attachment and inevitably means that any employment secured will be in unskilled or semi-skilled positions. A study of Roma entrepreneurs in Hungary by Kallai (2005) emphasised that poor education not only limits a person's opportunities, but also restricts his/her entrepreneurship horizons and relationship networks, plus it also had negative effects on oral skills and social acceptance. For potential or nascent Roma entrepreneurs, poor literacy also creates difficulties with completing forms and other administrative tasks relating to official registration, plus challenges ensuring the legal compliance of a business in terms of annual reporting and other company-related tasks. Such difficulties in understanding and completing administrative legal requirements means that many Roma entrepreneurs will operate in the informal economy as they are unable to fulfil the legal requirements of an official business.

Because of poor levels of education and living in poverty, many Roma are unable to budget and have poor financial literacy skills. According to Cho et al. (2016), basic numeracy and literacy skills are a precondition to setting-up and operating a business, but these skills are often lacking among subsistence entrepreneurs. They further argued that due to education levels being low, their cognitive skills tend to be underdeveloped and low levels of cognitive skills affect the capacity of individuals to interpret and process information about events that can affect their business. Furthermore, low cognitive skills also limit the capacity to choose viable economic activities and to learn from failure or success.

These limitations create challenges when seeking to access finance as Roma entrepreneurs are frequently unable to provide financial projections, plus poor financial literacy has negative consequences on the ability of a Roma entrepreneur to build a long-term sustainable business. Financial literacy is the cornerstone of any successful business and possessing poor financial skills is detrimental to the hopes of any Roma entrepreneur starting and growing a business. This finding was supported by Cooney and Flynn (2008) whose study of ethnic entrepreneurs determined that ethnic entrepreneurs blamed ethnic discrimination for their failure to access finance from official sources, when ineligibility or poor financial projections were the actual reasons for not being offered the money.

The issue of low levels of social skills was also highlighted by interviewees and it was suggested that language barriers caused by their inability to speak Slovak fluently combined with poor levels of education meant that many Roma would suffer from poor communication skills in the primary language of the country. A UNDP (2012) report stated that Romani was the mother tongue of 29.9 per cent of the Roma population living in diffused settlements, for Roma in separated settlements the share grew to 57.4 per cent and for Roma citizens living in segregated settlements it was 74 per cent. The report further stated that a total of 34.9 per cent of the Roma population gave Slovak as their first language of daily use, 12.3 per cent said it was Hungarian and the majority of 52.7 per cent said they used Romani on a daily basis. According to interviewees for this study, the use of Romani as a daily language meant that many Roma had significant difficulties with communication when interacting with people from outside the Roma community as they would lack the confidence to speak and interrelate as equals. It also meant that they would have very small networks outside of the Roma community, which is a disadvantage in business activity. Žarković-Rakić and Vladisavljević (2016) determined that Roma entrepreneurs rarely come into contact with other organisations that offer business development services, such as clusters, regional development agencies and similar organisations. Gatti et al. (2016) also noted the very high rates of illiteracy and poor communication skills among the Roma community across a number of Central and Eastern European countries. The inability of Roma to read and write Slovak means that understanding business or legal documents can be extremely challenging for many Roma entrepreneurs and would discourage them from interacting with state or business agencies. This connects with an ILO (2016) report which identified limited understanding of business administration as being a critical challenge to Roma entrepreneurship. The ILO report advocated that governments seeking to encourage entrepreneurship among Roma need to initiate action at the macro level to create more enabling environments.

The low level of education and skills amongst the Roma community also leads to low value business ideas. Research by Žarković-Rakić and Vladisavljević (2016) found that Roma firms in manufacturing industry are dominated by low-tech businesses or labour intensive activities that generate little added value and are not sufficiently competitive. The interviewees for this review report suggested that Roma entrepreneurs do not have the education or training to evaluate their business idea and assess the long-term viability of the business. They claimed that the business ideas of Roma entrepreneurs are commonly based on family traditions that have been passed down through the generations (e.g. handicrafts, music). It is unlikely that the idea would be based on opportunity recognition and even more unlikely that the opportunity has been evaluated beyond discussions with other members of the Roma community. The enterprises started by Roma entrepreneurs are typically in businesses that will usually earn low profit margins. Because the business ideas are of low added value and have limited market potential, a strong possibility exists that they will fail within a short timeframe. This further diminishes the self-confidence of the Roma entrepreneur and may cause them to be unable to pay any outstanding loans or credits, providing further reasons to the non-Roma community not to provide support to Roma entrepreneurs. According to O'Higgins and Ivanov (2006), many Roma do not connect their employment or self-employment difficulties to their lack of knowledge or skills and instead believe that such outcomes are solely caused by ethnic discrimination.

Lack of labour market experience

A common characteristic of entrepreneurs when establishing a business is prior industry experience. Many scholars such as Azoulay et al (2020) have argued that prior industry experience can lead to greater rates of entrepreneurial success. However, some of the interviewees for this study emphasised that Roma adults typically have little work experience in the formal economy and so have limited opportunity to develop many of the skills required of any entrepreneur. They are particularly unlikely to have been employed in any form of management position and so it is improbable that they will have management experience. Lacking relevant work experience is a substantial disadvantage to the potential of building a sustainable business as experience helps a person to learn the most / least effective means of undertaking any job or task.

