Chapter 7.

Economic Integration and Interdependence in Slovakia

An Automotive Powerhouse with an Uncertain Future

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The Conditions at the Beginning of the Integration Process

The main driver of high economic growth in Slovakia since gaining independence in 1993 has been foreign direct investment. Slovakia currently ranks number one globally in per-capita car production. A skilled labour force, low wages and tax rates, membership of the euro area, and a favourable geographic position have been the main reasons behind the Foreign Direct Investments (FDI) inflows. The weak points of the Slovak model are a negative net investment position, a negative balance of primary income, a high degree of export dependence, and low R&D intensity. Demographic prospects linked to ageing pose a long-term challenge to prosperity. Investing into childcare, science and education are necessary to direct Slovakia towards a more balanced and sustainable growth.

Slovakia became independent in 1993. The Association Agreement with the EU was signed in the same year and came into effect in 1995 after having been ratified by all member states. Full membership of the EU was accomplished in 2004, the adoption of the euro followed in 2009. Since 2001, Slovakia has also been a member of the OECD.

Slovakia was still part of the Czechoslovak Socialist Republic when the Velvet Revolution swept the Communist Party from power in 1989. Soon after the events of November 1989, when mass demonstrations and a general strike paralysed the power of the central apparatus, differences in priorities between the more prosperous, urbanised Czech lands and the

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poorer, more rural Slovak part of the common state became apparent. A drive for more autonomy developed in Slovakia, which ultimately led to the peaceful dissolution of Czechoslovakia and the formation of two independent states in 1993. In the field of economic policy, the differences materialised in a notably pro-market approach in Czechia, and a more nationalist approach in Slovakia.

The newly formed Slovak Republic started its path towards European integration in 1993 at a disadvantage to its western neighbour. The figures in Table 1 show that Slovakia trailed its western counterpart from the start in virtually every key economic indicator. Initially, confidence in the newly formed Slovak state was low; the Czech Republic attracted considerably higher levels of foreign direct investment per capita not just in the initial phase, but practically throughout the entire 1990s.

Table 1.

Economic conditions of the newly independent Czech and Slovak states in 1993

Indicators	Czech Republic	Slovakia
HDI score	0.872 (37.)	0.864 (41.)
GDP growth (%)	–0.9	–4.1
GDP (billions of USD)	124.6	39.6
GDP per capita (USD)	12,062	7,430
Inflation (%)	20.8	23.2
Unemployment rate (%)	3.5	14.4
Export/import ratio	1.027	0.86
FDI (billions of USD)	2,7	0.6
FDI (USD per capita)	261	112
Public finance surplus/deficit (% of GDP)	0.1	–6.8

Source: OECD s. a.; NBS[26] s. a.a

The relative position of the Slovak economy at the start of the integration process can further be demonstrated by GDP per capita in purchasing power parity in relation to Europe. According to Eurostat, GDP per capita (PPP) in Slovakia in 1995 reached 48% of the European average (current EU28 composition) and around a third of Western European levels. Slovak GDP per capita in 1995 was lower than that of the Czech Republic, Slovenia

[26] NBS: Národná Banka Slovenska (en – National Bank of Slovakia).

and Hungary, but higher than most Central and Eastern European (CEE) countries. The relative position of Slovakia in economic performance has seen much improvement due to a period of rapid economic growth following EU accession (Figure 1).

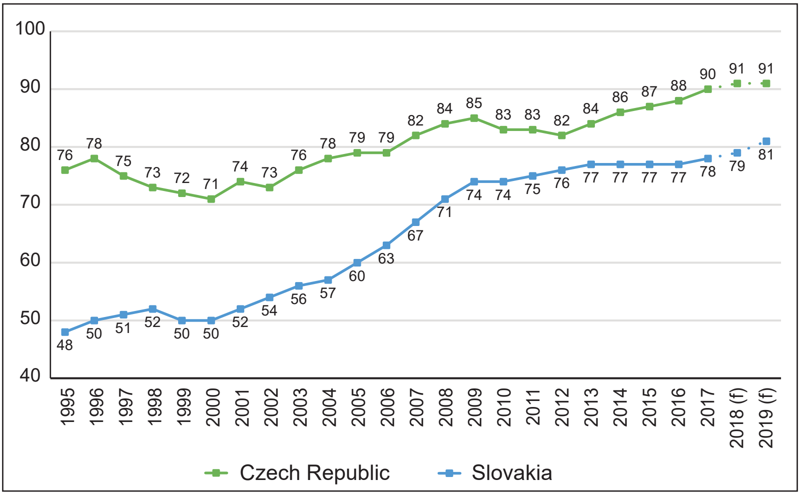


Figure 1.
GDP per capita in PPP (% of EU28 level)

Source: EC[27] s. a.

Interdependence and Economic Penetration

Foreign trade proved to be a lifeline for Slovakia and played an important role in turning around the fortunes of the Slovak economy in the upcoming years. Inside the Czechoslovak federation, Slovakia supplied the more advanced Czech economy with semi-finished goods, and export from Czechoslovakia to EU countries was rapidly rising from 1990 onwards. Therefore, Slovakia's export was already geographically oriented towards the west when the country achieved independence (Figure 2).

[27] European Commission.

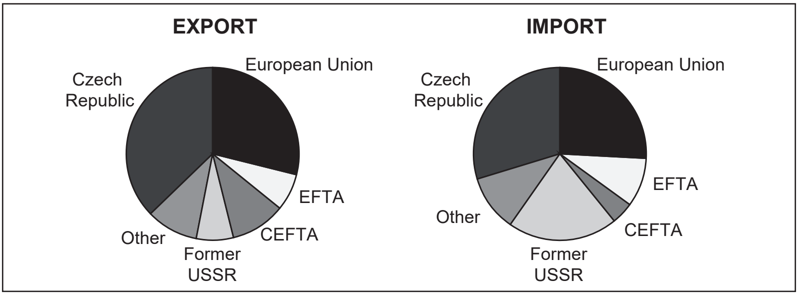


Figure 2.
Territorial structure of the Slovak foreign trade in 1994

Source: NBS s. a.a

Initially, the Czech Republic was the dominant trading partner; it formed a third of Slovakia's export and more than a quarter of its imports. On the import side, the Russian Federation was a major supplier of oil and natural gas and an important overall import partner with roughly a fifth of total Slovak imports. Second in importance after the Czech Republic were EU countries both in exports and imports; the strong growth in trade to the EU meant that they soon displaced the Czech Republic as the foremost trading partner. To be precise, Germany became the dominant trading partner and displaced the Czech Republic to second place, followed by Poland, Hungary, Austria, France, the United Kingdom, Italy and other EU economies (Table 2).

