

SLOVAKIA CATCHING-UP REGIONS

PREŠOV REGION: KEY DEVELOPMENT DYNAMICS

SLOVAKIA CATCHING-UP REGIONS

PREŠOV REGION: KEY DEVELOPMENT DYNAMICS

© 2019 International Bank for Reconstruction and Development
/ The World Bank
1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000
Internet: www.worldbank.org

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent.

The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Rights and Permissions

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: pubrights@worldbank.org.

CONTENTS

Acknowledgments	5
Acronyms	5
OVERVIEW	7
1. INTRODUCTION: SUBNATIONAL DISPARITIES AND LAGGING REGIONS IN THE EU	13
2. THE RAPID RISE: SLOVAKIA'S ECONOMIC RESURGENCE	17
3. EXPLORING THE VAST DEVELOPMENT GAP IN SLOVAKIA	23
4. THE BACK OF THE PACK: PREŠOV	29
Economic and Social Dynamics	30
Unpacking Prešov's Structural Constraints	33
Competitive Advantages and Opportunities for the Prešov region	41
5. CONCLUSIONS AND POLICY PRIORITIES	45
Annex A.	
Additional Information	48
Annex B.	
European Structural and Investment Funds (ESIF) in Slovakia Since 2004	51
References	57

BOXES

BOX 3.1 Territorial and Administrative Organization of Slovakia	25
--	----

FIGURES

FIGURE 1.1 Trends in EU Convergence, National and Regional, Coefficient of Variation of GDP per Capita, ^a 2005–15	14	FIGURE 4.4 Drivers of Population Change in Slovak Regions, 1993–2017, Number of People	33
FIGURE 1.2 Disparities in Regional GDP per Capita, EU Member States, 2016	15	FIGURE 4.5 Number of Enterprises in Prešov Districts	34
FIGURE 2.1 GDP per Capita, Slovakia and EU Transition Economies, 2000–17	18	FIGURE 4.7 Population Changes in Prešov Municipalities, 2000–17	34
FIGURE 2.2 Net Foreign Direct Investment, Share of GDP, 1993–2015	19	FIGURE 4.8 Change in Shares of Population of Post-productive Age in Prešov Municipalities, 1997–2007	34
FIGURE 2.3 Labor Productivity, EU15, 1995–2017	19	FIGURE 4.6 Unemployment in Prešov Districts	34
FIGURE 2.4 Share of Exports and Imports in GDP, 2000–17, Percent	19	FIGURE 4.9 The Effects of Urbanization	35
FIGURE 2.5 Goods Exports by Sectors Contributing More than 5 Percent of Total Exports, 1997–2017	20	FIGURE 4.10 Education and Employment in Slovakia	36
FIGURE 2.6 Trends in Employment and Poverty Alleviation since 2000	21	FIGURE 4.11 Slovakia and the Regional Innovation Scoreboard	36
FIGURE 3.1 Slovak Regions Compared	24	FIGURE 4.12 Quality of Governance Indicators	38
FIGURE 3.2 Contributions to Slovak GDP by Industry	26	FIGURE 4.13 Share of Roma Population by Municipality in Slovakia (left) and Prešov region (right)	40
FIGURE 3.3 Economic Characteristics of Slovak Regions	26	FIGURE 4.14 Visitors and Overnight Stays in Slovakia, by Region, 2016, Percent (left axis) and Average Length of Stay (right axis)	42
FIGURE 3.4 Regional Unemployment and Poverty in Slovakia	27	FIGURE B.1 ESIF Allocations, 2014–20, Total and Per Capita	51
FIGURE 3.5 Socioeconomic Trends of Slovak Regions (Coefficients of Variation)	27	FIGURE B.2 ESIF Allocations, 2014–20, Percentage of Public Investment by EU Member	51
FIGURE 4.1 Indicators for Prešov, Other Regions, and Slovakia as a Whole	30	FIGURE B.3 Use of ESIF Funding by Member States, Percent of Planned Spending	54
FIGURE 4.2 Determinants of GDP. Prešov and Other Noncapital Regions	31	FIGURE B.4 Total ESIF Funding and Share of Projects Contracted, June 30, 2018, Percent	55
FIGURE 4.3 Changing Industrial Specialization in the Prešov Region, 2012–16	32	FIGURE B.5 ESIF Usage and Total ESIF Allocation, June 30, 2018, Percent	55

TABLES

TABLE 4.1 The Innovation Potential of Slovak Regions	37	TABLE A.2 20 Largest Private Enterprises in Prešov Region by Revenue, 2017	49
TABLE 4.2 Basic Data, EU Funding in Slovakia, 2007–13	39	TABLE B.1 ESIF Allocations to Programs, Slovakia, 2014–20	52
TABLE 4.3 Doing Business in Slovakia, Distance to the Frontier (DTF)* (0–100)	41	TABLE B.2 ESIF Used in Slovakia, as of June 30, 2018	55
TABLE A.1 Industrial Parks and Their Investors in the Prešov Region, 2017	48		

ACKNOWLEDGMENTS

The report was prepared by Dmitry Sivaev with support from Vladimír Benč, under the guidance of Paul Kriss and Grzegorz Aleksander Wolszczak.

The report is a product of collaboration between The World Bank and the European Commission (EC) in an effort to address the challenges that hold back the economic and social development of targeted lagging regions in the countries of the European Union.

ACRONYMS

CBC	Cross-Border Cooperation
CEE	Central and Eastern European countries
CF	Cohesion Fund
EAFRD	European Agricultural Fund for Rural Development
EC	European Commission
EMFF	European Maritime and Fisheries
EQI	European Quality of Government' Index Fund
ERDF	European Regional Development Fund
ESF	European Social Fund
ESIF	European Structural and Investment Funds
ESO	Efficient, Reliable and Open Government Program of the Slovak Republic
EU	European Union
FDI	Foreign direct investment
GDP	Gross domestic product
GRP	Gross regional product
GVA	Gross value added
HDI	Human Development Index
ICT	Information and communication technology
IROP	Integrated Regional Operational Program
km	Kilometer
MRC	Marginalized Roma communities
NP	National park
NUTS	Nomenclature of Territorial Units for Statistics
OP	Operational program
Pp	Percentage point
PSK	Prešov Self-governing Region (Prešovský samosprávny kraj)
R&D	Research and development
RES	Renewable energy systems
SMEs	Small and medium enterprises
SR	Slovak Republic
TEN-T	Trans-European Transport Networks
UNESCO	United Nations Educational, Scientific and Cultural Organization
V4	Visegrad countries (Czech Republic, Hungary, Slovakia, Poland)
VET	Vocational education and training

OVERVIEW

The factors that hold back development of the Prešov region can be categorized as (1) inability to benefit from the FDI-driven growth that has lifted the Slovak economy in recent decades; (2) region-specific structural constraints that make its economy less productive than those of other regions outside the capital; and (3) the difficulties of integrating the Roma population.

Slovakia's rapid economic growth has not spilled over from Bratislava to Prešov and other outlying regions.

In recent years Slovakia has been among the fastest-growing European Union (EU) economies. In just two decades (1995–2015) average GDP growth of 3.9 percent has brought Slovakia's GDP per capita from 40 percent of the EU-15 average to 70 percent. This impressive catch-up was fueled by foreign direct investment (FDI), most of which went to automotive and electronics manufacturing. These industries were attracted to Slovakia by its low costs and proximity to western Europe. Today automotive and electronic products account for two-thirds of Slovakia's goods exports, twice what they contributed 20 years ago.

Although growth has helped improve the well-being of the population, it has not been inclusive and it has exacerbated social divides and exposed structural problems. Since 2000 average wages in Slovakia have quadrupled and unemployment has dropped by 12 percentage points (pp), but with little change in the number of those who are poor or in danger of poverty. This is a result of two factors: the concentration of economic growth in specific industries in a specific part of the country, and structural issues in the labor market and in education. FDI-fueled growth has created a highly productive and predominantly foreign-owned sector centered on Bratislava. However, it has not pulled up the productivity of other Slovak firms, creating a bifurcated economy. This has created a shortage of labor at the top and middle of the skills spectrum, which has pulled wages up; while at the lower end of the skills spectrum, a substantial number of the Slovak people have no access to the opportunity created by this period of growth, as stagnant poverty rates demonstrate.

Bratislava has more than double the GDP per capita of the next most developed region in Slovakia, Trnava, and more than quadruple that of Prešov. In recent years these gaps have been widening rapidly. In fact, for the last 20 years there has been no sign of regional convergence to the country's GDP per capita. Bratislava benefits from better access to markets, a much more skilled labor force, a higher rate of capital investment, and the agglomeration effects derived from higher population density. While it is important to seek ways to reduce the divergence by supporting development outside the capital, it is unreasonable to expect Prešov and other regions to catch up with Bratislava.

In recent years it appears from a drop in the pace of conversion to the EU frontier that Slovakia needs a new growth impulse, which may have to come from outside the capital. Slower growth, modest FDI inflows, and rising wages all suggest that Slovakia cannot expect the same growth model to be effective in the future. To create new growth opportunities, major structural problems need to be addressed—and that will not be possible without unlocking the economic potential of outlying regions and their people.

Prešov trails other non-capital regions because of structural constraints, which may be solvable.

Outside Bratislava the economies of Slovak's regions look relatively homogenous except for Prešov, which trails the other regions. Beyond the highly lucrative natural resource extraction industry in western Slovakia, the regional economy looks very similar. Yet Prešov's performance is consistently slightly worse than the others. Its labor productivity is 11 percent lower than the average for other regions—7 percent lower if the natural resource sector is taken out of the calculations. In the medium term, it is therefore much more reasonable for Prešov to work to bridge this meaningful gap than to try to catch up with the capital. Its underperformance is partly explained by objective structural characteristics of the region, such as peripheral location, but other constraints might be easier to address.

Here are some reasons why the Prešov economy lacks dynamism:

- **Industrial transformation of the economy:** Construction and agriculture, sectors in which the region specializes, have not been doing well. Meanwhile, professional services, manufacturing, and hospitality have been growing more vigorously. Although structural transition of the local economy may lead to some economic distress, it is critical that new tradable specializations emerge. This will depend both on external circumstances and on positive changes in the business environment in Prešov.
- **Out-migration and de-urbanization:** The most urbanized districts in Prešov region have a higher concentration of enterprises and less unemployment. It is typical for urban areas to be the epicenters of economic activity and drivers of growth because agglomeration stimulates productivity. However, Prešov is not exploiting the potential of its urban areas. Even though it is the least urbanized region in Slovakia, the trend is active de-urbanization. Rapid suburbanization and fast growth of rural population mean that fewer of the region's people live in urban municipalities (the central areas of the largest towns) than 10 years ago. This dispersion may undermine the economy: it is harder to raise productivity when urban density drops. This process is exacerbated by persistent out-migration, especially since there is secondary evidence that most of those leaving are highly educated urban residents. Their departure deprives cities of economic potential.
- **Skills gaps:** Although in the last two decades the skills profile of the Prešov labor force has improved dramatically, there are still gaps that need to be addressed. One is high unemployment among the least educated groups, perhaps a corollary of the social inclusion issues to be discussed later. The second is the quality of vocational education and training (VET). The region has the highest rate of unemployment in the country for those with secondary and trade school diplomas, which raises questions about the quality of education, and how relevant curriculums and instructional practices are to employer needs and the types of skills and competences they require.
- **Weak innovation ecosystem:** The region is at the bottom of national rankings on both innovation inputs, e.g., number of researchers and investment, and outcomes, e.g., patent applications and patents granted. The region seems to lack the foundational conditions for innovation.
- **Quality of governance and weak minimal ability to absorb EU funds:** Eastern Slovakia ranks rather well relative to other Slovak regions in the quality of its government, which suggests this is unlikely to be the main reason for Prešov's economic woes; however, it is still far below EU averages on all governance and service quality indicators. Lack of government capacity is manifested in the region's difficulties in absorbing EU funds, which in turn may be depressing growth rates. In the 2007–13 EU programming period, of all Slovak regions Prešov's applications had the second lowest success rate—and it had the lowest rate of utilizing the funding allocated.

The social development challenges of the region can mostly be linked to difficulties in integrating the Roma population.

The scale of social development and the welfare challenges confronting Prešov cannot be explained by the state of its economy alone. While the gap between the economies of Prešov and other non-capital regions in Slovakia is not that large, on social indicators the region is farther behind. Unemployment is close to 10 percent, the second highest regional rate in the country, and more than half of those unemployed have not had a job for over a year. Poverty is a real risk for 18 percent of the population—more than anywhere else in the country. These outcomes are readily linked to poor integration of the Roma.

Prešov hosts the second largest Roma population in Slovakia, and it is also more geographically concentrated (in 19 percent of the municipalities with Roma population, the Roma have a majority—the most of any region), and they are thus even more isolated than in other regions. Roma account for a substantial share of Prešov's unemployed and impoverished. Inclusion of the Roma is complicated; while much is already being done in this area, progress will require a determined long-term effort.

Bridging the gap between Prešov and other regions of Slovakia beyond the capital lies in recognizing its strength and dismantling the main constraints to growth.

The Prešov region actually has substantial advantages that can and should be leveraged:

- Prešov is the second most popular tourism destination in Slovakia, but most of the industry is concentrated around the High Tatra Mountains. There are opportunities to spread benefits generated by tourism, extend average stay, and develop new destinations, if lack of basic services is addressed.
- Despite persistent out-migration the region enjoys solid population growth. The labor force has been expanding in recent years and should continue to do so. Cheap and abundant labor and land resources, and decent transport connectivity, also present a great opportunity for manufacturing investment, as the success of several industrial zones in the region proves.
- The region also possesses substantial forest resources that could support wood and paper industries.
- Finally, Prešov city achieved the highest ranking in the recent Doing Business study of Slovakia's cities¹. This favourable business environment should be leveraged to promote entrepreneurship and attract investment.

The following policy priorities would advance the economic and social development of the region and prevent it from falling even further behind the rest of the country:

- **Top priority should go to ensuring that the population of the region can access economic opportunities, even if the jobs are outside the region.** This means offering high-quality education and health care and continuously improving digital and physical connectivity, both within the region and between the region and the rest of the country. Out-migration is not necessarily a failure for a region with somewhat limited economic potential like Prešov. Unless it provides comparable employment opportunities, the fact that its people are succeeding in other places means that the region has succeeded in preparing them for those opportunities.
- **The second priority is identifying and addressing constraints that create barriers for economic growth.** This means
 - improving the quality of VET;
 - investigating and addressing factors contributing to de-urbanization;
 - laying the foundation for innovation by building up technical education and research, nurturing entrepreneurship, and promoting commercialization of technical know-how; and
 - continuing to build up institutions by attracting and retaining talented staff and disrupting status quo structures that breed paternalism and corruption.
- **The third priority is making the most of the region's competitive advantages.** That means it must
 - Adopt a strategic and collaborative approach to bring the public and the private sectors together to develop new tourism destinations and extend the average stay of visitors. The recreational opportunities and the cultural heritage of the region could make it a major tourist destination. However, growing the industry will require infrastructure investments, basic service delivery, new tourism products, destination promotion campaigns, attracting domestic and foreign investors, and rolling out service quality standards. All these activities can be coordinated by a destination management organization co-owned by regional authorities and private businesses.
 - To take advantage of opportunities in the manufacturing, wood processing, and paper industries, the region can apply global best practices to attract FDI, such as using advanced market analysis to identify potential investors and creating quality support services for businesses, before as well as after they commit to projects in Prešov.

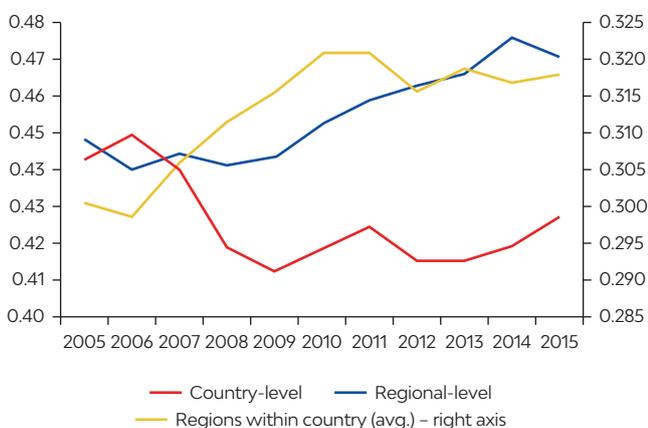
¹World Bank. 2018a.

- Another opportunity emerges from better utilization of EU funding. Raising the success rate of applications and the utilization of funds by successful applicants may depend on undertaking institutional development and capacity building region-wide. And targeted initiatives, such as training in application writing and problem resolution support for projects underway, can be quite productive.
- **Finally, it is important to recognize that the region will not be able to improve its relatively poor performance on a number of social and welfare indicators without advancing the social and economic integration of the Roma.** Public investment including EU funds can support better provision of education and health care services in their communities. More can be done to improve transport connectivity for Roma areas and to create jobs in such areas. Ultimately, however, it is clear that success will depend on overcoming longstanding cultural barriers, stigma, discrimination, and isolation.

1. INTRODUCTION: SUBNATIONAL DISPARITIES AND LAGGING REGIONS IN THE EU

Though the EU is a development conversion machine for national economies, it is less so for subnational regions. EU accession countries have been catching up to regional averages in terms of economic development since they joined the union. Except for Cyprus, the 10 countries that joined in 2004 grew faster than the rest of the EU, having higher average growth in GDP per capita. In fact, of the 10 fastest growing-economies in the EU in 2007–13, 9 had joined in 2004 or 2007. Similarly, expansion countries made up 8 of the 10 countries that had the fastest-growing per capita disposable income in 2007–13.² The economic success of the accession countries reduced disparities in national GDP per capita, but since 2005 both EU-wide and in most individual countries the

FIGURE 1.1 Trends in EU Convergence, National and Regional, Coefficient of Variation of GDP per Capita,^a 2005–15



Source: World Bank 2018.

Note: a. The higher the coefficient, the larger the disparity.

gap between most- and least-developed subnational regions has been widening (Figure 1.1). This suggests that in accession countries growth, and its benefits are concentrated in a few regions, mostly large cities and national capitals, while many areas fall further behind.

