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Each country diagnostic assesses the progress and challenges of the country of operations in developing a sustainable market economy. Private sector development and entrepreneurship are at the heart of the Bank's mandate in the regions of operation of the bank, but the private sector in all EBRD countries faces a range of problems and obstacles. The diagnostic highlights the key challenges facing private companies and shows where each country stands vis-à-vis its peers in terms of six qualities of transition – competitive, well-governed, resilient, integrated, green, and inclusive – and points out the main deficiencies and gaps in each quality.

The diagnostics draw on a range of methodologies and best practice for assessing how big different obstacles are. Extensive use is made of in-house expertise across the EBRD, along with surveys such as the Business Environment and Enterprise Performance Survey (BEEPS) and the Life in Transition Survey (LiTS), as well as other cross-country surveys and reports from institutions such as the World Bank, World Economic Forum and OECD. For some larger countries, the diagnostics also draw on specially commissioned studies of selected issues that are critical for private sector development in the country.

The diagnostics are led by the EBRD's Country Economics and Policy team, drawing substantially on the expertise of sector, governance and political experts in the Economics, Policy and Governance department (EPG) and consulting widely with relevant experts across the EBRD when preparing the final product. The diagnostics are shared with the EBRD Board during the country strategy process and published during the public consultation period.

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European Bank
for Reconstruction and Development

The Slovak Republic diagnostic paper: Assessing progress and challenges in developing a sustainable market economy¹

Executive summary

This paper assesses the progress in the Slovak Republic towards a well-functioning, sustainable market economy, and the challenges ahead. It provides a basis for the design of the forthcoming EBRD Country Strategy for the Slovak Republic and for the structure of ongoing and future investment activities and policy advice/advocacy in the country.

The report singles out four key constraints that are holding back private sector growth in the Slovak Republic. In order of importance, these are the following:

1. Building an adequate skills base and better frontier innovation environment will ensure that the economy remains competitive and resilient through further productivity growth and relevance in global value chains, including beyond the automotive industry;
2. Addressing large regional differences will make the economy more inclusive, and competitive;
3. Coping with rapid aging through increased labour participation and improved healthcare will make the economy more resilient, inclusive and competitive in the longer run;
4. Greening the economy, especially through energy efficiency, pollution mitigation and environmentally friendly production and solid waste management, will promote sustainable growth and improve the quality of life (Annex 1).

The report also benchmarks the Slovak Republic according to the newly proposed EBRD methodology for measuring transition, whereby each country of operations is assessed along six desirable qualities of a sustainable market economy: competitive, integrated, well-governed, resilient, green and inclusive. The report provides clear evidence that the Slovak Republic is among the economies most advanced in transition, in many respects on a par with mature market economies. Annex 1 of the report provides scores, along with insights into the relative strength of development of the Slovak Republic along these six dimensions.

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Introduction

This paper assesses the progress of the Slovak Republic towards a well-functioning, sustainable market economy, and the challenges ahead. It identifies four key constraints that currently hold back the transition into a sustainable market economy as defined by the new EBRD transition concept. The report also benchmarks the Slovak Republic according to the new EBRD methodology for measuring transition, whereby each country of operations is assessed along six desirable qualities of a sustainable market economy: competitive, integrated, well-governed, resilient, green and inclusive.

Sections 1 and 2 of the report describe the Slovak Republic’s current growth model, recent performance, and the political economy context. Section 3 provides an in-depth analysis of three of the constraints to the development of a sustainable market economy. Annex 1 presents an overall assessment for each of the six sustainable market qualities, as well as a brief outline of the underlying methodology.

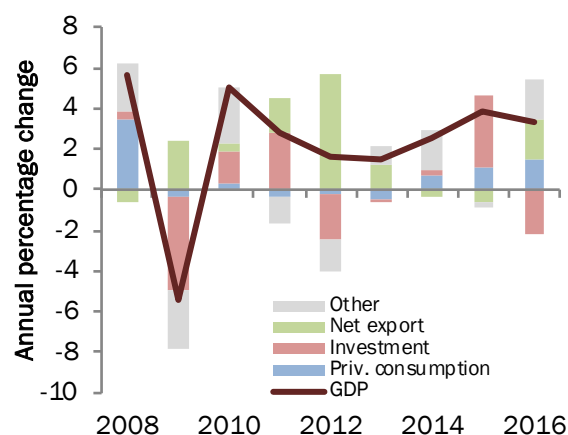
1 EU growth leader with unique development model

The Slovak Republic is the second wealthiest economy in the Central Europe and Baltics (CEB) region. The private sector was at the roots of the Slovak success since transition began. Slovak purchasing power-adjusted per capita GDP more than quadrupled since 1991, reaching 77 per cent of the EU average in 2016. SMEs account for 73.6 per cent of the active work force, and 52.8 per cent of value added. Industrial activity and employment are heavily concentrated around the Bratislava region, and there remain severe regional disparities with the east of the country. Long-term unemployment (defined as 12 months and more) accounts for over 65 per cent of total unemployment – mostly concentrated in the east of the country – and is the second highest in the EU. **Public sector employment, at 27.2 per cent, is 6 points above the OECD average.** State-owned Enterprises are active in “strategic” sectors, including transport and utility networks, healthcare, and social insurance. The state also has large stakes in the energy sector.

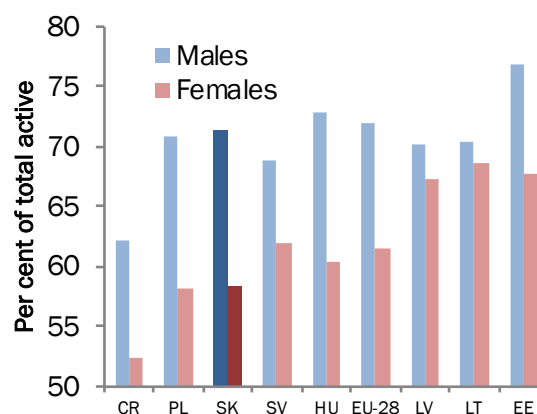
The Slovak Republic’s economy relies heavily on exports, which totalled almost 100 per cent of GDP in 2016, the largest such share among CEB countries. Given the industrial structure concentrated around the automotive sector, GDP is heavily exposed to fluctuations in output elsewhere in the EU, and in the world economy more broadly. The country plays a key part in global value chains of export-oriented foreign direct investment enterprises, in particular in the automotive sector and electronics. However, the value-added that derives from these activities still has a substantial potential to grow, with the domestic value added in gross exports remaining among the lowest across OECD countries.²

After a slowdown in 2012 and 2013, growth now seems well established. GDP growth reached 3.8 per cent in 2015 and 3.3 per cent in 2016. Domestic demand continues to recover, with investment growth likely to accelerate as the start of the new EU financial perspective gathers speed in 2017, and thanks to private sector investments, such as new projects in the automotive industry. Strong private consumption is expected to remain the key engine of growth, supported by rising disposable incomes and improvements in the labour market. Public investment is expected to accelerate over the coming years, though it is conditional on the ability of the country to absorb EU funds. While the Slovak Republic has one of the highest per capital allocations of EU grant funds, it has struggled to absorb them, which can create a risk of excessive public fixation over “just spending it” in the coming years, at the expense of efficiency and additionality.

² <https://data.oecd.org/trade/domestic-value-added-in-gross-exports.htm>.

Figure 1. Decomposition of GDP growth

Source: Eurostat. Note: Constant 2010 prices.

Figure 1.2 Employment rates

Source: Eurostat.

The labour market is getting increasingly tighter, potentially hampering growth. In recent years, unemployment fell from 14.9 per cent in the immediate post-crisis period to 9.9 per cent in 2016. Skilled-labour shortages are reaching unprecedented levels, with almost 25 per cent of industry respondents (significantly above the EU-28 average of 13 per cent in Q2 2017) of the European Commission's business survey citing qualified labour shortages as a limiting factor for production. Households' purchasing power has improved as real wages showed strong growth of 3.7 per cent in 2016. Despite long-running EU-sponsored investment programmes in the east of the country, regional disparities are not improving, underlined by an unemployment rate of 15 per cent in 2016 in some of the eastern regions, amidst sub-60 per cent labour force participation rates. Also, the nationwide female employment rate remains 14.2 percentage points below that of males – the sixth biggest difference in the EU.

2 Political economy and the reform environment

In recent years, the domestic political environment in the Slovak Republic has been generally favourable for economic reforms. Following early parliamentary elections in March 2012, the centre-left Direction–Social Democracy (SMER) party formed the first single-party government in the Slovak Republic's recent history, ending a period of unstable coalition governments. The latest parliamentary elections were held in March 2016. SMER-SD won the plurality of the vote, but secured only 49 out of 150 parliamentary seats. Prime Minister Fico successfully negotiated the formation of a coalition government with two other parties (the Slovak National Party and Most–Híd).