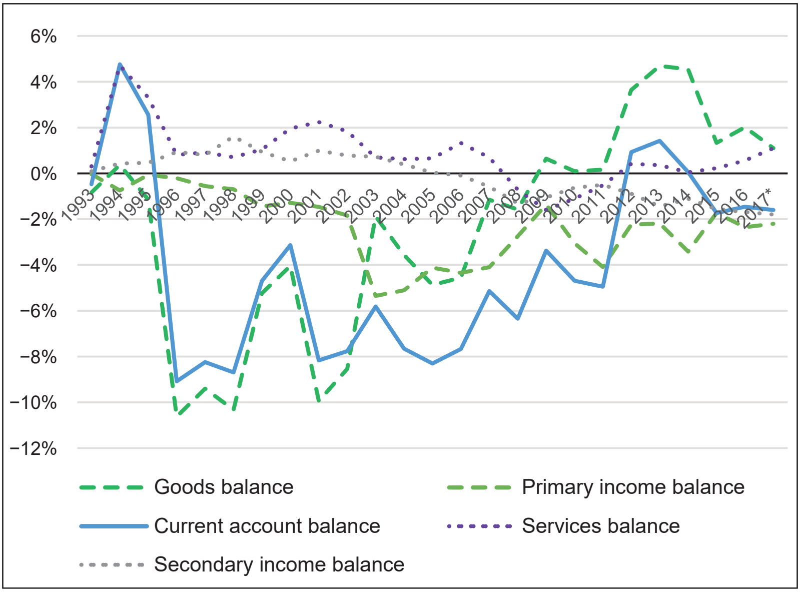
Table 2.
Largest trading partners of Slovakia in 2017 by share on total trade (%)

Exports		**Imports**	
EU	85.4%	EU	66.9%
Germany	20.6%	Germany	16.5%
Czech Republic	11.5%	Czech Republic	10.2%
Poland	7.6%	China	7.3%
France	6.3%	South Korea	5.7%
United Kingdom	6.0%	Poland	5.2%
Italy	6.0%	Hungary	4.8%
Hungary	6.0%	Russia	4.7%
Austria	6.0%	Italy	3.2%
Spain	2.9%	France	3.2%
United States	2.8%	Austria	2.8%

Exports		Imports	
Netherlands	2.6%	United Kingdom	2.5%
Russia	2.0%	Spain	1.5%
China	1.6%	United States	1.1%

Source: ŠÚ SR[28] s. a.

In the initial years after gaining independence, there was a decline in the importance of exports to the economy. The reason for this was that the Mečiar Government attempted to stimulate economic growth through public expenditure projects while retaining domestic and state ownership of large enterprises, which worsened the current account balance, while an unfavourable business climate hampered FDI inflow and thus exports grew more slowly than GDP (Figure 3).



*2017—only 3rd quarter data.

Figure 3.

Current account balance, Slovak republic (% of GDP)

Source: NBS s. a.b

[28] ŠÚ SR: Štatistický úrad Slovenskej republiky (en – Statistical Office of the Slovak Republic).

This trend was only reversed after 1998, which was brought about by a reorientation of the economic policy towards attracting FDI into export industries. Since then, Slovakia witnessed a dramatic increase in nominal export value, as well as a growing importance of exports to the overall economy (Figure 4). Throughout the 1990s, the share of exports destined to other EU countries (in today's composition) has been steadily increasing, and reached its apex in 2001 (90.6%). Since then, the share has been slowly declining; the share of EU exports in 2017 has reached 85.4%. On the import side, the European Union is also the dominant partner, but to a slightly lesser extent. In 2000, the share of Slovak imports from the EU was at 70.2%. The historic apex of this figure was in 2005, when it reached 77.8%; by 2017 it has somewhat decreased again to 66.9%. Thus we can say that the European Union remains the dominant trading partner for both exports and imports.

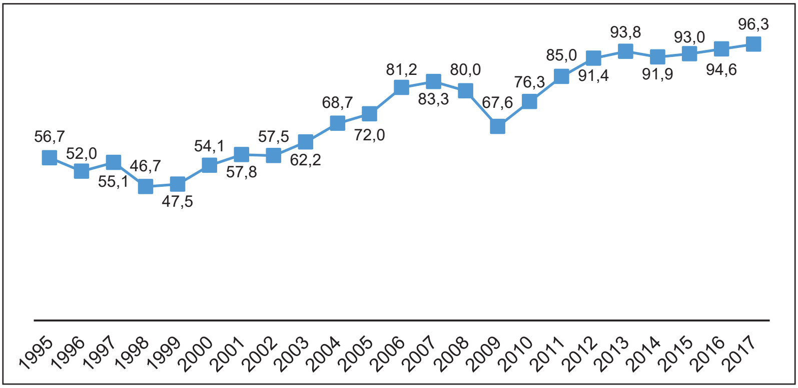


Figure 4.
Slovak exports of goods and services in relation to GDP (%)

Source: Eurostat s. a.a

On the import side, Russia is an important partner for oil and natural gas imports, but its overall importance for imports has dramatically decreased from 17% to less than 5% as Slovakia's economy has grown and diversified. On the other hand, we can observe a steady rise in imports from China and South Korea. The import shares of Germany and the Czech Republic have decreased, but these two countries have remained the two most important trade partners for Slovakia (Figure 5).

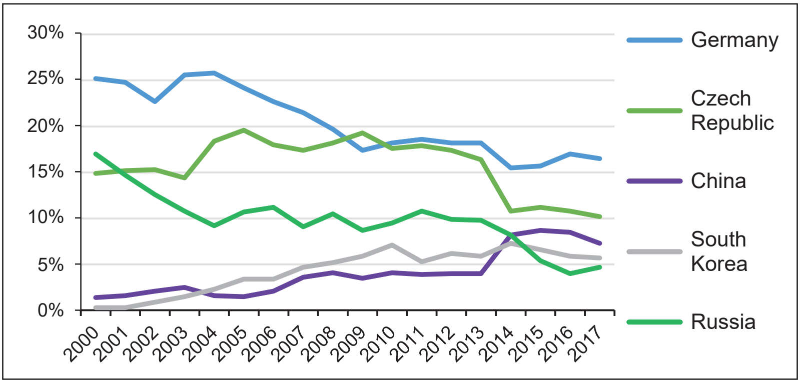


Figure 5.

Share of imports of selected trading partners, Slovak Republic (%)

Source: ŠÚ SR s. a.

The bulk of Slovak exports, which rose between 1995 and 2016 by a factor of 8.5 in nominal terms and by a factor of 5.5 in real terms, were automobiles and automobile parts, consumer electronics, industrial machinery and iron and steel production (Figure 6).

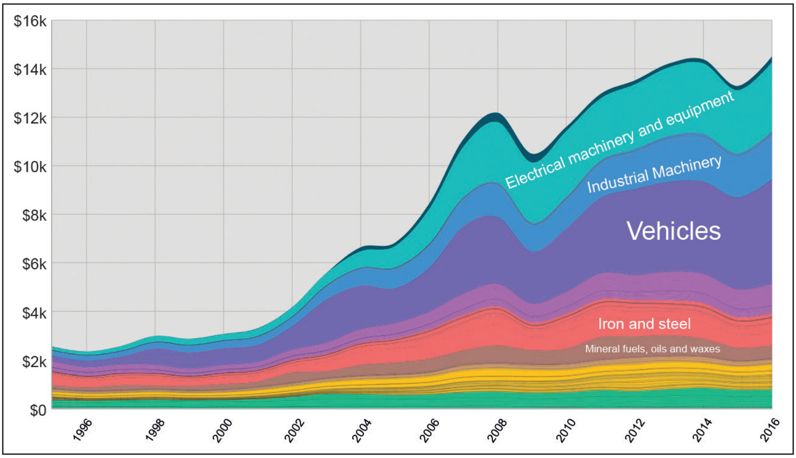


Figure 6.