Slovakia illustrates the difference between national convergence and subnational divergence. While Slovakia is considered one of the EU's economic stars, it also has some of the union's highest regional disparities (Figure 1.2). Slovakia's impressive economic gains over the last two decades were led by Bratislava region, which in 2016 became the sixth richest region in the EU by GDP per capita. In 2007–16 Bratislava region was one of the four fastest-growing regions in the EU, along with West London, Warsaw, and Bucharest. On the other hand, Eastern Slovakia (NUTS2³ region), which includes Prešov, is among the poorest regions in the EU, having only 53 percent of EU average GDP per capita (in Purchasing Power Standard, EU28 = 100).⁴

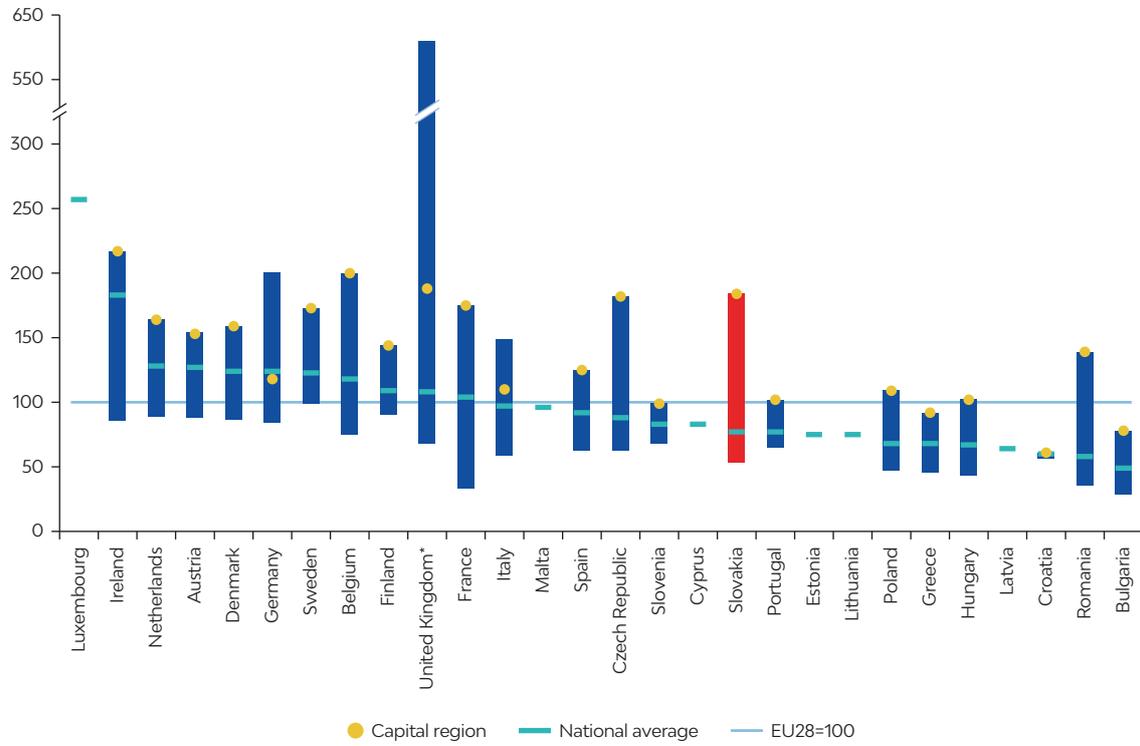
Relieving geographic disparities in development is a major EU policy target. Today it is widely accepted that large differences in economic development and welfare outcomes in different geographic areas in the EU threaten social and political cohesion and may deter aggregate economic growth. In recent years “lagging regions” have received most of the €50 billion the EU spends annually on cohesion policy, but these efforts may have limited success without deeper understanding of the context and the challenges specific to each laggard. This report on the Prešov region of Slovakia is part of that program. It reviews patterns of regional development in Slovakia, discusses opportunities and challenges of the Prešov region, and recommends policy actions for the region.

² Calculations based on Eurostat data.

³ Nomenclature of Territorial Units for Statistics: <https://ec.europa.eu/eurostat/web/nuts/background>.

⁴ Calculations based on Eurostat data.

FIGURE 1.2 Disparities in Regional GDP per Capita, EU Member States, 2016



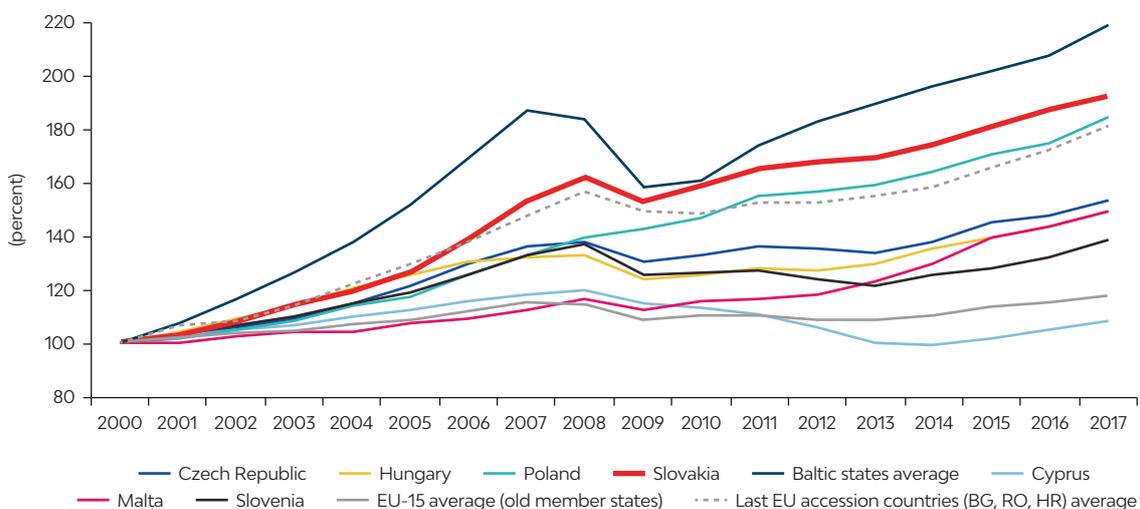
Source: Eurostat 2018.



2. THE RAPID RISE: SLOVAKIA'S ECONOMIC RESURGENCE

Since 2000 the Slovak Republic has been one of the fastest-growing economies in Europe. Its economy has almost doubled in size; it has achieved average annual GDP growth of 3.9 percent⁵; and it recovered from the global financial crisis in less than two years. Of all EU member countries, only the Baltic States⁶ had stronger cumulative growth in the same period⁷ (Figure 2.1). This has made Slovakia a leader in catching up to the EU development frontier. Real GDP per capita soared from about 40 percent of the EU-15 average in 1995 to over 70 percent in 2015, making Slovakia the third-most-developed of the accession countries.

FIGURE 2.1 GDP per Capita, Slovakia and EU Transition Economies, 2000–17



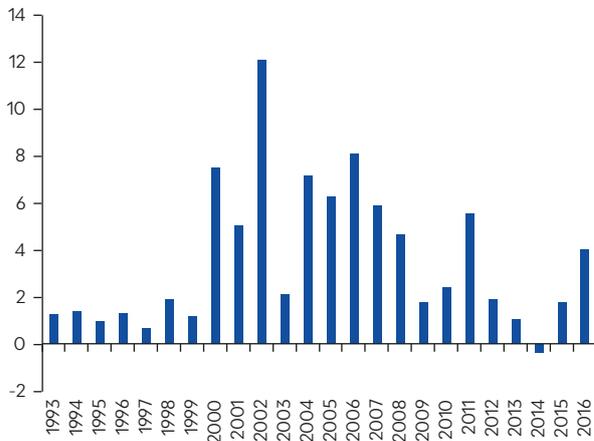
Source: Eurostat data, 2018.

Slovakia's economic miracle was fueled by FDI and the productivity growth it facilitated, but both have dried up recently. EU accession released a major flow of capital into Slovakia—between EU accession and the financial crisis of 2008–09 FDI annually exceeded 5 percent of national GDP. However, since 2008 FDI has become much more volatile: from 2012 to 2017, it never exceeded 2 percent of GDP (Figure 2.2). Labor productivity followed a similar trajectory; after rapidly catching up to the EU leaders in the 2000s, it has since been frozen at 50 percent of the EU15 level. As a result, economic convergence has slowed (Figure 2.3). Between 2000 and 2010 Slovakia leaped from 50 percent of EU28 GDP per capita to 75 percent; in the eight years since, it has only progressed to 77 percent. It seems that the model that propelled Slovakia's prosperity in the previous decade may have run out of steam; and Slovakia needs to find new drivers of economic growth.

⁵ National Bank of Slovakia, average calculated by the authors for 2000–17.

⁶ The Baltic States are Latvia, Lithuania, and Estonia.

⁷ Eurostat data, 2018.

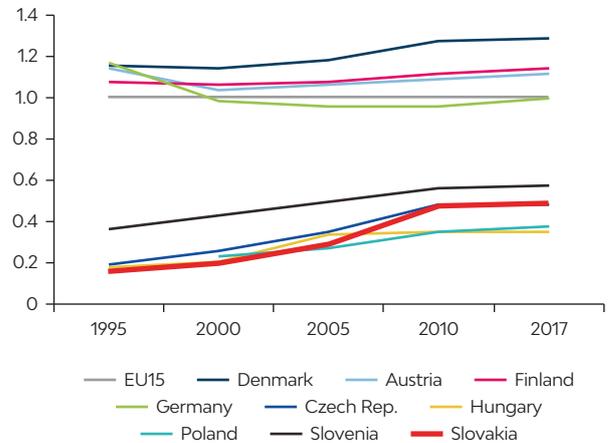
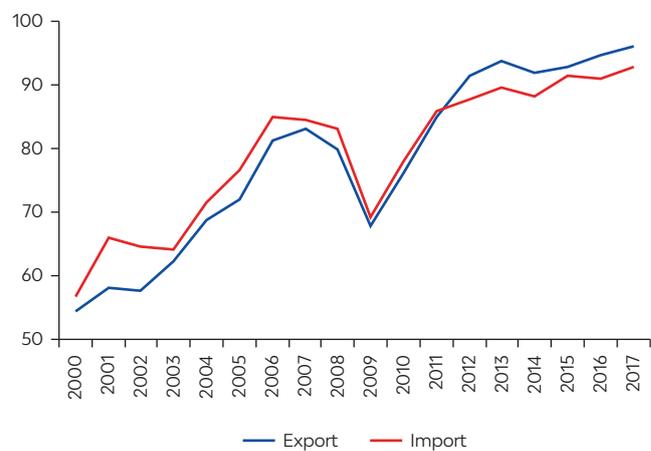
FIGURE 2.2 Net Foreign Direct Investment, Share of GDP, 1993–2015

Source: World Development Indicators and data from Eurostat 2018.

Most of the FDI went into export-oriented manufacturing. In the 1990s the Slovak economy lost a large portion of its eastern-bloc-era manufacturing capacity when it had to close polluting and energy-intensive factories that failed to meet EU standards. That left it unable to compete—the share of manufacturing in the economy went from 49 percent in 1990 to just 26 percent in 1999⁸. However, accession to the EU has made Slovakia a desirable destination for outsourced manufacturing due to its cheap labor and proximity to western Europe. Since 2000 both export and import volumes have skyrocketed, from about 55 percent of GDP to almost 95 percent (Figure 2.4). Today, with total exports of €74.8 billion, Slovakia is the 39th largest exporter in the world (though only the 65th largest economy)⁹, EU countries were the destination for 85.4 percent of goods exports and the source of 66.9 percent of imports; apparently, producers in Slovakia target EU markets. The inflow of investment in export-oriented production led to a resurgence of manufacturing, which by 2006 accounted for 31 percent of GDP. Today Slovakia is the sixth most industrialized economy in the EU²⁸.¹⁰

Cars and electronics were the main growth industries.

Automotive manufacturing is the most important industry in Slovakia today. In 2017 its share in total industrial production reached 44 percent; cars account for 21 percent of Slovakia's goods exports; and transport equipment as a whole contributes close to 30 percent. While electronics and appliances are a much broader group with more diverse products, the rise in that industry was similar to that of the automotive sector. In 2014 electronics accounted for about a third of Slovak goods exports, mainly screens and TVs (7.2 percent of exports), followed by broadcasting and radio equipment (2.7 percent).¹¹ Together the two industries have gone from one-third of goods exports 20 years ago to two-thirds today—a demonstration of their critical role in Slovakia's recent economic surge (Figure 2.5).

FIGURE 2.3 Labor Productivity, EU15, 1995–2017**FIGURE 2.4** Share of Exports and Imports in GDP, 2000–17, Percent

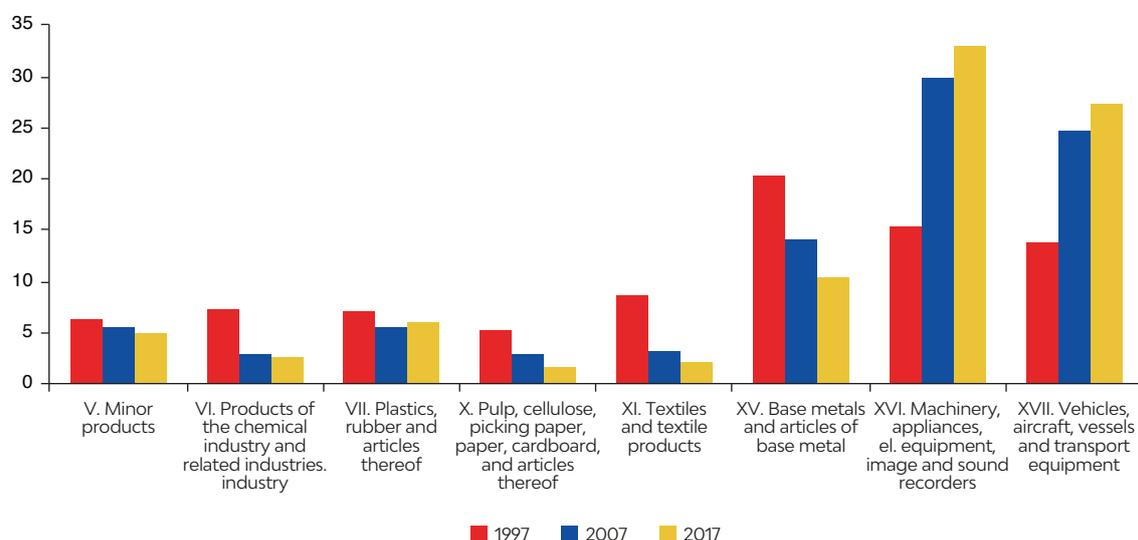
Source: OECD 2018.

⁸ Filčák and Dokupilová 2005.

⁹ World Development Indicators, World Bank; Observatory of Economic Complexity.

¹⁰ In 2017 EU economies with the largest share of manufacturing output were Ireland (37 percent), the Czech Republic (31.6 percent), Slovenia (27.5 percent), Poland (27.2 percent), Romania (26.7 percent), and Slovakia (26.6 percent).

¹¹ Observatory of Economic Complexity.

FIGURE 2.5 Goods Exports by Sectors Contributing More than 5 Percent of Total Exports, 1997–2017

Source: Data from the Statistical Office of the Slovak Republic 2018.

Note: Car engines, pumps and other components are included in the Machinery and appliances category, rather than vehicles and transport category.

Today, one part of the Slovak economy is highly productive and dominated by foreign-owned enterprises, the other, which has low productivity, is dominated by domestic enterprises. The FDI gold rush did not carry the whole economy along; it affected only selected manufacturing industries, their localized supply chains, and the business services concentrated around Bratislava. The rest of the economy was largely left behind. Workers in foreign-owned enterprises continue to be two to three times more productive than those in domestic companies. The foreign-owned firms are also more than twice as export-intensive in terms of the share of exports in their turnover¹². Foreign-owned enterprises are usually larger than those locally owned, more technologically advanced, and more capital-intensive.

Growth has substantially reduced unemployment and enhanced worker incomes, but not enough to alleviate poverty. Over the last 20 years the unemployment rate has gone down by more than 12 pp and has recovered quickly since, growing to 14 percent after the global financial crisis; the EU15 unemployment rate is still substantially higher than it was pre-crisis.¹³ Meanwhile, 2000 wages, in nominal terms, have almost quadrupled (Figure 2.6, A). However, this has not reduced poverty: the share of the population living in poverty did not decline between 2004 and 2014 (Figure 2.6, B). While none of the EU accession countries can boast of a rapid decline in poverty rates, unlike Slovakia Poland, for example, has achieved a sustainable decline in share of the impoverished. About 650,000 Slovaks (12.4 percent of the population) were still at risk of poverty in 2017 and the unemployment rate of 8.1 percent is the highest of the V4 countries.

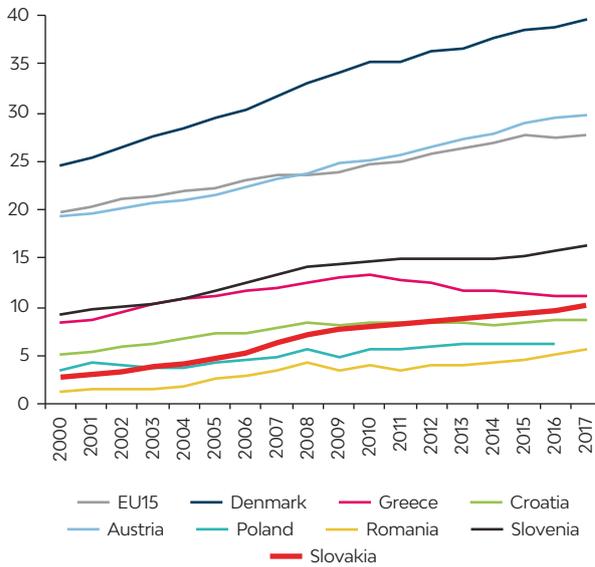
The persistence of social challenges illustrates the limitations of Slovakia's economic growth model, and the underlying structural constraints. While declining unemployment and growth in hourly wages may be signs of progress, they also illuminate structural issues in the labor market and the education system. At the top and middle of the skills spectrum, shortages of employees are emerging. When businesses must compete for workers, wages go up, dimming Slovakia's appeal as a low-cost off-shoring destination and reducing the potential of further FDI-driven growth. At the lower end of the skills spectrum, many in Slovakia have no access to opportunity. Those who have been seeking jobs for over a year (long-term unemployed) constituted 56 percent of all those unemployed in 2016. The unemployment rate for people aged 15–19 is 44 percent and for those of all ages with only basic education it is up to 32 percent.

