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Economic Development of Slovakia in 2015 and Outlook up to 2017

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INTRODUCTION

The Slovak economy was on the ascending path in 2014 and 2015. The reason for an improvement in the parameters of growth and stability, as well as an improvement in certain socio-economic parameters, is that there were also (but not exclusively) the factors which are not, and will not be permanently present. The factors as such were extraordinary withdrawals of the EU funds combined with the final phase of the political cycle.

In the economy, we observe some symptoms that are not common due to past development. The employment continued to grow at a pace which would be too weak to improve the situation on the labor market in the past. The level of consumer prices fell, investments volumes expanded by double-digit growth rate, a domestic demand strongly pulled the economic growth (replacing an external one as a growth driver); monetary policy tried to operate expansively in every possible way; the EU funds withdrawal acquired an intensity not known earlier. We preferably pay attention to such unusual phenomena that characterize the development of the Slovak economy in the recent period.

The analysis of economic development in Slovakia is issued by Institute of Economic Research since 1993. It assesses the development of economic level and economic performance, external and internal balance, economic policy, employment development, as well as measures that changed the economic environment. The conclusion outlines an expected short-term development until 2017.

1. OVERALL ECONOMIC DEVELOPMENT

In this section, we deal with a comprehensive overview of economic development, particularly with the issues of economic growth, macroeconomic stability, and structural changes. We focus on the phenomena which are in some way characteristic of this period. Individual topics are further elaborated in the following chapters.

In 2015, there were some clear signs of accelerated economic growth and improvement in the parameters of macroeconomic stability or socio-economic parameters. This development has not meant a significant change compared to previous period; it was rather a confirmation and highlighting of the trend already observed in 2014.

However, the favorable evaluation from the previous paragraph should not be depicted as an idyllic picture. Many positive phenomena in economic development have been caused or secured by short-term, unique factors (e.g. a massive drawdown of the EU funds, the decline in energy prices on the world markets or an attempt to minimize the unemployment in the pre-election period).

Economic Growth with "Enhanced" Employment Effects

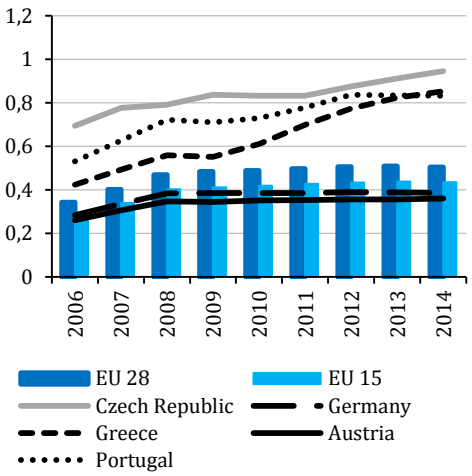
Boosted economic growth (with a 3.6 % rate) probably contributed to the continuation of real convergence (catching up in GDP per capita to the most developed economies). The GDP per capita in Slovakia reached 76 % of the EU 28 average in 2014.[1]

There is a remarkable convergence bifurcate in the development of consumption level: while the convergence of household consumption was keeping up with GDP convergence; the convergence of public consumption was relatively lagging behind (see Chart 1.2). It could (with a certain degree of simplification) mean that public sector services are lagging behind the level which they should achieve with given level of the economy.

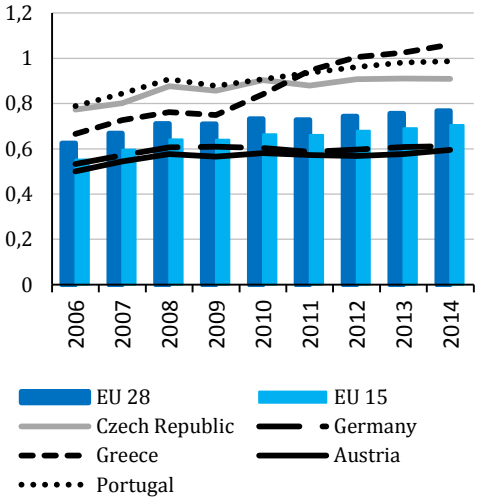
[1] In the time of this text preparation, the GDP per capita data were available only up to year 2014.

Figure 1.1
Convergence of GDP per capita (SR Level Compared to Listed Economies or Organizations)

a) Data in EUR, current prices



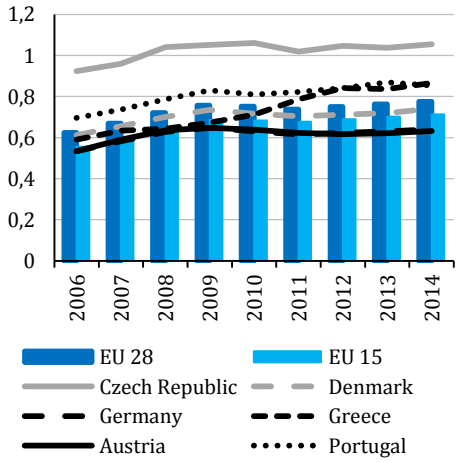
b) Data in Purchasing Power Standard



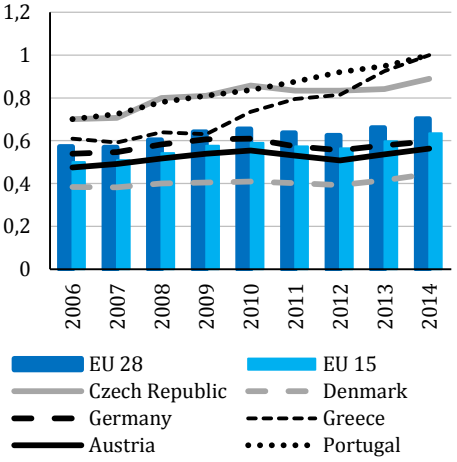
Source: Own calculations based on Eurostat database.

Figure 1.2
Convergence of Final Consumption per Capita Level (SR Level Compared to Listed Economies or Organizations)**, Based on Data in Purchasing Power Standard**

a) Final Consumption of Households



b) Final Consumption of Government



Source: Own calculations based on Eurostat.

In the previous assessment for the year 2014, we have already observed the interruption of "domestic demand misery" and highlighted the benefits of renewed domestic demand growth for change in pace and nature of economic growth (not only in higher growth rates but also better impact on labour market). In 2015, the further growth in domestic demand cannot be overlooked: double-digit growth in fixed investments (gross fixed capital formation) with the continued increase in household consumption and public administration are crucial to the acceleration of the GDP growth.

The economic growth experienced in recent years is different from the growth observed before the recession and debt crisis (before the period 2009 – 2011). Moreover, it is not the difference in the size of growth: it is clear that growth rates achieved in "smooth" period 2005 – 2007 are not feasible at present nor in the near future. There are significant differences in the structure of GDP growth (Table 1.1):

- Current economic growth is associated with an increase in collected taxes on products (i.e. indirect taxes).
- In 2015, there was an exceptionally high share of gross capital formation (i.e. investments) on GDP growth. In years 2014 and 2015, there was a very high share of domestic demand on GDP growth.
- By utilization of income method of GDP computation, the exceptionally high share of employees compensations is noticeable. It is a very remarkable turnaround as the Slovak economy was in the past characterized by low and declining share of wages (more precisely – compensation of employees) to GDP. The proportion of the operational surpluses is lower when compared to recent years.

To highlight some peculiarities of the economic growth in recent two years, we introduce the comparison of growth experienced in the prior period with selected parameters (Figure 1.3 – 1.5).