Low levels of capital and no access to finance

Žarković-Rakić and Vladisavljević (2016) ascertained that a lack of access to capital was seen as possibly the single biggest barrier to Roma starting their own business. Given that the Roma community experience very low rates of employment, they do not have the opportunity to save capital to start their own business. If they are in receipt of social welfare, then they will only have enough money to survive each week and will be unable to save any money. Having one's own capital to start a business is a basic requirement of any entrepreneurial activity and so the inability of a potential or nascent Roma entrepreneur to invest their own money in their business start-up creates a substantial barrier to starting an enterprise.

Because they do not have their own capital, Roma entrepreneurs regularly require loan capital to start their own business. However, getting a loan from a lending institution is highly problematic as it is unlikely that they have previously held a bank account, so they will have no credit history. A World Bank (2012) report found that just 29 per cent of Roma in the Slovak Republic had a bank current account, while just 8 per cent had a credit card or store card. Furthermore, the report found that Roma save less and they are also more likely than the general population to have arrears on utility bills. Foley and Cooney (2017) contended that Roma generally operate in a cash economy and that their reluctance to have a bank account is due to their suspicion of how information held by the banks might be utilised by government agencies. A significant problem identified by Žarković-Rakić and Vladisavljević (2016) was the lack of collateral that Roma entrepreneurs had to offer banks due to their property usually being of relatively low value. This low valuation can be caused by several factors, including the location of their real estate, its lack of marketability, poor quality of construction, etc. This lack of collateral is a problem, not only to obtain loans from banks, but also to have access to finance from other, non-banking sources. Additionally, a lack of trust among lending institutions towards the Roma community means that a lender is less likely to offer a loan to a Roma entrepreneur once their identity has been established. Indeed, according to the World Bank (2012), micro-finance suppliers in Central and Eastern European countries often decline to serve Roma communities.

As a result of the difficulties in obtaining finance from formal lenders, Hrustič (2015) detected that many people in the Roma community sought loans from informal lenders. A UNDP (2012) report suggested that more than 70 per cent of Roma households are currently indebted. A number of interviewees also mentioned that many Roma were obligated to repaying 'loan sharks' and in serious financial difficulties. Accessing funding in this manner will mean paying higher interest rates on monies borrowed and any inability to meet repayment schedules could meet with heavy penalties. Interestingly, it was noted by some that the 'loan sharks' occasionally came from within the Roma community and how this practice of informal entrepreneurial activity was very successful for some Roma. However, they must repay the full amount if the business fails, plus they cannot claim welfare benefits if the business fails. While the grant is meant to be an incentive for people to start a business, the reality is that the requirements to

repay the full amount and lose welfare benefits act as disincentives for the Roma community given their greater likelihood of having a failed business due to the many reasons outlined in this section.

Welfare trap

It has been emphasised throughout the chapter that due to low rates of employment, many Roma are in receipt of welfare benefits. As can be found amongst minority and disadvantaged communities across the world, people from within these communities are in danger of falling into the 'welfare trap'. Such a situation arises when earning income would result in losing access to welfare benefits and the net result could mean a person earning less net income on a weekly basis. This creates a disincentive to secure employment as the best economic decision for that person (and potentially their own family also) would be to stay in receipt of welfare benefits. This allows a person to maintain a guaranteed regular income which they are sure to receive rather than the uncertainty of generating income from a business start-up and losing their welfare benefits. Rat (2009) identified that a number of expert evaluations were concerned about welfare dependency within the Roma community and detailed a number of reports that had highlighted the need to break the cycle of poverty and social exclusion. An OECD (2019) report stated that intergenerational mobility is very low for Roma and that the probability of Roma children becoming unemployed was almost 70 per cent. In some countries, the philosophy of 'Making Work Pay' (e.g. Ireland) has been adopted and so people who start their own business see their welfare benefits reduced over a number of years on a staggered basis. The welfare benefit system potentially acts as a deterrent to labour market attachment for the Roma community and encourages informal market activity. Breaking this intergenerational cycle of the welfare trap is extremely difficult and complex, but will only happen when creative and flexible solutions are introduced to address the situation.

Current approaches to supporting Roma entrepreneurship

In seeking to address the complex issues facing the Roma community, the Slovak Government has been requested by the European Commission and the Council of Europe to consider introducing effective policies and programmes for multifaceted problems such as health, education, housing and employment. Finding workable solutions is extremely difficult and require significant resourcing and long-term vision. Any customised measures to support the Roma community need to be introduced against a background where the general population is largely unsupportive of assistance being provided to Roma and government budgets being constrained by its own financial position and economic burdens.

In 2012, the Slovak Republic published its national Roma integration strategy and it addressed poverty and social exclusion in Roma communities by focusing on education, employment, health and housing. However, no mention was made in the strategy to supporting Roma through self-employment or entrepreneurial activity. The strategy reinforced that the principal agency for addressing Roma issues in the Slovak Republic was the Office of the Slovak Government Plenipotentiary for Romani Communities.