¹² OECD 2017.

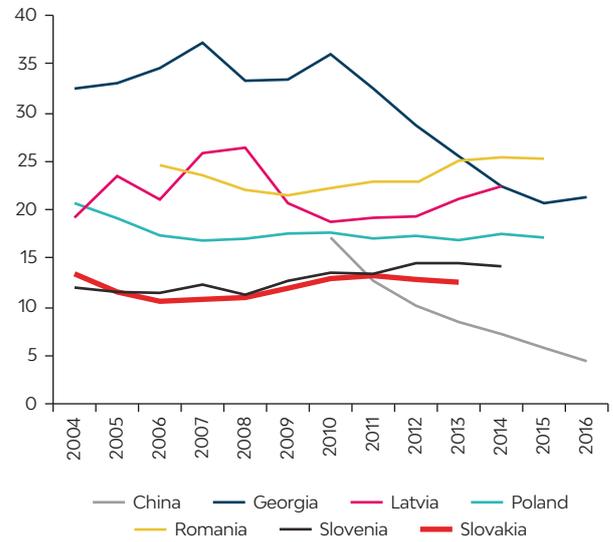
¹³ World Bank, World Development Indicators, 2018.

FIGURE 2.6 Trends in Employment and Poverty Alleviation since 2000

A. Hourly Compensation, Euros



B. Percent Living Below National Poverty Lines



Source: Eurostat 2018.

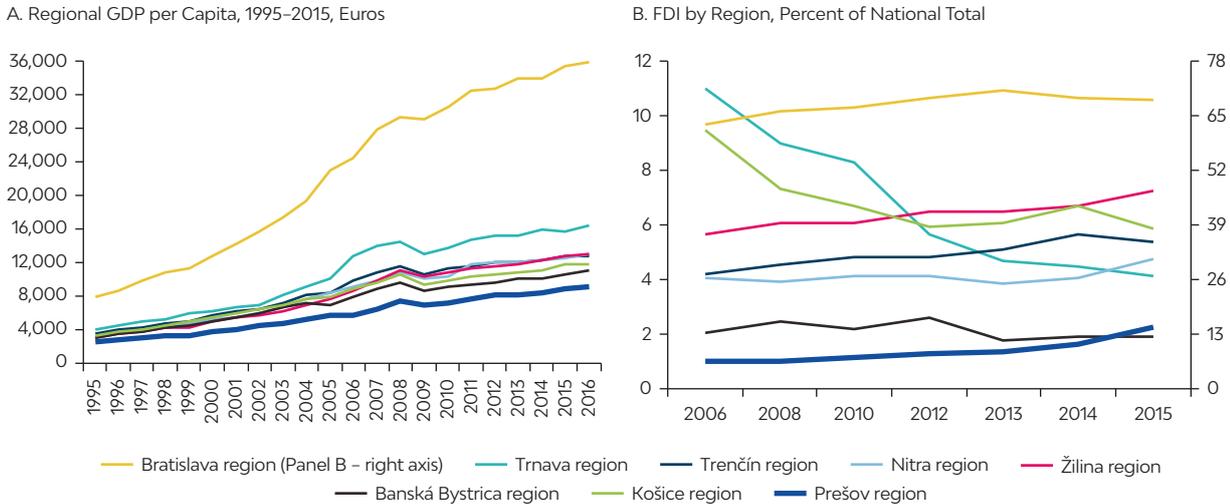
Territorial disparities in development are at the heart of Slovakia's difficulties in achieving sustainable economic growth and social progress. The divide between the two parts of the Slovak economy is also geographical: The dynamic, FDI-driven part is concentrated in the west of the country in and around the national capital. The rest of the country is stuck with lower productivity, less economic dynamism, and much slower improvement in citizen well-being. One possible reason why poverty is not being reduced much in Slovakia, then, is that there has been little economic growth in the areas where more poor people live. As FDI-fueled growth is exhausting its potential, Slovakia must now both find new sources of growth and ensure that it is more geographically inclusive. The next section examines the causes of regional disparities in economic development.



3. EXPLORING THE VAST DEVELOPMENT GAP IN SLOVAKIA

As growth concentrated in the capital region, the gap between Bratislava and the rest of Slovakia kept growing. In 1995 GDP per capita was 2.6 times higher in Bratislava than in the Prešov region; by 2015 it was 4 times higher (Figure 3.1, A). In fact, as measured by the Gini coefficient, Slovakia shows the highest regional disparities among EU countries¹⁴. Concentration of FDI in Bratislava explains why: Throughout the last decade the Bratislava region accounted for 70 percent of total FDI stock in Slovakia (€29 billion of the total €42 billion from 2006 through 2015). Relative to the vast gap with the capital, the differences in the GDP per capita and FDI shares of other regions are relatively small.

FIGURE 3.1 Slovak Regions Compared



Source: Data from the Statistical Office of the Slovak Republic 2018.

Analysis of regional economies confirms that while Bratislava stands out, economies of other regions are similar. Because the Bratislava economy is to a significant extent the product of 15 years of FDI-driven growth it differs substantially from the rest of the country. Its manufacturing base is highly productive and it also specializes in advanced financial and professional services that mainly serve foreign-owned manufacturers. As a big and rich city, Bratislava also has more extensive and more dynamic local services industry and a more vibrant entertainment industry. In essence its economic dominance can be attributed to the combination of highly productive foreign-owned manufacturing firms and the productivity stimulus of agglomeration. (Figure 3.2, A). Western Slovakia differs from the rest of the country in having a highly productive and lucrative natural resource extraction industry (Figure 3.2, B) Otherwise, differences in productivity between regions outside of Bratislava are minimal.

¹⁴ Eurostat, 2018.

BOX 3.1 Territorial and Administrative Organization of Slovakia

Slovakia has three tiers of geographical subdivision. First are the eight regions (kraj). These are subdivided into districts (okres), which total 79 (plus 3 military districts). Each district consists of cities, rural municipalities, and areas in the Bratislava and Košice (all treated as municipalities). There are 2,891 municipalities.

Public administration today is organized in two tiers: decentralized national administration and autonomous regional and local self-government.

In 2013 the ESO reform (efficient, reliable, open government) reorganized the national government. It created 72 district offices representing the national government. These offices are responsible for civil protection, crisis management, economic mobilization, real estate cadasters, state defense, environmental management, construction and maintenance of roads of national significance, agriculture, hunting and forestry, general internal administration, and business licensing. The ESO also introduced such new elements as government contact offices for citizens (KAMO Centers) and integrated service points to open up easy access to a wide range of services.

The autonomy of municipal and regional governments in Slovakia is recognized in the 1992 Constitution, the 1990 Municipal Autonomy Act, and the 2001 Act on Local Governments of Higher Territorial Units. Governance responsibilities are assigned to both regions and municipalities.

Since 2002 the eight regional governments have been responsible for regional roads and public transport; secondary, professional, and vocational education; territorial planning and regional economic development; social welfare (children's home, social policy); participation in civil defense, health (secondary hospitals and specialized services, licensing of pharmacies and private physicians); culture in the form of regional theaters, libraries, museums, galleries, and cultural centers; and regional tourism planning and development.

The municipal level includes cities (mesto), rural municipalities, and city districts in Bratislava and Košice. Parliament grants city status to municipalities that constitute an administrative, economic, and cultural center that provides public services to neighboring municipalities; today there are 140 municipalities with city status. They also have the same responsibilities as other municipalities. Bratislava and Košice have special status and are subdivided into city districts. Rural municipalities are mostly very small; 85 percent have fewer than 2,000 inhabitants.

Municipal government responsibilities were extended in 2002 (416/2001 Act) to include preschool and primary education; social welfare for the elderly and children and other social aid; local roads and public transport; environmental protection; water, sewerage, and waste utilities; parks; local planning and development; tourism; housing; leisure, including local cultural centers and libraries and local sport centers; municipal police and voluntary fire-fighting units; health (walk-in clinics, primary-care hospitals); collection of local taxes and fees; participation in regional planning; and registry offices, construction, and public order generally.

Overall subnational governments in Slovakia (regions and municipalities) are responsible for 15.9% of government spending, which is half of the OECD average. Current expenditure accounts for 85% of subnational spending, and the largest share of it is spent on education, since municipalities hold responsibility for paying teachers salaries.*

Both municipal and regional governments in Slovakia have very limited sources of own revenue and are highly reliant on national government transfers. Regional governments in Slovakia can't levy own taxes, and mostly rely on redistributed national taxes: PIT and vehicle tax—which account for 45% of revenue. Earmarked grants from the national budgets contribute further 45% of regional budgets. Municipalities have more authority to levy taxes and fees than regions. As a result at municipal level 20-25% of revenue comes from own sources—predominantly property tax and waste collection fees. Still PIT redistribution is the biggest source of municipal revenue, accounting for around 40%, and 35% of municipal revenues come from earmarked national government grants.**

* OECD (2016) Slovak Republic Profile. <https://www.oecd.org/regional/regional-policy/profile-Slovak-Republic.pdf>

** European Committee of the Regions (unknown) Slovakia Fiscal Powers: Overview of fiscal decentralization. (<https://portal.cor.europa.eu/divisionpowers/countries/MembersNLP/Slovakia/Pages/Slovakia-Fiscal-Powers.aspx>)

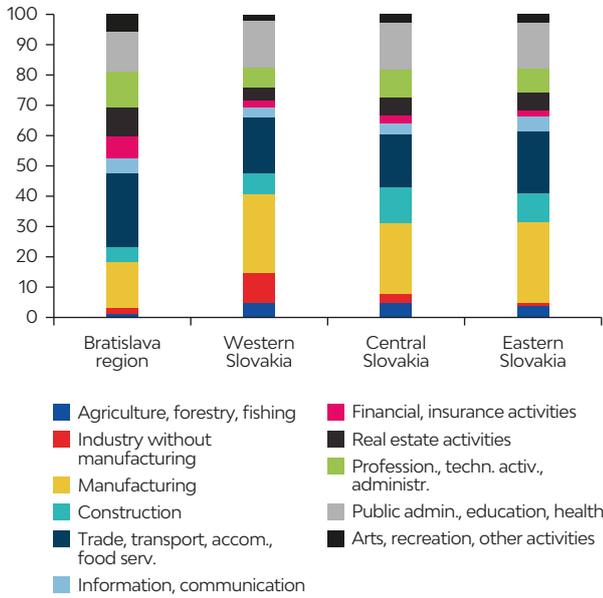
The gap in economic development between Bratislava and the other regions is a function of their economic potential. An estimate of economic potential at NUTS2¹⁵ level across the EU shows that while the Bratislava region is classified as having high potential, all other Slovak regions are in the second to bottom quintile among EU regions because they have low potential¹⁶ (Figure 3.3,A). The main characteristics that define the gap in poten-

¹⁵ Nomenclature of Territorial Units for Statistics: <https://ec.europa.eu/eurostat/web/nuts/background>.

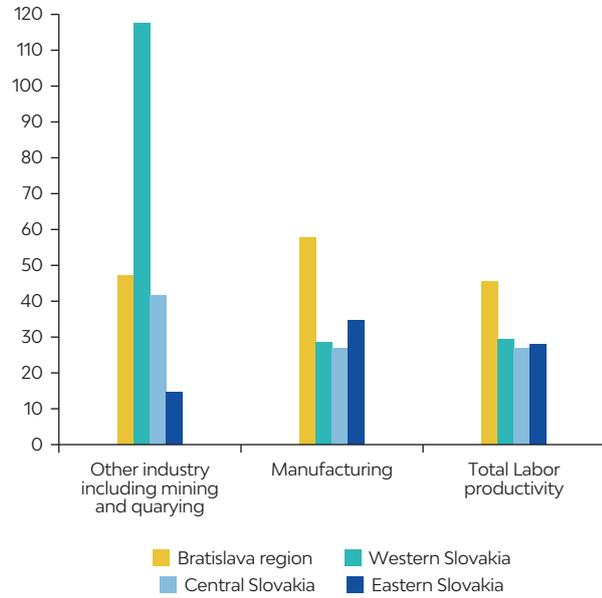
¹⁶ The Economic Potential Index was calculated for the report "Rethinking Lagging Regions in the EU" (World Bank 2018b) using econometric analysis of the fundamental structural characteristics of EU regions (NUTS2) most closely correlated with observed economic development outcomes (GDP per capita). The resulting index includes such factors as Population Density, Market Access, Industrial Structure, Skill levels, Quality of Institutions, Capital Investment.

FIGURE 3.2 Contributions to Slovak GDP by Industry

A. Structure of GDP by Region, Percent



B. Labor Productivity by Region and Industry, Euros ('000) per Worker per Year

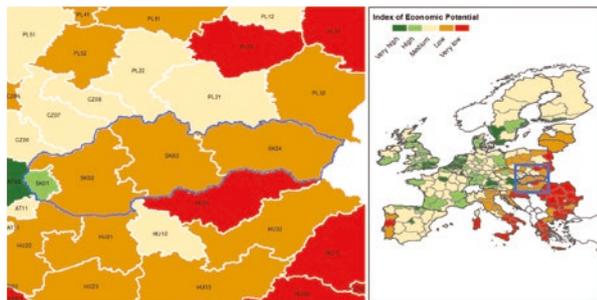


Source: Data from the Statistical Office of the Slovak Republic 2018.

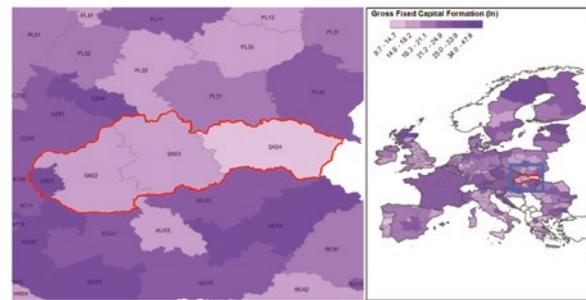
tial between Eastern Slovakia and Bratislava are differences in skill levels (particularly the share of the labor force with tertiary diplomas) and capital investment—both confirming the thesis that supply and demand constitute a dual challenge for the labor market (Figure 3.3, B&C). While the differential in these two conditions is the largest, other factors also contribute, among them access to market, population density and low urbanization, and reliance on agriculture.

FIGURE 3.3 Economic Characteristics of Slovak Regions

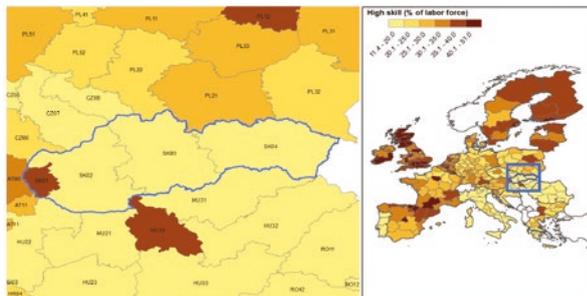
A. Industrial Structure of GDP



B. Gross Capital Formation by Region



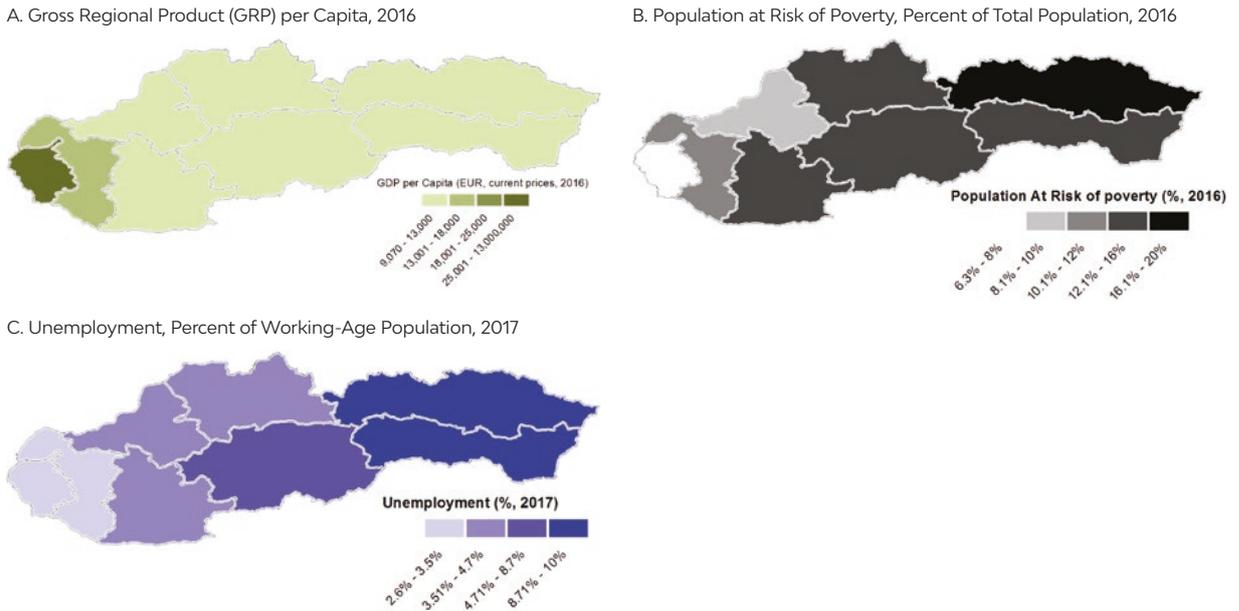
C. Share of Population with Tertiary Diplomas by Region



Source: World Bank 2018b.

The regional distribution of unemployment and poverty is not directly aligned with the geography of economic development. Although the disparity in social outcomes has the same east-west pattern, with Bratislava having the best, the main gap in economic development is between the Bratislava area and the rest of the country; but poverty and unemployment in eastern Slovakia are worse than in central or western region (Figure 3.4).