Strong expansion in the so-called pre-crisis period 2005 – 2008 was associated with the rather lower share of domestic demand in GDP increase. The current weaker economic growth is strongly linked to domestic demand (Figure 1.3).

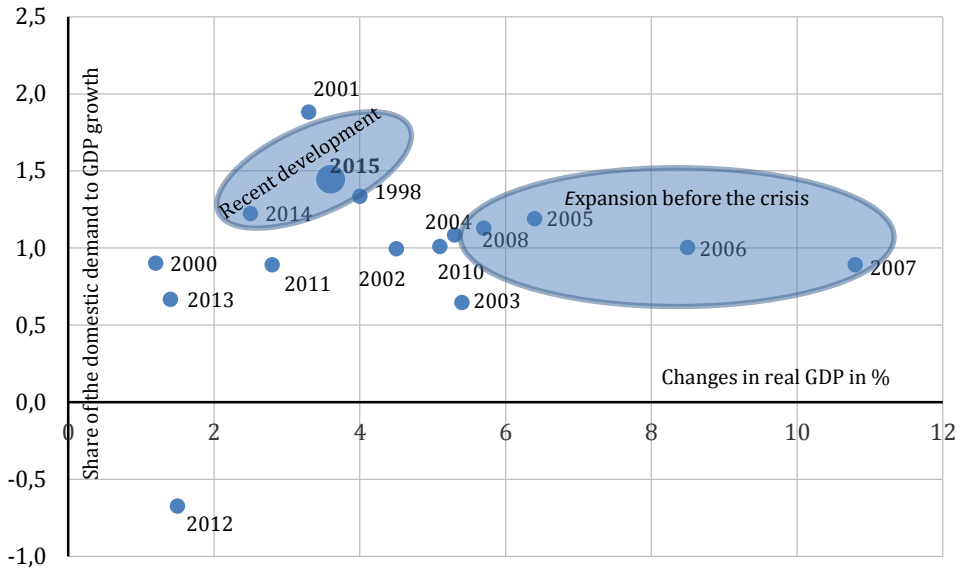
Regarding socio-economic development, the more appropriate is the combination of economic growth rate and employment change. The employment growth in recent years (especially in 2015) was comparable to employment growth usually associated with much stronger economic growth. In Figure 1.4, the clear link between the economic and employment growth is visible: the significant employment growth was associated with extremely strong economic growth. The only exception is the recent period which combines robust employment growth with a weaker GDP growth.

T a b l e 1.1
Changes in the Structure of GDP Growth (Last Years versus "Pre-Crisis" Period of Economic Expansion)

	2006	2007	2008	2013	2014	2015
Utilizing production method of GDP computation						
Unit of GDP growth in current prices was accompanied by:						
Production growth	2.89	2.22	2.68	0.55	1.14	2.74
Intermediate consumption growth	1.87	1.32	1.71	-0.20	0.45	1.96
Added value growth (Production-Intermediate Consumption)	1.02	0.90	0.97	0.75	0.69	0.78
Net taxes on products growth	-0.02	0.10	0.03	0.25	0.31	0.22
Utilizing consumption method of GDP computation						
Unit of GDP growth in current prices was accompanied by:						
Growth in Final Consumption of Households	0.54	0.51	0.62	0.15	0.54	0.37
Growth in Final Consumption of General Government	0.22	0.10	0.20	0.30	0.49	0.24
Growth in Gross Capital Formation	0.23	0.27	0.30	0.21	0.20	0.82
Growth in Domestic Demand	1.00	0.89	1.13	0.67	1.22	1.45
Growth in Export of Goods and Services	1.38	0.93	0.62	1.99	0.07	1.52
Utilizing income method of GDP computation						
Unit of GDP growth in current prices was accompanied by:						
Growth in Compensations of Employees	0.32	0.33	0.36	0.39	0.65	0.56
Growth in Operational Surplases	0.67	0.57	0.62	0.39	0.06	0.29
Additional Parameter: Growth Rate of Real GDP	8.5	10.8	5.7	1.4	2.5	3.6

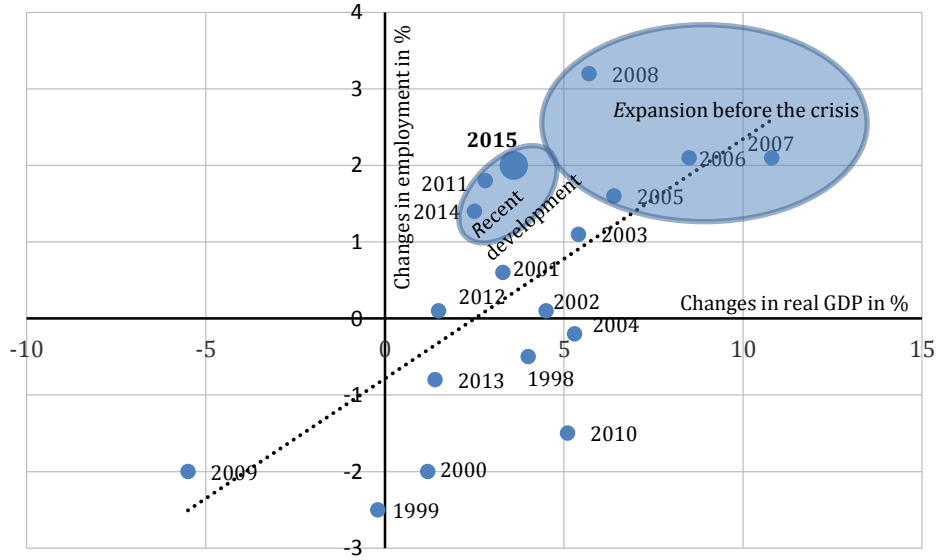
Source: Own calculation based on Eurostat database and SO SR (Slovstat database).

Figure 1.3
Combinations of Economic Growth Rate (Change in Real GDP) **and the Share of Domestic Demand in GDP Increase**



Source: Own calculation based on Eurostat database.

Figure 1.4
Combinations of Economic Growth Rate (Change in Real GDP) **and the Changes in Employment**



Note: Employment based on National Accounts methodology.

Source: Own calculation based on Eurostat database.

The fact that the parameters of the labour market have improved dramatically during the milder (to Slovak standards) economic growth is probably the most remarkable feature of socio-economic development over the past two years. There is a question, what allowed such positive employment and unemployment development in 2014 – 2015.