Per capita exports of goods of the Slovak Republic, adjusted for inflation

Source: Harvard University 2016

The rapid increase of exports of these products was driven by foreign direct investment in export-focused industries. Some of the large automotive investors already established in Slovakia are Volkswagen, PSA and Hyundai–Kia. In 2015, the decision to build a fourth car plant near Nitra was made by Jaguar Land Rover; production at the facility should commence in late 2018. With over 1 million cars produced in 2017, Slovakia currently leads the world in per capita car production. The country is also home to a web of automotive parts suppliers, machinery producers, metallurgic and wood-processing enterprises. Shared service centres, foreign-based retailers and banking groups are a dominant feature of foreign investment. Besides the car industry, large investments of electronics and home appliance manufacturers like Samsung, Sony, Foxconn and Whirlpool are also present. Companies from several countries appear among the investors in Slovakia (Table 3).

Table 3.

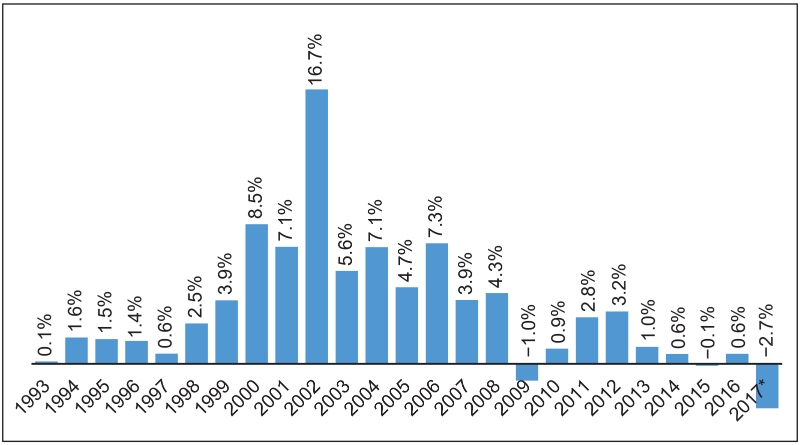
Inward FDI stock in Slovakia by country of origin in 2016

Country of origin	FDI stock (million EUR)	Share
Netherlands	10,282,346	24.8%
Austria	6,644,347	16.0%
Czech Republic	4,844,377	11.7%
Luxembourg	4,414,644	10.6%
South Korea	2,918,877	7.0%
Hungary	2,269,985	5.5%
Belgium	2,223,222	5.4%
Germany	2,161,787	5.2%
Cyprus	1 654 852	4.0%
Italy	877,990	2.1%
Other	3,204,072	7.7%

Source: NBS s. a.c

The bulk of these manufacturing enterprises are situated in western Slovakia, which is not just the most urbanised part of the country, but also the best endowed with infrastructure and human capital. In Eastern Slovakia, the city of Košice and the village of Kechnec were also large beneficiaries of FDI inflow. The most significant investment in eastern Slovakia was made by American multinational US Steel, who have purchased a near-bankrupt steel mill in 1998. The mill was originally constructed in the 1960s during the Communist era but sold to domestic entrepreneurs in the early 1990s.

The bulk of foreign investors in Slovakia have arrived in the 2000s, which saw the largest inflow of FDI into the country (Figure 7). A considerable part of that investment was driven by the privatisation of formerly state-owned enterprises, especially banks, telecoms and utilities. These sectors are now largely in foreign hands. As has been mentioned earlier, throughout the 1990s Slovakia was not particularly attractive to foreign investment in comparison to neighbouring countries because the Mečiar cabinets were prioritising domestic privatisations and the business climate was not very reliable. The unusually large inflow of FDI in the following period was therefore merely the manifestation of a dramatic catching-up process.



2017—only 3rd quarter data.

Figure 7.

Foreign direct investment balance of Slovakia (% of GDP)

Source: NBS s. a.d

The robust FDI inflow was instrumental in decreasing unemployment levels, raising living standards and improving the formerly substantial deficit of the current account (Figure 8). This was not accidental but a cornerstone of government economic policy in the 1998–2016 period. A lack of domestic capital and know-how was to be compensated by importing large stocks of foreign capital, to which the tax and labour codes were tailored.

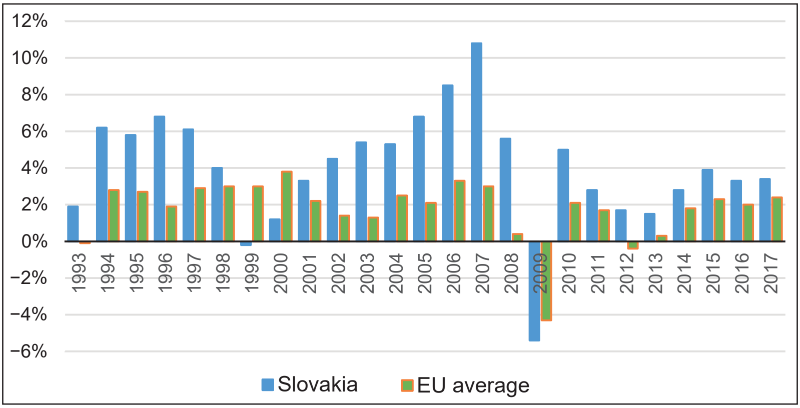


Figure 8.
Annual GDP growth

Source: Eurostat s. a.b; NBS s. a.d

Despite the obvious success of this model, there are some deficits. Large inflows of foreign investment coupled with an especially weak domestic capital basis resulted in a markedly negative net investment position of the country amounting to 48% of GDP (Figure 9). The balance is quite one-sided even in comparison with other CEE countries. Slovakia lacks large domestically based companies, hence the ability of domestic capital to reach outwards is very limited.

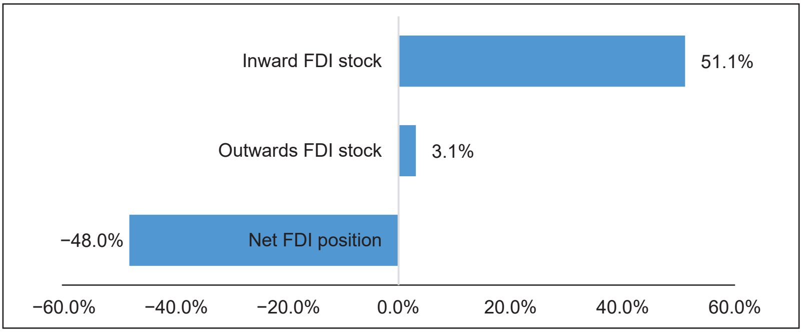


Figure 9.
Slovakia's FDI stock and net investment position in 2016 (% of GDP)

Source: Eurostat s. a.c

A consequence of Slovakia's development model is the formation of a so-called dual economy. Economic growth has been chiefly driven by a relatively small number of large, foreign-owned enterprises, but the bulk of employment is provided by less technologically advanced SMEs. According to Eurostat, Slovakia has some of the largest shares of employment (26%) provided by foreign companies (Figure 10).