Boosting employment, tackling regional disparities, and improving health and education are the main priorities of the government. A number of key economic portfolios went to the same ministers who served under the previous one-party government, thus ensuring continuity of the reform efforts, particularly in the area of implementing fiscal consolidation and reducing long-term unemployment. The national reform programme for 2016-2018 draws on the government's manifesto for 2016-2020, which was approved by parliament in May 2016.

In addition to economic reforms, the government has faced two other important challenges – addressing corruption and reforming the judiciary. The weaknesses in these

two areas have had a negative impact on the business environment for many years, featuring in a number of business surveys. The Slovak Republic has the lowest levels of public trust in the judiciary among EU countries and the fifth lowest in the transition region, according to World Economic Forum 2016 Global Competitiveness Report and the EBRD/World Bank 2016 Life in Transition Survey (LiTS), respectively. The authorities have taken steps to strengthen the rule of law, including reforming the Judicial Council, and adopting new legislation on whistleblowing and an Action Plan on Fighting Corruption. The European Commission's 2016 Country Report on the Slovak Republic notes that these efforts have brought limited effects so far.

Also, competition from the informal sector was identified as the top obstacle facing Slovak firms. The share of firms that reported they compete against informal firms increased slightly, from 40 per cent in BEEPS IV (2009) to 43 per cent in BEEPS V (2012-2014), exceeding the CEB average of 35 per cent.

In addition, the authorities took measures to support investment, including the approval of incentive packages for start-ups in 2015. This supplements earlier measures to strengthen cooperation between academia and the business sector. The rate of firm start-ups in the Slovak Republic has continuously declined since 2010. Under new and simplified procedures, entrepreneurs establishing new businesses are able to register a joint stock company, instead of more sophisticated forms of legal entities. In addition, start-ups are exempted from the obligation to pay certain taxes for the first three years of operations. Under the new legislation, visas for skilled workers from outside the EU are slightly easier to obtain and a national centre for entrepreneurs is now in charge of disseminating innovation.

The charged political debate on refugees weighs on the political feasibility of a more structured approach to immigration, as advocated by industry leaders. Although the Slovak Republic is not located on the main migration transit route into the EU and did not have to grapple with a large influx of refugees, the latest election campaign was dominated by concerns over the EU refugee quota implementation. Anti-migration and anti-Roma rhetoric has increased. Although a far right party (Kotleba – the People's Party – Our Slovakia) has a small representation in the parliament (14 out of 150 seats), they are likely to increase their representation at the regional elections, due in autumn 2017. Addressing industrial labour shortages through immigration is getting more difficult in such an environment.

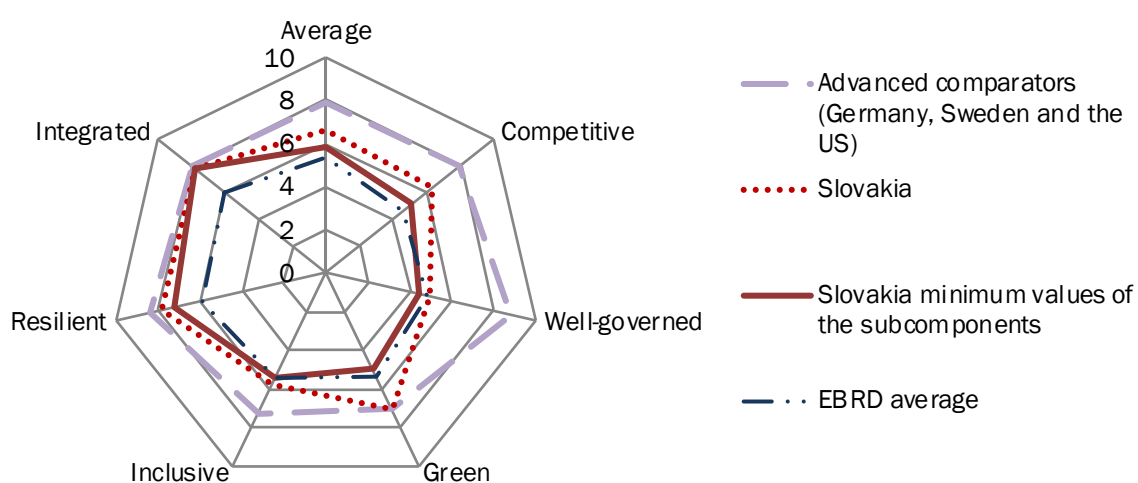
The government implemented important reforms aimed at higher participation in the official labour market. Personal insolvency regulations were simplified, aimed at eliminating perverse incentives for heavily indebted individuals, for whom it was optimal to stay out of the legal employment. Also, tax incentives for private-sector education facilities run by industry resulted in a large number of schools, but a somewhat limited response by potential students. At the same time, according to the EBRD/World Bank 2016 LiTS, 60 per cent of people cite “no opportunities” as a reason for not being able to find a job, suggesting only partial effectiveness of these reforms.

A reform of administrative processes is underway, with the goal of streamlining, modernising and strengthening capacities, in particular through e-services. An E-procurement system, designed in line with the 2014 EU Directive, is particularly ambitious, at the point of risking delays and problems with implementation. According to the 2016 LiTS, about one-third of respondents cited bureaucracy as the main obstacle for establishing a new business.

3 Key binding constraints to developing a sustainable market economy

Since the early 1990s, the Slovak Republic made major progress on moving from a planned system, showing significant improvements along all six qualities of a sustainable market economy. In this section we present an analysis of three of the key constraints that are still holding back the economy from developing its full potential. Annex 1 provides a snapshot of each of the six qualities and shows that the **EBRD Sustainable Market Economy Index (SMEI) for the Slovak Republic stands at 6.84 (out of 10)**, which is representative of a **small** gap in terms of developing a sustainable market economy (Figure 3.1). Nevertheless, when comparing only the minimum values of the subcomponents of the six qualities across the countries, the Slovak Republic scores worse in two dimensions: green and competitive.

Figure 3.1 EBRD ATQs – the Slovak Republic



Source: EBRD estimates. Note: Level of development within each of the qualities is measured from 1 to 10, with 10 representing the highest level of development.

The Slovak Republic's economy is among the most advanced transition countries. It is one of the three most **integrated** and **resilient** economies of the EBRD countries of operations (CoOs). Many key elements of a well-functioning, private sector-led economy are already in place in the Slovak Republic; still, some challenges remain. The EBRD defines *Competitiveness* in two dimensions: (i) market structure and institutions, (ii) capacity of firm/s to generate value added and innovate. While on (i) the Slovak Republic is not far from advanced OECD countries, on (ii) the country is lagging behind. The following section looks at this dimension in more detail.

3.1 An adequate skill base and better frontier innovation environment are needed to ensure the economy remains competitive through further productivity growth and relevance in global value chains

Over the last twenty years, the Slovak Republic attracted investment to build a complex, export-driven economy. The automotive sector has been the target of much FDI, benefitting from the Slovak Republic's competitive advantage of a relatively cheap and educated labour force. The country has become the 16th most complex and 42nd largest export

economy in the world.³ Trade openness, FDI and labour productivity growth have been the major forces in the Slovak Republic's rapid catch-up relative to the advanced European countries.

Still, the Slovak Republic has not yet fully addressed the competitiveness gaps with the most advanced countries. The Slovak Republic is regarded as *moderate innovator* in the European Innovation Score Board with its innovation performance relative to the EU at 67 per cent in 2015.⁴ While the share of high-technology exports has increased significantly in the Slovak Republic (from 4 per cent of manufactured exports in 1994 to 10 per cent in 2015), it is still below the OECD average of 17 per cent. Similarly, Slovak exports of knowledge-intensive services are below 60 per cent of the EU average. Thus, the capacity of Slovak firms to generate value added and innovate remains below the most advanced countries. So far, firms in the Slovak Republic, alongside those in the Czech Republic and Hungary, have reaped substantial productivity benefits mainly through international spillovers of technology and know-how, particularly through FDI and a greater participation in global value chains, rather than in-house innovation (see EBRD 2014 Transition Report for more details).

The gradual eliminating of these gaps is crucial to ensure sustainability of the Slovak Republic's economy. The existence of the innovation gaps may be natural given the stage of the development process, but the country's capability to move up the global value chain is not a given. Today, the Slovak Republic is very well integrated in global and regional processes. And the hope is that, as simpler processes will move to cheaper locations (e.g. Eastern Europe or the Western Balkans), higher value added production, including innovation and R&D should take over (see Box 2 *The Slovak Republic's Homogeneous Economy* on the future of the crucial automotive industry). This shift is very important as the Slovak Republic is gradually losing its comparative advantage due to rising wages, a process likely to be accelerated by aging.