Obviously, the accelerating economic growth in 2014 – 2015 had a positive impact on employment. Based on current experience, however, the actual acceleration of the growth of this magnitude (though it is still a relatively weak growth) may be insufficient to increase employment. Therefore, other factors had to contribute as well:

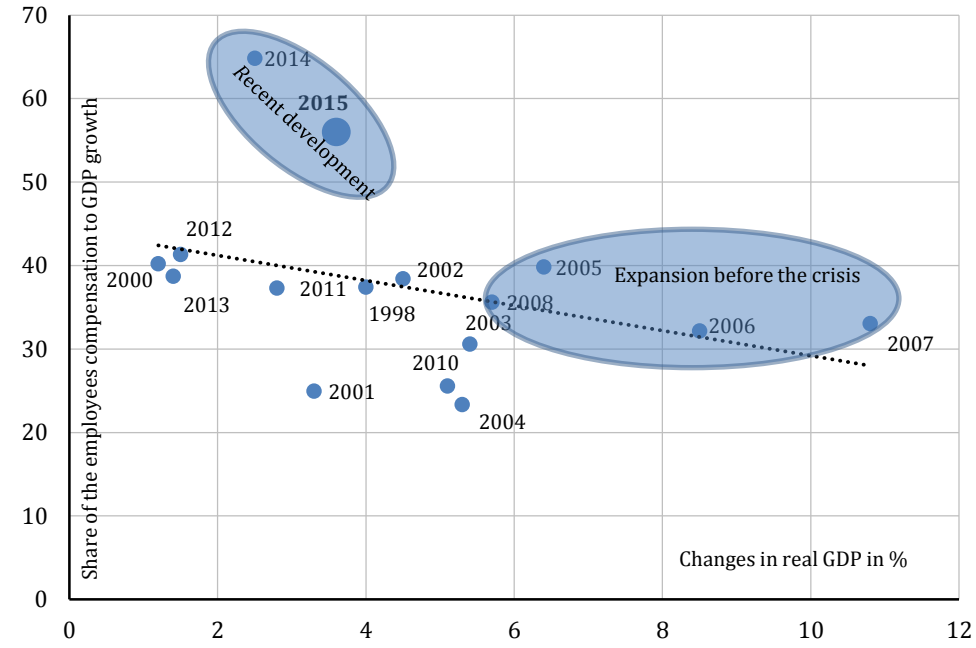
- *The growth of domestic demand*. The activities covering domestic demand have a more favourable impact on the labour market compared to activities covered by external demand. The components of aggregate demand (AD) have very different employment intensity in the domestic economy. The production for external demand (i.e. export) is essentially carried out by large international companies with their high import intensity and relatively low domestic employment demands. The production for components of domestic demand is more associated with the service sector and activities of small industrial enterprises. Also, it is associated with lower import intensity and larger domestic employment demands. Therefore, the domestic demand growth may have a different (more favourable) impact on the labour market than the same increase of export. Subsequently, the changes in the structure of aggregate demand have a serious impact on changes in the employment. And such change in the structure of AD growth happened – in the past, the usually export-driven economic growth was between 2014 and 2015 replaced by growth mainly driven by domestic demand.
- *The effect of massive EU funds withdrawal* (discussed in details in the chapter dealing with public finances). The significant uneven timing of the EU funds withdrawal led to the need for withdrawal on "last minute" – in 2014 and especially 2015. However, this factor is already reflected in the expansion mentioned above of domestic demand.

- *Employment pulled by the state*. The expansion of employment in sectors with strong involvement of the state was recorded. Namely, the block of sectors: "Public administration and defense", "Education" and "Health and social care". These are sectors where the state has a significant influence on the development of employment (or is directly determined by the state as an employer; or the state acts as regulator and sectors functions primarily due to the flow of public expenditure).
- *Enhanced employment policy*. After the success of fiscal consolidation and in the context of upcoming parliament elections, the economic policy makers were more focused on economic expansion and the labour market. The new expansion of incentives for businesses to create jobs and greater use of certain tools of active labour market policies were the signs (sometimes controversial) of this effort.
- *Methodical changes in performance terms of the labour market*. Some changes in the definition of the labour market performance terms have improved their quantitative values. The performance terms were influenced by changes made to the international standards (redefinition of the employed person in ILO methodology), or in the methodologies of local authorities (changes in definition applied by employment offices). We pay more attention to this topic in the chapter about labour market).

It was typical for the past development of the Slovak economy that employment growth occurred when the strong economic expansion was in place. The employment responded poorly to the economic growth (e.g. Hudcovský, 2015). However, the link between economic growth and employment has recently changed (Habrman, 2015 or Morvay et al., 2015). A relatively favorable development of labour market can be achieved with economic dynamics previously not sufficient for employment change. However, as it is clear from already stated facts that this was partially enabled due to exceptional factors that do not have permanent character (or they lack its intensity).

Above mentioned, improved quality of employment is apparently related to the fact that the economic growth of last period is associated with a particularly high share of employee's compensation in GDP increase (Figure 1.5). It means the growth of so-called "wage share" (share of wages in GDP), which was in the Slovak Republic persistently low.

F i g u r e 1.5
Combinations of Economic Growth Rate (Change in Real GDP) **and the Share of Employees Compensation in GDP Increase**

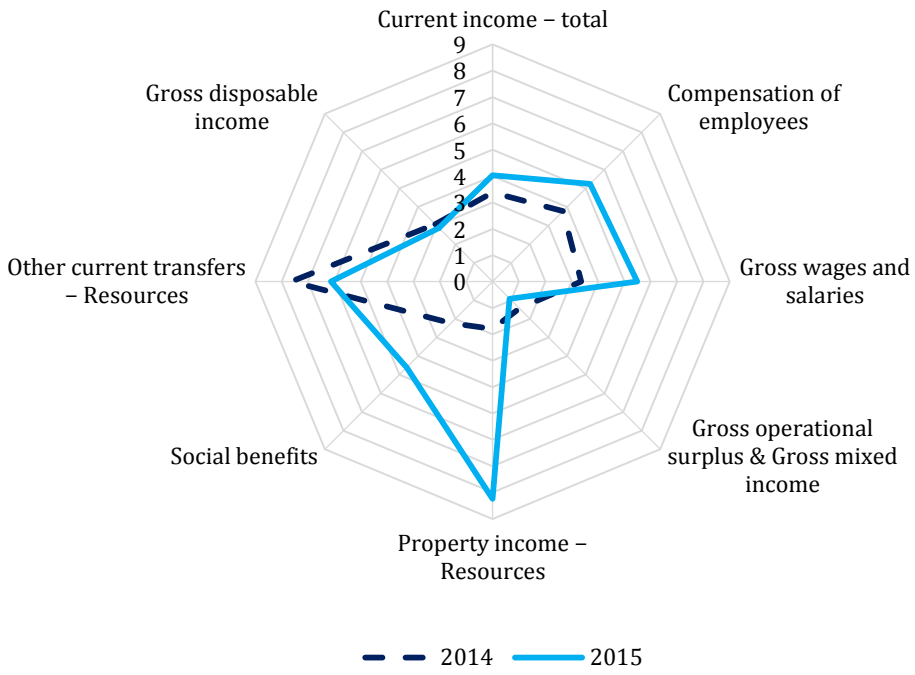


Source: Own calculation based on Eurostat database.

The economic growth also reflected in the favorable development in the sector of household income. Year-on-year (Y-o-y) growth accelerated in those categories of income which have the character of labour income.[2]

[2] Of course, this is not surprise given the afore mentioned improvement in parameters of labour market and increase in volume of total wages paid (or rather compensation of employees).

Figure 1.6
Y-o-Y Changes of Differently Defined Income in Household Sector (%)



Note: Naturally, the revenues have different weights in the structure of households total income. E.g. in 2015, the property income grew strongly, however, its weight is small.

Source: Own calculation based on SO SR (Slovstat database).