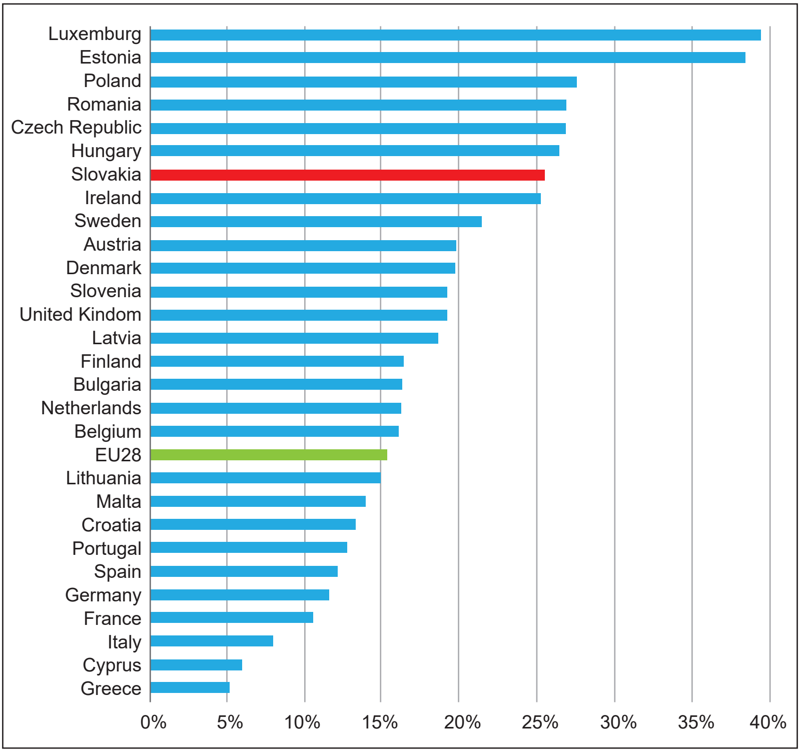


Figure 10.

Share of foreign companies on total domestic employment, 2014

Source: Eurostat 2018a

While offering substantially better pay than domestic enterprises and the public sector, foreign investors in Slovakia often do not pass over a substantial part of value added to their workers in the form of workers compensation since their compensation levels are accommodated to Slovak wage levels.

Trade unions in Slovakia are traditionally rather weak, thus workers' ability to bargain with large employers for wages and other working conditions is limited. Collective bargaining in Slovakia takes place predominantly at company level. While there are active and well organised trade union organisations present at the largest industrial enterprises (i.e. car plants), they are very weak in the services sector (Figure 11).

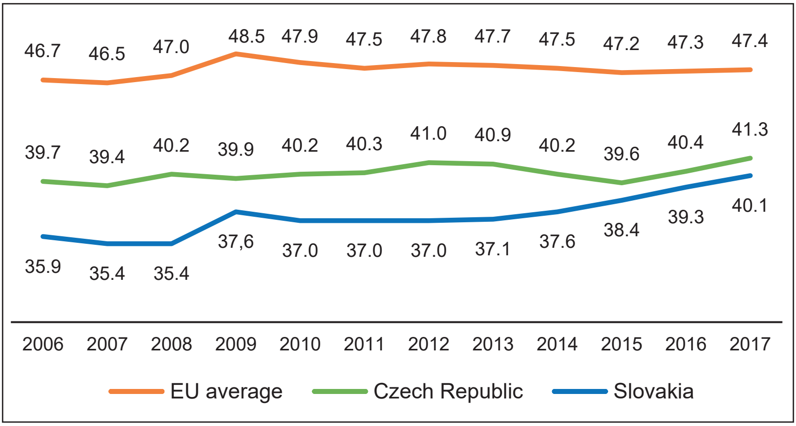


Figure 11.
Compensation of employees (% of GDP)

Source: Eurostat 2018a

This may be one of the reasons why worker compensation in industries like banking and telecoms is relatively low, given the productivity of the sector. For instance, most banks present in Slovakia only pass off one third of value added to their workers as wages, while two thirds remain in the form of gross profit. In more mature labour markets of Western Europe, the ratio is usually reversed: two thirds of value added are paid out as wages and only one third remains as profit of the shareholders. Another plausible reason for low bargaining power of workers may be, of course, that the rate of unemployment in Slovakia has traditionally been quite high and has only fallen to levels close to the EU average in late 2017. The recent fall in the unemployment rate coincides with an increase in the share of worker compensation on GDP.

The effects of euro adoption have been debated in Slovakia right after the financial crisis, but as of today, euro membership of Slovakia is not an issue. Slovakia joined the euro area on 1 January 2009, which was just after the outbreak of the 2008 Financial Crisis and the following Great Recession. During these, Slovakia's neighbours experienced significant exchange rate depreciations of up to 30%, which cushioned the immediate impact of the recession on their export-oriented economies. On the other hand, the necessity to cut costs in the face of a fixed exchange rate with most export markets may have led establishments in Slovakia to cut their workforce more aggressively then neighbouring countries and focus on increasing productivity to keep pace with competition (Figure 12).

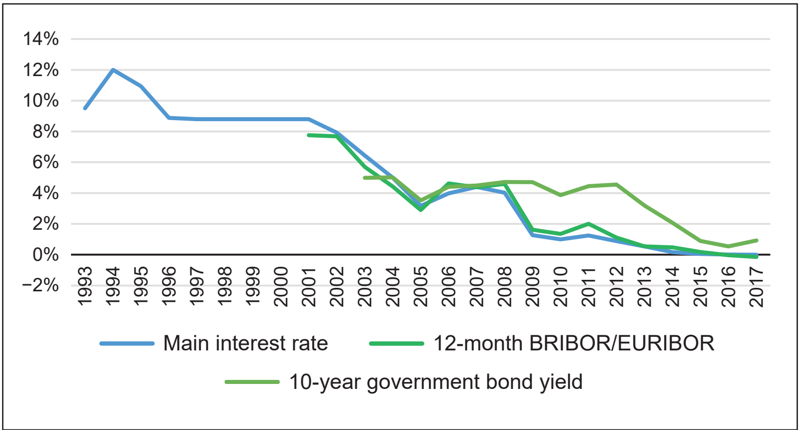


Figure 12.
Interest rates in Slovakia

Source: NBS s. a.d

The Slovak labour market did in fact experience a more violent reaction to the recession than other V4 economies, with the unemployment rate climbing by as much as 6% between September 2008 and March 2010 (Figure 13). The effects of the euro adoption on long-term GDP growth and labour productivity may therefore be positive, but with a negative effect on employment. The Inštitút finančnej politiky (IFP) (Institute of Financial Policy) at the Slovak Ministry of Finance has estimated that the euro increased Slovak GDP by 10%, but most of this effect had already been realised prior to 2009 in anticipation of Slovakia joining the euro. The IFP also concluded that the absence of a floating exchange regime worsened the performance of the Slovak economy during the Great Recession by 2%. (IFP s. a.a)

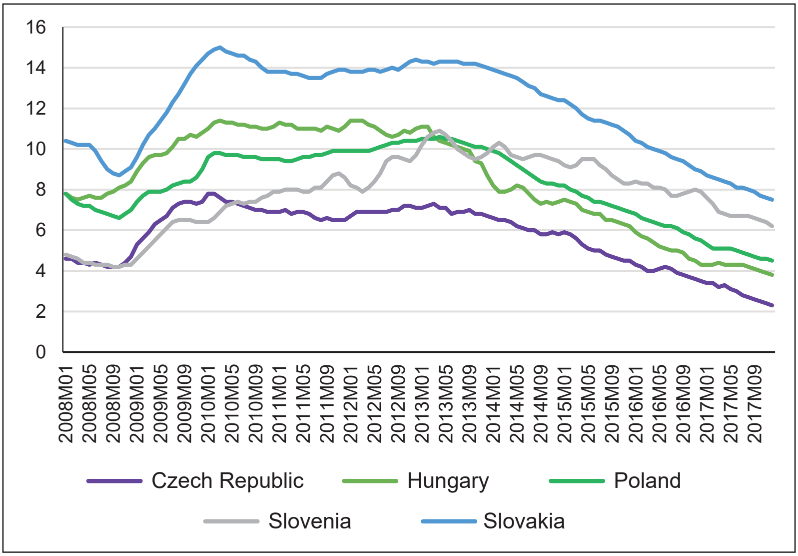


Figure 13.
Harmonised unemployment rate (%)