A further progress on the key elements of the knowledge economy would help the Slovak Republic to move up the value chain. Specifically, further efforts should be made on three fronts, in order of importance: (1) supporting the ability of traditional industries to innovate through R&D, skills and ICT improvements; (2) improving the innovation environment to encourage companies to innovate and move up global value chains; and (3) helping ensure the continuity of chain of financing from angel support, early, growth and later stages to allow smaller, innovative companies to market ideas.⁵

First, the ability of traditional industries to innovate through skills and R&D improvements remains limited. Today, this ability is constrained by low and ineffective public spending on education. The Slovak Republic spends only 2.6 per cent of GDP on non-tertiary (vs. 3.4 per cent OECD average) and 1 per cent of GDP on tertiary education (vs. OECD average of 1.3 per cent). This puts the Slovak Republic in 82nd place globally.⁶ In effect, the percentage of pupils that are assessed as low achievers⁷ in PISA⁸ is significantly

³ Economic Complexity Index (2016). <http://atlas.media.mit.edu/en/profile/country/svk/>.

⁴ <http://ec.europa.eu/DocsRoom/documents/17856>.

⁵ EBRD's Knowledge Economy Initiative also has a fourth stream, where the Slovak Republic performs relatively well: (4) access to information via the availability of broadband, fixed and mobile, particularly in the regions. Access to broadband is good across in the Slovak Republic and there are no large regional discrepancies in the use of internet. In all regions, the share of households with access to broadband is almost 80 percent. Similarly, the share of individuals who ordered goods or services over the internet for private use is similar across the country (55 percent in the Bratislava region vs. around 50 percent elsewhere in 2014).

⁶ Global Innovation Index 2016.

⁷ Per cent of pupils, 15 years old, with proficiency level 1a (reading and science) and level 2 (math) and lower on PISA.

higher in the Slovak Republic than in an average EU country. About 51 per cent of Slovak pupils are low achievers in maths (vs. 47 in the EU), and 32 per cent are low achievers in science (vs. 22 per cent in the EU). Moreover, public spending on education remains inefficient. Dutu and Sicari (2016) show that in the Slovak Republic on average PISA scores could be improved by 12 per cent if the Slovak Republic were to match the best performing countries with similar levels of spending.⁹

As a result of these inefficiencies, the Slovak firms' innovation capacity suffers from skills gaps. Currently, tertiary educational outcomes as well as vocational education and training (VET) do not fully match the needs of the Slovak labour market. In particular, the private sector faces shortages in engineering, technical, and IT areas. While the interest of firms engaged in VET is increasing, the dual education scheme does not seem to be attractive for young students. Besides, in the 2016 WEF survey, the private sector strongly indicates that the educational system in the Slovak Republic does not meet the needs of a competitive economy¹⁰ (the results put the Slovak Republic on 117th place globally). Similarly, a Deloitte 2016 survey¹¹ finds that limited availability of qualified and experienced researchers is a key factor that limits firms' innovation activities. The "brain drain" continues to be a problem, especially for Eastern Slovak regions where skilled jobs are limited. Emigration to Western Europe increased after the country joined the EU in 2004. The total number of emigrants is estimated to be up to half a million people (around 10 per cent of population).

There will be also a growing need to better support incentives for R&D within firms. The Slovak Republic's FDI and technology transfer is above the EU average,¹² even if the domestic firms' spending on R&D remains low (0.3 per cent of GDP, compared with 1.6 per cent in OECD¹³). So far, rapidly increasing labour productivity was a signal of the existence of areas of process innovation within firms not reported in the statistics. Still, as the country approaches the technological frontier, effective use of, for instance, technology vouchers could provide incentives for firms to consult a knowledge provider and to implement new technologies.¹⁴ The Slovak Republic has introduced a tax super deduction for R&D (effective as of 2015) of 125 per cent (150 per cent in the second year) of R&D costs deductible from the tax base. In the Deloitte 2016 survey, two-thirds of surveyed companies want to use the super deduction¹⁵ and almost 70 per cent of firms plan to increase their R&D expenditure in 3-5 years.

Second, the innovation environment does not sufficiently encourage companies to move up global value chains. Today, the capacity of Slovak firms to generate value added remains constrained. The economy's knowledge absorption is held back by a low number of researchers in the private sector; the share of

"Multinational companies do not care about local researchers in the Slovak Republic.

Slovak academia is not rewarded for cooperation with business."

A university professor

⁸ <http://www.oecd.org/pisa/>.

⁹ Dutu R. and P. Sicari (2016), "Public Spending Efficiency in the OECD: Benchmarking Health Care, Education and General Administration", *OECD Economics Department Working Papers*, No. 1278, OECD Publishing, Paris.

¹⁰ A score of 2.9 [1 = not well at all; 7 = very well] (WEF, 2016).

¹¹ Deloitte (2016). Central European Corporate R&D Report 2016.

¹² The Slovak Republic scores 5.3 of 7 on this indicator in the Global Competitiveness Index (average 2013-2016), which is above EU average of 4.8. This puts the Slovak Republic on the 15th place out of 138 assessed economies.

¹³ OECD Economic Surveys: Slovak Republic 2014.

¹⁴ https://cdn5.euraxess.org/sites/default/files/domains/brazil/focus_on_slovakia.pdf.

¹⁵ Deloitte (2016). Central European Corporate R&D Report 2016.

research talent¹⁶ in total firms' employment is only 18 per cent, which puts the Slovak Republic in 57th place globally.¹⁷ Moreover, the Slovak Republic's low knowledge diffusion is demonstrated by virtually non-existent intellectual property receipts as a percentage of total trade (the country scores 70th in the Global Innovation Index, 2016).

More effective skills transfer could benefit potential innovators. Such projects should boost the innovative activity of more entities in the local innovation ecosystem. For instance, stronger FDI-SME links could support the innovation capacity of smaller players. Currently, the share of SMEs with innovation co-operation activities¹⁸ is 0.2 of total SMEs in the Slovak Republic (below the EU average of 0.4). Moreover, these efforts could strengthen the currently weak co-operation between firms, universities and research centres. The implementation of an effective tertiary vocational education programme, including on-the-job training, would provide the technicians needed to use new technology. While the authorities are providing incentives for hiring youth workers, these incentives could be targeted to firms that provide internships to students from those programmes.

Further promotion of economic clusters in lagging regions could also improve knowledge transfers and support the local labour market. The Slovak Republic has built a few relatively successful clusters, which could be better supported with funding and access to skilled labour. Beyond the manufacturing sectors, such as in the automobile and consumer electronics industries, an IT sector is gradually gaining in importance in the Slovak economy. In particular, the Košice IT valley is an impressive example of entrepreneurship in the eastern region of the Slovak Republic (see Box 1). The success of this cluster has emerged from an efficient collaboration between academia, local authorities and IT firms. Today, more and more IT companies are being established there, while the quality of IT training programmes at schools and universities is constantly improving.

Box 1: Košice IT valley

Košice and its surroundings still remain among the poorest regions in the EU. Left with unfinished infrastructure, this region in the eastern part of the country has suffered from failed regional development concepts for decades. High rates of unemployment, low labour force participation and emigration have caused a vicious circle, which impedes this region from converging with the western part of the Slovak Republic, statistically the fifth most affluent region in the EU.

Despite this disadvantaged position, Jozef Ondáš, a managing director at T-Systems, a subsidiary of Deutsche Telekom, together with his colleagues came up with an idea to utilise the most precious assets of the region, which are computer-science graduates. Instead of waiting for the perpetually promised highway, which effectively would have brought new manufacturing plants rather than more sophisticated production, they decided to focus on a field with greater value – the IT sector. For that purpose a regional partnership of IT

¹⁶ Full-time equivalence (FTE) researchers in the business enterprise sector refers to 'researchers' as: professionals engaged in the conception or creation of new knowledge, products, processes, methods, and systems, as well as in the management of these projects, broken down by the sectors in which they are employed (business enterprise, government, higher education, and private non-profit organizations).

In the context of R&D statistics, the business enterprise sector includes all firms, organizations, and institutions whose primary activity is the market production of goods or services (other than higher education) for sale to the general public at an economically significant price, and the private non-profit institutions mainly serving them; the core of this sector is made up of private enterprises. This also includes public enterprises.

¹⁷ <https://www.globalinnovationindex.org/gii-2016-report#>.

¹⁸ have had any cooperation agreements on innovation activities with other enterprises/institutions.

companies, education institutions and regional authorities was created in 2007, the Košice IT Valley.

Košice IT Valley is a cluster, based on the knowledge triangle, which consists of educational institutions, local government and leading IT companies. The main objective of this initiative is to promote and facilitate educational programmes for IT jobs as well as to motivate the youth to study and work in IT and robotics. At the same time, the close collaboration of schools and universities with leading IT multinationals is expected to provide a broad portfolio of job opportunities for such graduates.