In April 2020, Andrea Bučková was appointed as the eighth person to hold the post of Government Plenipotentiary for Roma Communities since the agency was established in 2001. Since 2012, the Office has been integrated into the structure of the Ministry of the Interior and has been implementing the 'Strategy of the Slovak Republic for Integration of Roma up to 2020'. While the Plenipotentiary acts as an advisory body to the government and performs tasks aimed at addressing the problems facing the Roma community, an OECD (2019) report noted that the office has no official power. Additionally, the Plenipotentiary does not control the funds for programmes relating to Roma integration, which are under the control of the individual Ministries. Furthermore, the Council of Europe (2016) noted that there

was a failure to implement the Roma integration programmes due to a lack of will and because the various programmes remain under the responsibility of different Ministries.

Both Hurrle et al. (2012) and Klimovský et al. (2016) argued that the measures being introduced by the Slovak Government were having little impact on the Roma community. Klimovský et al. stated that the findings from their research indicated that there was "no statistically significant relationship among allocation of grants and characteristics describing Roma's access to basic infrastructure, education, healthcare and institutional approach to solving the so-called 'Roma problem' at a local level". This section focuses on the various approaches being adopted by various stakeholders to encourage greater levels of entrepreneurial activity by the Roma community.

Government support

The Ministry of Economy of the Slovak Republic manages a network of innovation support agencies which includes: (a) the Slovak Business Agency (SBA); (b) the Slovak Innovation and Energy Agency (SIEA); and (c) the Slovak Investment and Trade Development Agency (SARIO). The agencies implement the majority of enterprise and innovation policy measures in Slovakia, with many of the policy measures being heavily dependent on EU funding. The principal government enterprise support organisation is the Slovak Business Agency (SBA), which was established in 1993 by a common initiative of the EU and the Ministry of Economy with the support of the Entrepreneurs Association of Slovakia and the Slovak Association of Crafts. SBA provides a wide variety of supports to potential, nascent and existing entrepreneurs, such as: (1) Microloan Programmes; (2) Financial Programmes; (3) Non-Financial Programmes; (4) Support for Startups; (5) Support for Marginalized Groups; (6) Analysis of Business Environment; and (6) Internships. The SBA has offices throughout the country and its aim is to be a one-stop shop for any person who is seeking assistance when starting or managing a small business.

The SBA offices are open to the Roma community to utilise as the agency is available to all everybody living in the country, but has few targeted policies focused on marginalised groups. The main exception is the Slovak Women's Platform, of which the SBA is a founding member, and annually organises the prestigious Businesswoman of Slovakia Award. There are no tailored start-up programmes targeted solely at the Roma community and feedback from the interviews suggested that interaction between the SBA and Roma was very low (but no official data on this basis are collected).

Interviewees for this study suggested that Roma were reluctant to use SBA offices due to a fear of experiencing discrimination (although there is no data backing such claims) and also because they would be unable to complete the required paperwork for any of the SBA initiatives due to issues surrounding language and literacy, despite the support provided by front desk officers of the SBA to fill in the necessary paperwork. Given that the SBA has not proactively engaged with the Roma community on a sustained basis, plus the averseness of the Roma community to interact with SBA staff, the effective outcome is that few examples of Roma entrepreneurs receiving SBA support could be identified.

Municipalities

There are 2 891 municipalities in the Slovak Republic which are grouped into 79 districts, which in turn are grouped into 8 regions. Kolesarova (2012) suggested that municipal firms could be utilised to employ Roma and give them the opportunity to gain work experience. Municipal firms are enterprises that are owned by a municipality that offers employment of a fixed duration (e.g. two years) to people who are unable to secure employment in the open market due to discrimination, stereotyping, disability or other such reasons. The municipal enterprise behaves like a social enterprise as it provides training and employment to these disadvantaged people by providing products or services to customers that

are willing to pay a fair price. Any profit that is accrued is reinvested in the business. Musinka (2012) argued that it would be easier for smaller municipalities establish a successful municipal firm because relations between the authorities and the local population is closer. The municipality of Spišský Hrhov (Box 8.3) provides an excellent example of such an initiative and the local mayor has frequently offered his support and mentorship to other municipalities who have sought to follow this example.

Box 8.3. Use of social enterprises to support the Roma, Spišský Hrhov

The first Slovak municipal firm, with the specific objective to raise employability and employment rate of the Roma living in settlements and consequently to improve their critical socioeconomic situation, was established in Spišský Hrhov in 2000. Spišský Hrhov is a municipality located in Levoča District. It has approximately 1 350 inhabitants, 300 of whom are Roma. A local municipal firm was established as a direct reaction to the high unemployment rate and critical situation of the marginalized Roma community who lived in impoverished settlements. Each employed Roma starts with a supervisor, who teaches and leads him/her. However, even under supervision, approximately 50% of Roma workers are not able to acquire working habits and skills necessary for full-time employment and to keep a permanent job. Consequently, they squander their opportunity and have to leave the firm during the trial period which lasts 2-3 months. However, thanks to the municipal firm, employed workers who stay become skilled and competitive in the labour market and later are able to find a regular job.

The first entrepreneurial activity of the municipal firm started with buying simple technologies and hand tools (shovels, hoes, rakes, etc.) for producing paving-stones. Later, the firm expanded its activities to making firewood, taking care of public municipal spaces, the production of wooden products and souvenirs in wood workshops, and the storage and trading of wine. Nowadays, they also provide construction works (building of houses or fences), plus the installation of the scaffolding.