Source: Eurostat s. a.d

Another effect which may prove to be a double-edged sword is the effect of reduced interest rates on the economy. As noted before, one of the benefits of Slovakia joining the euro was the adoption of the common monetary policy of the European Central Bank (ECB), which provided for lower inter-bank and commercial interest rates. In the euro area, due to the expansive policy of the ECB, the main interest rate after the Great Recession has fallen to zero. Long-term interest rates on government debt have fallen below 2%. Slovakia, being a member of the euro, is subject to stricter macroeconomic surveillance and enforcement of fiscal discipline after the reform of the Stability and Growth Pact (the so-called Sixpack), the signing of the Euro+ Pact, and the Fiscal Compact in 2011–2012. The reason why the interest rate reduction may prove to be a double-edged sword lies in the effect on household balance sheet.

In recent years, historically low interest rates coupled with a somewhat immature, unsaturated housing market, as well as government support of home ownership, have fuelled a mortgage boom and sharply increased housing prices (Figure 14). The rapid increase in household debt, fuelled mainly by mortgage loans, has already led the National Bank of Slovakia, which sees risks to household liquidity in the case of a market correction, to restrict access to mortgages. A factor which compounds the risk is the fact that the household savings rate in Slovakia has traditionally been rather low, and although it has recently risen to approximately 9%, is still below EU average. The threat to household balance sheets have, however, so far not realised because the country is yet to enter the top of the economic cycle (economic growth is expected to accelerate to above 4% in 2018 and 2019 due to enlarged automotive facilities).

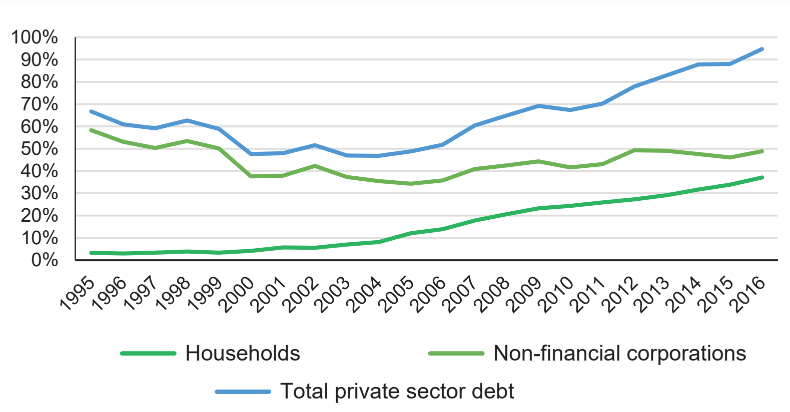


Figure 14.
Private sector debt in Slovakia

Source: Eurostat s. a.e

Somewhat surprisingly, Slovakia's extremely negative investment position does not correspond with relative low levels of primary income deficits in the current account balance (Table 4). The long-term average for the primary income deficits in 2006–2016, for which withdrawal of dividends by foreign multinationals are chiefly responsible, stands at just 2.4% of GDP, which is relatively low. This is unusual but may have a plausible explanation. An explanation for this may probably lie in transfer pricing strategies of large industrial enterprises present in Slovakia, thus the channel of profit withdrawal would not be the primary income balance, but rather the trade in goods and services balance.

Table 4.
Primary income balance for 2006–2016 (% of GDP)

Countries	Credits	Debits	Balance
Czech Republic	3.7%	9.3%	–5.5%
Hungary	11.5%	16.0%	–4.5%
Estonia	6.0%	10.0%	–3.9%
Bulgaria	2.1%	5.4%	–3.5%
Poland	2.8%	5.8%	–3.0%
Croatia	2.3%	4.9%	–2.7%
Lithuania	2.5%	5.1%	–2.6%
Slovakia	4.4%	6.8%	–2.4%
Romania	1.6%	3.6%	–2.1%
Slovenia	3.1%	4.9%	–1.8%
Latvia	5.3%	5.7%	–0.3%

Source: Eurostat s.a.f

Unlike e.g. groceries, banks and insurance companies whose revenue is derived from sales, fees and interest income originating in the domestic market, large industrial establishments like car factories and electronics manufacturers sell their produce mainly to their parent companies who handle marketing and sales to export markets for the entire group. Slovak tax legislation applies the arms' length principle to transactions between domestic as well as foreign related parties for tax purposes, but this does not mean that transfer pricing in practice is altogether eliminated. Typically, a company which sells produce to its foreign owner would apply below-market prices for its produce, resulting in reduced reported revenue, but make up for this in the tax return and transfer pricing documentation supplied to the tax authority, thus paying the correct amount of tax. Underreporting revenue in the annual statements makes bargaining for higher wages by the in-house trade union difficult because the real profitability of the company is unknown. Transfer pricing policies are often accompanied by utilising loans, management fees and royalties instead of standard dividend pay-out schemes as means of profit withdrawal. The scale of profit withdrawal from the country could be a lot larger than what can be observed from simply looking at the figures presented in the current account balance. Unfortunately, it is practically impossible to precisely determine the exact impact of these practices on private sector profitability, current account balance and gross domestic product from publicly disclosed sources alone.

Slovakia's model of FDI-, export-driven economic growth is based on several key advantages. The first is membership not just of the European Union, but from 2009 on also of the euro area, which eliminated exchange rates fluctuations and reduced interest rates. This, together with a favourable geographical position and good infrastructure has made western Slovakia an ideal region for establishing export-oriented manufacturing facilities. An important advantage is a skilled and relatively cheap labour force, which result in a favourable labour costs/productivity ratio (Figure 15). While labour costs have risen strongly and are now among the highest in the CEE countries, they still compare favourably to labour productivity. Labour productivity per hour worked in PPS in 2016 reached 81.7% of the European average, whereas labour productivity per hour in nominal exchange standards reaches 55.6% of the EU average. (Eurostat 2018b) Total nominal labour costs per hour in euro are yet lower, at around 44% of the EU28 average. Therefore, we can say that unit labour costs in Slovakia are still favourable in comparison to productivity and towards labour costs in the rest of Europe. However, from the numbers it is obvious that this advantage is slowly diminishing as labour costs are rising, unemployment rates are falling, and the pool of skilled labour is diminishing. In western Slovakia in particular, companies are already complaining about a fundamental lack of skilled labour as the levels of unemployment in some western regions has reached as little as 3%, which pushes up wages.

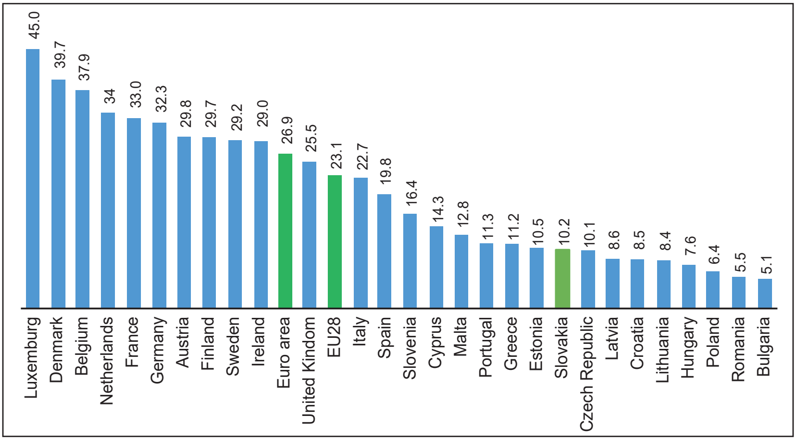


Figure 15.