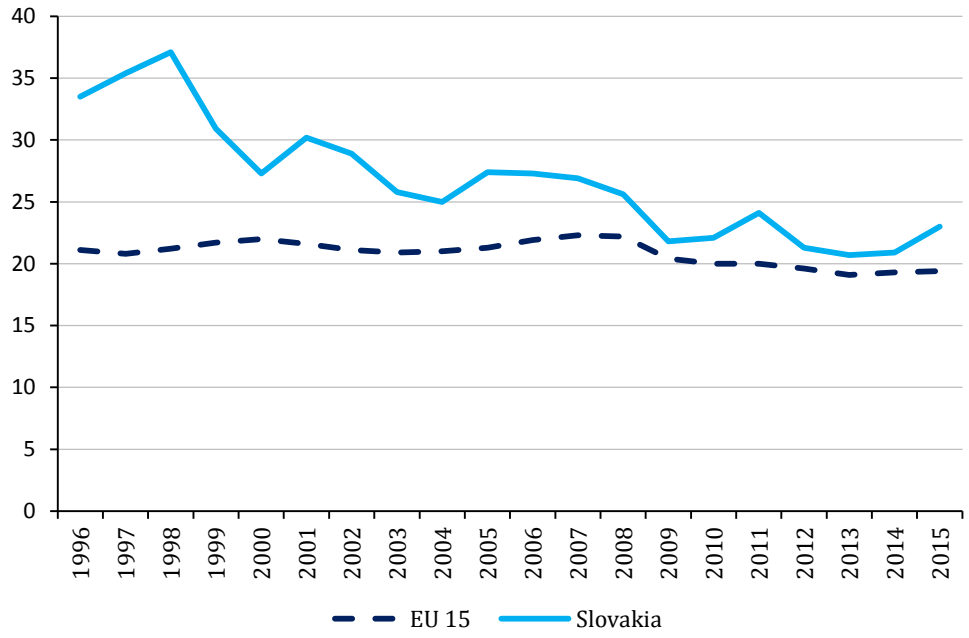
The Growth Pulled by Fixed Investments Expansion

It was already mentioned above that extraordinary role in demand growth and GDP was played by fixed investments (more precisely, gross fixed capital formation). Therefore, the investment rate increased (the share of gross fixed capital formation to GDP) even though it was before gradually declining and had a relatively high volatility. In the long-term view, the rate of investment decreased close to levels similar to more advanced economies (Figure 1.7). The fact that the investment rate in Slovakia was high (considerably higher than the EU 15[3]) could be easily explained: the Slovak economy had to overcome its lack of capital.

[3] For comparison purposes we chose more advanced economics (former EU 15 group of countries).

Therefore, the fixed investments accounted for a relatively high percentage of GDP. It is a necessary fact of fixed investments debt degradation and backwardness of the economy capital stock.

Figure 1.7
Development of Investment Rate (Share of Gross Fixed Capital Formation to GDP; %)

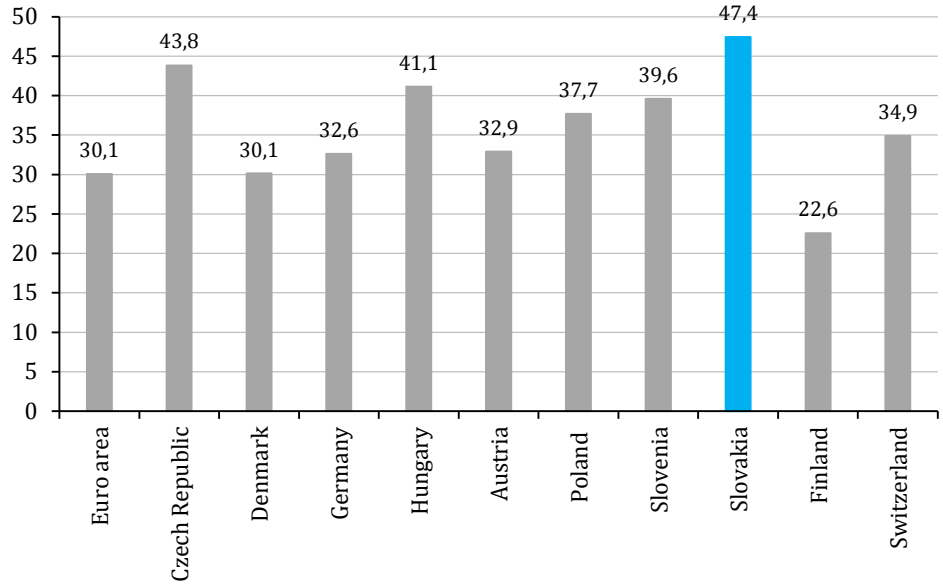


Source: own calculation based on Eurostat database.

In the increase of gross fixed capital formation, there are two "anomalies" visible. There is the extremely high proportion of machinery and equipment in the Slovak fixed investments, along with an extremely low share of intellectual property assets[4] (Figure 1.8 and 1.9). It represents the continuation of catching-up process in capital stock which was already recorded in long-run, thus, there is the strong catching-up to the developed economies in the total fixed capital stock and lagging behind in intellectual property assets stock (see below).

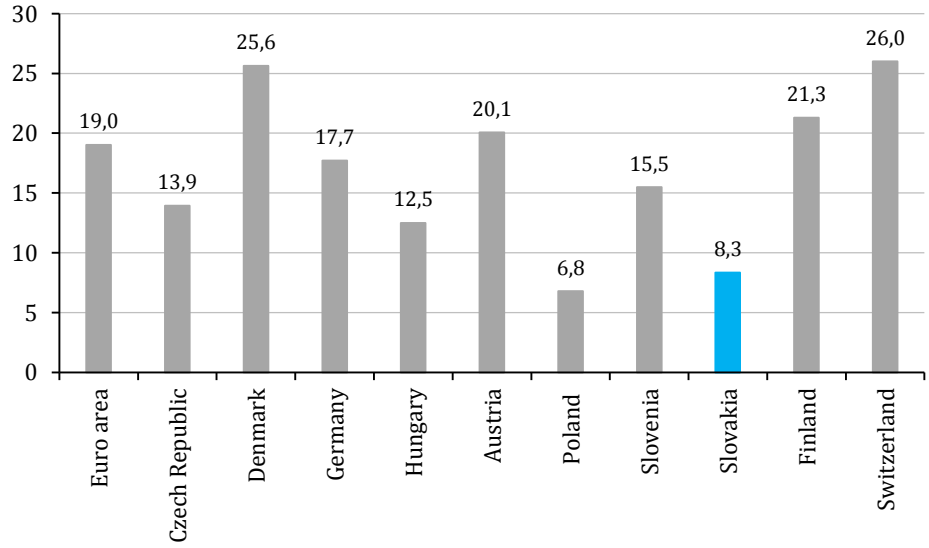
[4] Intellectual property assets include software, databases, R&D outcomes, etc.

Figure 1.8
Share of Investments in Machinery and Equipment in the Gross Fixed Capital Formation (Average Values for 2013 – 2015; in %)



Source: Own calculation based on Eurostat database.

Figure 1.9
The share of Investments in "Intellectual Property Assets" in the Gross Fixed Capital Formation (Average Values for 2013 – 2015; in %)

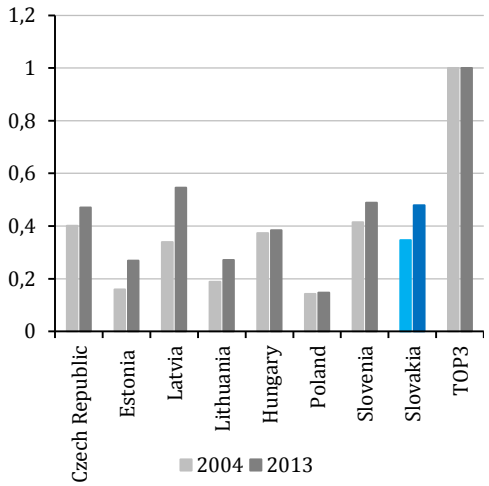


Source: Own calculation based on Eurostat database.