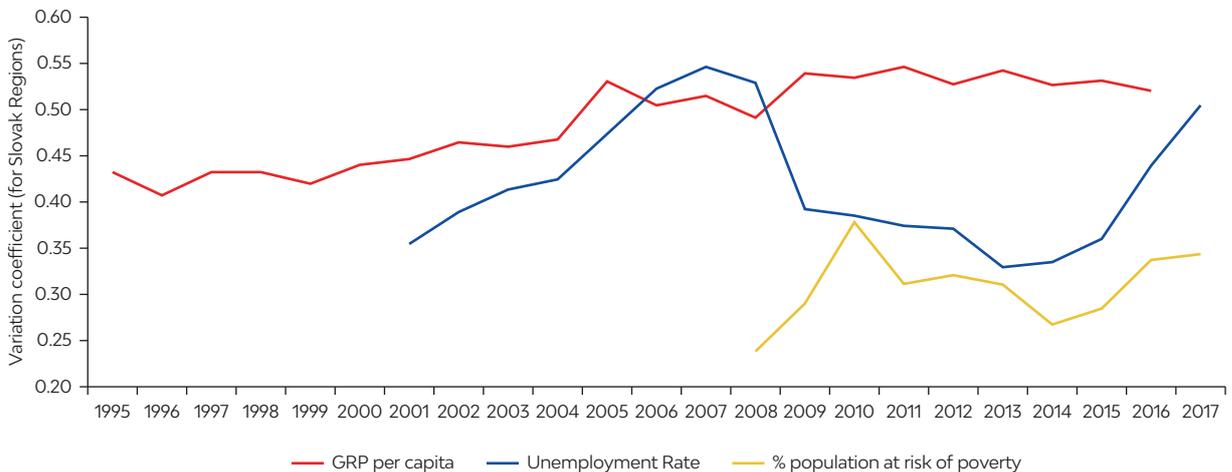
FIGURE 3.4 Regional Unemployment and Poverty in Slovakia



Source: Data from the Statistical Office of the Slovak Republic 2018.

While all regions have achieved substantial social development, there is no sign of sustained convergence. Figure 3.5 shows that the disparity in GRP per capita has been gradually growing for the last 25 years; the disparities in other socioeconomic outcomes have been more volatile. The leading regional economies, Bratislava and Trnava, were hit harder by the 2008 global crisis, and their unemployment and poverty grew faster, leading to a convergence to the bottom, with equalization achieved not because laggards were catching up, but because leaders were losing ground. However, the economies of the leading regions recovered faster, so that today social outcome disparities are back to pre-crisis levels. In fact, more Slovaks are at risk of poverty in Eastern Slovakia today than there were in 2008.

FIGURE 3.5 Socioeconomic Trends of Slovak Regions (Coefficients of Variation)



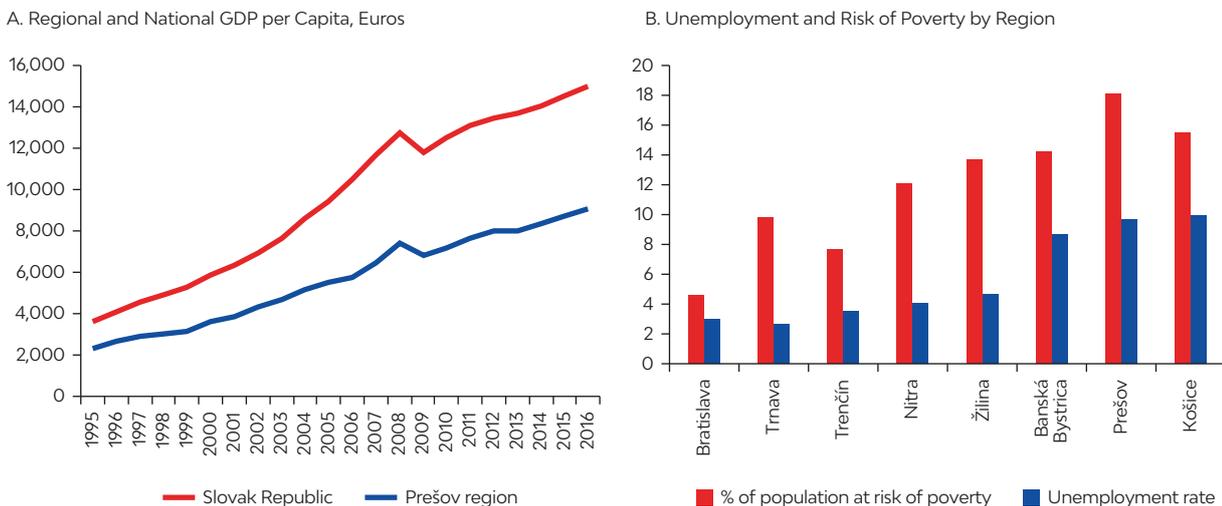
Source: Data from the Statistical Office of the Slovak Republic 2018.

4. THE BACK OF THE PACK: PREŠOV

ECONOMIC AND SOCIAL DYNAMICS

Though the Prešov region is among the largest and most populous regions in Slovakia, for 15 years it has trailed the others in achieving progress. With an area of 8,974 km², the region occupies 18.3 percent of Slovak territory, and its population of 823,826 accounts for 15.1 percent of the national population.¹⁷ Its GRP per capita has quadrupled since 1995,¹⁸ and since 2001 unemployment has dropped from 24 to 10 percent today. Although these achievements are undeniable, they were not enough: In recent decades Prešov's GDP growth has been below the national average (Figure 4.1, A). The region also has the second highest unemployment rate in the country, and the highest share of the population at risk of poverty (Figure 4.1, B). Moreover, 61.1 percent of the unemployed in Prešov have been unemployed over the long term, the second-highest number in Slovakia after Košice.

FIGURE 4.1 Indicators for Prešov, Other Regions, and Slovakia as a Whole



Source: Data from the Statistical Office of the Slovak Republic 2018.

The primary reason Prešov has been falling behind in economic development is that its growth has not been FDI-driven. The region saw very little of the manufacturing investment that moved Bratislava ahead; trailing the rest of Slovakia in foreign investment inflow for the last 20 years, it accounted for less than 2 percent of total FDI.

¹⁷ The region is divided into 13 districts; there are 665 municipalities (the most among Slovak regions), of which 23 have city status. Only two towns had more than 50,000 inhabitants in 2017: Prešov with 89,138 and Poprad with 51,486. Source: Statistical Office of the Slovak Republic 2018.

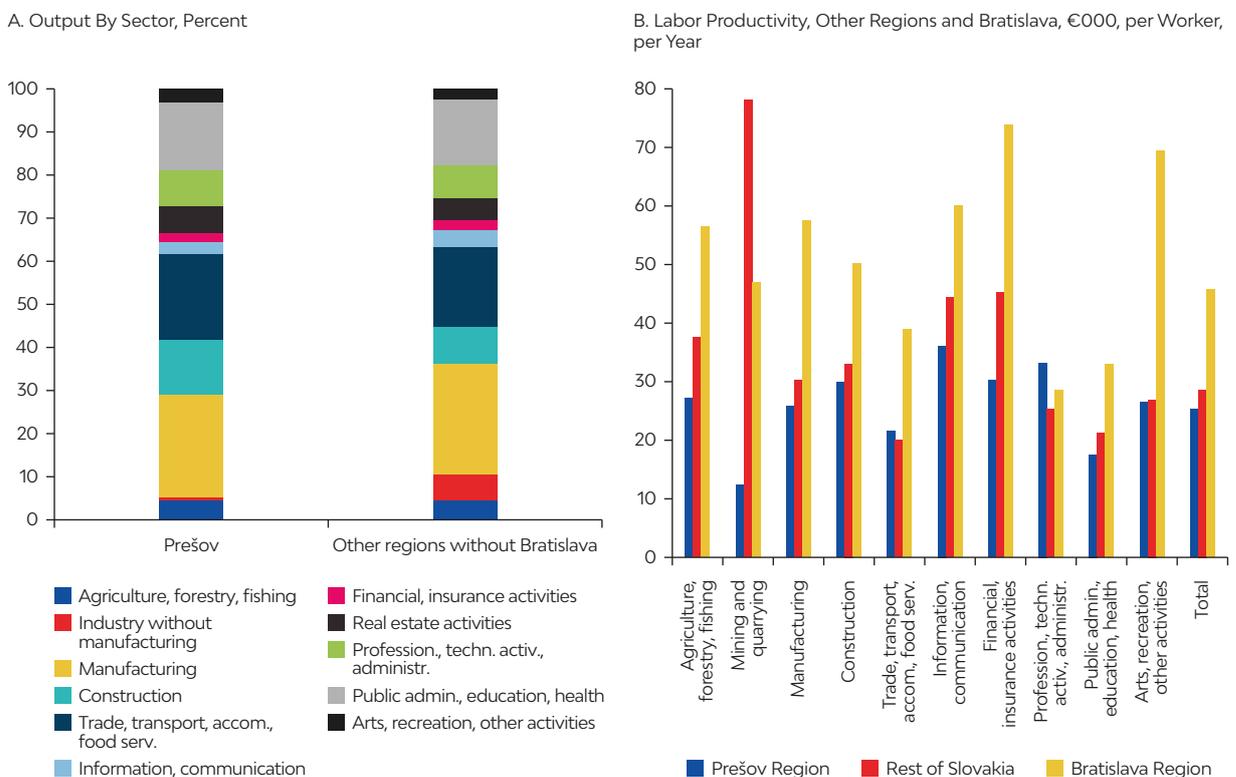
¹⁸ In nominal terms.

Today only 4.8 percent of jobs in the region are in foreign-owned firms; the national average is 12 percent, and all other regions exceed 7 percent.¹⁹ This is quite logical: It is unreasonable to assume that a relatively rural region located on the periphery of the country could compete with Bratislava for FDI—none of the other regions could. A more relevant comparison for Prešov is those other noncapital regions.

Unfortunately, Prešov's performance has also been continuously worse than in other non-capital regions. In 1995 its GDP per capita was 72 percent of the average for other regions outside the capital. Between 1995 and 2015 the region grew on average 0.1 pp more slowly than they did, so that the region now trails the average by 30 percent—Prešov was behind its peers from the start and has failed to gain ground. This suggests that there are persistent structural constraints the region has not yet been able to address. In identifying policy priorities for Prešov's economic development, it is much more important to understand why it trails its peers rather Bratislava, because bridging that gap is a more realistic target.

The productivity gap between Prešov and other noncapital regions cannot be explained by a difference in industrial structure or the performance of a single industry. In 2016 labor productivity in Prešov was 11 percent lower than in other noncapital Slovak regions. This may be small in relation to the 45 percent gap with Bratislava, but it is far from insignificant. About 4 of the 11 percent gap can be attributed to the natural resource sector, which pulls up the productivity of western Slovakia but contributes less than 1 percent to the Prešov economy. However, the remaining 7 percent difference in productivity cannot be readily assigned: the structure of output by industry and employment in Prešov does not differ much from other regions (Figure 4.2, A); and the productivity gap is noticeable across an array of industries: agriculture, manufacturing, financial and business services, information and communication. Importantly, productivity is lagging in most tradable industries, but especially in the industries in which Prešov specializes, namely manufacturing and agriculture (Figure 4.2, B). This suggests that certain conditions put Prešov at a disadvantage relative to the other Slovak noncapital regions. The following analysis begins to unpack what these conditions are.

FIGURE 4.2 Determinants of GDP. Prešov and Other Noncapital Regions



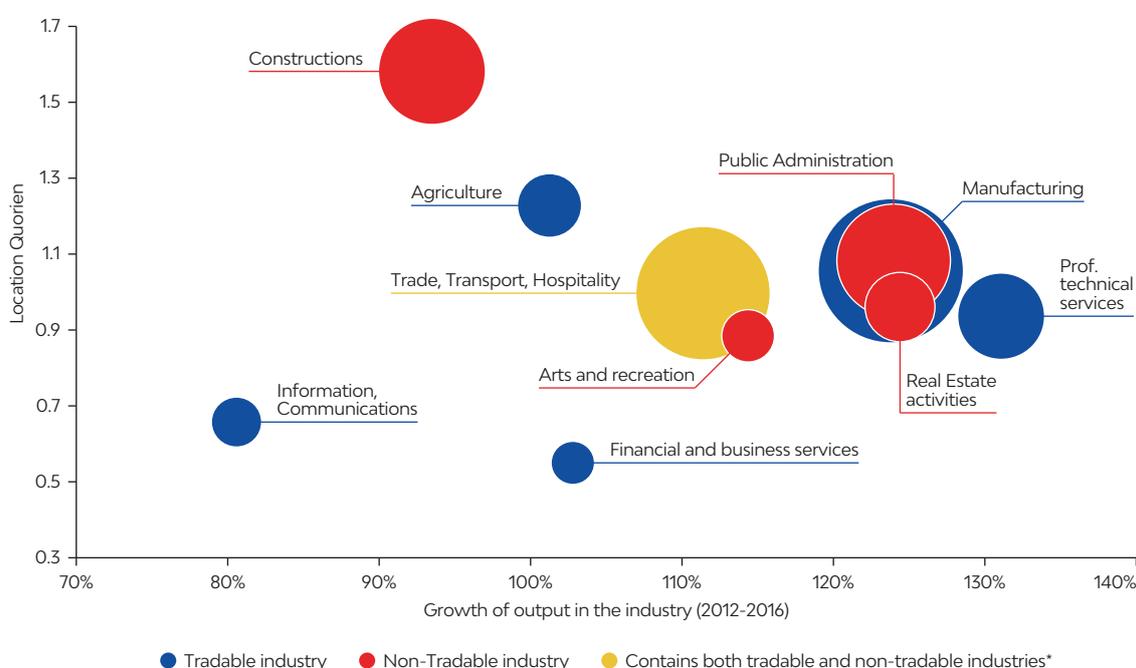
Source: Data from the Statistical Office of the Slovak Republic 2018.

¹⁹ Statistical Office of the Slovak Republic 2018.

One explanation of the productivity gap is that Prešov has no specialization in tradable industries, and its economy is just now going through restructuring. As Figure 4.3 shows:

1. The main specialization of the region (the industry overrepresented in the region compared to the rest of the country) is construction, which is nontradable and cannot by itself sustain an economy. The shares of agriculture and manufacturing, though relatively high within the Prešov economy, are both lower than countrywide.
2. Construction and agribusiness have not seen substantial growth in recent years; professional services, manufacturing, and tourism are among the fastest-growing industries and all are tradables (Figure 4.3). Clearly, the region is going through a structural transition, which may cause underperformance today but may also support new areas of specialization in the future.

FIGURE 4.3 Changing Industrial Specialization in the Prešov Region, 2012–16



Source: Data from the Statistical Office of the Slovak Republic 2018.

Note: Horizontal axis = rate of growth of the industry; vertical axis = specialization in the sector. Location quotient is a measure of a sector's over- or under-representation in the region relative to the rest of the country: value above 1 represent over-representation, the higher the value, the higher the specialization). The size of the bubble relates to the size of the industry (total output in 2016). A dynamic economy usually specializes in tradable sectors, and its sectors of specialization are usually among the fastest-growing sectors.

*Retail and wholesale are non-tradable industries, and transport is usually so classified; restaurants and hotels are associated with tourism, which is tradable.

The low productivity of Prešov's manufacturing is probably caused by a lack of clusters or strong specialization. The main manufacturing sectors are food processing, chemical manufacturing, mechanical engineering, and the automotive and textile industries. Only the chemical industry is clustered; four of the biggest companies are located in the Humenné and Poprad districts. Other industries are all spread throughout the region. Electronic equipment, once the region's main specialization, has been declining since several foreign companies invested in new electrotechnics production facilities elsewhere in Slovakia. It is also true that some industries of regional specialization, such as textiles, have long been in decline throughout the country.

In addition to the productivity gap between Prešov and other noncapital regions, there is a much larger gap in social outcomes. By yearend 2016 unemployment in Prešov was more than 3.5 percentage points higher than the average for other noncapital Slovak regions; and the share of population at risk of poverty was almost double (18.1 to 9.9 percent). Thus, in addition to identifying factors holding the Prešov economy back, it is important to identify the conditions responsible for the region's social development problems.

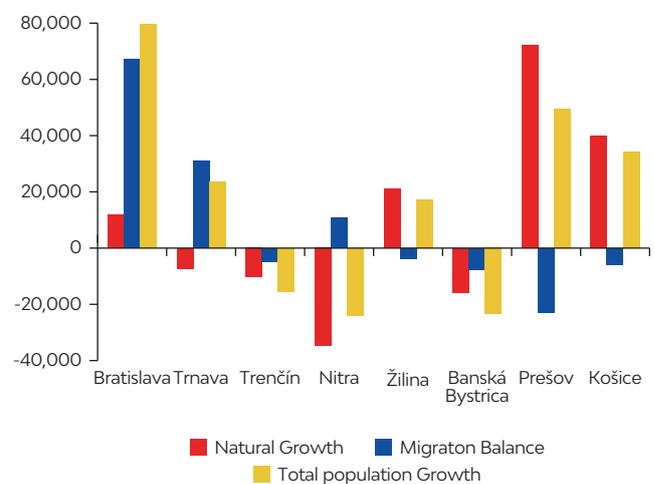
UNPACKING PREŠOV'S STRUCTURAL CONSTRAINTS

DEMOGRAPHIC TRENDS

Despite rapid out-migration, natural growth is keeping the Prešov region's population on the rise. Between 1993 and 2017, the population increased by 8.22 percent, the highest rate of growth in Slovakia; over the last two decades, the region has added 72,000 people, more than any other region in Slovakia. Nevertheless, out-migration is still an issue. The regional migration balance has been consistently negative for 20 years, during which the region has lost more than 20,000 people, substantially more than any other region (Figure 4.4).

Although the population structure is currently favorable to economic growth, the region is aging. The broader demographic trends are worsening. The share of the population younger than 15 is decreasing as the share of those of post-productive age grows (from 15 percent in 2000 to 19 percent today). Since 2000 the average age has gone up by five years; it is now 38. However, unlike many other regions in Slovakia, population growth has kept the Prešov labor force growing and will keep it growing for the foreseeable future. In coming years the Prešov region needs to extract maximum value from this demographic dividend, which is likely to diminish over time. Thus, it is extremely important that opportunities for productive use of labor resources be created promptly.

FIGURE 4.4 Drivers of Population Change in Slovak Regions, 1993–2017, Number of People



Source: Data from the Statistical Office of the Slovak Republic 2018.