Nominal labour costs per hour worked in 2017 (EUR)

Source: Eurostat 2018b

Finally, another advantage which Slovakia offers to investors, but which is also slowly diminishing, is low tax rates. Public revenue and expenditure has been lower than in the rest of the euro area since around 2000 (Figure 16). Tax reform has been one of the key aspects of Slovakia's strategy in supporting investment and improving the business climate. However, this has mostly concerned business taxes as labour and consumption taxes have remained at relatively high levels. The rate of corporate income tax has been reduced to 25% from 40% between 1999 and 2002. In 2004, which coincided with Slovakia's accession into the European Union, the right-wing government launched a major tax reform, which replaced a progressive system with a flat tax of 19%. This rate applied to VAT, corporate as well as personal income tax. Dividend tax was abolished, which resulted in an extremely low level of capital income taxation. In addition to low tax rates, investors in Slovakia can make use of various government support schemes which include tax holidays.

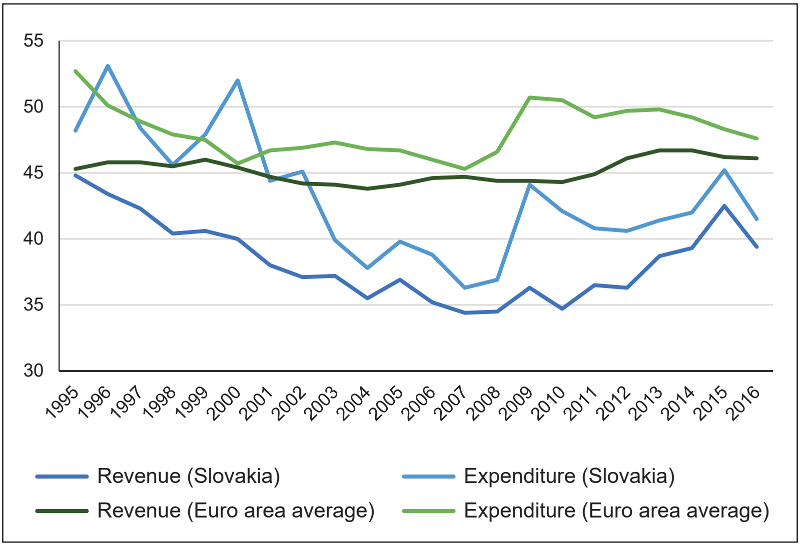


Figure 16.

General government revenue and expenditure (% of GDP)

Source: Eurostat s. a.g

The flat tax remained in place with only cosmetic changes until it was abolished in 2013 by a leftist government, but the changes were relatively moderate. Corporate tax has initially risen to 23% in 2013, but the rate has again fallen to 21% in 2017. Personal tax has seen the introduction of a higher tax bracket, to which a 25% rate applies, but this rate is rather low and currently only concerns yearly taxable income in excess of 35,268 euros, which is more than three times the average wage. Additional changes after 2013 included introducing payroll taxes to non-traditional employment contracts, increasing payroll tax ceilings, as well as the reintroduction of the dividend tax, currently at 7%. Despite these changes, Slovakia remains a relatively low-tax country, at least in a European context.

The Use of European Structural and Investment Funds

The financial support of the European Union in the form of the pre-accession funds, the Structural Funds and the Cohesion Fund has been an important part of Slovakia's development (Tables 5 and 6). During the candidacy period, starting from 1998 onwards, financial assistance to Slovakia came in form of pre-accession funds ISPA, PHARE and SAPARD. Yearly drawing of funds in this period averaged 1.4% of GDP. (MF SR[29] s. a.) After EU accession in 2004, support is coming chiefly from the Structural Funds and the Cohesion Fund, while drawing of pre-accession funds continued until 2007. Slovakia, being one of the poorer members of the EU, is a net benefactor from the EU budget, with a net yearly financial position of 2.7% of GDP. Slovak funding of the EU budget amounts to 1.1% of GDP, while total inflow of EU funds to Slovakia amounts to 3.8% of GDP based on the 2007–2013 period. (Úrad podpredsedu vlády SR pre investície a informatizáciu[30] s. a.)

[29] MF SR: Ministerstvo financií Slovenskej republiky (en – Ministry of Finance of the Slovak Republic).

[30] en – Office of the Deputy Prime Minister of the Slovak Republic for Investments.

Table 5.
Allocation and drawing of EU structural and investment funds in the Slovak Republic by operational programmes in the 2007–2013 programming period

Funded areas	Allocation in 2007–2013 (EUR)	Share
OP Education	542,728,860	4.7%
OP Employment and Social Inclusion	941,301,578	8.2%
OP Informatisation of Society	843,595,405	7.3%
OP Environment	1,820,000,000	15.8%
OP Regional OP	1,554,503,927	13.5%
OP Transport	3,160,154,595	27.5%
OP Healthcare	250,000,000	2.2%
OP Competitiveness & Economic Growth	968,250,000	8.4%
OP Technical Assistance	97,601,421	0.8%
OP Bratislava Region	95,207,607	0.8%
OP Research and Development	1,209,145,373	10.5%
Total	11,482,758,666	100.0%

Source: Úrad podpredsedu vlády SR pre investície a informatizáciu s. a.

Currently, around 80% of public investment in Slovakia is dependent on the EU's financial support, and the impact on economic growth is estimated at 0.9% of GDP annually. (Úrad podpredsedu vlády SR pre investície a informatizáciu s. a.) The total allocation of funds from the Structural Funds for the 2007–2013 programming period, which was the first period to which Slovakia had full access as an EU member during the whole period, was EUR 11.5 billion, which equals to 2.44% of Slovakia's GDP. Out of this amount, only a total of EUR 8.1 billion (70% of available funds) was successfully implemented by the end of April 2015. Due to the prolongation of drawing from the 2007–2013 period by the European Commission, the absorption rate for the period of 2007–2013 has reached 97% in the end.

Table 6.
Allocation of European structural and investment funds for the Slovak Republic in the 2014–2020 programming period

Funds	Allocation (EUR)	Share
European Regional Development Fund	7.36 billion	48.0%
Cohesion Fund	4.17 billion	27.2%
European Social Fund	2.17 billion	14.1%
European Agricultural Fund for Rural Development	1.55 billion	10.1%

Funds	Allocation (EUR)	Share
European Maritime and Fisheries Fund	16 million	0.5%
Youth Employment Initiative	72 million	0.1%
Total	15.32 billion	100.0%

Source: EC 2016

The European Commission has at many occasion stated that an enduring problem of Slovakia has been the slow absorption of EU funds. This has been the reason why drawing of EU funds from the 2007–2013 period has been prolonged until the end of 2015. This, however, has caused further delays in drawing funds from the 2014–2020 period due to staff being busy with managing projects from the foregoing period rather than concentrating on new projects. By the beginning of 2017, only 4% of the available funds (except the CAP funds) have been absorbed. (SME Ekonomika 2017)

The Socioeconomic Effects of Integration

Answering the question to what degree has integration affected Slovak migration is difficult due to the lack of truly reliable data. According to official population data as published by Eurostat, Slovakia is not as much affected by emigration as most other CEE countries (Figure 17). The number of people having legal residence in Slovakia has risen since 1989 by more than 3%, or more precisely from 5.26 million to 5.44 million.