Thanks to the temporary or permanent employment gained in the municipal enterprise, people earned some money and reconstructed or built their own house, connected them to the infrastructure supply services and legalised their homes. All these steps have significantly improved the housing conditions of the Roma community, with everyone living in a house and 70% of households connected to the infrastructure supply services. Other positive impacts were observed in other areas of social life as employment has also solved problems with financial debts, because people have work to pay their loans. The ‘behaviour’ of the Roma community has also significantly altered and the local majority population has overcome their prejudices towards the Roma community. The Roma community is relatively well integrated and there are few problems arising from mutual coexistence.

Source: Kolesarova (2012) and interview with Vladimir Ledecky, Mayor of Spišský Hrhov.

It was consistently highlighted during the interviews for this review that the positive participation of municipalities (supported by their mayors) was potentially the best opportunity to change the circumstances of the local Roma community. Such initiatives frequently included the development of housing for the Roma community which had the double benefit of increasing labour market attachment and social housing within one activity. By securing a job contract, Roma were able to arrange mortgages from lending institutions which then enabled them to buy the houses that they were building or renovating. With the skills that the Roma learn on these employment schemes, they are able to secure long-term employment in other enterprises or potentially start their own business. For many observers, such a form of employment was considered the most efficient pathway for Roma to move from unemployment into self-employment as it enabled Roma to acquire new work skills, learn to appreciate the benefits of work supervision and mentoring, build a regular daily routine, develop their social skills and expand their network of contacts. Quite importantly, it also provided local role models of Roma who moved from unemployment into positions of permanent employment and occasionally self-employment.

The initiative offered a pathway to changing their economic and social circumstances that local role models had already successfully taken.

The European Commission and the Council of Europe launched the ROMACT Programme in 2013 to assist mayors and municipal authorities to work together with local Roma communities to develop policies and public services that are inclusive of Roma. In the Slovak Republic, six municipalities have participated since the beginning and seven new municipalities were added in 2016. As part of the programme, Community Action Groups (CAGs) were established and community priorities were drafted in all municipalities and shared with the local authorities. These Joint Action Plans were approved by the relevant mayors and City Councils after a review process. The Slovak ROMACT Team also supported and coached municipalities willing to access EU funds to improve the situation of Roma communities through close collaboration. Besides training on EU project planning and management, training on social entrepreneurship was also provided to relevant stakeholders. While the programme achieved several successful outcomes, the initiative is no longer operational. A new mechanism needs to be developed that encourages municipalities to become dynamic partners in changing the circumstances of the Roma community within their localities.

Non-Governmental Organisations

There are several Non-Governmental Organisations (NGOs) in the Slovak Republic which proactively furnish support and assistance to the Roma community. Refworld (2014) identified many NGOs as being involved in addressing Roma issues in the country, but very few offer training support for employment or self-employment. The following lists those who help in this way:

- Association for a Better Life – its mission is to support Roma marginalized communities in eastern Slovak Republic by raising educational and employability levels.
- Pontis Foundation – supports employment for minority communities such as Roma.
- Young Roma Association – provides social counselling for Roma, plus employment and education programmes.

These organisations are proactively seeking to enhance the levels of education and employment amongst the Roma community. Those who were interviewed from these NGOs spoke of the substantial challenges in securing finance for any initiatives with the Roma community, developing training and support initiatives that would accomplish high levels of participation and achieving meaningful results due to the complexity and multiplicity of the economic and social problems within the community. Because of the nature of these challenges, few initiatives were believed to be available that were focused solely on training Roma to start their own business. It was suggested that a programme such as the Network for Teaching Entrepreneurship (NFTE) would be a welcome addition to the provision of programmes targeted at the Roma community in the Slovak Republic, since NFTE is specifically designed to provide entrepreneurial training to young people in disadvantaged communities. The NGOs recognise the entrepreneurial capacity of the Roma community, but believe that gaining education and employment is the most effective method of building a better future for participants on their programmes.

The Brussels-based organisation REDI (Roma Entrepreneurship Development Initiative) is a start-up stage investing NGO established to focus on catalysing new approaches to business development and financial inclusion of Roma entrepreneurs. In 2019, REDI announced a call to train five Roma Business Facilitators in each of the following countries: the Slovak Republic, Hungary and the Czech Republic. The purpose of the business facilitators training was to enable Roma personnel to assess and assist the needs of potential and nascent Roma entrepreneurs in their communities. More recently, it announced an e-accelerator programme for Roma Entrepreneurs in Romania, Serbia and Northern Macedonia (Box 8.4). REDI is funded through a variety of sponsors and revenue streams, and operates

across a number of Central and Eastern European countries. In the Slovak Republic, it works in collaboration with the Association of Young Roma, which has been operating since 1999.

Box 8.4. Roma Digital Boost Programme in Romania, Serbia and Northern Macedonia

Description of the approach

The Roma Digital Boost Programme is designed to be an e-accelerator programme for Roma entrepreneurs. It aims to support 60 Roma entrepreneurs to help them digitise their business so that they can maintain their activities during the COVID-19 crisis and recovery. It is open to both formal and informal entrepreneurship activities, and a specific outreach effort is envisaged to attract female Roma entrepreneurs.