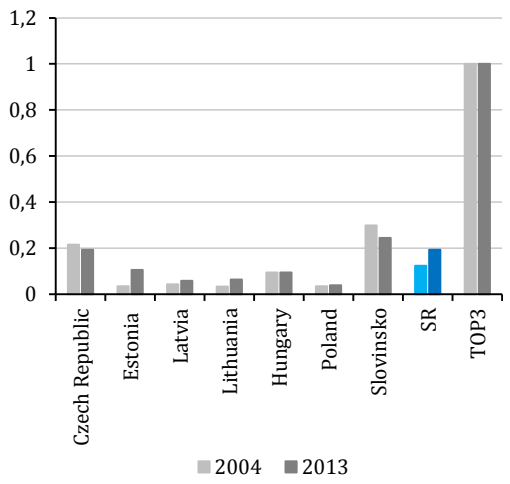
The Slovak economy was catching up (in the field of capital stock – fixed capital per employee) to the most developed economies (Figure 10A). However, while we can state a significant lag decrease in total fixed assets; the stock of intellectual assets clearly lags by an obvious gap (Figure 10B). Despite the fact, there is a convergence in the level of capital stock per employee, the structure of the capital is lagging behind with its highly progressive component necessary for the establishment of domestic "smart" manufacturing processes. Slovakia is primary and successfully catching up its gap in the "traditional" type of fixed assets (buildings, vehicles, machinery, and equipment). However, it is lagging behind in accumulation of those assets necessary for intellect promotion in production.

Figure 1.10
Catching up with the Most Developed Economies in the Level of Assets Stock per Employee

A. Catching up in Total Fixed Assets Stock per Employee (average TOP3 = 1)



B. Catching up in Intellectual Assets Stock per Employee (average TOP3 = 1)



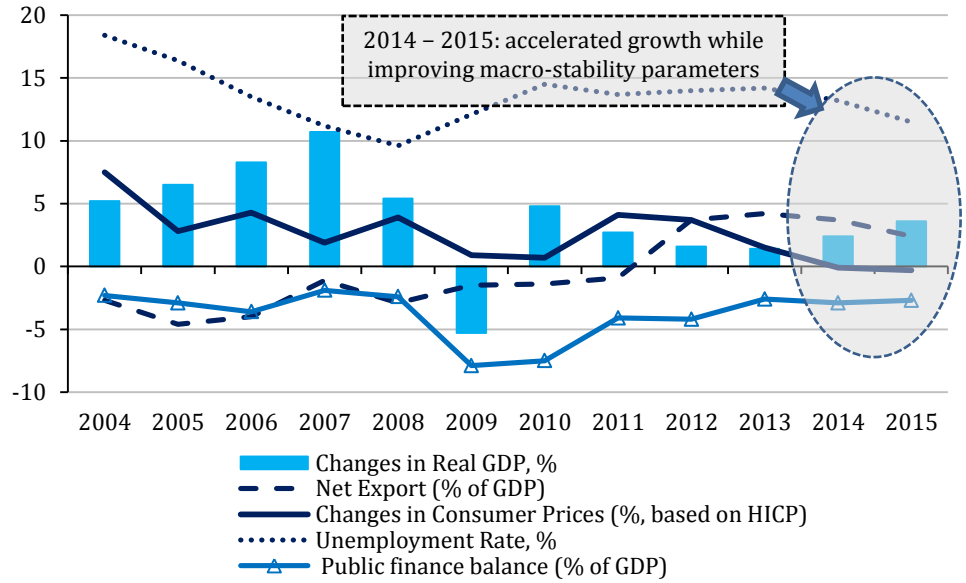
Notes:
– TOP3 in Figure 10A – The average of three countries with the highest level of total fixed assets stock per employee. In this case – Denmark, Austria and Finland.
– TOP3 in Figure 10B – The average of three countries with the highest level of intellectual assets stock per employee. In 2004, it was the case of Denmark, France and Finland. In 2013, it was Denmark, Ireland, and Finland.

Source: own calculation based on Eurostat database.

The Enhanced Macroeconomic Stability: the Imbalances Indicators are Heading to More Favourable Values

The basic parameters of macroeconomic stability (balance) converged closer to zero value (Figure 1.11). Thus, the balance was rather strengthening. Surely, it does not have to be automatically and under all circumstances considered as only positive development. However, by brief overlook, it could be perceived as a positive sign of development (more detailed assessments of partial balance indicators are in following chapters). The shown balance indicators don't need to have the same weight or priority at the same time.

Figure 1.11
Development of Main Macroeconomic Stability Parameters in the Slovakia



Source: Own calculation based on Eurostat database and Ministry of Finance SR.

The main parameters of macroeconomic stability (balance) have improved with the accelerated economic growth. The favorable trends in internal and external can be seen in following fields:

- The level of consumer prices did not grow; the deflation was recorded for the second consecutive year (more precisely, the decrease of

consumer prices level by tenths of percentage). However, such a stability of price level is not a trouble-free phenomenon.

- Both balances (current account and public finance) have moved towards zero, representing the balanced state.
- The range of unemployment rate fall surpassed previous expectations.

The Slovak economy experienced an approximately six years' process of public finance fiscal consolidation which reflected the decline in the share of public finances to GDP from 7.9 % to 2.7 % (decrease of 5.1 percentage points). A greater role in the decline in the share of the deficit to GDP was played by an increase in the share of public revenues (by 2.8 p.p.) and a little less important role was played by public spending reduction (by 2.3 p.p.). The European countries have followed different consolidation strategies. There have been cases of different combinations of decline in public revenues and expenditures (Table 1.2). The Slovakian case was no exception, though. However, the exceptional was the restructuring of government consumption which occurred during public finance consolidation in Slovakia.

Table 1.2
The Role of Changes in the Public Revenues and Expenditures while Reducing General Government Balance (values in percentage points – p.p.)

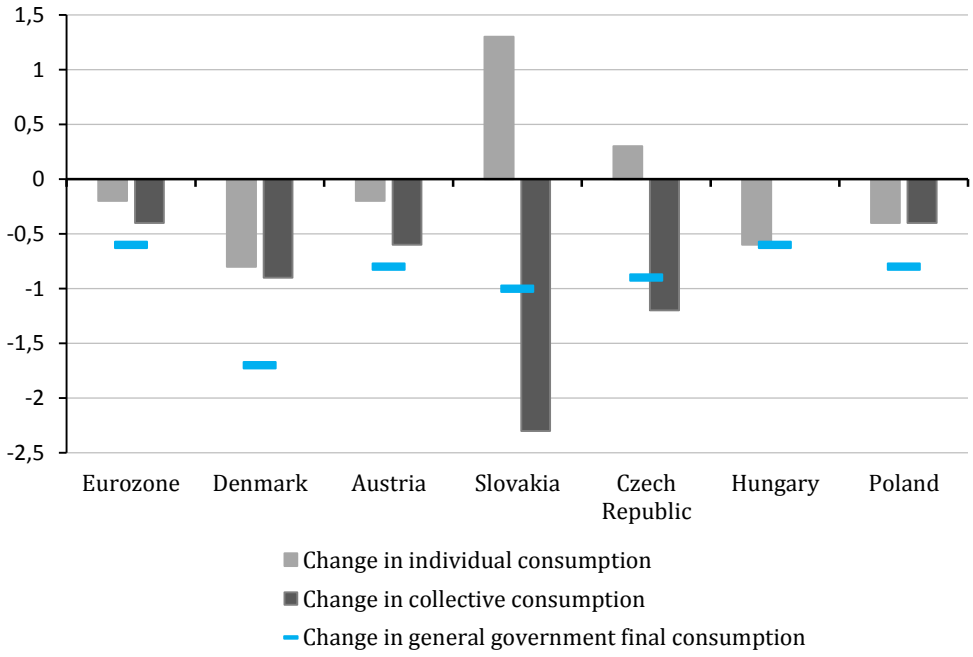
	Eurozone	Denmark	Austria	Slova-kia	Czech Republic	Hungary	Poland
Change in the ratio of general government balance to GDP; p. p.	3.7	4.3	2.6	5.1	3.6	3.0	4.2
Change in the ratio of public revenues to GDP; p. p.	2.4	3.4	1.2	2.8	2.5	3.1	0.7
Change in the ratio of public expenditures to GDP; p. p.	1.3	0.8	1.4	2.3	1.0	-0.2	3.5