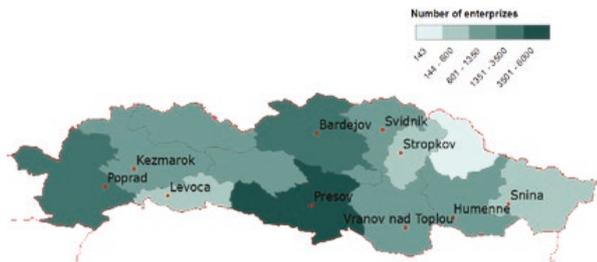
One reason why the favorable population dynamic is not reflected in economic performance is that the most dynamic and qualified residents are the ones leaving. Although the fact that natural growth outpaces departures is positive for the region, it cannot replace the loss of human capital when the best educated and most skilled are leaving.²⁰

GEOGRAPHIC PATTERNS OF DEVELOPMENT AND URBANIZATION

In terms of socioeconomic development in the region, urban areas are doing better than the rest. The largest number of companies is in the Prešov and Poprad districts, in or near the largest towns in the region, which are also the most densely populated areas (Figure 4.5). These areas also host the largest investors in the region (Whirlpool Slovakia, Tatravagónka, Poprad, GGP Slovakia in Poprad and Lear Corporation Seating Slovakia, Milk-Agro, KE Prešov Elektrik in Prešov; for the full list of biggest companies in the region, see Annex A). These towns also have two of the most successful industrial zones in the region (for details on all industrial zones, see Annex A). Not surprisingly, the Prešov and Poprad districts also have the lowest unemployment (Figure 4.6). It is reasonable to assume that these areas benefit from larger labor markets and enjoy the agglomeration effects associated with higher productivity.

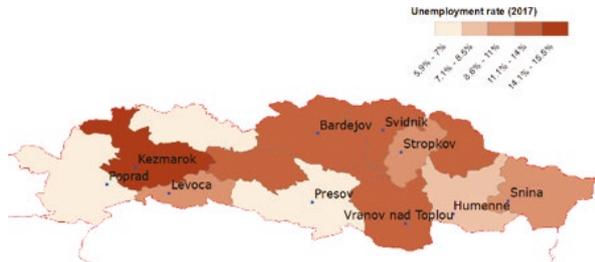
²⁰ There is a shortage of data on the education of people who migrate out, but the belief that they are the best qualified is widely held in the region.

FIGURE 4.5 Number of Enterprises in Prešov Districts



Source: Data from the Statistical Office of the Slovak Republic 2018.

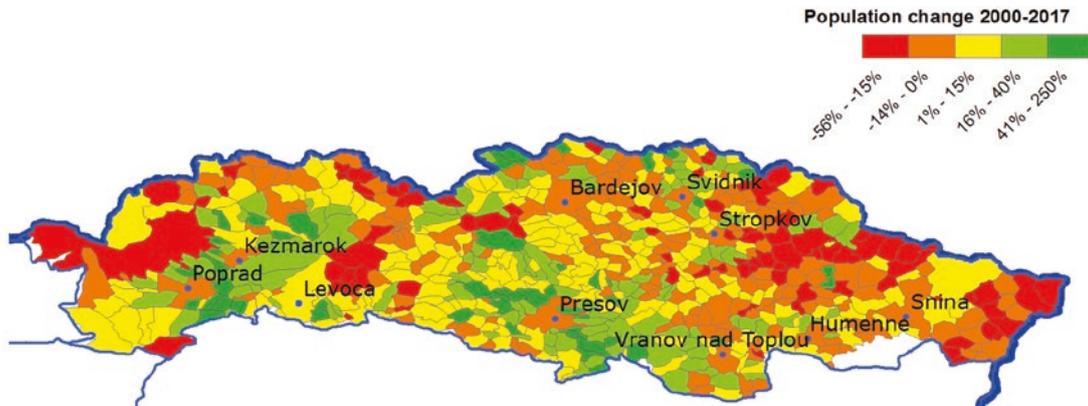
FIGURE 4.6 Unemployment in Prešov Districts



Source: Data from the Statistical Office of the Slovak Republic 2018.

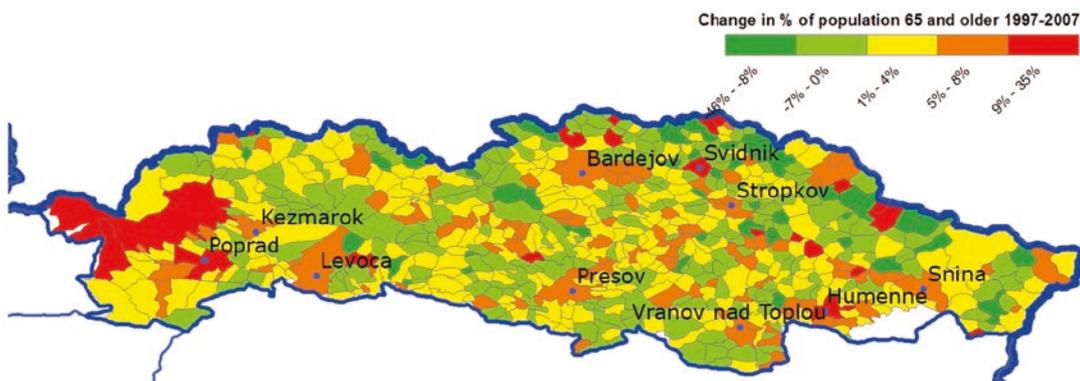
Despite the strong economic performance of the more urbanized districts, most urban areas in Prešov are losing population to suburbanization and out-migration. Between 2001 and 2016 Prešov lost more than 31,000 people and Poprad more than 44,000. This was mainly due to inhabitants moving from blocks of flats in the city centers to houses in nearby villages and smaller towns. Figure 4.7 clearly shows that most municipalities surrounding these towns saw a rapid population increase in 2000–17, while the populations of Prešov and Poprad shrank. In fact, most towns in the region have lost population (e.g., Humenné, Kežmarok, Bardejov, Svidník, and Stropkov). Suburbanization was again the driving force, but migration to Prešov and Poprad areas from more peripheral municipalities were likely contributors. It is also clear that it is the young and more active Slovaks who are leaving towns. Figure 4.8 shows that towns, more than any other areas, have seen growth in the share of population in post-productive age.

FIGURE 4.7 Population Changes in Prešov Municipalities, 2000–17



Source: Data from the Statistical Office of the Slovak Republic 2018.

FIGURE 4.8 Change in Shares of Population of Post-productive Age in Prešov Municipalities, 1997–2007

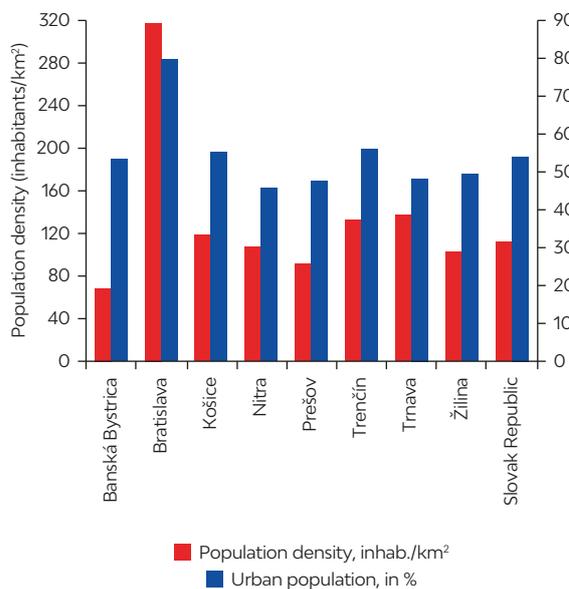


Source: Data from the Statistical Office of the Slovak Republic 2018.

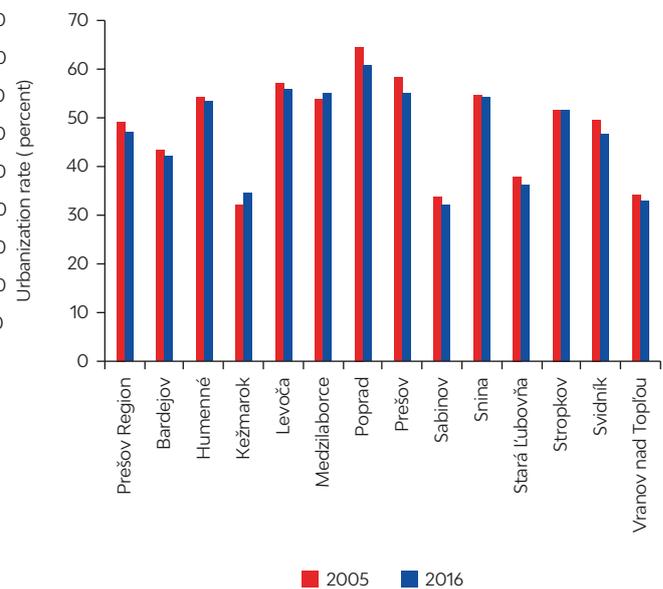
De-urbanization undermines the region's economic potential. Both urbanization rate (47.1 percent) and population density (91 persons per km²) in the Prešov region are the second lowest among Slovakia regions²¹ (Figure 4.9). Since 2005 urbanization in Prešov has dropped by 2 pp; in 2016 it was lower than in 2005 in all but one district, even in those with the largest towns, Prešov and Poprad. It is important, though, to acknowledge that this finding is based on a very narrow definition of an urban area, which does not include extended suburbs—which have in fact been expanding rapidly. However, the trend is still worrying because it clearly signifies that the density of the region's urban centers is decreasing, and these usually are the places that can generate the productivity benefits of agglomeration, particularly in the tradable services and knowledge industries that are associated with innovation.

FIGURE 4.9 The Effects of Urbanization

A. Urbanization and Population Density, 2017, Percent



B. District Urbanization, Prešov Region, 2005–16



Source: Data from the Statistical Office of the Slovak Republic 2018.

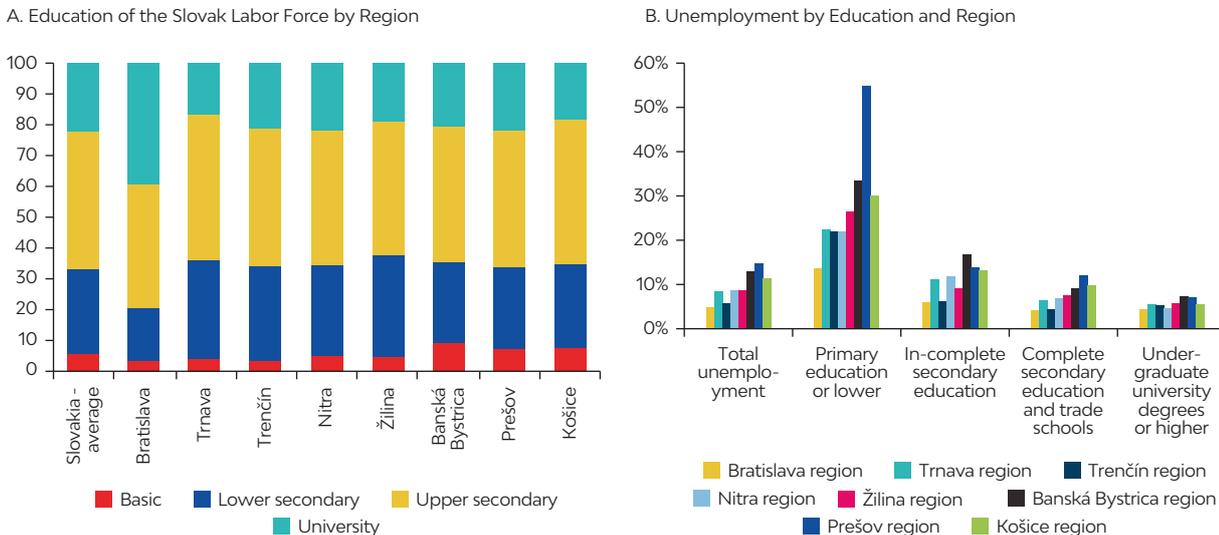
SKILLS AND EDUCATION

The formal qualifications of the labor force do not alone explain the region's productivity gap. Lack of skills is a key determinant of the lower economic potential of noncapital regions in Slovakia. Although a labor force skills profile confirms that there is a major difference between Bratislava and the rest of Slovakia, there is no real difference between Prešov and other noncapital regions, largely because of rapid improvement in recent decades. The share of university graduates in the Prešov labor force has shot up dramatically, growing by 13 pp since 2002 to reach 21.8 percent in 2016—less than half a percentage point below the national average. Simultaneously, the share of people who did not complete secondary education dropped from 44 to 26 percent.

Analysis of unemployment by different education groups reveals problems with inclusion of the poorly educated and, possibly, with the quality of vocational education and training. Prešov stands out in terms of unemployment among the least educated and among people with high school and trade school diplomas. The inclusion challenge most likely reflects difficulties with inclusion of minority groups, which will be covered later (Figure 4.10). The fact that many people with secondary and professional diplomas are out of work may reflect that trade schools are not addressing the needs of the labor market: this might be purely a matter of quality (or outdated technology, curriculums, and instructional practices), or a matter of producing graduates with the wrong qualifications. In either case further analysis is required.

²¹ The Nitra region has the lowest urbanization rate, 45.3 percent, and Banská Bystrica region has the lowest density, 61 person per km².

FIGURE 4.10 Education and Employment in Slovakia

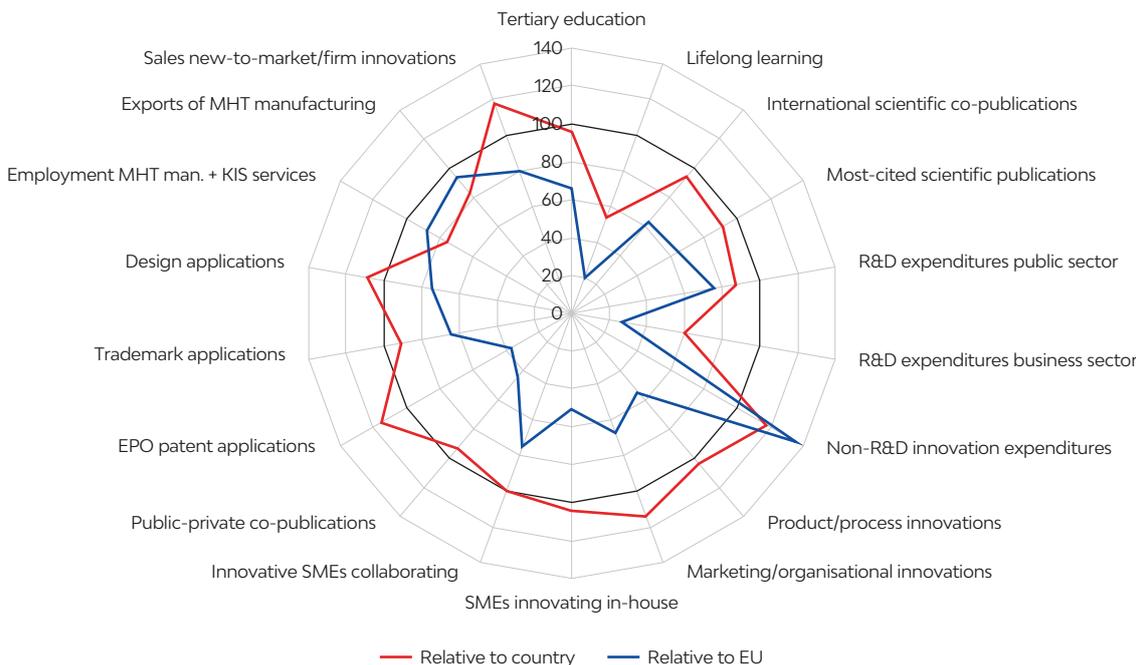


Source: Data from the Statistical Office of the Slovak Republic 2018.

BUILDING AN INNOVATION CULTURE

In an EU-wide analysis of innovation potential, Eastern Slovakia is classified as a moderate innovator but most of its potential is concentrated in the Košice region. According to the score card, this NUTS2 region, which includes both Prešov and Košice regions, is on par with Slovak averages for education, presence of innovating small and medium enterprises (SMEs), design and trademark applications, and product and process innovations. It stands out particularly in spending on non-R&D innovation (Figure 4.11). This suggests that in this region innovation relies more on dynamic entrepreneurs than on scientific know-how. Further analysis adds that innovation is in the Košice region; in Prešov it is largely nonexistent.

FIGURE 4.11 Slovakia and the Regional Innovation Scoreboard



Source: European Commission 2017.

Prešov is far behind its neighbor in terms of both innovation inputs (investment and technical professionals) and outputs (patents). In fact it ranks last in the country on a number of indicators of innovation potential: it has the smallest number of researchers and technical and support staff, the smallest volume of R&D spending, and the lowest number of patent registrations (Table 4.1). All these factors together suggest that the region's minimal innovation and technological capacity might be a major reason for its lack of productivity. Most patents granted to Prešov institutions relate to chemistry (26.4 percent of patents granted), textiles and transportation (both 11.3 percent), and engines (9.4 percent). Efforts to build an innovation culture might start by identifying institutions and actors with high innovation potential in these fields.

TABLE 4.1 The Innovation Potential of Slovak Regions

Region	Number of Researchers and Technical Staff, 2015	Gross Domestic Spending on Research and Development, € Million, 2015	Patent Applications, Percent of National Total, 2012	Patents Granted, Percent of National Total, 2012
Bratislava	15,705	320	32	35
Trnava	1,898	40.6	9	9
Trenčín	1,530	56.1	14	15
Nitra	2,642	37.1	8	7
Žilina	3,607	59.2	12	10
Banská Bystrica	2,272	38.4	9	9
Prešov	1,389	24.8	7	5
Košice	4,209	61.53	11	10

Source: Data from the Statistical Office of the Slovak Republic (2 left columns) and from the Industrial Property Office of the Slovak Republic (2 right columns) 2018.

INFRASTRUCTURE

Transport infrastructure has in recent years improved considerably. More than 80 kilometers of new highways were constructed in the last 10 years—more than in any other region—mainly with support from EU funds. However, a highway to connect Bratislava with Prešov and Košice is not yet finalized; the current deadline is yearend 2026. The local road system is dense—the region has the second most roads in the country—but railway density (46.8 km per ths. km² of the area) is the lowest among the regions, although the largest towns, Prešov and Poprad, are on the main national rail lines.

Transport infrastructure improvements could help compensate for the region's remoteness, but it is still not clear whether the substantial investments of recent years will improve its competitiveness, considering that Prešov is still one of the least accessible regions in the country. Links to Poland and Ukraine (where the border is not transparent) are minimal, and there are no major plans to improve them. All in all, it is still difficult to argue that transport infrastructure can overcome the region's market access disadvantages.