The programme will be delivered through an interactive online platform that facilitates interaction between participants and with trainers and mentors. The programme will be offered in four languages (Romania, Macedonian, Serbian and English) and will be structured in four modules:

5. Business Modeling – Digital Transformation
6. Impact management
7. Content Marketing & Storytelling
8. E-Commerce

The programme will also provide awards with financial support to those who have the most promising potential for online businesses.

Factors for success

The two critical success factors for the programme will be the digital skill level of the participants and their access to regular internet connectivity. It appears that young Roma entrepreneurs will be the most likely to benefit since they likely have the highest levels of digital skills.

Contact point

REDI at romadigitalboost@redi-ngo.eu

Source: Roma Entrepreneurship Development Initiative (2021)

Social enterprises

The utilisation of local social enterprises was frequently highlighted by interviewees for this review report as potentially the most effective method of securing labour market attachment for Roma. Some of these social enterprises were started by municipalities (e.g. Spišský Hrhov) or by NGOs (e.g. Young Roma Association). These social enterprises employ Roma and through a combination of training and job experience, provide them with the skill-sets to secure permanent employment away from the social enterprise. While the long-term results are not officially documented, many interviewees for this reinforced the value of these initiatives. Research by Kolesarova (2012) reasoned that municipal enterprises serve as a tool against high unemployment rates; create new job opportunities and employ disadvantaged citizens (thereby supporting disadvantaged communities); develop working skills and habits; raise employability of hard-to-employ workers from marginalised communities; lower dependency on social welfare assistance; develop services according to the local needs; use local resources as soon as firms are tailored to local condition; ensure sustainable development of municipality; and support regional development which contribute to the elimination of inter-regional

disparities. International experiences such as EPEKA in Slovenia (Box 8.5) show that the engagement by Roma in these social enterprises frequently leads to long-term labour market activation through securing permanent employment or created their own business.

Given these success factors, it would be anticipated that many municipalities and NGOs would be utilizing this method of increasing labour market attachment and entrepreneurial activity amongst the Roma community, but the evidence suggests that such is not happening. The EU funded ROMACT programme enabled 13 municipalities in the Slovak Republic to receive funding and training for developing social enterprises, but that initiative ceased in recent years. It was also highlighted by an interviewee that several municipalities had come together to create their own support group and learn through peer-to-peer mentoring, but this network is relatively small. According to Dimitrova (2016), municipal social enterprises have several weaknesses with the principal one being that are contingent upon the support of the mayor and local council (a view expressed several times also by interviewees). There are also some restrictions regarding the manner in which they are delivered since they are financially dependent on the jobs being subsidised by the active labour market policy. However, one could argue that since social enterprises are supporting labour market activation and business creation, the cost-benefit to the exchequer of such policies is justified.

A European Commission (2014) report estimated that there were 24 municipal social enterprises at that time in the Slovak Republic (although not all focusing on Roma), but that the general concept of social enterprise had not yet gained momentum. The prospects for municipalities to engage more proactively in social enterprise activity continues to exist and a significant opportunity awaits multiple stakeholders to pursue this approach towards increasing the rate of labour market attachment and entrepreneurial activity amongst the Roma community. However, it should also be highlighted that social enterprises can also be started by NGOs or by social entrepreneurs and so actors other than municipalities can establish a social enterprise. An excellent example of the Roma community creating its own social enterprise is WASCO (see Case Study 4) which was established by the Association of Young Roma and has been operating successfully for over 20 years.

Box 8.5. EPEKA, Slovenia

Description of the approach

The Association EPEKA, Soc. Ent., has been active in the field of social entrepreneurship since 2012. The focus of its activities is on the inclusion of Roma in the social entrepreneurship and the labour market.

The project Social Entrepreneurship for Roma seeks to:

- include 10 people from vulnerable groups in mentoring schemes;
- employ 1 person from vulnerable target groups to promote social entrepreneurship;
- establish two social entrepreneurship initiatives in the Western regions.

The association's first initiative was in the area of tourism – a Roma camp in Styria region where visitors could experience the "Roma way of life" right by the motorway. This includes sleeping underneath the stars, dancing, cooking and traditional cuisine.

The second was the establishment of the European Capital of Roma, where one city in the European Union will be named the European Capital of Roma. In addition, selected cities would hold cultural activities. The goal is to facilitate structured dialogues between NGOs, policy makers and the general public about the inclusion of Roma in society and to give some profile to the challenges that they face.

The project is supported by the European Social Fund and Ministry of Economic Development and Technology.

Factors for success

The most important element in supporting the Roma was the intensive mentoring that was delivered as part of this initiative.

Source: MATEO (2020)

Box 8.6. WASCO

The Association of Young Roma (AYR) is an NGO working for disadvantaged Roma since it was established in 1999. To help achieve its goals, in 2014 AYR established the Horehronie Multifunctional Centre in Valaská in conjunction with two other NGOs. The main driving force behind WASCO since its foundation in 2014 is Ivan Mako, who is now Chairman of the Board of Directors. Through his work with AYR, he identified the opportunity to design and develop a social enterprise in this locality that could offer support to people in highly disadvantaged situations. The principal activity in the 900 square metre building is a laundry service which employs 40 people, washes 20 tons of laundry per month and involves 30 000 km of trips every month to collect and deliver laundry. WASCO also has a small social community kitchen where people can learn to cook food but it needs more funding to sustain this activity.