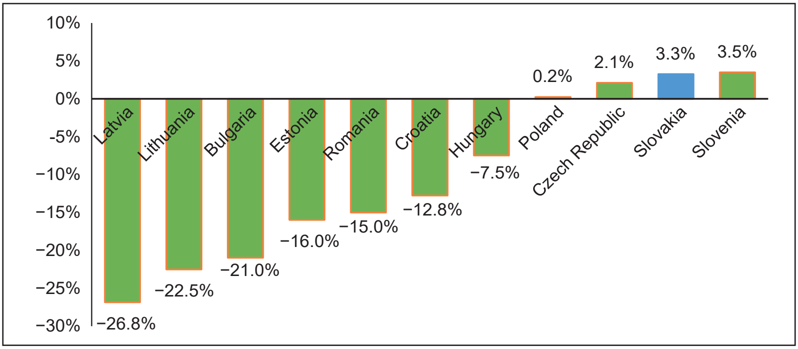


Figure 17.

Population change in eastern members of the EU between 1989 and 2017

Source: Eurostat 2017a

However, the reliability of these numbers may be questioned because they rely on official legal residence, which Slovaks have a habit of not changing even after having permanently moved to a different location. Using other, more sophisticated methods, indicates that emigration of skilled people from Slovakia, especially university students and graduates, is a serious problem. The Institute of Financial Policy at the Slovak Ministry of Finance has concluded that around 12–14% of university graduates leave the country every year after finishing studies. This mostly concerns graduates of medicine and engineering studies. (IFP s. a.b) The IFP also published a report which said that data from health insurance companies indicates a reduction of Slovakia's population, which questions official population data. According to this report, the number of persons who have health insurance in Slovakia has decreased by 300,000 over the years 2000–2015, which may indicate an effective decrease of overall population that may not be accounted for in the official census. (IFP s. a.b) The Statistical Office of the Slovak Republic has estimated the number of Slovaks working abroad short-term at 150,000, but the real number of people working abroad is estimated to be much higher, at around 300,000. (Denník Postoj 2017) The number of Slovak university students abroad is estimated at more than 36,000, which amounts to 16% of the 221,000 students studying in Slovakia. (Petková 2017) An important factor in the flow of students abroad is the lack of a language barrier between the Czech Republic and Slovakia, and the availability of tuition-free, higher quality university studies in the Czech Republic. The Czech Republic is the preferred destination of Slovaks who wish to study abroad. Currently there are more than 20,000 Slovak students at Czech Universities.

Conclusion and Outlook: Drawing the Balance of the Results of Integration

After a quarter century since gaining independence in 1993, we can conclude that the integration of Slovakia into the European and international economy was a largely successful story. Slovakia has managed to attract sufficient foreign investment, achieve strong economic growth, reduce unemployment, and raise the standards of living of its people. GDP per capita expressed as a percentage of the EU average is approaching 80%. The gross nominal average wage has risen between 1993 and 2017 by a factor of 5.3 from 178 euros per month (using the official conversion rate of 30.126 SKK/EUR) to 944 euros per month. (STATdat. s. a.) Unemployment, reaching almost 20% at the turn of the century, has been reduced to below 8% at the start of 2018, with latest forecasts indicating a further downward trend towards 6% in the year 2020. Slovakia is also the only Visegrád country which has adopted the euro.

Still, certain key problems remain to be solved. The economic model employed by Slovak government cabinets since 1998 has also shown the limits to what can be achieved by concentrating on FDI-fuelled growth. For one, the dependence of the Slovak economy on exports is extremely high with 96% of GDP, which is much higher than what similarly-sized countries in the west experience (i.e. Denmark and Finland). Despite the 80% of employment being provided by SMEs, large foreign companies have been the dominant force driving economic growth. The international investment position of the Slovak Republic is markedly negative, with only negligible influence of Slovak capital abroad. The Slovak economy today is characterised by a high degree of dependence on foreign money, technologies and know-how (irrespective whether the funding comes from FDI or EU structural funds), for growth and investment. The attractiveness of Slovakia for foreign investment is still largely dependent on the price of labour. Despite labour productivity per person in purchasing power reaching 81% of the European average, nominal wages are just a third of the western European level. This highlights the need for a wage and price convergence in addition to convergence in economic output and productivity. An obvious obstacle towards achieving full convergence with "old Europe" is the poor performance of Slovakia in matters of higher education, science and innovation. Slovakia trails even most of its CEE peers, when it comes to the R&D intensity of its economy (Figure 18).

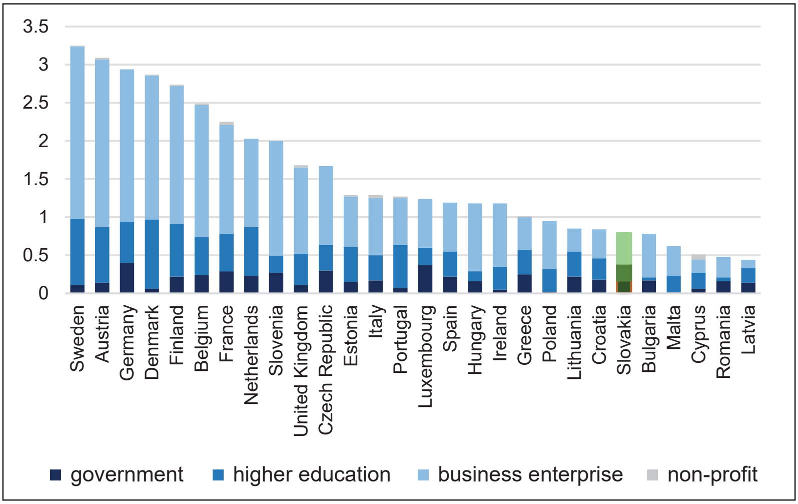


Figure 18.

Research and development expenditure by sector in 2016 (% of GDP)

Source: Eurostat 2017b

Yet the largest threat to sustainable economic growth of the Slovak economy lies in demographics. At present, Slovakia has one of the youngest populations in the European Union. The median age is around 40 years, which is one of the lowest in the EU. The old-age dependency ratio, expressing the ratio of people aged 65 or more relative to the active population and currently at around 20%, is also among the lowest in the European Union. However, if current levels of fertility and migration persist, by 2080 the median age in Slovakia could climb up to 54 years, which by then would be the highest value in the entire European Union. The old-age dependency ratio could climb up to 56%, and the total population could decline from currently 5.4 million to a something between 3.8 million and 4.8 million, depending on the scenario. (Eurostat 2018c) The reason for this lies not as much in emigration as in natural population development; Slovakia has a young population resulting from a baby boom in the 1970s and 1980s, but the current fertility rate of 1.4 is quite low. (Eurostat 2017c) Countering the negative demographic scenarios with a more open, inclusive immigration policy, as well as a more modern family policy enhancing fertility, is not an option but a necessity. Experience from western European countries shows that this is possible (for instance, by providing better childcare options for families), but will require political leadership and communication to counter ingrained xenophobic tendencies and outdated attitudes towards the role of women.