Ten years after its inception, Košice IT Valley shows outstanding results. It employs over 10 thousand IT specialists, ten times what was initially expected, and has a potential to offer another thousand jobs annually in the coming years. Starting only with seven companies, currently the cluster consists of 49 members. Global players, such as Cisco Systems, or Ness Technologies Inc. (an Israeli provider of IT services), offer significantly above regional-level average salaries, and are competitive at the national scale.

The labour market for specialists in the Slovak Republic is tightening. Similarly to the automotive industry, qualified labour shortages are hindering the fast pace of development of the IT industry too, despite high unemployment rates in the region. Currently, there are roughly 500 IT graduates from Slovak schools annually. This means that the demand on IT specialists exceeds the market offer by 100 per cent. Unless the qualified workers supply increases, including through a greater interest in IT among the youth or inflow of specialists from abroad, the factor of skilled labour, which effectively triggered this regional success, could become an inhibiting factor for the region's further expansion.

In 2015, the government launched an EU co-financed Research and Innovation Operational Programme (€2.2 billion) to support links between academia and the private sector. The Programme prioritises new materials, ICT, nanotechnology, automotive and biomedicine and could also promote the development of economic clusters.

The innovation financing ecosystem lacks continuity.

In the Slovak Republic, financing innovation is heavily influenced by unprecedented amounts of EU funding, including the European Structural and Investment Funds (€2.2 billion available until 2020) or the Horizon 2020 (the biggest EU Research and Innovation programme ever). However, the participation of Slovak firms in these programmes remains low¹⁹ also due to a low success rate and the limited experience of applicants. While the large-scale infusion of funds represents a valuable opportunity to transform the Slovak innovation system, it poses risks to the sustainability and effectiveness of the investment.

“We need more engineers and math graduates, not just political scientists and sociologists.”

“EU money is not cheap, when you add paperwork and the strings attached. It has its place, but sometimes projects are more attractive without it. Bank loans are good for companies that are ready for such financing. But even bigger, more established companies face problem with financing external expansion.”

PE fund manager

Moreover, the Slovak Republic's chain of innovation financing underutilizes important equity elements. For instance, venture capital investment is at a mere 13 per cent of the EU average.²⁰ This is a combination of demand and supply issues in financing. While there is a need to strengthen the early-stage financing, a lack of investment projects (e.g., due to low experience in structuring projects) was often mentioned as a bigger obstacle than availability

¹⁹ Deloitte (2016). Central European Corporate R&D Report 2016.

²⁰ European Innovation Scoreboard.

of the funds themselves. The demonstration effects of successful projects and further growth of the skilled PE/VC fund management community will be necessary to ensure wider upscaling of Slovak start-ups.

Some private sector representatives indicate hesitance of financing the global expansion of Slovak firms by the domestic banking system. This is true of even larger SMEs, with adequate access to bank funding for domestic projects. Foreign capital expansion would not only make the Slovak economy more integrated, but would also contribute to faster upgrading of management practices, create a strong competition- and productivity-enhancing impulse, and stimulate R&D in the Slovak Republic. Additionally, it could also make the Slovak economy more inclusive by reducing the large gap between Gross Domestic Product and Gross National Product, resulting from the currently large foreign ownership of Slovak industry.

Box 2: The Slovak Republic's homogenous economy

Over the last 10 years, the Slovak Republic's car production saw a five-fold increase. With over one million cars produced annually, the Slovak Republic became the global leader in car production per capita.²¹

There are three big car manufacturers in the country – Volkswagen, which opened its first factory in 1991, followed by PSA Peugeot Citroen and Kia Motors, which were established in 2003 and 2004, respectively. These three companies, together with tier 1 suppliers, employ about 80 thousand people, whereas directly and indirectly about 200 thousand people work in the automotive industry (8 per cent of the entire labour force). In 2015, the share of automotive production in total industrial production reached 44 per cent, or almost 12 per cent of GDP. These figures will increase further, as in 2018 Jaguar Land Rover will start production in its assembly plant in Nitra, with a capacity of 300 thousand cars per year.

While these automotive-related FDI inflows have constituted a significant factor in the country's income convergence with those of the Western Europeans, it made the economy very reliant on one industry, mainly in manufacturing.

Single industry-led growth can lead to economic catastrophe, such as the example of Detroit. Following its impressive automobile-driven growth of the 1950s and 1960s, Detroit started failing in competition with European and Japanese producers. Lack of innovation, and the tardy and inadequately response to the need to develop new fuel-saving technologies resulted in decreasing market shares. That became especially critical during the oil crisis of the 1970s and then even more severe during the latest financial crisis of 2008.

The Slovak Republic can avoid the Detroit scenario. While this small and open economy is highly dependent on the automotive industry there are also other country specialisations emerging, such as the electronics and IT sectors. Yet, is such a manufacturing-led development model sustainable without change? Not necessarily. In order to reach income levels of above 90 per cent of the EU-average, the Slovak Republic needs to refocus its manufacturing sector towards producing high-end value added products.

Car production in Slovak factories is among the most effective and environmentally-friendly worldwide. As a proof, the Volkswagen Bratislava plant was set apart as an example of a best performing factory in the entire Volkswagen group for two consecutive years. On one side, this high production efficiency is credited to large technology transfers and corporate government standards, which came with international investors. On the other, however, the

²¹ There were 191 cars per 1000 inhabitants produced in 2016, according to ZAP (Automotive Industry Association of the Slovak Republic).

Slovak Republic had been equipped with a skilled labour force, which was a heritage from its heavy engineering industry, mainly production for the needs of the Eastern Block armies.²²

Although Slovak skilled and still relatively cost-competitive labour has proved to be the key factor encouraging investors to open new car plants and expand production in the Slovak Republic, the country has already started to suffer from an insufficient amount of skilled workers. Despite the growing interest of employers in dual vocational education and training (VET), the new scheme, which entered into force in 2015, does not seem to be sufficiently attractive to young people or certain schools.²³ Efforts to increase awareness of the benefits of the dual VET among young people in compulsory education and their families remain deficient.

Another risk factor that constitutes a constraint for the Slovak Republic's competitiveness is shrinking demography and ageing. Given the expected automation of the manufacturing sector, shorter labour supply may coincide with higher labour productivity in industry. This, however, will require the right skills needed to operate and programme such robots.

So far, the Slovak Republic's high quality manufacturing does not generate high value added. At the onset of the first Volkswagen car production in the early 1990s, approximately 90 per cent of car components had to be imported from other countries. While nowadays this share is roughly 60 per cent, still almost all suppliers (tier 1 and 2) are headquartered abroad. Departments generating higher value added, such as research and development, design and financial services remain outside the Slovak Republic, where these products are only manufactured. At the same time, the locally established suppliers experience great difficulties in entering such multinational networks. In order to go beyond simple assembly, which generate relatively little value added, the Slovak Republic's car parts producers need to be innovative. This will not be possible to achieve without highly skilled engineers (tertiary education) and risk-friendly financing, such as through business angels and venture capital funds.

In order to improve the Slovak Republic's resilience long-term, the country's growth model needs to be restructured towards production of high-end value added goods. It does not necessarily mean that it should move away from the automotive industry as such. Far from it, the automotive sector constitutes a perfect demand on high quality intelligent components, which could be also designed and developed domestically. A well-designed education system reform as well as entrepreneur initiatives, such as the one in Košice, have the potential to break up the homogenous, manufacture-centred structure of the Slovak economy. Ultimately, the economy's high pace of convergence will be preserved.

3.2 Addressing regional differences will make the economy more inclusive and competitive.

Regional inequalities in the Slovak Republic are among the highest in the OECD and are increasing. There are low levels of economic growth, job creation and labour market participation in the eastern and central part of the country, combined with insufficient labour mobility to the west, in particular by low-skilled workers. Regional labour mobility is the lowest among OECD countries despite regional disparities in unemployment. Job shortages and lack of technological capacities in the central and eastern regions persist alongside skills

²² Vladimír Baláž (2013): <http://www.voxeurop.eu/en/content/article/4019471-how-avoid-becoming-detroit-europe>.

²³ EC 2016 country report: For the 2016/2017 school year, 293 companies signed up to the scheme, offering 2 763 apprenticeship places, but due to insufficient demand only 1,121 new contracts were signed, with 142 companies.

shortages in the Bratislava region. Slovak regional exclusion, apart from being a problem in its own right, is a source of concern on two fronts.

First, some regional disparities are not only a sign, but also a source, of further exclusion. Unemployment and labour inactivity propagates over generations. Uneven access to financial services hampers business development. Insufficient infrastructure limits investment. A weaker local economy limits labour market participation. It also limits private healthcare provisions, which would lead to worse health outcomes for the inhabitants.