WASCO began by clearing the debris from the derelict factory building and its initial reconstruction took 18 months (the process is still on-going). It received some funding from national and international sources to help get it started. During this phase, 125 people were involved in the work and when it was finished, approximately 25 people secured employment elsewhere. Within the building, WASCO also has a Community Centre which provides services to children and adults. WASCO offers working, training and educational opportunities to a variety of disadvantaged groups including long-term unemployed, single mothers with children, health-disadvantaged, Roma from marginalised communities, young people and those over the age of 50. The initiative began by offering employment to people who had been unemployed for 15-20 years. By providing support, advice and education, it assists its clients to develop life skills, good working habits and healthy self-confidence, while also learning to take responsibility for their lives.

Ivan Mako believes that the success of the initiative is based on trust and equality between the works and management. He highlighted that the association cannot offer good wages but that it can offer a good work environment and a feeling of self-worth. He also believes that it is important that the employees give good quality work in return and that they feel as if they are working for themselves (all profits generated are reinvested in the business). Ivan states that people who are employed have multiple personal issues (including financial debts to loan sharks) and that all need to be addressed over time as part of their personal development. The support programme usually takes more than two years and each employee has a maximum of three years with WASCO after which time they must seek employment elsewhere. Ivan believes that other social enterprises do not follow the WASCO model because of the complex nature of the problems of each individual, the long time needed to address them and the modest number of Roma that finally return to the workforce. However, he has seen the fantastic results that can occur and firmly believes that the rewards are worth the hard work.

Source: Visit to WASCO and interview with Ivan Mako.

The Slovak Republic adopted a ‘Social Economy and Social Enterprise Act’ in 2018, which created new comprehensive legislation for the operation and support of social enterprises (European Commission, 2019b). The Act expands the concept of social entrepreneurship, which was previously perceived as an active labour market policy instrument. It now recognises three forms of registered social enterprises, namely: (1) integration enterprises promoting the employability of unemployed and disadvantaged people; (2) social housing enterprises focused on the provision of beneficial renting houses; and (3) other registered social enterprises (community-based or public-benefit based) providing other types of socially-beneficial services. According to the European Commission report, the new Slovak regulation offers direct and indirect forms of assistance to social enterprises, which consists of financial instruments, demand-support and the compensatory forms of aid. This change in legislation should encourage a greater number of social enterprises to be established, whether by municipalities, NGOs

or social entrepreneurs. As of March 2020, 93 social enterprises were registered in the register of social enterprises, of which 92 were of the work-integration type (Kahanec et al., 2020).

An alternative form of assistance provided to the Roma community that has proven effective has been the introduction of Roma community centres. They primarily act as locations for social services and can be the source of communication of new initiatives. The pilot centres were initially tested by NGOs and many municipalities now have such centres which are supported by the European Union and / or the Ministry of Labour, Social Affairs and Family. The community centres work with Roma adults, advising them on issues such as housing, education and employment. The community centres seek funding opportunities which allow them to deliver training programmes for Roma adults relating to labour market attachment. Much of the support offered is one-to-one help as people require significant tailored assistance. Examples of dedicated entrepreneurship training or start your own business programmes were difficult to locate and instead it appears that any support for nascent or potential Roma entrepreneurs is provided on an individual basis. A future opportunity might exist to provide custom-designed social entrepreneurship training for Roma through these community centres.

International programmes

In recent years, there have been a number of international programmes that have sought to address the entrepreneurship challenges facing the Roma community. The following are some examples that have been identified:

- Pal Network for Support of the Roma Entrepreneurship (2017-19) – this was an Erasmus+ project led by a Czech partner (RomaPraha). The objectives of the programme were to develop a specific training programme for Roma based on skills for entrepreneurship and to supply tools for building and managing Roma businesses. The budget was approximately EUR 200 000 and eight Roma adults trained as youth trainers and put in charge of organising and facilitating camps for young Roma in their countries.
- Build your Future (2015-16) – this was an Erasmus+ project led by German partner (YEPP Europe) with the Slovak partner being the Association for Better Life. The five-module training programme started with soft skills training (communication, teamwork, creativity) and concluded with participants writing business plans and communication strategies, plus looking for financial sources through lending institutions and foundations. The budget for the programme was approximately EUR 250 000 and 20 young Roma in the Slovak Republic participated.
- Labour Plus Project (2009) – this initiative was led by a partner in the UK and included partners in Czech Republic, Greece, Spain, Netherlands, France and Hungary. The aim of the project was to support entrepreneurship in disadvantaged areas and with groups of minorities (including Roma) by creating ‘social entrepreneurship zones’. For example, in the city of Most in the Czech Republic, a small factory with simple production facilities and a special operating regime was built on a meadow next to the housing estate of a Roma community.