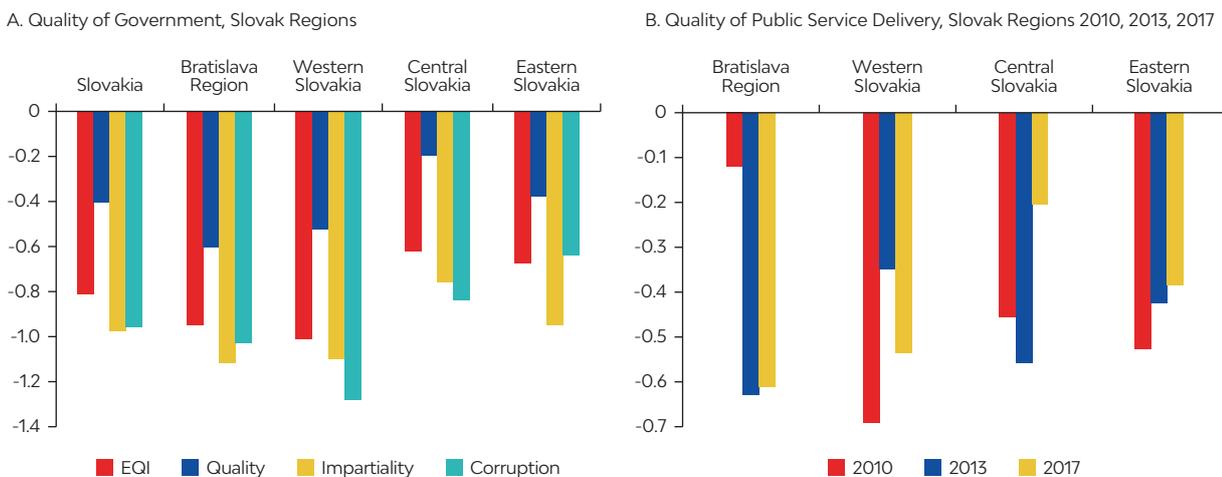
Digital infrastructure may also be a constraint for the Prešov economy. Although the share of its households with Internet access is equivalent to the national average (80 percent), the region has the least extensive broadband cable network in the country: currently there is only 1 broadband subscription for every 5 adults, compared to 1: 4 nationwide, and 2: 5 in Bratislava. Partly this is because the region is very rural and difficult to cover with fiberoptic networks. Further analysis is needed to understand to the extent to which broadband Internet access may be a problem for the regional economy.

QUALITY OF GOVERNANCE AND ABSORPTION OF EU FUNDS

Building up institutions and the quality of governance are persistent challenges for Slovakia's regions. The quality of institutions and governance is closely associated with economic development²². Several evaluations of Slovak institutional and governance quality²³ have concluded that poor administrative capacity, poor governance, and rampant corruption limit prospects for long-term economic growth. Slovakia ranks 22nd of 28 in the survey of Quality of Government in EU regions, the lowest rank in its wave of accession²⁴. Studies suggest that Slovakia has an overgrown central government bureaucracy, a lack of qualified staff, and clientelist and politicized appointment practices that increase the risk of corruption²⁵.

Eastern Slovakia performs reasonably well on quality of governance indicators relative to other Slovak regions, but it is still far behind EU averages (Figure 4.12). The NUTS2 region, which includes Prešov and Košice, ranks second highest on quality of government among four Slovak regions, and has the lowest level of corruption. Similarly, the region is ranked second on quality of public service delivery, in which it has shown steady improvement since 2010. Thus, the quality of government is unlikely to be a lead reason for the development gap between the east and other parts of the country. However, on all these indicators, Eastern Slovakia is far behind EU averages—there is clear room for improvement. Unfortunately, the data available do not allow for disaggregating the Prešov and Košice regions.

FIGURE 4.12 Quality of Governance Indicators



Source: University of Gothenburg 2018.

One illustration of the governance challenges is the low rate of EU funds absorption in the region. Prešov is among the main recipients of EU funds in Slovakia but it is not very efficient in absorbing the funding. In the 2007–13 programming period the region ranked third in total volume of disbursed EU funding; it received 14.5 percent of the national total, behind Žilina region (central Slovakia) and Trenčín region (western). The share was lower than in the previous programming period (16.1 percent in 2004–06). Given its size and its lagging status, the region could have absorbed substantially more funds. In fact, the largest number of proposals for the second largest volume of funding came from institutions based in the Prešov region. But Prešov was the second worst region in securing funding relative to the original proposals, and it was below the national average in utilization of the funding it did receive (Table 4.2) To become more efficient in absorbing EU funding, Prešov will have to build up the capacity of regional and local government and other public institutions.

²² Pinheiro-Alves, Ricardo, and Tavares 2013.

²³ see, e.g., SGI 2017 and OECD 2015.

²⁴ University of Gothenburg 2018.

²⁵ Bertelsmann Stiftung 2018.

TABLE 4.2 Basic Data, EU Funding in Slovakia, 2007–13

Region	Submitted projects (number)	Submitted projects/ requested grant EU+SR (in EUR)	Contracted projects (number)	Contracted projects (in EUR)	Realized / declared expenditures (in EUR)
Bratislava	1,987	2,259,510,933	1,213	1,377,866,667	1,212,021,366
Trnava	2,039	1,911,093,902	774	755,729,129	646,842,172
Trenčín	2,048	3,083,547,966	822	84,087,886	1,540,275,511
Nitra	2,547	2,168,898,836	1,047	818,252,425	677,867,193
Žilina	3,042	3,862,135,140	1,274	1,907,537,361	1,791,541,464
Banská Bystrica	3,434	3,129,782,658	1,415	1,369,463,951	1,184,415,219
Prešov	4,580	3,837,234,276	2,011	1,607,768,889	1,396,047,355
Košice	3,163	3,016,283,169	1,313	1,290,514,367	1,186,774,173
Slovakia total	22,840	23,268,486,880	9,869	10,969,220,675	9,635,784,454

Source: Data from the Government Office of the Slovak Republic (2018).

Emerging data for the 2014–2020 EU funding period suggests that Prešov is going to benefit less than neighbors. Overall absorption of the allocated ESIF for period 2014–2020 in Slovakia is very small so far, and as of June 30, 2018, Slovakia has spent EUR 2.14 billion of the ESIF, representing 13.82% of the total allocation. While no regional breakdown of allocation and absorption is available, even the review of largest approved projects suggest that Prešov can do better at attracting and absorbing resources. While the 5 largest projects funded in Prešov region in total attracted EUR. 43 mil, only the largest project in Žilina region is worth EUR 140 mil and the largest project in Košice amounts to EUR 80 mil.

SOCIAL INCLUSION AND ACCESS TO OPPORTUNITY

The Prešov region hosts a large population of Roma, who are likely to be economically and socially segregated from the rest of the population. The *Atlas of Roma Communities in Slovakia 2013*²⁶ estimates the Slovak Roma population to be 402,840 (7.45 percent of the population), of whom 28 percent live in Prešov (114,000, 18 percent of the region's population in 2015). Prešov hosts the second largest Roma population of all Slovak regions and has the second highest share of Roma population (both are only marginally below Košice region). The Roma in Slovakia are disproportionately exposed to poverty, lack of skills and access to well-paying jobs, poor access to education and health care, high unemployment, and the prevalence of long-term unemployment—all exacerbated by segregation and discrimination.²⁷

The Roma probably account for a substantial number of the unemployed and at risk of poverty in the Prešov region. Of the economically active segment of the Roma population (aged 15–64), 71 percent of the men and 75 percent of the women were unemployed in 2011²⁸. Assuming that unemployment rates are similar in the Prešov region, it is likely that Roma account for at least half its unemployed and make up a large part of the overall unemployed, putting them therefore at risk of poverty.

The Roma in Prešov are more concentrated than in other regions, which exacerbates the segregation typical for their communities. The *Atlas of the Roma Population*²⁹ shows that only 46.5 percent of Roma live in integrated environments; the rest live in segregated communities inside urban areas, on their edges, or in remote rural loca-

²⁶ UNDP 2014.

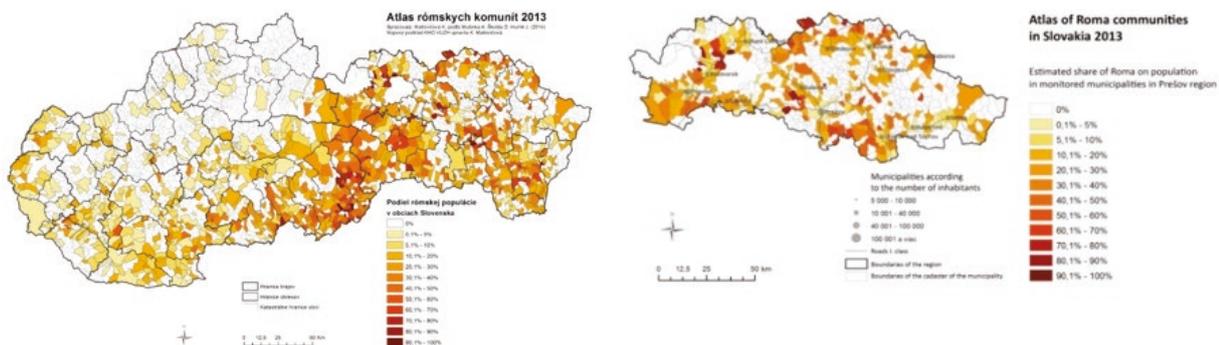
²⁷ See, e.g., *Atlas of Roma Communities 2004 and 2013* (UNDP 2014) and several strategies elaborated by the Ministry of Labour, Social Affairs and Family of the Slovak Republic (documents available at <https://www.employment.gov.sk/sk/rodina-socialna-pomoc/socialne-sluzby/socialne-vylucene-atspolocenstva/dokumenty.html>).

²⁸ UNDP/World Bank 2011.

²⁹ UNDP 2014.

tions. Physical segregation is an important contributor to the social and economic exclusion of Roma. In Prešov region Roma settlements are found in 36 percent of municipalities, a much lower share than in Košice (58 percent) and Banská Bystrica (51.6 percent), which suggests that the large Roma population in Prešov region is also highly concentrated: 19 percent of Prešov municipalities with Roma population are Roma-majority, the highest share in the country. The high concentration exacerbates the segregation and seclusion challenges and makes it harder to engage this group in the economy.

FIGURE 4.13 Share of Roma Population by Municipality in Slovakia (left) and Prešov region (right)



Source: UNDP 2014.

The first step to including the Roma in the economy and society is improving their access to services, particularly education. Countrywide, 48 percent of Roma have completed elementary school but did not enter secondary school. Moreover, 17 percent did not complete basic education, although 16 percent completed secondary education. Future development efforts among the Roma in Presov, therefore, could include a specific emphasis on transition to, and participation in, secondary vocational education, where emerging anecdotal evidence from a few regional employers (such as Tatravagonka) suggests they are quite skilled and show high potential. Additionally, Roma live in poor housing, and only 71 percent of their homes have running water. However there also a need to support targeted job creation for the Roma.

EU funds are helping to provide the Roma with basic infrastructure, but access to social and health services continue to be deficient. However, in recent years there have been several significant basic infrastructure investments in the Roma settlements. In 125 municipalities, community centers were established, and in 66 “hygienic centers” were built. Today 279 municipalities have social workers regularly attending to the needs of Roma communities.

COMPETITIVE ADVANTAGES AND OPPORTUNITIES FOR THE PREŠOV REGION

With the shortcomings of the regional economy of Prešov identified, it is important to recognize that the region has a number of competitive advantages. Its favorable demographic situation, the availability of cheap (though mostly unskilled) labor, access to all major transportation corridors, and an abundance of land offer opportunities for manufacturers. Forest resources have considerable potential for wood processing and paper production. Most importantly, the region has substantial potential for tourism given its local food products, national parks, scenic landscapes, geothermal and mineral springs, and a strong local tradition of arts and crafts. A separate crucial opportunity that as a lagging region it has access to EU structural funds.

BUSINESS ENVIRONMENT

Prešov could offer favourable conditions for doing business.³⁰ A supportive business environment can both promote entrepreneurship and attract investment. According to a new IBRD/World Bank study (2018), *Doing Business in the European Union 2018: Croatia, the Czech Republic, Portugal and Slovakia*, Prešov city offers better conditions for doing business than other Slovak regional capitals, topping the rankings in two of the five indicators (Table 4.3):

- Prešov is the easiest city in Slovakia to open a business—it takes 11 days less than in Bratislava (although this may simply reflect the fact that Bratislava sees many more applications)—although the process in Prešov still takes longer and is more complicated than on average in the EU.
- Dealing with construction permits is time-consuming everywhere in Slovakia, but permitting is fastest and easiest in Prešov, where it can be completed in 250 days (vs 282 in Bratislava) and requires only 14 procedures (the EU average is 174 days and 13 procedures). There is still plenty of room for improvement.
- Getting access to electricity in Prešov is easier than on average in the EU: it takes 66 days, 5 procedures, and costs 57 percent of income per capita—the second-best result in Slovakia.
- Property registration in Prešov takes only 16.5 days, which compares favourably to EU averages, though other regions in Slovakia do perform marginally better.
- Enforcing contracts in Slovakia is generally difficult. It takes 640 days from filing a complaint to getting a court decision in Prešov; although this is better than Bratislava (775 days), it is much worse than the EU average.

TABLE 4.3 Doing Business in Slovakia, Distance to the Frontier (DTF)* (0-100)

City	Rank	Average DTF Score	Starting a Business	Dealing with Construction Permits	Getting Electricity	Registering Property	Enforcing Contracts
Prešov	1	78.78	84.73	62.91	86.27	90.17	69.81
Košice	2	78.19	83.72	60.74	85.29	91.24	69.95
Žilina	3	77.82	84.73	57.90	88.41	91.00	67.08
Trnava	4	76.96	83.98	61.39	80.07	91.48	67.90
Bratislava	5	76.16	81.97	59.33	83.19	90.17	66.12

Source: World Bank 2018a.

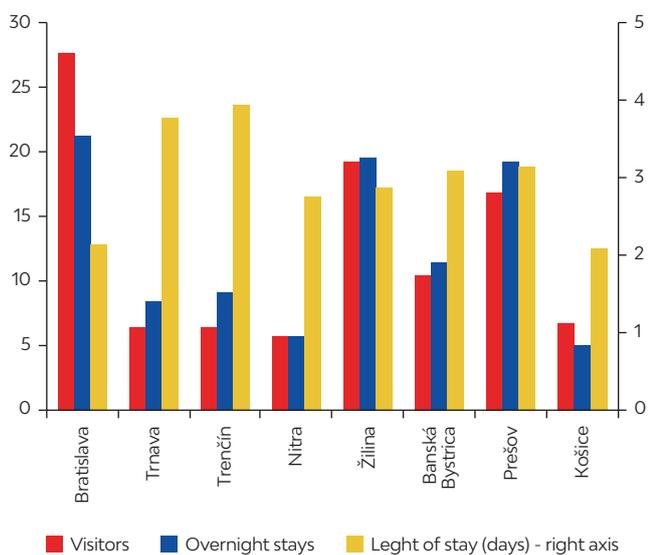
Note: *The DTF score shows how far a location is from the best performance achieved by any economy on each Doing Business indicator. The score is normalized to range from 0 to 100, with 100 representing the frontier of best practices (the higher the score, the better).

³⁰ Farole et al. 2017.

TOURISM—PREŠOV REGION

The Prešov region has a number of valuable recreational resources and tourism based on local assets could generate employment. Main attractions of the region include stunning national parks, such as Vysoké Tatry (High Tatras), Slovenský raj (Slovak Paradise), Pieniny and Poloniny. The region also has several UNESCO protected cultural heritage areas, such as Levoča city, which has the biggest wooden altar in the world; monuments in the city of Bardejov, Bardejov is also the home of the world-famous spa, Bardejovské kúpele. Other attractions in the region are the Andy Warhol Museum of Modern Art in Medzilaborce, the Carthusian monastery in Červený Kláštor, open-air museums, and the castle in Stará Ľubovňa, Kežmarok.

FIGURE 4.14 Visitors and Overnight Stays in Slovakia, by Region, 2016, Percent (left axis) and Average Length of Stay (right axis)



Source: Data from the Statistical Office of the Slovak Republic 2018.

The Prešov region is already one of the leading tourism destinations in the Slovak Republic, but tourism is highly concentrated in few destinations. In 2016, more than 5 million tourists spent time in Slovakia, staying on average 2.81 days. Of these 1.4 million visited Bratislava, 976,000 the Žilina region, and 854,000 the Prešov region. The longest average stay for a tourist was 4.0 days in the Trenčín region, where there are several spa resorts. The average stay in the Prešov region is 3.2 days (Figure 4.14), mostly in the High Tatras Mountains.

Tourism in Prešov is highly concentrated geographically. The most popular destination in the region is the High Tatras Mountains, in the Poprad district, which accounts for 67.4 percent of visitors to the region and more than half of all hotel beds. Spa tourism to the Bardejov and Stará Ľubovňa Districts is also an important cluster. Spas areas attract fewer tourists, but they tend to stay longer. Bardejov attracts 42,000 visitors, who stay on average 7.2 days, Stará Ľubovňa 37,000 visitors staying on average 4.7 days.

5. CONCLUSIONS AND POLICY PRIORITIES

It is highly unlikely that Prešov will catch up to Bratislava, but narrowing the gap with other Slovak regions is achievable. The starting point is to define a reasonable goal. The fundamental truth is that most lagging regions are lagging for a reason. Prešov is no exception. The region is far from the main markets, it is mountainous, and the regions of Ukraine and Poland that it borders are poor. Even today the region is predominantly rural; it has no major cities. For all these reasons, it is unreasonable to expect Prešov region to perform like Bratislava. On the other hand, there is no fundamental reason why it cannot catch up to the average of other Slovak regions. Its economic structure is similar, and the regional productivity gap can be bridged if some problematic conditions are improved.

The first objective for Prešov, like any other lagging region, should be offering to its people access to opportunity. This means continuing to improve access to and the quality of health care, education, and other services. It also means continuing to enhance transport and digital infrastructure to give them access to the information and the markets they need to succeed. Although these policies may not necessarily translate into better regional economic performance—may even stimulate people to leave in search of better personal fortunes—as long as they enable people to do better for themselves, within the region or beyond, they are worth pursuing. For a region like Prešov, a negative migration balance is not necessarily a sign of failure—it can also be a sign that the region is working to position its people for success.