Notes: Period 2009 – 2014 except Hungary (2011 – 2014). The period selected on criteria for beginning in the most extensive public finance deficit after 2008/2009 crisis.

Source: own calculation based on Eurostat database.

The reduction in government consumption in Slovakia (percentage of GDP) was accompanied by the contradictory development of its two components (Figure 1.12). Despite the decline in public consumption, the share of general government individual consumption significantly increased[5] along with a particularly strong decline in the share of collective consumption. Given the nature of these components, we can simply note that the consolidation of public finances in Slovakia was associated with public goods funding restrictions (non-rivalry part of public consumption).

Figure 1.12
Change in the Share of General Government Consumption Components in the Period of Fiscal Consolidation (Changes in the ratio to GDP; in p. p.)



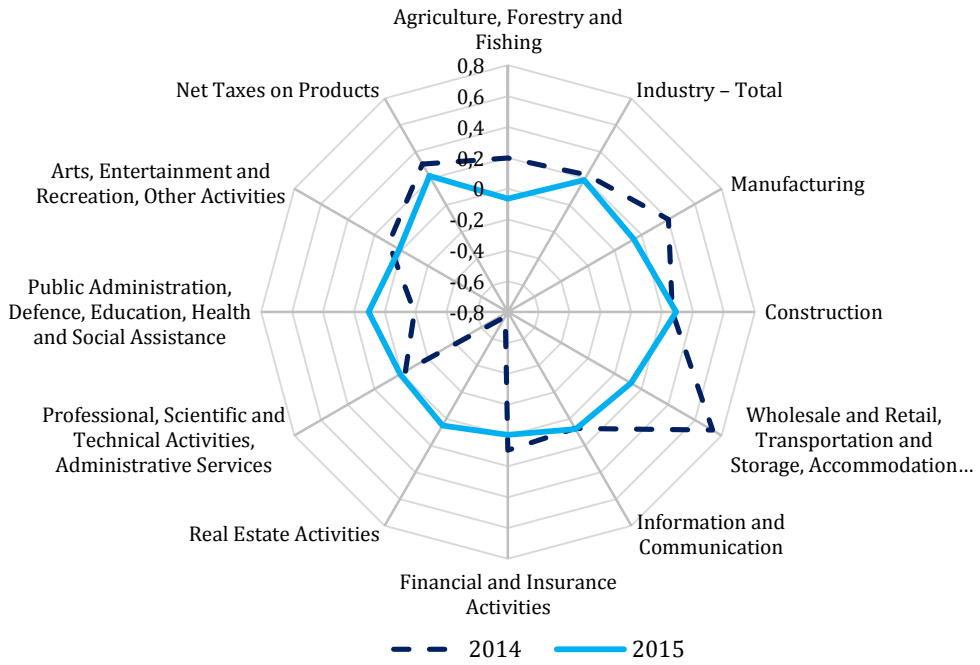
Notes: The same time period as in Figure 1.2.
Source: Own calculation based on Eurostat database.

5 General government individual consumption is the part of public consumption in which it is possible to identify the individuals benefiting from it.
Regarding collective consumption, it is not possible for anyone to exclude someone from this consumption, there is non-rivalry in consumption (the benefit is spread across society without possibility to identify its receivers – so-called public goods).

Importance of Manufacturing Production is Both: Falling and Rising

The growth in the construction industry is interesting when looking at the development of economy on an industrial level. With the growth rate of 12.7 % in current prices and 9.3 % in constant prices, it was the fastest growing industry in 2015 with a high proportion of this growth in generated GDP (Figure 1.13). The expansion of construction production has a clear correlation with the already mentioned sharp increase in fixed capital formation and with the mobilized drawdown of the EU funds. It is true, the high growth rates of the construction industry are partially enabled because, in the recent past, the industry experienced a couple of downturns of its added value (last in 2013) and therefore, upcoming growth could be steeper than usual.

Figure 1.13
Share of branches in Year-on-Year Increase of GDP (calculated in current prices)



Source: Own calculation based on SO SR (Slovstat database).

As the added value growth rates of individual industries are very volatile (and therefore the data for one year can be easily misinterpreted), we rather evaluate the three-year averages. There is a significant difference in dynamics of industries when evaluated in current or constant prices. If we considered the growth rates in current prices, the growth leaders (the period 2013 – 2015) would be Agriculture, Construction, Trade, Real Estate Activities and Arts, Entertainment and Recreation. Having looked at the dynamics in the constant prices, we would identify as growth leaders almost a completely different list of industries: Agriculture, Manufacturing, Financial and Insurance activities. Due to this bias, it is clear that in a certain industries the physical volume of their output expanded along with unfavourable price development (e.g. Manufacturing) and elsewhere, the output prices rose with a minor change in physical volume (e.g. Construction, Real Estate Activities).

T a b l e 1.3
Average Added Value Growth Rate in the Branches for 2013 – 2015 (%)

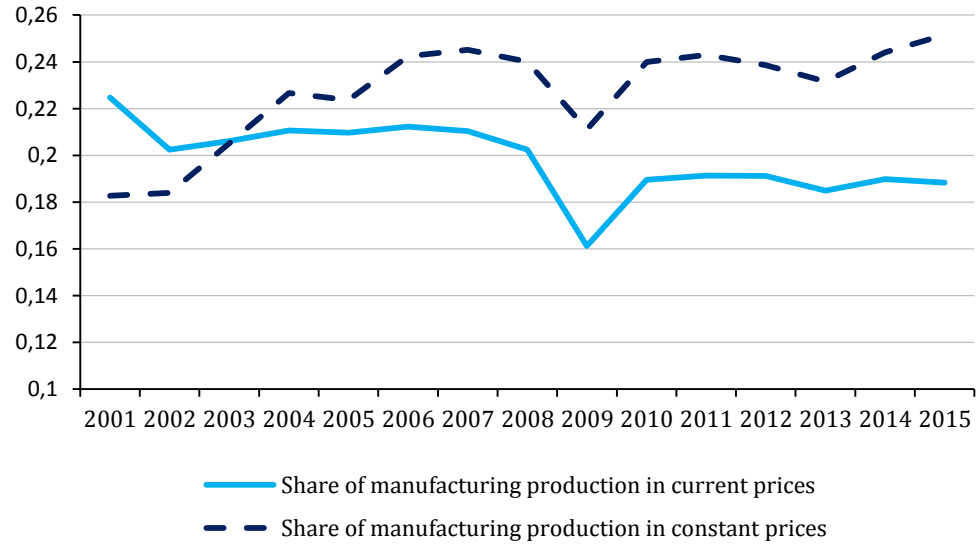
	Current prices	Constant prices
Total	2.5	2.5
Agriculture, Forestry and Fishing	7.1	11.9
Industry – Total	0.7	4.5
Manufacturing	2.1	6.4
Construction	3.2	1.7
Wholesale and Retail, Transportation and Storage, Accommodation and Food Service	3.5	2.1
Information and Communication	1.0	-0.4
Financial and Insurance Activities	1.8	5.3
Real Estate Activities	4.1	0.7
Professional, Scientific and Technical Activities, Administrative Services	2.1	0.1
Public Administration, Defence, Education, Health and Social Assistance	1.4	-0.5
Arts, Entertainment and Recreation, Other Activities	3.4	0.5

Source: Own calculation based on SO SR (Slovstat database).