These initiatives were all EU funded and were assessed at the end of the project to determine if they had succeeded in delivering the goals set initially for each of the projects. It is not the general practice of the EU to assess the long-term benefits of each initiative, so it has not been possible to track how effective these programmes were in producing Roma entrepreneurs who started viable enterprises (or secured employment due to the skills developed on the programmes). However, they do offer interesting examples of international initiatives that sought to collaboratively support potential and nascent Roma entrepreneurs and they may provide inspiration for creatively-designed programmes for delivery in the Slovak Republic.

The Kiútprogram in Hungary (Box 8.7) provides an example of an international programme for microfinance that can provide inspiration for policy development in the Slovak Republic to support the establishment of businesses by Roma entrepreneurs.

Box 8.7. Kiútprogram, Hungary

Description of the approach

This group lending scheme ran from October 2010 to June 2012 and was based on the Grameen model. Field workers visited potential areas to promote the scheme and then re-visited the area to meet with interested participants for the intake interview. Selected participants were placed into loan groups and group members received their loans sequentially. Repayments were required weekly and missed payment meant that other group members did not receive their loans. Each group had a leader who had the responsibility of ensuring that members were meeting the loan conditions. Group leaders received their loans last.

The Kiútprogram targeted people in the most disadvantaged areas of Hungary, mostly, but not exclusively the Roma population. It aimed to fill a gap in the social support system by providing financial support, training and personal coaching to help people start businesses so that they can remain active in the labour market and society. Clients were recruited from regions with less than 60% of Hungary's median household income. The scheme prioritised women, however only 40% of the applicants and 48% of the clients were female. Interviews with clients – although not based on a representative sample – suggest that official numbers might over-report women's participation since many husbands or partners were the true business operator (UNDP, 2012).

The selection process had two steps. First, the field workers screened the potential settlements. In the period 2010-12, the field workers visited 202 settlements in order to make public announcements about the scheme and to organise local community meetings where information on the microfinance scheme and the supplementary business services was shared. When communities showed a high level of interest in the scheme, field workers then visited families to assess the economic and social conditions of the potential participants on site. They also completed the intake questionnaire with the families during these visits to collect basic information about the applicants and their households.

At this stage of the selection process, loan groups of 8 or 9 candidates were formed. Group meetings were organised and field workers explored the past business experiences of the group members. The group had to select a leader and to approve the group rules. Potential candidates also had to meet a number of selection criteria (e.g. have no unpaid taxes) and also had to create a simple but realistic draft business plan. The Credit Committee operated by the Managing Company evaluated the individual application packages, which included the on-site questionnaire, an evaluation by the field worker, the draft business plan, and an individual self-scoring, and made the final decision in consultation with the field worker.

Following the Grameen model, this scheme was based on group lending. Loan groups served as a substitute for the lack of collateral and as a forum for sharing experiences and mutual learning. Group dynamics and operating rules were intended to enforce repayment since the group members received loans sequentially, and on the condition of no failure. The group leader was the last to receive their credit. Loans were provided according to 3 schedules: a loan of EUR 670 to repay over 6 months; a loan of EUR 1 670 to repay over 12 months; and a loan of EUR 3 330 to repay over 18 months.

The European Union project 'Pan-European Co-ordination of Roma Integration Methods – Roma Inclusion: Self-Employment and Microcredit' was the principal financial source for the Kiútprogram (OECD/EU, 2016). The overall budget of the project (including operational costs and loan portfolio) was EUR 1.4 million. The European Union project provided pre-financing (85%) and the remaining share was assured after the official closure of the project. The Hungarian government co-financed the project management costs and after the end of the pilot phase, the project follow-up activities and some of the local projects were financed by private sources (mainly the Polgár Foundation).

Factors for success

Key success factors for the programme are set out below:

- Ensure strong field workers. The field workers proved to be the key actors in the implementation phase. The Kiútprogram provides good lessons on the selection of field workers and the diversification of their tasks. The simultaneous roles of being social worker and loan agent and the complexity of the related services may turn out to be a barrier. It may therefore be necessary to differentiate the responsibilities and hire staff members specialised in these different roles separately.
- Utilise intensive outreach. The scheme aims to assist disadvantaged groups in disadvantaged areas. The key to reaching this group, so that it is aware of the available support, is to go into the field and interact with them directly. This also has the advantage of identifying potential candidates and building trust between the field workers and the clients.
- Develop realistic targets. This scheme had to make major adjustments during the pilot phase because it was clear that it was too ambitious and too selective. As a result, the profile of the target client changed and many of the social objectives were compromised. It is important to undertake an ex ante evaluation to ensure that the project design matches the objectives and targets.
- Ensure that loans are appropriate. The size of the loan offered should be tailored to the business environment and the needs of participants' businesses. This implies higher start-up capital in European countries than in the developing country context where this type of approach originated.

Obstacles encountered and responses

The intake process was revised after the first year due to slow uptake and poor performance of the first cohort of clients. The key issues and responses are as follows:

- Meeting objectives and targets. The scheme changed its target market substantially during its 3-year run.
- Participant selection was a challenge. It was difficult to identify potential entrepreneurs who met all of the selection criteria and as a result, many participants were not successful.
- Participants were located in disadvantaged areas and therefore faced the challenge of having relatively weak regional markets and business networks. They heavily relied on their field worker for support.