References

Denník Postoj (2017): Zo SR stále viac ľudí odchádza pracovať do zahraničia, ako prichádza. [Many more people are leaving Slovakia for work than are coming in.] *Konzervatívny Denník Postoj* (online), 13 February. Available: www.postoj.sk/21280/zo-sr-stale-viac-ludi-odchadza-pracovat-do-zahranicia-ako-prichadza (Accessed: 07.05.2018)

EC (s. a.): *AMECO database.* Brussels, European Commission. Available: http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm (Accessed: 03.04.2018)

EC (2016): *European structural and investment funds, country factsheet Slovakia.* Brussels, European Commission. Available: http://ec.europa.eu/regional_ policy/en/information/publications/factsheets/2016/european-structural-and-investment-funds-country-factsheet-slovakia (Accessed: 23.04.2018)

Eurostat (s. a.a): *Exports of goods and services in % of GDP.* Available: http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tet00003&plugin=1 (Accessed: 04.05.2018)

Eurostat (s. a.b): *Real GDP growth rate – volume.* Available: http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00115&plugin=1 (Accessed: 07.05.2018)

Eurostat (s. a.c): *Foreign Direct Investments.* Available: http://ec.europa.eu/eurostat/web/economic-globalisation/globalisation-in-business-statistics/foreign-direct-investments (Accessed: 01.04.2018)

Eurostat (s. a.d): *Harmonised unemployment rate.* Available: http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=teilm020&plugin=1 (Accessed: 21.04.2018)

Eurostat (s. a.e): *Private sector debt.* Available: http://ec.europa.eu/eurostat/web/products-datasets/-/tipspd20 (Accessed: 15.04.2018)

Eurostat (s. a.f): *Balance of payments.* Available: http://ec.europa.eu/eurostat/web/balance-of-payments/data/main-tables (Accessed: 16.04.2018)

Eurostat (s. a.g): *Government finance statistics.* Available: http://ec.europa.eu/euro stat/web/government-finance-statistics/data/main-tables (Accessed: 04.21.2018)

Eurostat (2017a): *Population.* Available: http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00001&plugin=1 (Accessed: 11.04.2018)

Eurostat (2017b): *R&D expenditure.* Available: http://ec.europa.eu/eurostat/statistics-explained/index.php/R_%26_D_expenditure (Accessed: 11.04.2018)

Eurostat (2017c): *Fertility statistics.* Available: http://ec.europa.eu/eurostat/statistics-explained/index.php/Fertility_statistics (Accessed: 09.04.2018)

Eurostat (2018a): *International trade, investment and employment as indicators of economic globalisation.* Available: http://ec.europa.eu/eurostat/statistics-explained/index.php/International_trade,_investment_and_employment_as_indicators_of_economic_globalisation (Accessed: 01.05.2018)

Eurostat (2018b): *Hourly labour costs.* Available: http://ec.europa.eu/eurostat/statistics-explained/index.php/Hourly_labour_costs (Accessed: 19.04.2018)

Eurostat (2018c): *Population structure and ageing.* Available: http://ec.europa.eu/eurostat/statistics-explained/index.php/Population_structure_and_ageing (Accessed: 03.05.2018)

Harvard University (2016): *The Atlas of Economic Complexity.* Cambridge, Center for International Development at Harvard University. Available: http://atlas.cid.harvard.edu/explore/stack/?country=206&partner=undefined&product=undefined&productClass=HS&startYear=undefined&target=Product&year=2016 (Accessed: 01.05.2018)

IFP (s. a.a): *Vstup do eurozóny pridal slovenskej ekonomike 10 %.* [Euro membership added 10% to the Slovak economy.] Bratislava, Inštitút finančnej politiky. Available: www.finance.gov.sk/files/archiv/priloha-stranky/20289/15/2016_8_vplyv_eura.pdf (Accessed: 21.04.2018)

IFP (s. a.b): *Odliv mozgov po slovensky.* [Brain-drain, Slovak Style.] Available: www.finance.gov.sk/Default.aspx?CatID=11308 (Accessed: 01.04.2018)

MF SR (s. a.): *Informácia o čerpaní prostriedkov PHARE, ISPA a SAPARD.* [Information on Drawing of Funds from PHARE, ISPA and SAPARD.] Bratislava, Ministerstvo Financií Slovenskej Republiky. Available: www.finance.gov.sk/Default.aspx?CatID=6216 (Accessed: 12.04.2018)

NBS (s. a.a): *Ekonomický vývoj v slovenskej republike.* [Economic Development of the Slovak Republic.] Bratislava, Narodná Banka Slovenska. Available: www.nbs.sk/_img/Documents/_Publikacie%5CVyrocnaSprava%5CSVK1993%5CVS1993_kap05.pdf (Accessed: 02.05.2018)

NBS (s. a.b): *Platobná bilancia.* [Balance of Payment.] Bratislava, Narodná Banka Slovenska. Available: www.nbs.sk/sk/statisticke-udaje/statistika-platobnej-bilancie/platobna-bilancia (Accessed: 04.04.2018)

NBS (s. a.c): *Priame zahraničné investície* [FDI Statistics]. Available: www.nbs.sk/sk/statisticke-udaje/statistika-platobnej-bilancie/priame-zahranicne-investicie (Accessed: 05.05.2018)

NBS (s. a.d): *Makroekonomická databáza.* [Macroeconomic Database.] Available: www.nbs.sk/sk/menova-politika/makroekonomicka-databaza/makroekonomicke-ukazovatele-graf (Accessed: 06.04.2018)

Úrad podpredsedu vlády SR pre investície a informatizáciu (s. a.): *Dáta k implementácii Štrukturálnych fondov a Kohézneho fondu v SR v programovom období 2007–2013.* [Information Regarding the Implementation of Structural Funds and the Cohesion Fund in 2007–2013 Programming Period.] Available: http://cloud.csiss.gmu.edu/uddi/en_AU/dataset/data-k-implementacii-strukturalnych-fondov-a-kohezneho-fondu-v-sr-v-programovom-obdob-2007-2013 (Accessed: 09.04.2018)

OECD (s. a.): *Databank.* Paris, Organisation for Economic Co-operation and Development. Available: https://data.oecd.org/gdp/gross-domestic-product-gdp.htm (Accessed: 02.04.2018)

Petková, Zuzana (2017): *Prečo študenti utekajú zo slovenska.* [Why Students Run from Slovakia.] Bratislava, Slovenská technická univerzita [Slovak University of Technology]. Available: www.stuba.sk/sk/diani-na-stu/preco-studenti-utekaju-zo-slovenska-trend.html?page_id=11409 (Accessed: 06.05.2018)

SME Ekonomika (2017): Čerpanie peňazí EÚ v programovom období 2014–2020 dosiahlo 4,1 percenta. [The absorption of EU funds in the period of 2014–2020 has reached 4.1 percent.] *SME Ekonokika,* 14 February. Available: https://ekonomika.sme.sk/c/20459460/cerpanie-penazi-eu-v-programovom-obdobi-2014-2020-dosiahlo-41-percenta.html (Accessed: 10.05.2018)

STATdat (s. a.): *Public Database.* Available: http://statdat.statistics.sk/cognosext/cgi-bin/cognos.cgi?b_action=xts.run&m=portal/cc.xts&gohome= (Accessed: 21.04.2018)

ŠÚ SR (s. a.): *Zahraničný obchod.* [Foreign Trade Statistics.] Bratislava, Štatistický úrad Slovenskej republiky. Available: https://slovak.statistics.sk/ (Accessed: 22.04.2018)