The very significant role is played by the price factor when assessing the development of manufacturing industry. If we take a look on the

development of share in current prices, the lower and decreasing the share of manufacturing industry on total economy production can be observed. However, if we do the same with values in constant prices, higher and increasing proportion can be identified (Figure 1.14). This phenomenon is probably caused by the fact that prices of manufactured products have long-term tendency to stagnate or decline as a result of a strong productivity growth. That means strong growth in the volume of output with lagging growth in monetary value.

F i g u r e 1.14
Share of Manufacturing Production Expressed in Current and Constant Prices (Share of Added Value in Manufacturing in the GDP of Total Economy)



Source: Own calculation based on SO SR (Slovstat database).

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After this "overview" had brought in the first chapter, we can preliminarily conclude that the Slovak economy accelerated the GDP growth as well as improved some essential parameters of stability and socio-economic development. The relatively favourable development of parameters was partly caused (not exclusively) by factors which availability is limited. We provide more detailed assessment and

evaluation of individual areas in the series of following chapters and at the end, we provided the synthesizing overview of possible development .

T a b l e 1.4
Socio-economic development of Slovakia in 2005 – 2015

	2011	2012	2013	2014	2015
Indicators of economy performance					
Index of real GDP ; sppy = 100[1]	102.8	101.5	101.4	102.5	103.6
Relative economic level (GDP per capita in PPS; EU 28 = 100)	72.8	74.3	75.7	76.7	
Relative economic level (GDP per capita in EUR; EU 28 = 100)	49.8	50.6	50.9	50.5	
Index of domestic demand; sppy = 100	101.2	95.8	100.3	103.1	104.9
Real labour productivity change; index sppy = 100[2]	101.0	101.5	102.2	101.1	101.6
Indicators of stability					
Inflation rate; %[3]	4.1	3.7	1.5	-0.1	-0.3
General government balance/GDP; %	-4.1	-4.2	-2.6	-2.9	-2.7
Share of government consumption in GDP; % (curr. p.)	18.6	17.9	18.2	18.8	19.0
Net lending (+)/borrowing (-)	-3.8	1.8	2.3	0.2	
Net exports of goods and services / GDP; % (curr. p.)	-0.9	3.7	4.2	3.7	2.4
Indicators of social development					
Annual index of employment, sppy = 100[4]	101.9	100.6	100.0	101.4	102.6
Change in number of employees; in thousands[4]	.[5]	13.7	0.3	33.7	61.0
ϕ Unemployment rate; %[4]	13.6	14.0	14.2	13.2	11.5
Annual change of real wages; %	-1.6	-1.2	1.0	4.2	3.2
Annual change of disposable income of households; %	1.5	1.6	3.0	3.1	2.9
Index of real household consumption / population	0.0	-0.6	-0.9	2.2	2.3
Share of public expenditure on social protection in GDP; %	19.4	19.8	20.1	20.0	

[1] Calculated by chain-linked volumes, ESA 2010, sppy – same period of previous year. [2]real GDP per 1 employee. [3] Based on Harmonized Index of Consumer Prices (HICP); sppy = 100. [4]Based on Labour Force Survey (LFS). [5]In 2011, the number of employees was corrected, so it is not possible to calculate the year-on-year increase of employees in the period 2010/2011.

Source: Statistical Office of SR, MF of SR, Eurostat database.

2. QUALITATIVE FACTORS OF ECONOMIC DEVELOPMENT

Technological and innovative development of the Slovak economy, currently based on the import of foreign technology, should be compensated by the more intensive development of domestic innovation capacity. It should be based mostly on efficient domestic research and development (R&D), educated and sophisticated labour force, and the use of information and communication technologies (ICT). These qualitative prerequisites of the economic development will be a crucial condition of national competitiveness enhancement, the economic growth and employment once the price and costs factors will be exploited.

Table 2.1
Selected Indicators of Research and Development, 2009 – 2014

	2009	2010	2011	2012	2013	2014
Funding of R&D:						
Gross R&D expenditure (% GDP)	0.47	0.62	0.67	0.81	0.83	0.89
Divided by sector of performance (% GDP):						
Government sector	0.16	0.19	0.18	0.20	0.17	0.25
Business enterprise sector	0.20	0.26	0.25	0.34	0.38	0.33
Higher education sector	0.12	0.17	0.23	0.28	0.27	0.31
Divided by resource of funds (% GDP):						
Government sector	0.24	0.31	0.33	0.31	0.32	0.37
Higher education sector	0	0	0.01	0.01	0.02	0.02
Business enterprise sector	0.17	0.22	0.23	0.31	0.33	0.29
Foreign resources	0.06	0.09	0.1	0.15	0.15	0.21
R&D personnel[1]	25,388	28,128	28,596	28,880	27,823	28,825
Outputs of R&D:						
Domestic patent applications[2]	176	235	223	168	184	211
Number of patent applications[2] per 1,000 R&D employees	6.9	8.4	7.8	5.8	6.6	7.3
Number of EPO applications	41	53	85	52	51	80
Number of EPO applications per 1,000 R&D employees	0.16	0.19	0.30	0.18	0.18	0.28

[1] Head Count by 31st December.
[2] Domestic patent applications filed at the Industrial Property Office of the Slovak Republic.
Source: IPO SR (2015); Yearbook of S&T 2015 (2015); EPO (2015).

Table 2.1 shows the development of selected input indicators (expenditures on R&D and R&D employees) and output indicators (domestic patent applications and research papers) of Slovak R&D in 2009 – 2014.[6]

Regarding innovation performance prerequisites, a poor patent performance is the long-lasting limiting factor. The patent activity measured by the number of domestic patent applications slightly increased to a level of 211 domestic patent applications in 2014 compared to 2013. It has been reflected in the increase in patent productivity which achieved a level of 7.3 domestic patent application per 1,000 R&D employees. The positive evaluation can also be attributed to patent productivity measured in the absolute and relative number of EPO application (number of EPO applications per 1,000 employees). Both indicators recorded a year-on-year growth.

The key indicator of innovative development – gross expenditures on R&D experienced growth to the level of 0.89 % of GDP in 2014. Therefore, Slovakia retains a very moderate pace of gross R&D expenditures growth and comes slowly closer to the EU 28 average (2.03 % of GDP. The y-o-y growth represented 9.6 % (Figure 2.1) while the share of business sector on R&D funding declined for the first time in 2014 during the analyzed period 2006 – 2014. The y-o-y growth of gross R&D expenditures was mostly driven by the public sector (6.5 p.p.) and foreign resources (8 p.p.).