The region then needs to identify and address additional obstacles to economic growth. The following should be priorities:

- Improve the quality of VET. Here closer coordination with employers and restructuring curriculums, instructional practices, and improved training facilities and equipment can have substantial impact. This would also include an emphasis on strengthening the region's efforts on re- and up-skilling of current workers in line with changing labor market needs, whether they be recent graduates or older workers.
- Analyze what regulatory conditions contribute to de-urbanization. These may be related to housing market deficiencies that push people out of city centers, poor planning that limits construction in central areas, or unattractive urban spaces, amenities, and services.
- Lay the foundations for building an innovation culture. This may start with support for scaling up existing R&D activities, or fashioning programs to nurture entrepreneurial networks and support commercialization of technical know-how.
- Continue to build up public institutions to ensure that skilled and talented workers are attracted to public sector jobs and there are incentives for them to stay. This may require deep administrative reforms to disrupt governance structures that may be breeding paternalism, resisting innovation, and creating an environment where corruption thrives.

The region also needs to adopt ways to fully utilize its competitive advantages and make the most of its opportunities:

- International experience offers numerous templates for developing tourism in peripheral locations that have cultural heritage and recreational assets. These efforts usually include among similar activities (1) targeted infrastructure investments to make the attractions more accessible; (2) combination of tourism and agribusiness; (3) destination promotion campaigns; (4) attracting domestic and international hotel chains

and airlines; and (5) creating systems to ensure service quality and safety. Accomplishing this will require a strategic joint effort of the regional administration and tourism enterprises. The region might consider establishing a regional level Destination Management Organization to increase the engagement of the private sector and coordinate tourism development activities, reforming the current marketing structure that includes a high number of fragmented Tourism Information Center and local Destination Management Organizations.

- To realize the region's potential for manufacturing, wood processing, and paper production, Prešov can implement global best practices for attracting FDI. Among these are using advanced market analysis to identify potential investors rather than running general campaigns and attending exhibitions, and creating quality services to support businesses before as well as after they commit to projects in Prešov. While 95 percent of investor location decisions are based on fundamental characteristics of the site, when other conditions for candidate locations are relatively equal the quality of support services may be an important consideration³¹.
- EU funding is the region's greatest underutilized resource. The low rate of success of applications and the relatively low utilization of funds are symptomatic of Prešov's general challenges of institutional development. A targeted investigation of reasons for underperformance is worth undertaking, followed by targeted capacity improvement interventions: broader dissemination of information about the funding available, guidance and training on the application process, and support for those who have to address problems with projects as they arise.

It will not be possible for the Prešov region to achieve improvement in indicators of social development unless it makes progress in integrating Roma communities. Economic and social integration of the Roma is and has been a complicated, long-standing challenge for many European regions, which have found progress slow and difficult. Critical first steps are to give the communities better education and health services and to better integrate them physically with the rest of the country through greater access to roads. The next step is to develop programs for targeted job creation for the Roma. Much of this work is already being done, but meaningful improvement will require long-term commitment in order to overcome cultural barriers, stigma, discrimination, and isolation.

³¹ World Bank 2015.

ANNEX A. ADDITIONAL INFORMATION

TABLE A.1 Industrial Parks and Their Investors in the Prešov Region, 2017

District	Municipality	Industrial park	Area (in ha)	Free space (in ha)	Companies already established in the park
Bardejov	Bardejov	PP Bardejov	88	30.0	Kamax Hudos SB Inmart
Humenné	Humenné	PP Humenné - Gutmanovo	5.4	-	Tytex Slovakia, s.r.o.
	Humenné	PP Chemes Humenné	64.0	8.7	Chemes, a.s. Nexis Fibers, a.s. Andritz Slovakia, s.r.o.
	Myslína	PP Myslína	1.98	-	Muller textiles Slovakia, s.r.o.
Kežmarok	Kežmarok	Priem. Zóna Kežmarok - Pradiareň	17.6	-	Deltrian Slovakia, s.r.o. INGOSING DV, s.r.o. Institute Europharm, s.r.o. Rosler, s.r.o.
Levoča	Levoča	PP Levoča - JUH	11.98	-	LEVOTEC, s.r.o.
	Spišské Podhradie	Hnedá priem. Zóna - Spišské podhradie	3.04	-	-
Medzilaborce	Medzilaborce	PP Medzilaborce	4.75	4.75	-
Poprad	Poprad	PP Poprad - Matejovce	9.09	-	TOL, spol.s r.o. HO&PE FAMILY, s.r.o. GGP Slovakia, s.r.o. CA.BI,s.r.o. TRANSERVICE EUROPA SK,s.r.o. Immergas Europe s.r.o. Ing. Dušan Popovič LPH,s.r.o.
Prešov	Záborské	PP Záborské - Prešov	24.63	17.0	Honeywell Turbo s.r.o. AHP, s.r.o. Draka Comteq Slovakia, s.r.o. LEYARD EUROPE SI Regio
	Petrovany	Petrovany	8.53	N	Logistické centrum Petrovany
Sabinov	Lipany	PP Za traťou	10.13	-	Teprofa Slovakia s.r.o., Tecoma Travel Agency, s.r.o., ICLA SR s.r.o., E&G EisenStahl, s.r.o., BioLipany, s.r.o., Repos, s.r.o MACHJAN SLOVAKIA s.r.o.

District	Municipality	Industrial park	Area (in ha)	Free space (in ha)	Companies already established in the park
Snina	Snina	Výrobné haly Snina	0.5	-	DEL Casting a.s. Elektron, s.r.o. MOPS Press, s.r.o. RMR Slovensko, s.r.o.
Stropkov	Stropkov	PP Stropkov	2.11	-	IP CONECTOR TECHNOLOGY, s.r.o. STANISLAV POTOMA PS.
Svidník	Svidník	PP Svidník – JUH (Petrova dolina)	19.4	19.4	-
Vranov nad Topľou	Vranov nad Topľou	PP FEROVO Vranov nad Topľou	12.77	12.77	-

TABLE A.2 20 Largest Private Enterprises in Prešov Region by Revenue, 2017

Company Name	Sector	NACE	Revenues (€ 000)	Net Profit (€ 000)	Employees (Number)	Assets (€ 000)
Whirlpool Slovakia, s.r.o., Poprad	Electrical engineering	Manufacture of electric domestic appliances	310,999	-6,000	1,332	148,264
Tatragónka, a.s., Poprad	Mechanical Engineering	Manufacture of railway locomotives and rolling stock	190,798	8,675	1,804	246,152
Lear Corporation Seating Slovakia, s.r.o., Prešov	Automotive	Manufacture of other parts and accessories for motor vehicles	184,126	4,723	1,195	105,694
Merkury Market Slovakia, s.r.o., Prešov	Retail trade	Retail sales in non-specialized stores	173,441	20,767	1,345	153,043
GGP Slovakia, s.r.o., Poprad	Mechanical engineering	Manufacture of agricultural and forestry machinery	133,074	957	300	38,888
Pivovary Topvar, a.s., Veľký Šariš	Food processing	Brewing beer	115,600	7,345	545	81,989
Mecom Group, s.r.o., Humenné	Food processing	Processing and preserving meat	108,550	-7,359	965	79,935
Milk-Agro, s.r.o., Prešov	Retail trade	Retail sales of food in specialized stores	107,483	1,174	1,402	37,941
Nexis Fibers, a.s., Humenné		Manufacture synthetic fibers	102,575	-15,576	431	76,216
Bukóza Export-Import, a.s., Hencovce	Wholesale	Sales of intermediate products	94,936	74	52	20,972
Chemosvit Folie, a.s., Svit	Plastics industry	Manufacture of plastic plates, sheets, tubes, and profiles	93,777	1,596	949	70,533
STD Donivo, a.s., Vranov nad Topľou	Transport	Freight transport by road	83,351	6,335	945	63,015
Bukocel, a.s., Hencovce	Pulp and paper	Manufacture of pulp	80,448	541	538	81,977
KE Prešov Elektrik, s.r.o., Prešov	Automotive	Manufacture of electrical and electronic equipment for motor vehicles	73,984	6,225	701	26,304
Farmakol, s.r.o., Ľubotice	Wholesale	Sales of pharmaceutical goods	67,674	1,204	48	31,855

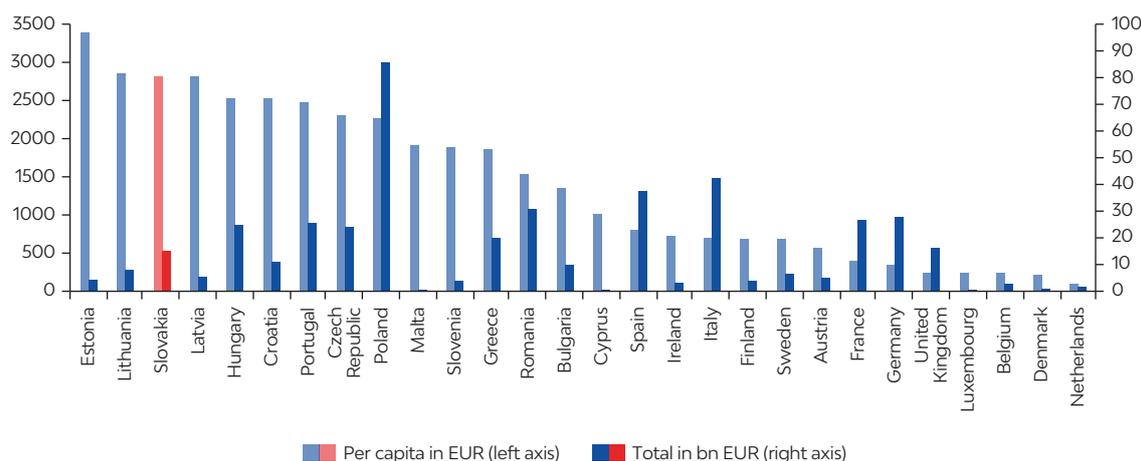
Company Name	Sector	NACE	Revenues (€ 000)	Net Profit (€ 000)	Employees (Number)	Assets (€ 000)
Terichem Tervakoski, a.s., Svit	Plastics	Manufacture of plastic plates, sheets, tubes, and profiles	65,099	3,871	302	66,722
Tatranská mliekareň, a.s., Kežmarok	Food processing	Operation of dairies and cheese making	62,949	375	215	38,576
D.P. Ekoplast, s.r.o., Snina	Plastics	Manufacture of plastic plates, sheets, tubes and profiles	56,449	269	70	19,586
FTE automotive Slovakia, s.r.o., Prešov	Automotive	Manufacture of other parts and accessories for motor vehicles	50,333	2,165	188	42,463
Andritz Slovakia, s.r.o., Humenné	Mechanical engineering	Manufacture of structural metal products	47,334	224	335	66,275

Source: Data from public registries, e.g., <http://www.registeruz.sk/>.

ANNEX B. EUROPEAN STRUCTURAL AND INVESTMENT FUNDS (ESIF) IN SLOVAKIA SINCE 2004

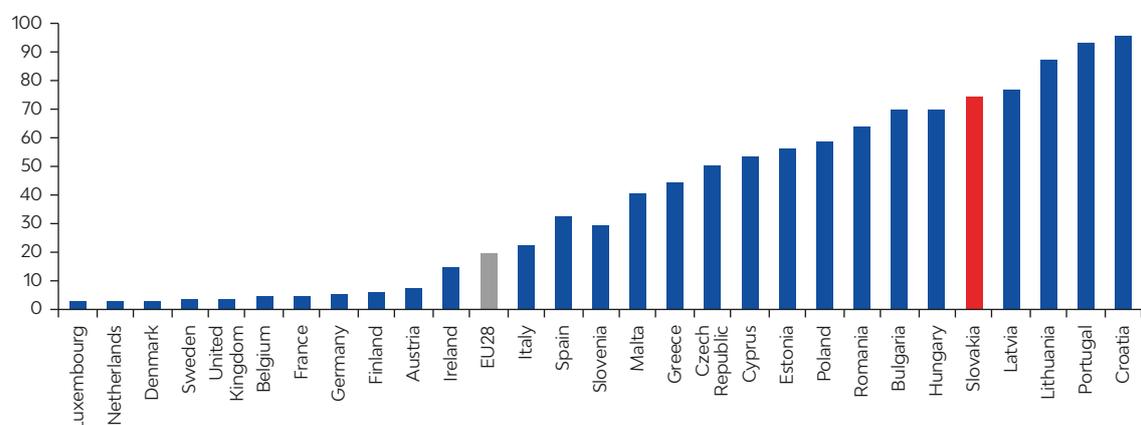
Since its EU accession in 2004, Slovakia has been one of the main beneficiaries of EU cohesion policy. The total ESIF allocation for 2014–20 is €351.8 bn. Poland, which has received €86 bn so far in the ESIF program period, is by far the biggest beneficiary, followed by Italy (€42.8 bn), Spain (€37.4 bn), and Romania (€30.8 bn). Slovakia can benefit from ESIF funding of €15.3 billion—an average of €2,829 per person³² from the EU budget, in the third rank in terms of aid intensity (EU allocation/number of inhabitants). The EU28 average is €896, and the highest (€3,389) is in Estonia, followed by Lithuania, Slovakia, and Latvia; the lowest is €242 per capita in the Netherlands, Denmark, Belgium, and Luxembourg (Figure B.1). The ESIF allocation represents approximately 70 percent of public investment in Slovakia, as it does in other less-developed countries of the EU28.

FIGURE B.1 ESIF Allocations, 2014–20, Total and Per Capita



Source: Data from EC 2018.

FIGURE B.2 ESIF Allocations, 2014–20, Percentage of Public Investment by EU Member



Source: Data from EC 2018.

³² Calculated for 2014, based on Eurostat data.

ESIF funds go to seven priority areas, with the most going to infrastructure for economic growth and employment, in particular transport networks and sustainable urban transport (mainly financed by the Integrated Infrastructure and Integrated Regional Operational Programs (OP). In the Prešov region, the fact that the highway network is still far from complete is perceived as a major obstacle to attracting foreign investors. In countries with very high unemployment, projects that tackle long-term and youth unemployment are getting also more funding, especially through the OP Human Resources, which also supports projects for social inclusion of Roma communities. Other ESIF priorities are the environment (mainly meeting the acquis requirements for waste and water management, and meeting Slovakia's commitments to the EC for urban waste water treatment), and R&D, where the priority is promoting innovation-friendly businesses by enhancing the competitiveness of SMEs, heightening innovation and research, and developing an e-economy (Table B.1).

TABLE B.1 ESIF Allocations to Programs, Slovakia, 2014–20

Operational Programs	ESIF	Allocation (€€)
OP Research and Innovation	ERDF	3,599,942,384
OP Integrated Infrastructure	ERDF, CF	4,646,130,079
OP Human Resources	ESF, ERDF, YEI*	2,640,897,984
OP Quality of Environment	ERDF, CF	3,885,811,623
Integrated Regional OP	ERDF	2,104,595,026
OP Efficient Public Administration	ESF	335,381,024
OP TA	ERDF	187,143,427
Total 7 OPs		17,399,901,547
Rural Development Programme	EAFRD	2,099,199,698
OP Fisheries	EMFF	20,832,779
Total ESIF Allocation for Slovakia		19,519,934,024

Source: Data from <https://cohesiondata.ec.europa.eu/2014-2020/ESIF-2014-2020-FINANCES-PLANNED-DETAILS/e4v6-qrrq/data>.

Note: * The allocation to the Youth Employment Initiative accounts for €72 million; CF = Cohesion Fund; EAFRD = European Agricultural Fund for Rural Development; EMFF = European Maritime and Fisheries Fund; ERDF = European Regional Development Fund; ESF = European Social Fund; YEI = Youth Employment Initiative.

and promoting resource efficiency through enhanced infrastructure, especially for waste and water management. The rest of the allocation is split between climate change adaptation, risk prevention, and management, such as flood prevention measures; and supporting the shift to a low-carbon economy in all sectors, as for improving the energy of the public buildings and reducing the energy intensity of enterprises; installing renewable energy systems (RES), up to 10 kW, in small facilities; and modernizing and reconstructing heat distribution networks.

The goal of OP Research and Innovation³⁵ funding is to create a stable innovation-friendly environment for all relevant entities and to promote the efficiency and performance of the R&D and innovation in Slovakia. Most of funds have been earmarked for actions to build up research, technological development, and innovation. The

OP Integrated Infrastructure,³³ with €4.6 bn allocated should contribute to sustainable mobility, economic growth, job creation, and the improvement of the business environment through development of transport infrastructure, public passenger transport, and the information society. Most of the funding is for construction of new sections of motorways and express roads, and TEN-T, Trans-European Transport Networks, followed by railway modernization, and increasing the attractiveness of public passenger transport and its integration; small proportion of the funding is targeted to improving the quality of services provided in the public Danube river port in Bratislava and other measures to increase the safety and navigability of the Danube. A fifth of the funding is allocated to improving access to ICT, its use and quality, especially progress on national eGovernment.

The OP Quality of Environment,³⁴ second-biggest ESIF contributor to Slovakia, supports sustainable and efficient use of resources to ensure environmental protection, active adaptation to climate change, and promotion of an energy efficient, low-carbon economy. The largest share (close to 50 percent) of this allocation is earmarked for preserving the environment

³³ OP Integrated Infrastructure (<https://www.opii.gov.sk/>) is managed by the Ministry of Transport, Construction (<https://www.mindop.sk/>).

³⁴ OP Quality of Environment (<http://www.op-kzp.sk/>) is managed by the Ministry of Environment (<http://www.minzp.sk/en/>).

³⁵ OP Research and Innovation (<https://opvai.sk/>) is a joint program of the Ministry of Education, Science, Research and Sports (<https://www.minedu.sk/193-sk/strukturalne-fondy-eu/>) and the Ministry of Economy (<http://www.economy.gov.sk/eu-a-fondy/eurofondy>).

intent of the activities supported is to consolidate existing research and innovation infrastructure and capacities and extend them as needed to develop promote excellence. Based on EC country-specific recommendations, a significant part of the allocation should go to promote cooperation between academia and business, which can have positive impact on the generation of knowledge and new products, and hence on growth of the Slovak economy. The rest of the allocation is to enhance SME competitiveness and stimulate entrepreneurship, mainly by facilitating the commercialization of new ideas, establishment of new firms, and increasing their survival rate. Activities are also directed to creating a comprehensive system to support SME internationalization.