Second, underutilised resources, particularly labour, in the east are sorely lacking in the more rapidly developing regions, weighing on the whole economy. Aging trends and public reluctance to accept migrant workers will make this issue more and more pressing.

The Slovak Republic's good performance on competitiveness is therefore blurred by a strong performance of the Bratislava region.

Since joining the EU in 2004, the Bratislava region has become one of the richest (in PPP terms) and competitive regions in the EU. The region has strongly benefitted from its close proximity to Austria, and the Vienna-Bratislava region has become one of the principal cross-points in Europe, an integral part of numerous sector networks.²⁴ In effect, the Bratislava region and some other Western regions of the Slovak Republic have attracted large amounts of investment, which have generated skilled jobs and income growth.

At the same time, the competitiveness of other regions is significantly lagging behind. This difference can be demonstrated by several statistics. One of the measures of a country's position in global value chains is the share of medium and high technology product exports as a share of total product exports.²⁵ While in Bratislava this share is high (84 per cent) it is much lower in Western (57 per cent), Central (48 per cent) and Eastern (40 per cent) parts of the country.²⁶ Moreover, employment in knowledge-intensive sectors is above 8 per cent in Bratislava and only around 3 per cent elsewhere. While patent activity is below the EU average everywhere in the Slovak Republic, it is virtually non-existent beyond the capital. In 2016, the Bratislava region had 21 patent applications per million inhabitants; all remaining regions had less than 7 (much below the EU average of 93). This is related to the fact that Bratislava spends 1.6 per cent of GDP on R&D, while other regions spend below 0.7 per cent.

In effect, Slovak regions are at three difference stages competitiveness. First, the knowledge economy-driven Bratislava region has already reached the standard of EU developed regions. Second, in Western Slovakia (beyond Bratislava) competitiveness lies within the export industry, utilizing high-tech manufactories (automotive) and partially commercial services. Third, Eastern Slovakia's competitiveness is constrained by absence of FDI, and weak infrastructure.²⁷ These persistent regional differences are even more puzzling

“Social policy can only work when it is applied into labour market. You need kindergartens, secondary schools and vocational education. Public works are probably more valuable in the long run for the children than for the parents working“

“There is no value to have many highways linking East Slovakia with Bratislava region, except for the core infrastructure, which is necessary.”

“National development plans should be built with regard to the regions' potential. You need to find clusters, such as the IT Valley in Košice. If you identify these, you can expect business opportunities there”

Senior public sector economists

²⁴ <http://www3.ekf.tuke.sk/cers/cers2007/PDF/Jasso.pdf>.

²⁵ This indicators measures the ability to commercialise the results of research and development (R&D).

²⁶ Study of the European Commission, DG GROW (2016).

²⁷ Pavol Korec (2014), Lagging regions of the Slovak Republic in the context of their competitiveness.

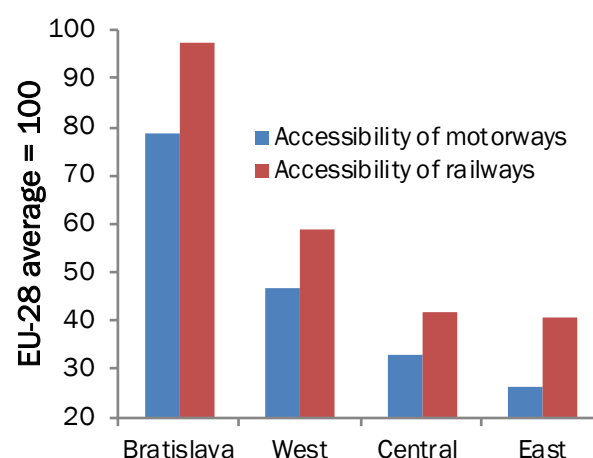
considering the small size of the country. Efforts to promote competitiveness therefore have to take into account these regional differences. While in the Western regions the focus should be on supporting frontier innovation, in the Eastern part, efforts should be put on building skills, the attraction of FDI and on the incentives for the adoption of new technologies in firms, for instance by providing innovation and technological vouchers and support to local clusters.

Reducing the differences in skills could enhance competitiveness across regions. More than a third of population between the ages of 25 and 64 have higher education in the Bratislava region; this share drops below 18 per cent in all remaining regions.²⁸ Similarly, above 7 per cent of adults aged 25-64 participate in education and training in Bratislava; outside this region, this share drops to below 3 per cent, well below the EU average of 11 per cent. Moreover differences are in specific education relevant for competitiveness. For instance in 2014, the vast majority (65 per cent) of Slovak Republic's 9,000 ICT students studied in Bratislava and neighbouring regions (Nitra, Trnava and Komarno). Both Central and Eastern parts of the Slovak Republic had only 15 per cent of total ICT students each.²⁹ In lagging regions, the school-to-work transition is also weak and vocational education does not provide adequate skills.

There are persisting gaps in labour market participation, especially among the Roma population. A tighter labour market incentivises employers to participate in private sector-based training initiatives while activating potential employees. For the long-term inactive families, however, active labour market policies, as well as inclusive early childhood education, are needed. Enhancing school-to-job progression with a focus on formal employment, supporting the private sector in introducing equal employment opportunities and practices, and involving local communities, both in planning and financially, are crucial to the lasting success of all such policies.³⁰ The importance of the broad approach is well understood by the Slovak government, with the government plenipotentiary for the less developed regions putting particular attention on micro-level policies.

Policy centred around focal points of growth looks to be the most effective way to boost regional convergence in income, opportunities and competitiveness. One such growth area is the whole west of the country. Trying to replicate its success very broadly in the east via a sweeping infrastructure investment push would not, however, be cost-effective. Integrating with neighbouring, and relatively poor, Western Ukraine will have only a limited impact. Finally, long-distance mobility to the Bratislava region is unlikely remove inclusion issues, as the growing differences in costs of living and limited rental market prevent low-skilled internal migration. Policies promoting personal income equality via broadly defined commuting to better connected and already well

Figure 3.2.1 Regional accessibility of motorways and railways



Source: Spiekermann & Wegener, 2016.

²⁸ Eurostat, 2013.

²⁹ Jana Liptáková, Lack of experts challenges ICT sector 22. Feb 2017.

³⁰ EBRD (2017), Economic Inclusion Strategy.

developing local centres are likely to be more effective. Selection of such focal growth points should be based on trends already in place, such as the IT valley and steel industry in Košice. Investment in hospitals and secondary education in such centres might also help to address quality issues within a limited budget, while stimulating youth mobility early on.

Competitiveness could benefit from better transport infrastructure to stimulate business and labour mobility. The estimated costs of reaching other regions in the EU from eastern Slovakia are among the highest in the EU. Spiekermann and Wegener (2016) measure access to motorway and railways with a reference point 100 for EU28 average (see Figure 3.2.1). The Bratislava region scores well with 79 (motorways) and 97 (railways). Western Slovakia performs slightly better (47 and 59) than Central Slovakia (33 and 42). The eastern part of the country has the largest gaps in infrastructure with the lowest access to motorways (26) and railways (41) of all Slovak regions, dramatically below the EU28 average (100). Market-based solutions to close the infrastructure gaps in the east are difficult to structure given limited traffic flows. Blended financing solutions joining grant, public participation, and market elements would help in ensuring the effectiveness of infrastructure spending. As argued above, efforts should concentrate on building the backbone national infrastructure, coupled with investment around regional hubs. Road, rail rolling stock and “focal cities” designed to cope with commuting workers would contribute to a balanced growth of the Slovak economy.

To support permanent labour relocation, the government has recently liberalised conditions to obtain a relocation subsidy. An unemployed person who decides to move more than 70 km from their permanent residency for work is eligible for a state subsidy.³¹ Moreover, in 2015 a law to support the least developed districts came into force. Support is based on the cooperation between public authorities, employers and civil society. Employers are exempt from paying any social and unemployment insurance over the first year of employment. Flats for rent market might also need to be supported in regional industrial hubs, such as Nitra, if active efforts to relocate labour are to succeed. Relocation policies might deepen regional disparities owing to productivity differences, but they do contribute to higher productivity and income growth overall.

3.3 Rapid aging requires steps to increase female labour participation, and improvements in healthcare are needed to promote resilience, inclusivity and competitiveness of the economy.

The Slovak Republic population is rapidly aging. Low fertility rates coupled with migration will result in the fastest increase of the old-age dependency ratio in the EU.³² By 2060, the number of workers per pensioner will decline from five to less than two while the average age will reach 50 years.

Aging will put a strain on public finances. This will come from pension spending and healthcare, including long-term care. Even though the retirement age is now linked with life expectancy, aging of the voting population will increasingly put pressure on the government to increase old age pensions.