Impacts

192 people from disadvantaged groups applied, with 138 being selected for participation in the scheme. Some 95% of clients claimed that their main source of funding to start their own businesses was through the scheme. Some 45% of businesses were still operational one year after the participants had completed the scheme.

Relevance for the Slovak Republic

This programme represents an innovative approach to supporting Roma entrepreneurs.

Contact point

Polgar Foundation in collaboration with Raiffeisen Bank, with EU financing.

Source: World Bank (2012); OECD/EU (2016)

Conclusions and policy recommendations

While exact statistics are difficult to establish, there is significant evidence highlighting the low rates of labour market attachment experienced by the Roma population. The causes for this situation are multifaceted, with the principal reasons including poor levels of education, impoverished housing, low scales of employment-related skills and discrimination by the non-Roma community. Research on minority and disadvantaged communities internationally has highlighted that in such situations, the minority community will frequently engage in entrepreneurial activity as an alternative option to income generation. However, there is a gap in formal self-employment by the Roma community in the Slovak Republic compared with that generally found in disadvantaged populations in OECD countries. Where successful formal entrepreneurial activity does take place, prior work experience has frequently been attained through social enterprises or through working abroad. This implies that pathways to Roma labour market attachment in the Slovak Republic may be supported through support for social enterprises providing work integration services, including municipal enterprises, as well as by providing more comprehensive support to self-employment.

Multiple international reports have highlighted the lack of progress in changing the circumstances of the Roma community in the Slovak Republic and the lack of commitment by key stakeholders to implementing the recommendations of such international reports. These reports have offered detailed recommendations relating to improving labour market activation rates for Roma and which organisations might take lead responsibility for realising these recommendations. This report focuses more closely on the role of entrepreneurship in increasing labour market attachment among Roma. Two stages of development are advised. The first stage offers recommendations for labour market attachment through social enterprises that provides Roma with the opportunity to develop their skills and gain work experience, while the second stage offers recommendations for starting their own business.

Box 8.8. Key policy recommendations on inclusive entrepreneurship – focus on the Roma community

Labour market attachment through social enterprises

- The Office of the Slovak Government Plenipotentiary for Romani Communities should introduce into its planning a strategy for the introduction of 40 additional municipal social enterprises by 2025. The Office should identify key stakeholders to provide detail to the plan and determine key targets to be achieved.
- The Ministry of the Interior of the Slovak Republic should be responsible for securing the required funding to achieve the strategy and dispersing the ring-fenced funds dependent upon the municipalities achieving agreed targets.
- Conferences and government meetings where the Mayors of municipalities gather should be targeted by the Office of the Plenipotentiary to provide awareness, training and promotional support for the establishment of municipal social enterprises. A network of participating municipalities should also be established to enable peer-to-peer learning across the duration of the strategy.
- The Ministry of Labour, Social Affairs and Family of the Slovak Republic should review the amount of money that people on welfare benefits receive when they participate on a social enterprise programme to ensure that they will not be disadvantaged financially because they participate in such a programme. Any anomalies whereby a person entering a social enterprise programme is financially worse off should be identified and addressed.
- Programme participants should be paid their salaries through formal bank accounts to help build a personal credit history.

Business creation and self-employment by Roma people

- The Office of the Plenipotentiary should invite a small number of successful Roma entrepreneurs to create an 'Association for Roma Entrepreneurs' to help identify and promote Roma entrepreneurs as role models within the community.
- The Association of Roma Entrepreneurs should be supported to introduce initiatives such as job shadowing and mentoring whereby nascent Roma entrepreneurs can learn from established entrepreneurs.
- A microfinance programme should be introduced for Roma entrepreneurs, potentially managed by the Association for Roma Entrepreneurs. The Ministry of the Interior of the Slovak Republic should be responsible for securing the required funding to achieve the strategy and dispersing the ring-fenced funds dependent upon the Association achieving agreed targets.
- A one-stop shop or telephone line should be made available to provide access to business and legal support for nascent and established Roma entrepreneurs. This could be provided either through the labour offices or by the Association of Roma Entrepreneurs

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OECD Studies on SMEs and Entrepreneurship

SME and Entrepreneurship Policy in the Slovak Republic

This report presents the findings and recommendations of the OECD review of *SME and Entrepreneurship Policy in the Slovak Republic*. It examines how to address the challenges of stimulating more productive entrepreneurship, supporting enterprise scale-up, stimulating SME exports and global value chain participation, increasing SME innovation and innovative entrepreneurship, and making entrepreneurship more inclusive across the population. The report examines SME and entrepreneurship performance and the business environment for SMEs and entrepreneurship in the Slovak Republic, giving benchmarks against other OECD countries. The report also takes a close look at arrangements to ensure policy leadership, co-ordination and consultation in this field. It examines the government support programmes across areas including SME and entrepreneurship financing, supporting innovation, building SME workforce skills and public procurement. It also examines the east-west divide in SME and entrepreneurship activity and their supporting conditions in the Slovak Republic and how to strengthen regional entrepreneurial ecosystems across the country. Further chapters focus on SME digitalisation and the promotion of self-employment and social entrepreneurship to strengthen the labour market attachment of the Slovak Republic's Roma community.

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