OP Human Resources³⁶ supports development and lifelong learning of human resources and their full integration into the labor market, to improve their social situation. The program includes multiple priority areas. The Education priority is directed to (1) heightening the quality and inclusivity of the education system; (2) putting in place quality vocational training harmonized with labor market requirements, including more practical preparation with employers; (3) enhancing the quality of tertiary education and its connection with practice, and (4) development of lifelong learning. The youth employment initiative supports internships, practice, and training, should help reduce youth unemployment. The Employment priority supports activities to increase the employability of disadvantaged job seekers (long-term unemployed, low-skilled, older, and disabled persons); the mobility and adaptability of the labor force; job retention; and improvements in the ability of public employment services to provide personalized services to job seekers. The Social Inclusion priority supports measures to bring in people at risk of poverty and social exclusion, and eliminate all forms of discrimination. Integration of Roma communities is given special attention within Priority Axes 5 and 6 and the integrated approach emphasizes pre-primary education of Roma children; helping those in marginalized Roma communities (MRCs) to become more employable; opening up access to health care and heightening housing hygiene standards; and improving the living conditions of the MRC population in terms of housing, access to social and preschool infrastructure, and Roma integration through social economy instruments.

A global objective of the Integrated Regional OP³⁷ (IROP) is to help upgrade the quality of life and ensure sustainable provision of public services as a factor in balanced and sustainable regional development and the economic, territorial, and social cohesion of Slovak regions, cities, and municipalities. The highest allocation is for promoting social inclusion and combating poverty and any discrimination. A quarter of the funding is also dedicated to promoting sustainable transport and removing bottlenecks in network infrastructure, especially planned measures that reflect regional needs for better second- and third-class roads and low-carbon transport systems. Other priorities include promoting sustainable and quality employment and supporting labor mobility received; investing in education, training in specific areas, and general vocational training, as well as in skills and lifelong learning ;supporting the shift to a low-carbon economy in all sectors is targeted to an increase of energy efficiency in both residences and public buildings. The rest of the allocation is dedicated to reducing air pollution by the revitalizing brownfields and improving the supply of drinking water and disposal of wastewater in urban areas.

OP Efficient Public Administration³⁸ is the smallest program; its main goal is a client- oriented, transparent public administration that provides quality services swiftly and effectively. It has two priorities: Building up the institutional capacity and effectiveness of Public Administration and an Efficient judicial system that ensures that laws are enforced.

Besides the seven OPs, the Rural Development Programme (National)³⁹ is supporting investment in the Slovak countryside. It is working to make agriculture, forestry, and the food industry more competitive; supporting sustainable management of natural resources and adaptation to climate change; and encouraging balanced territorial development of rural economies and communities through, e.g., job creation. The program covers six pri-

³⁶ OP Human Resources is managed by the Ministry of Labour, Social Affairs and Family (<https://www.employment.gov.sk/sk/esf/>).

³⁷ Integrated Regional OP is managed by the Ministry of Agriculture and Rural Development (<http://www.mpsr.sk/index.php?navID=47&slD=67&navID2=1036>).

³⁸ OP Efficient Public Administration is managed by the Ministry of the Interior of the Slovak Republic (https://www.minv.sk/?europske_programy).

³⁹ Rural Development Programme (National) is managed by the Ministry of Agriculture and Rural Development and implemented by the Agricultural Paying Agency (<http://www.apa.sk/en/>).

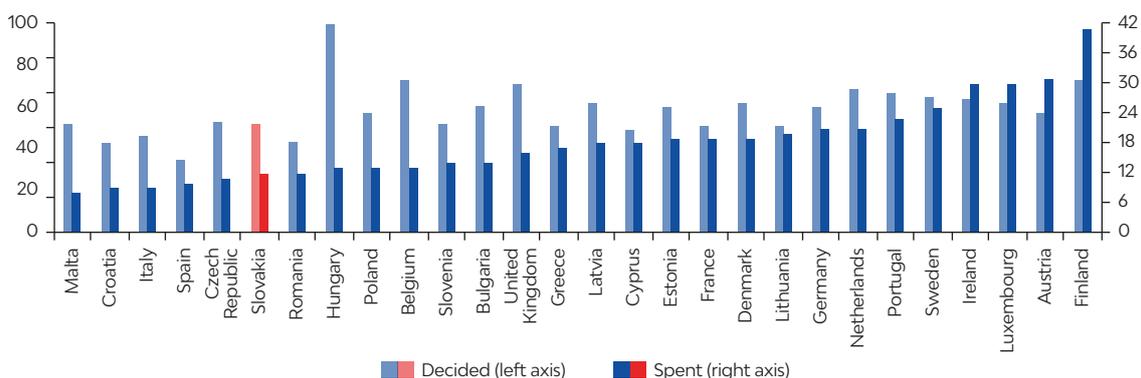
orities: (1) knowledge transfer in agriculture and forestry; (2) the competitiveness of agriculture and farm viability; (3) organization of food chains and risk management in agriculture; (4) preserving and enhancing ecosystems (biodiversity/landscapes) that depend on agriculture and forestry; (5) efficient use of resources and the transition to an agri-food and forestry low-carbon economy; and (6) job creation and the renewal of rural areas.

Slovak institutions can participate in the EU territorial programs, such as Interreg V cross-border and trans-national⁴⁰ programs and interregional programs.⁴¹ Among these are

- *Interreg V-A—Poland-Slovakia⁴²*: Most activities are devoted to putting in place transport infrastructure to improve cross-border accessibility; others target protection and development of the cross-border natural environmental and cultural heritage. The Cross-Border Cooperation (CBC) program also supports activities to adapt vocational education to the requirements of the cross-border labor market and the expectations of employers.
- *Interreg V-A—Hungary-Slovakia⁴³*: Most activities are devoted to building up sustainable cross-border tourism and related infrastructure; investment in transport for better CBC connectivity; and support for environmentally friendly regional public-transport and logistics systems. The program also supports projects to promote sustainable and quality employment; support labor mobility within the region, and enhance cooperation between public institutions and communities on both sides of the border.
- *Interreg V-A—Slovakia-Czech Republic⁴⁴*: The program is designed to strengthen cross-border regional innovation capacity and cooperation between SMEs and the R&D sector. It will also address environmental issues and promote effective and sustainable use of natural and cultural heritage, keeping mind the need for efficient restoration of biodiversity. Also a program priority is encouraging local initiatives and closer legal and administrative cooperation to create a fully integrated border region.
- *Interreg V-A—Slovakia-Austria⁴⁵* (€75.9 million): The goal here is smart specialization and cross-border research driven by initiatives in the twin-capital region of Vienna and Bratislava. A priority is promoting sustainable management and protection of resources in the natural area along the former Iron Curtain was and initiating new sustainable transport solutions.

Slovakia's absorption of ESIF funds at yearend 2017 was quite low, just 12 percent of the ESIF allocation; only five other EU members spent less. The highest ESIF spending was by Finland (41 percent of total allocation), Austria (31 percent), and Ireland and Luxemburg (both 30 percent). At the other end of the rank, Malta (8 percent), Croatia and Italy (both 9 percent) spent the less ESIF so far (Figure B.3).

FIGURE B.3 Use of ESIF Funding by Member States, Percent of Planned Spending



Source: Data from the EC – ESIF Open Data Portal <https://cohesiondata.ec.europa.eu/> (2018, data refresh by Aug 9, 2018).

⁴⁰ Central Europe (<https://www.interreg-central.eu/Content.Node/home.html>); Danube (<http://www.interreg-danube.eu/>).

⁴¹ ESPON (<https://www.espon.eu/>); Interact (<http://www.interact-eu.net/>); Interreg Europe (<https://www.interregeurope.eu/>); Urbact (<http://urbact.eu/>).

⁴² Further information is available at the program website: <https://sk.plsk.eu/>.

⁴³ For further information: <http://www.skhu.eu/?lang=sk>.

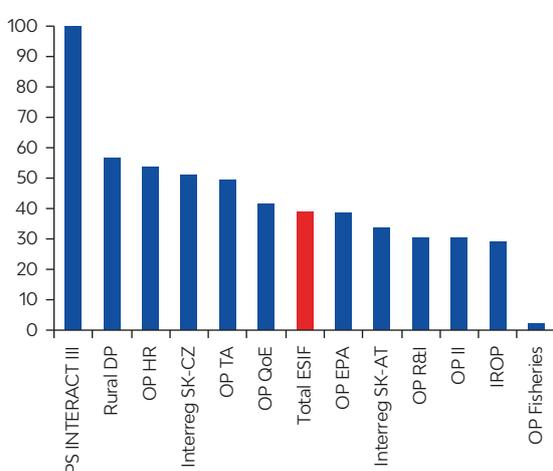
⁴⁴ For further information: <http://www.sk-cz.eu/>.

⁴⁵ For further information: <https://www.sk-at.eu/>.

As of June 30, 2018, managing authorities in Slovakia prepared 364 calls for proposals within the 7 ERDF and ESF OPs and the 6 other programs managed in Slovakia. From the total 2014–20 ESIF allocation (€15.46 billion), the managing authorities made available to potential applicants grant funds of €13.31 billion, representing 86.25 percent of the allocation from all EU sources.

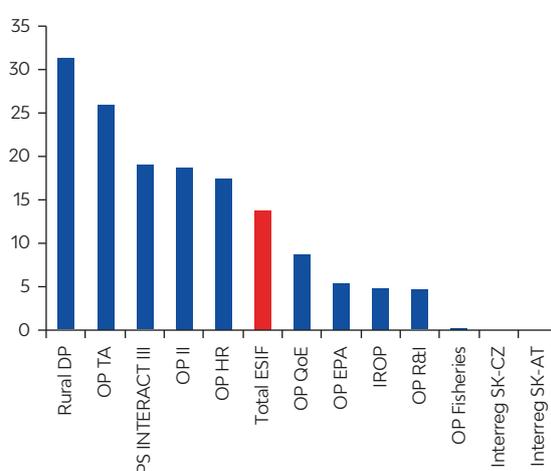
Both procurement and spending of the allocated funding have been progressing slowly in Slovakia as of June 2018. The total volume of contracts signed by June 30, 2018, amounted to €6.04 billion representing 39.08 percent of the total ESIF allocation. The highest shares of contracted budgets were under the Rural Development Programme (56.6 percent) and OP Human Resources (53.8 percent). (Figure B.4). As of June 30, 2018, Slovakia had spent €2.14 billion—13.82 percent of the total allocation. (Figure B.5 and Table B.2).

FIGURE B.4 Total ESIF Funding and Share of Projects Contracted, June 30, 2018, Percent



Source: Data from the Government Office of the Slovak Republic 2018.

FIGURE B.5 ESIF Usage and Total ESIF Allocation, June 30, 2018, Percent



Source: Data from the Government Office of the Slovak Republic 2018.

TABLE B.2 ESIF Used in Slovakia, as of June 30, 2018

Operational programs	Allocation (EUR)	Valid Calls			Contracted		Usage / spending	
		No.	Amount	% of allocation	Amount	% of allocation	Amount	% of allocation
OP Research and Innovation	2,204,059,380	41	1,141,872,243	51.81	669,770,471	30.39	101,422,415	4.60
OP Integrated Infrastructure	3,949,210,563	53	4,649,596,360	117.73	1,191,431,288	30.17	738,926,979	18.1
OP Human Resources	2,217,348,081	81	1,665,733,703	75.12	1 192,087,928	53.76	387,690,222	17.48
OP Quality of Environment	3,137,900,110	55	2,749,674,755	87.63	1 302,088,514	41.50	273,620,419	8.72
Integrated Regional OP	1,738,834,120	29	1,228,572,544	70.65	508,120,455	29.22	84,105,132	4.84
OP Efficient Public Administration	278,449,284	33	123,446,211	44.33	107,737,291	38.69	15,213,911	5.46
OP TA	159,071,912	13	114,958,040	72.27	78,828,039	49.55	41,154,651	25.87
Total 7 OPs	13,684,873,450	305	11,673,853, 856	85.30	5,050,063,986	36.90	1,642,133,729	12.00

Operational programs	Allocation (EUR)	Valid Calls			Contracted		Usage / spending	
		No.	Amount	% of allocation	Amount	% of allocation	Amount	% of allocation
Rural Development Programme	1,559,691,844	32	1,487,552,203	95.37	882,422,583	56.58	487,780,268	31.27
OP Fisheries	15,785,000	12	3,258 470	20.64	377,845	2.39	10,378	0.07
Interreg V-A SK-CZ	90,139,463	10	64,132,255	71.15	45,906,758	50.93	0	0.00
Interreg V-A SK-AT	75,892,681	5	75,892,678	100.00	25,830,949	34.04	0	0.00
PS INTERACT III	39,392,594	na	na	na	39,392,594	100,00	7,481,434	18.99
Total ESIF Allocation for Slovakia	15,465,775,032	364	13,304,689,462	86.25	6,043,994,716	39.08	2,137,405,810	13.82

Source: Authors based on the Data from the Government Office of the Slovak Republic 2018. The data is not fully consistent with table B.1 due to lack of availability of the updated breakdown.

In the previous 2007–13 period, Slovakia spent €11.3 billion in EU funds (97.01 percent of the total allocation),⁴⁶ equivalent to 15 percent of its GDP and more than €2,144 per capita. The highest spending was within OP Transportation that used up all its allocation (€3.16 bn), followed by OP Competitiveness and Economic Growth (98.11 percent, €0.95 bn), OP Research and Development (97.79 percent, €1.20 bn), Informatization of Society (96.91 percent, €0.82 bn), OP Employment and Social Inclusion (96.51 percent, €0.91 bn), OP Environment (95.71 percent, €1.74 billion), and the Regional OP (95.33 percent, €1.48 billion). The worst performers were OP Education (92.49 percent, €0.50 bn), and OP Healthcare 87.45 percent, €0.22 bn). Among the smaller programs, OP Technical Assistance spent 91.74 percent (€89.54 million), The Slovak-Czech CBC spent 91.39 percent of its allocation (€84.75 million) and OP Fisheries 80.62 percent (€10.38 million).

Compared to the 2007–13 programming period), the funding available to Slovakia went up by more than €3 bn. The focus themes did not change much, even though the number of OPs was reduced from 11⁴⁷ to 7. Compared to the 2007–2013 period the new program has a stronger focus on helping vulnerable groups to access the labor market. Several OPs are not only supporting job creation but also paying special attention to the employment of youth, low-skilled, and long-term unemployed people, including Roma community. Some 250,000 unemployed persons should benefit from the ESIF in Slovakia and be able to improve their chances on the jobs market.

⁴⁶ Source: http://www.partnerskadohoda.gov.sk/eurofondy-cerpanie-penazi-eu-v-obdobi-2007-2013-zostalo-na-urovni-97-per-cent/?den=2017-12-01&den_od=2017-11-16&den_do=2017-11-16.

⁴⁷ For more information on 2007–13 OPs in Slovakia see: <http://www.nsrr.sk/en/operational-programmes/>.

REFERENCES

- Bertelsmann Stiftung. 2018. Country Report: Slovakia. Bertelsmann Stiftung's Transformation Index (BTI) 2018. http://www.bti-project.org/fileadmin/files/BTI/Downloads/Reports/2018/pdf/BTI_2018_Slovakia.pdf.
- European Commission. 2018a. DG Regional and Urban Policy
- . 2018b. *Partnership Agreement for Slovakia, 2014–20*.
- . European Commission 2017, Regional Innovation Scoreboard.
- Eurostat. 2018.
- Filčák, R., and D. Dokupilová. 2015. *Economic Transformation Environment, and Manufacturing in Slovakia: From High Environmental Impacts and High Employment to Treadmill of Production?* Bratislava, Slovak Academe of Sciences.
- Farole, Thomas, Issam Hallak, Peter Harasztosi, and Shawn Tan. 2017. "Business Environment and Firm Performance in European Lagging Regions." Policy Research Working Paper 8281. World Bank, Washington, DC.
- International Bank for Reconstruction and Development / The World Bank. 2018. *Doing Business in the European Union 2018: Croatia, the Czech Republic, Portugal and Slovakia*. <http://www.doingbusiness.org/reports/subnational-reports/eu-croatia-czechrepublic-portugal-slovakia/>.
- Observatory of Economic Complexity,
- OECD (Organisation for Economic Co-operation and Development). 2017. "International Trade, Foreign Direct Investment and Global Value Chains. Slovak Republic: Trade and Investment Statistical Note." <http://www.oecd.org/investment/SLOVAK-REPUBLIC-trade-investment-statistical-country-note.pdf>.
- . 2015. *OECD Public Governance Reviews: Slovak Republic: Better Co-ordination for Better Policies, Services and Results*. <http://www.oecd.org/gov/slovak-republic-better-co-ordination-for-better-policies-services-and-results-9789264247635-en.htm>
- . 2018.
- Pinheiro-Alves, P., Julio Ricardo. and Jose Tavares. 2013. "Foreign Direct Investment and Institutional Reform: Evidence and an Application to Portugal." Working Paper 6/2013. Bank of Portugal, Lisbon. <https://www.bportugal.pt/sites/default/files/anexos/papers/wp201306.pdf>Slovak Statistical Office 2018.
- SGI. 2017. Survey: http://www.sgi-network.org/2017/Slovakia/Key_Challenges.
- University of Gothenburg. 2018. *Quality of Government in EU Regions: Spatial and Temporal Patterns*.
- UNDP 2014. *Atlas of Roma Communities in Slovakia 2013*. ATLAS rómskych komunit na Slovensku 2013. Bratislava. ISBN: 9788089263189. Electronic version available at: http://www.minv.sk/?atlas_2013.
- UNDP/World Bank. 2011. Regional Roma Survey. And/or World Bank (2012): Diagnostics and Policy Advice on the Integration of Roma in the Slovak Republic. <http://documents.worldbank.org/curated/en/570461468303056342/pdf/729850ESW0Whitoporto9Sept20120Final.pdf>
- World Bank. 2018a. *Doing Business in the European Union 2018: Croatia, the Czech Republic, Portugal and Slovakia*. Washington, DC: World Bank.
- . 2018b. *Rethinking Lagging Regions in the EU: Evidence-based Principles for Future Cohesion Policy*. Washington, DC: World Bank.
- . 2015. *What Do Multinational Firms Want from Cities?* Washington, DC: World Bank.
- World Bank Group. World Development Indicators