The rapidly declining working-age population is also a threat to the Slovak Republic’s development model. The gradual evolution of the economy upwards on the global value added ladder will be far more challenging, if it is rushed prematurely, because of the acute shortage of labour and loss of competitiveness of traditional industries. The IMF estimates

³¹ As of 2016, the subsidy is calculated as 80 per cent of the costs of living, up to €250 for the first six months and dropping to €125 for a further six months.

³² 2015 EU Commission Aging Report.

that aging will shave 0.3 points from TFP in the coming two decades. To smooth the process, allowing more time for adjustment, further labour participation rate increases should compensate for the loss of working-age population.

There have been a number of initiatives to address these problems. These include measures addressing regional disparities, a new personal bankruptcy law, a sweeping action plan on long-term unemployed, and a reduction of the tax wedge for the lowest earners. Two major gaps that will have an increasingly detrimental effect on the Slovak Republic's competitiveness are low female participation in the labour market and rising costs of healthcare.

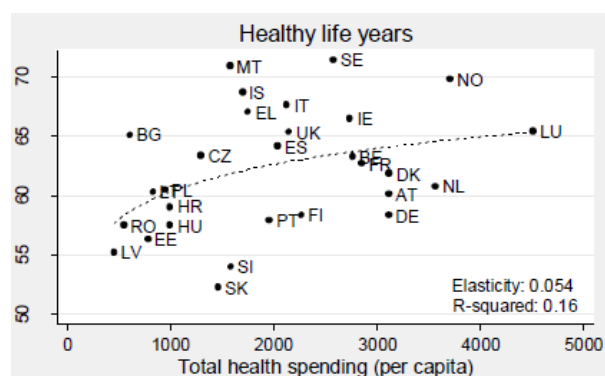
Almost the entire employment rate gap between the Slovak Republic and the EU average can be attributed to low female employment (60.3 per cent vs EU average of 64.2 per cent). The male-female employment gap is especially striking for the age group 20-40. It is linked with more than 50 per cent drop in likelihood of being employed for women with a child aged under 3 years. This is among the worst results in the EU.³³ The employment gap is 20 per cent for women with children aged 3-6 years, again (together with the UK and Ireland) the worst in the EU. A higher prevalence of flexible work arrangements and further investment in pre-school education, preferably including the private sector, NGO and local community participation, would help to unlock this underutilised potential of the Slovak economy.

The healthcare sector is problematic both as a source of age-related costs and as an impediment to labour market activity. Bad health outcomes limit labour market activity, putting unnecessary pressure on the economy and increasing inequality. At the same time, improving the efficiency of healthcare is paramount, given the growing needs and limited public finance space. The EU Commission projects age-related healthcare spending to increase to 2 per cent of GDP in the long run. Healthcare spending per capita is low compared to the EU average, but higher than in most New EU Member States.

The cost-effectiveness of healthcare spending is very low, despite some progress. Healthy life expectancy grew 2 years since 2008, but remains six years below the EU average and much below CEB peers. Estimates of potential gains in health outcomes as a result of the Slovak health system moving towards the efficiency frontier range between 14 and 17 years.³⁴ Efficiency improvement needs are well recognised by the government. MinFin's *Value for Money* project resulting in targeted savings of over €150 million in 2017. Price referencing, procurement changes to diagnostics and specialised treatments, introduction of out-of-pocket fees to limit recourse to emergency care were introduced recently.

Aging will strain the supply of healthcare on top of increasing demand. The current shortage of GPs and nurses will become even more acute as many retire in the coming years.

Figure 3.3.1 Health spending and healthy life expectancy



Source: Heijink et al (2015), Comparative efficiency of health systems...

³³ Hungary, Czech Republic and Estonia exhibit even larger employment gaps, according to the EU LFS.

³⁴ Medeiros, João and Christoph Schwierz (2015), Efficiency estimates of health care systems, Economic Papers 549, EU Commission.

Private sector healthcare is present and active in the Slovak Republic and its importance will grow. However, preventing regional and income segmentation will hinge on reform of how public healthcare spending is put to work. Implementation of the diagnosis-related group (DRG) system of hospital remuneration is a step in the right direction, but more work is needed.³⁵ Given the public finance constraints, the use of PPPs in financing outpatient infrastructure (where the gaps are greatest) could allow for greater leverage of public funds.

³⁵ 2016 Joint Report on Health Care and Long-Term Care Systems & Fiscal Sustainability by DG Ecfm and EPC

Annex 1: Qualities of sustainable market economy

Competitive (Average transition quality score: 6.29)

The Slovak Republic's economy is among the most competitive CoO. The country has benefitted from large FDI inflows, which supported the catch-up with the more advanced EU countries. Many features of a competitive economy in place; still, some challenges remain. The economy remains constrained by limited firms' ability to generate value added and the lack of adequate skills and infrastructure in its Eastern regions.

Market structures and institutions:

- **In the Slovak Republic, the general business environment is good.** The Slovak Republic took 33rd place (out of 190 economies) in the World Bank's Doing Business 2017 ratings. The country scores 1st globally in "trading across borders" and 7th in "registering a property". "Protecting minority investors" (87th) and "dealing with construction permits" (103rd) remain the key
- **Competitors' practices in the informal sector** were identified in the latest BEEPS as the top obstacle facing Slovak firms. The share of firms that reported to compete against informal firms increased slightly, from 40 per cent in BEEPS IV to 43 per cent in BEEPS V, exceeding the central Europe and the Baltic states (CEB) average of 35 per cent
- **Despite large liquidity in the banking sector, access to finance** remains an important issue, particularly for SMEs, start-ups and innovative firms. Firms now rely less on internal funding (47% in BEEPS V compared with 59% in BEEPS IV) and more on suppliers/customers in financing fixed-assets purchases. The amount of seed and venture capital as well as equity in the economy is limited.

31st in ease of doing business 2017 among 190 countries (World Bank)

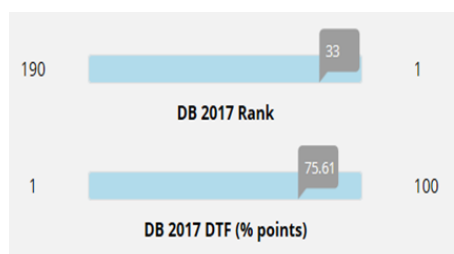
13th in economic complexity out of 124 economies (Harvard CID, 2014)

Ranked in the **first decile** among EBRD CoOs on Competitive ATC (13 indicators)

Capacity to create value-added:

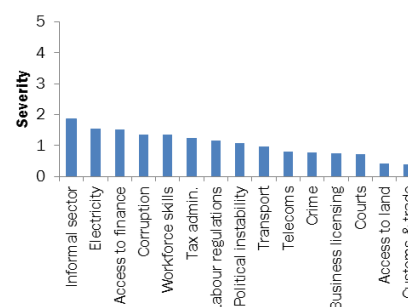
- **Workforce skills remain a concern.** The Slovak Republic faces high structural unemployment, particularly among the young and the low-skilled workers. Tertiary educational outcomes as well as vocational training do not match the needs of the labour market.
- **Limited spending on R&D constrains the ability of Slovak firms to generate value added.** Spending on R&D by the business sector is low (0.3 per cent of GDP, compared with 1.6 per cent in OECD). Low R&D expenditure and innovation activity in the business sector constrain the capacity to adopt new technology and hamper productivity growth.

World Bank Doing Business 2017 rank



Source: WB 2017.

Business obstacles



Source: BEEPS V.

Well-governed (Average transition quality score: 4.98)

Further progress towards improving governance in the Slovak Republic is required, as recognised by the authorities, making this one of the key reform priorities. Private sector activity is hindered by persistent barriers such as fast-changing regulations, complex bureaucratic procedures, weak insolvency regulations, ineffective justice system or corruption. The low level of cross-ministerial cooperation hampers strategic planning and effective policy delivery.

- **Corruption** remains a serious challenge. Control mechanisms and the enforcement of anti-corruption rules appear weak. Policy initiatives on whistleblowing and letterbox companies have only had a marginal impact. In Transparency International’s Corruption perception index 2016 the Slovak Republic was at 54th place.
- A new **Civil Service Act**, adopted in 2017 should help set standards and reduce political influence in public administration. **Public procurement** has been subject to significant share of non-competitive tendering. According to the European Commission data in 2016 a single bidder has participated in 31 per cent of public tenders, and in 7 per cent of cases the Slovak contracting authorities awarded a contract without a tender. According to a Eurobarometer survey, 54 per cent of Slovak managers that took part in a tendering process felt that corruption has prevented their company from winning the contract.
- The Slovak Republic remains one of the lowest-ranked EU Member States in terms of perceived **independence of judiciary**. While a domestic survey, carried out in 2016, showed a modest improvement of public trust in the justice system, lengthy processes of suitability screening led to a worrying backstop in filling vacate positions in the Slovak Constitutional court (3 unfilled positions in the 13-member plenum).
- To ensure better spending efficiency the Ministry of Finance launched a **Value for Money project** in a number of areas, including healthcare, IT and transport.

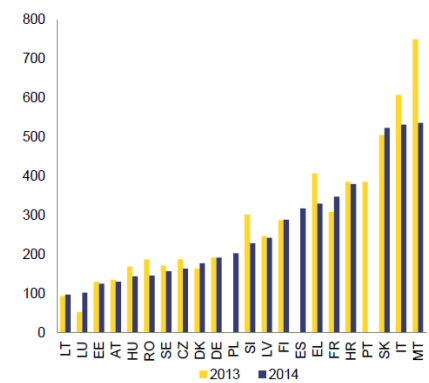
102nd in the quality of institutions
79th in property rights protection,
54th in intellectual property protection,
120th in judicial independence
131th in the burden of government regulation,
84th in the transparency of government policy making
89th in irregular payments and bribes
122nd on the diversion of public funds out of 138 countries
 Source: World Economic Forum 2016/17

Worldwide Governance Indicators

Indicator	Country	Year	Percentile Rank (0 to 100)
Voice and Accountability	High income: OECD	2015	~85
	Slovak Republic	2015	~75
Political Stability and Absence of Violence/Terrorism	High income: OECD	2015	~80
	Slovak Republic	2015	~75
Government Effectiveness	High income: OECD	2015	~85
	Slovak Republic	2015	~75
Regulatory Quality	High income: OECD	2015	~85
	Slovak Republic	2015	~75
Rule of Law	High income: OECD	2015	~85
	Slovak Republic	2015	~75
Control of Corruption	High income: OECD	2015	~85
	Slovak Republic	2015	~75

Source: WB Governance Indicators.

Time needed to resolve litigious civil and commercial cases (first instance, in days)



Source: European Commission.

Resilient (Average transition quality score: 7.84)

As with regional peers, the banking sector is the primary source of financing. The Slovak banking sector is large (almost 90 per cent of GDP in 2016) and well capitalized (aggregate Tier 1 capital adequacy ratio of 17.3 per cent). The sector is dominated by banks from Western Europe (96 per cent of foreign ownership by assets). As part of the integration of the Euro Area, the Single Supervisory Mechanism became operational in 2014, with the majority of the banking sector (70 per cent by assets) directly supervised by the European Central Bank (ECB). Lending is not leveraged and is financed by local deposits, with a loan to deposit ratio of about 96 per cent in 2016.

- The Slovak Republic's economy is very exposed to a single industry - car manufacturing.** While automotive-related FDI inflows have constituted a significant factor in the country's income convergence with the EU-average, it made the economy vulnerable to external shocks. In 2015, the share of automotive production in total industrial production reached almost 44 per cent (33 per cent directly and 11 per cent from other sectors).
- The Slovak Republic's economy relies heavily on exports, including services.** Given the concentrated industrial structure, GDP is heavily exposed to fluctuations in output elsewhere in the EU, and in world trade more broadly.
- Non-performing loans (NPLs) dropped to 4.4 per cent per cent of gross loans at end-2016, which is a ratio among the three smallest in EBRD CoOs.** Since the crisis, they are higher for corporates than in the retail sector. For the last few years, new lending has focused primarily on the retail side. Demand for loans from large corporates is low as they are frequently foreign-owned and able to rely on group financing.
- Non-banking access to finance is still limited.** Given the difficulties local growth-oriented SMEs face in accessing debt finance despite a fairly liquid banking sector, a wider use of alternative sources of finance, such as covered bonds, private equity and capital markets, could support these companies' expansion into both domestic and international markets. Innovation and start-up financing is also limited.

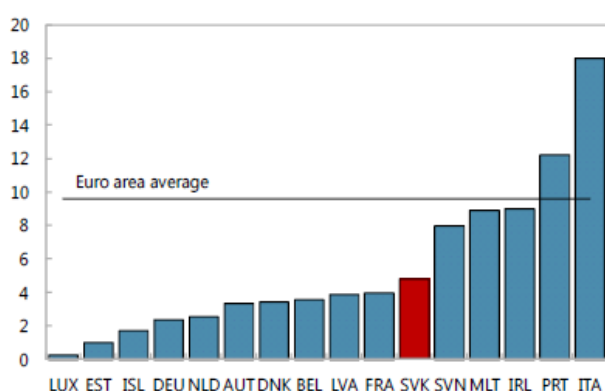
Gross external debt reached **85 per cent of GDP** in 2016

Share of automotive production in total manufacturing value reaches **almost 33 per cent and 13 per cent** of manufacturing employment

Energy dependence is above EU-average, with about **60 per cent of energy needs** being imported from abroad.

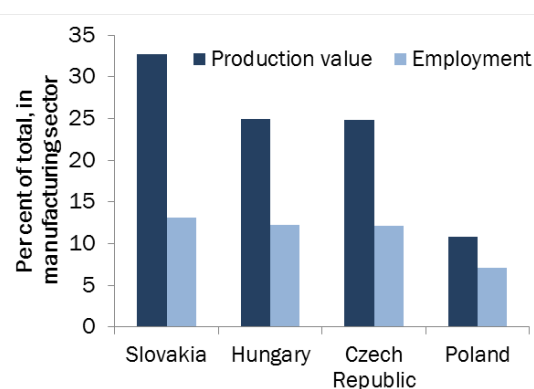
12 per cent of GDP is generated by automotive industry

Non-performing loans, per cent of total loans



Source: IMF Financial Soundness Indicators.

Share of production value and employment in manufacturing total



Source: Eurostat.

Integrated (Average transition quality score: 7.85)

The Slovak Republic, an EU member state since 2004 and a Eurozone member since 2009, is well integrated in the region. It has evolved into a dynamic export-oriented economy, benefiting from strong foreign direct investments, which have facilitated the transfer of know-how and technology. While the road infrastructure in western parts of the Slovak Republic enables smooth transport between these regions and other EU countries, the lack of suitable infrastructure in the eastern part of the Slovak Republic effectively hinders investment into that region, also effectively preventing their integration into global value chains and preserving regional divergences.

- Upgrading transport infrastructure would be beneficial for removing growth bottlenecks in the capital region by reducing obstacles to job creation in less developed regions and increasing inter-regional mobility.** The estimated costs of reaching other regions in the EU from eastern the Slovak Republic are among the highest in the EU.
- The Slovak Republic's inward FDI and trade integration is among the highest in the region.** In 2015, the inward FDI stock exceeded 55 per cent, the third highest in the CEB region. In contrast, outward FDI remains subdued, below 3 per cent of GDP, the lowest such rate in the CEB region. This is partly caused by difficulties of expanding firms in securing financing. Export of goods represents about 84 per cent of GDP, with its global market share growing. Since 1993, the share of exports of goods in world exports has been growing by an average rate of above 5 per annually.
- In order to enhance energy security, further diversification of energy sources will be required.** Almost 96 per cent of gas needs are satisfied through imports from Russia. Further investments in alternative renewable energy sources as well as cross-border transmission pipelines are required to reduce this dependency. Among other projects, an electricity interconnector with Hungary is planned, as well as a gas interconnector with Poland. The Easting gas pipeline to Bulgaria and Romania is also on the government's agenda.
- Broadband access is widely spread.** In 2015, more than 77 per cent of the population uses the internet, whereas in Estonia and the UK such rates are around 90 per cent, respectively. Mainly wireless broadband is used (75.5 subscribers per 1000 inhabitants) while the fixed-line internet broadband less so (only 23.8 subscribers per 1000 inhabitants).

Shared 1st place in Trading Across Borders (Doing Business 2016)

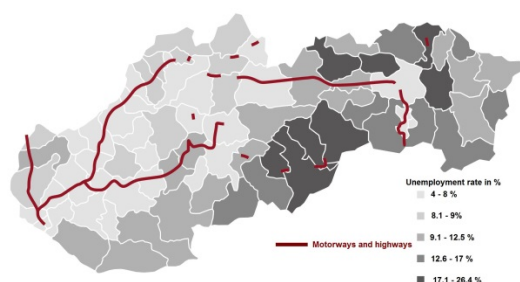
Inward FDI stock exceeded **55 per cent of GDP** in 2015, whereas, at the same time, outward FDI was **less than 3 per cent of GDP**

The value of exports (goods and services) reached **100 per cent of GDP** in 2016

77 per cent of inhabitants have the broadband internet access

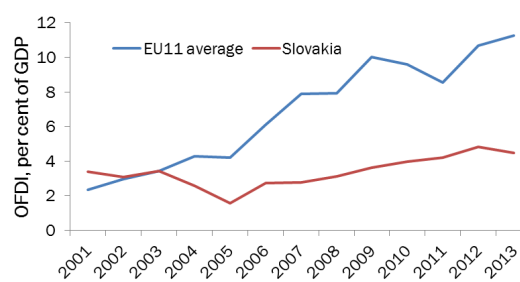
Road density (at **9 km/km²**) is below the Slovak Republic's peers (Hungary: 22 km/km², Poland (13 km/km²))

Road network coverage and unemployment



Source: EC 2016.

Outward FDI stock



Source: UNCTAD.

Green (Average transition quality score: 7.05)

Despite a significant reduction of the final energy consumption by almost 40 per cent since the EU accession in 2004, energy and carbon intensity in the Slovak Republic still remains among the highest in the EU. Even though being ranked as the greenest economy among all EBRD CoOs, the adaptation sub-indicator of the Green SMEI is only the 7th best among all 37 economies.

- **Municipal waste management remains problematic.** The landfilling rate of municipal waste, at 68 per cent in 2015, remains significantly above the EU-average levels of 25 per cent. The recycling rate stands only at 15 per cent, whereas the EU average is 45 per cent. A new law on waste management came into force in January 2016, but reaching the 50 per cent recycling target by 2020 remains challenging.
- **The legal and institutional framework for supporting sustainable energy projects is not yet fully adequate.** Even though the Slovak Republic is currently on track to achieve its national renewable energy target of 14 per cent by 2020 set under the EU's Renewable Energy Directive, the share of energy from renewable sources of 12.9 per cent in 2015 represents the second lowest value among the CEB countries. Similarly in the transport sector, only 5.3 per cent of the energy used comes from green sources.
- **The residential sector has some of the largest energy efficiency needs,** with domestic heating accounting for about 80 per cent of the total energy consumption of the sector.
- **Air pollution remains one of the main environmental challenges.** Despite significant reduction in several types of air pollutants, largely driven by structural changes in industry since the beginning of transition, exposure to excessive air pollution of particulate matter PM2.5 in the urban areas remains the third highest in the EU.
- **The Slovak Republic enjoys abundant water resources.** However, effective management of these resources remains a challenge, particularly regarding floods which have imposed significant costs to the economy in the recent past. This will need to be addressed through climate resilient investments, possibly supported with labour market activation measures.

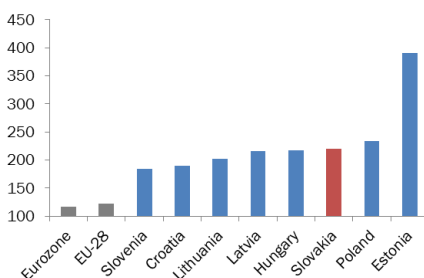
In 2014, greenhouse gas emissions were by **45 per cent** lower than in 1990.

Almost **20 per cent** the urban population is exposed to excessive air pollution of particulate matter PM2.5, the third highest exposure in the EU.

Recycling rate of municipal waste was only **14.9 per cent** in 2015, the thirteenth lowest in the EU.

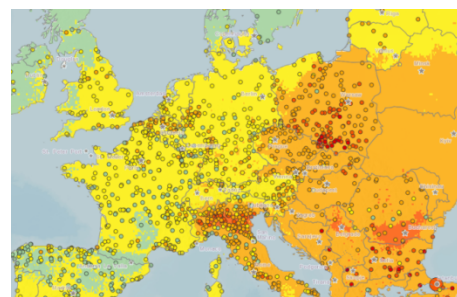
Share of energy from renewable sources was **12.9 per cent** in 2015, below EU-average of 16.7 per cent.

Gross consumption of energy divided by GDP



Source: Eurostat.

Ambient air pollution, PM2.5 concentration



Source: World Health Organisation.

Inclusive (Average transition quality score: 5.73)

Substantial regional disparities persist. According to Eurostat, the employment rate in predominantly urban regions is 70.9 per cent, higher than that of rural regions at 60.1 per cent. The Slovak labour market has one of the lowest job turnover rates in the EU, and mobility is hampered by limited transport infrastructure as well as relatively high (adjusted for disposable income) travel costs.

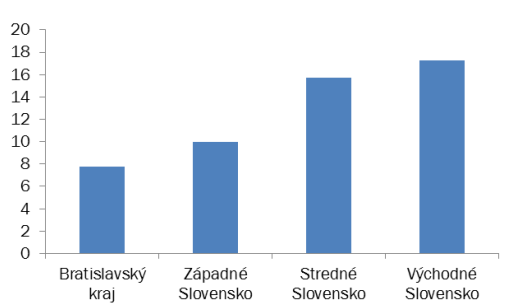
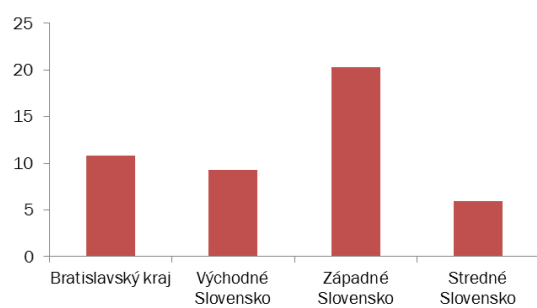
- **Even though the Slovak Republic's aggregate income per capita increased to 77 per cent (in purchasing power adjusted terms) of the EU average in 2014, significant regional disparities persist**, which remain among the highest in Europe and the 2nd highest among all OECD countries (after Italy). Whereas income per capita in and around Bratislava equals that of London, at 186 per cent of EU average, it reaches only 53 per cent in eastern parts of the country, one of the lowest levels in the EU. The combination of low job creation in the less developed regions and insufficient labour mobility westward, particularly of low-skilled workers, are the key factors behind this divergence. Uneven access to finance remains a major constraint on private sector growth in remote regions.
- **The quality of the Slovak Republic's education system is poor.** The Slovak Republic ranks 35th out of 188 countries in the 2015 UNDP Human Development Index (HDI). Educational attainment is relatively high, with average years of schooling at 12.2 years and only 0.7 per cent with no schooling. Yet, household perception of the quality of the Slovak Republic's education system remains low and the country performed below the top 50 per cent in the 2012 Programme for International Student Assessment (PISA). Public expenditure on education remains below the EU average, with an expenditure-to-GDP ratio at 3.9 per cent.
- **Roma communities, which are primarily concentrated in the Eastern parts of the country, face substantial and disproportionate barriers to accessing economic opportunities.** The employment rates of Roma are among the lowest in the EU (35 per cent). The situation of Roma youth is especially alarming with 43 per cent not in education, employment or training, which is around four times the national average.

Male and female labour force participation rates stand at **69 and 56 per cent** compared to 71 and 60 per cent in the EU in 2015

More than **13.3 per cent** of youth population (15 and 24) living in eastern part of the Slovak Republic are neither in employment nor in education compared to **8.6 per cent** in Bratislava (2016)

20 per cent of companies in western parts of the Slovak Republic consider access to finance as a major or severe obstacle to current operation (**6 per cent** in Central the Slovak Republic)

Gender pay gap reaches almost **20 per cent**, above the EU-28 average of 16 per cent

Young people neither in employment nor in education**Access to finance is a major or severe obstacle to current operations**

Source: Eurostat.

Characterising qualities of sustainable market economy

The Assessment of Transition Qualities (ATQs) scores are based on a distance to frontier approach, with best performing countries used as benchmark. Resulting scores are rescaled to 1 – 10, where 10 represents frontier. The following characteristics under each of the qualities were considered.

	Components	Sub-components
Competitive	Market structure that supports competition and incentives for sound decision making	Openness
		Dynamic structures
		Institutions
		Business skills
	Capacity to add value and innovate	Value chains
		Knowledge / ICT
		ICT infrastructure
		Infrastructure
Well-governed	National-level governance	Human capital
		Finance
		Quality of public governance
	Corporate-level governance	Integrity and control of corruption
		Rule of law
		Corporate governance frameworks and practices
		Integrity and other governance-related business standards and practices
Green	Climate Change Mitigation	Physical indicators
		Structural indicators
	Climate Change Adaptation	Physical indicators
		Structural indicators
	Other environmental areas	Physical indicators
		Structural indicators
Inclusive	Gender	Legal regulations and social norms
		Access to health services
		Education and training
		Labour policy
		Labour practices
		Employment and business
	Youth	Access to finance
		Labour market structure
		Youth employment
		Quantity of education
		Quality of education
		Skills mismatch
	Regions	Financial inclusion
		Institutions
		Access to services
		Labour markets
		Education
Resilient	Financial stability	Financial sector
	Energy sector resilience	Liberalisation & market liquidity
		System connectivity
		Regulation and legal framework
Integrated	Trade (external dimension)	Trade
		FDI
		Balance of payments openness
	Infrastructure (internal dimension)	Cross-border infrastructure
		Domestic infrastructure quality
		Energy
	ICT	