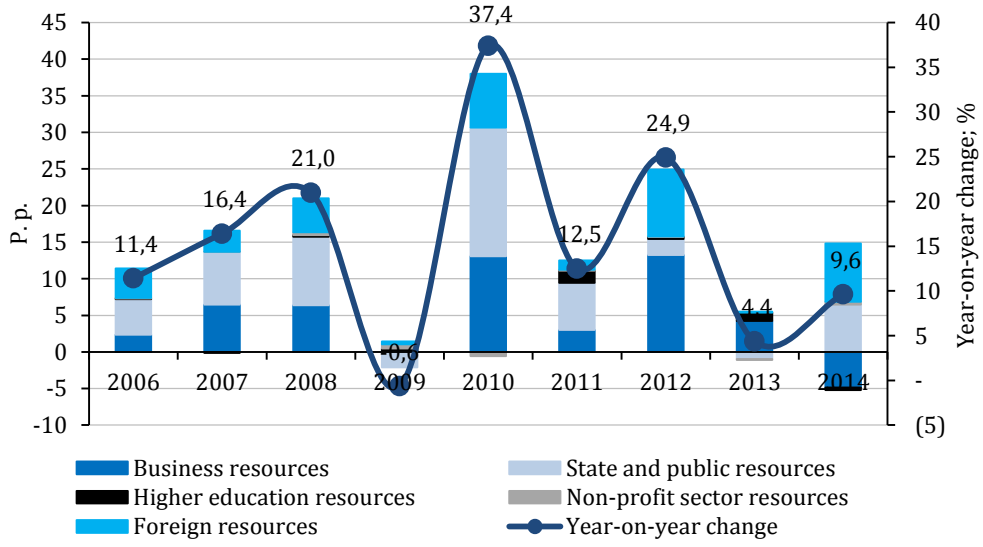
The Slovak gross R&D expenditures are characteristic by growing share of foreign resources in recent years. It was only 6 % in 2005, but already 24 % of R&D expenditures in 2014. The average level of foreign resources share on the gross expenditures is about 10 %. An approximately 2/3 of foreign resources are the funds of European Commission (the rest are mainly resources of companies abroad). Lagging of Slovakia in R&D funding persists and remains one of the main limiting factors of the innovative development. The funding of Slovak R&D was only 44 % of the EU 28 average in 2014. The structural weakness of the Slovak scientific research system is the high share of the

[6] Some indicators published in this chapter are 2 years lagged.

public sector (in terms of use and resources of gross expenditures on R&D) and insufficient share of business sector R&D funding. In 2014, the decline in business R&D expenditures resulted in the relative decline of the whole sector in R&D sectoral structure. The negative trend is mentioned due to the national target in R&D to achieve R&D intensity of 1.2 % with 2/3 share of the business sector. The enhancement of business R&D in Slovakia will depend on increased participation of all kind of resources. The structure of business R&D expenditures for Slovakia and selected EU countries in 2014 is presented in Figure 2.2.

The growth of R&D expenditures remains one of the most important public policy challenges. According to the study by KPMG, "it will be necessary to support schemes targeted particularly on cooperation between businesses and the public sector. Opportunities to increase public sector R&D expenditures from its resources are and will be limited by constraints of the state budget. The expenditures from public resources should generate multiplicative expenditures of corporate funds with the inclusion of large research infrastructure" (KPMG, 2015).

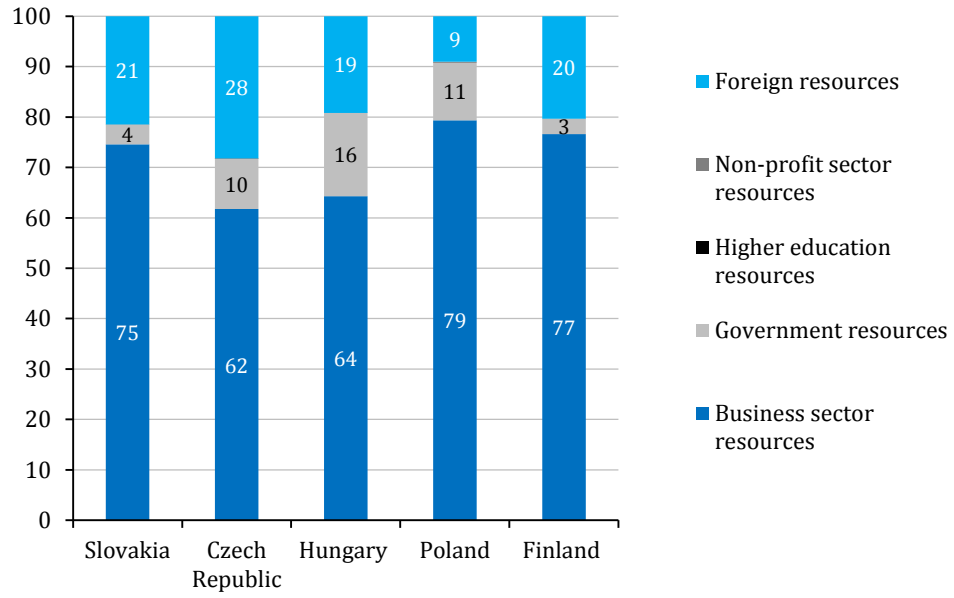
Figure 2.1
Year-on-year Change in Gross R&D Expenditure (%) **and the Sector's Contribution to Growth** (p.p.)



Source: Own compilation based on Eurostat database (2016).

Figure 2.2

The Structure of Business R&D Expenditures in 2014



Source: Own compilation based on Eurostat database (2016).

Note: Calculation based on absolute expenditures in PPP.

In 2015, the programming period 2007 – 2013/+2 ended during which Slovakia had the opportunity to draw funds from the EU funds. The areas of R&D and innovation development were among the preferred areas. The R&D sector absorbed in the years 2007 – 2015 (via Operation Programme R&D) 1.381 billion EUR. In comparison, the total state budget of R&D expenditures was 2.257 billion EUR in the same period. The area of innovative development was primarily funded by the EU funds through two measures: OP Competitiveness and Economic Growth: Innovation and Technology Transfers (387.7 million EUR) and Support of Innovation Activities (59.8 million EUR) as well as by smaller measures OP Bratislava Region: Innovation and Technology Transfer (30 million EUR). However, it should be noted that in addition to those already mentioned measures, also the other ones had a significant impact on innovative and technological catching-up of the Slovak economy – e.g. the informatization of public sector, environmental sector

or educational sector through the modernization of technical and production base. The major role in the support of public sector R&D was played by OP R&D after 2007. After 2011, there has been a shift away in priority axis of R&D (mainly due to under-drawing) from funding of minor projects aimed at applied research and business towards the funding of major projects (seven university parks and six research centers). The funding was oriented to three kinds of activities: Research and infrastructure in universities and Slovak Academy of Sciences; Excellence Centers creation and cooperation projects between universities / SAS and the private sector. Although the problem of the low pace of the EU funds absorption was resolved, the establishment of large-scale R&D infrastructure created a problem of its financial sustainability and efficient use.

Education belongs among the key determinants of the economic development. In particular, a higher education is a prerequisite for quality human capital, thus also an improvement of innovation performance. Table 2.2 lists selected non-financial indicators of the education system. The first two indicators represent *Europa 2020* objectives – the reduction of early leavers in schools and increase the share of population with tertiary education. A certain downside is the slowly increasing population of early school leavers; it was 7.1 % in 2015 (preliminary data). The target value for Slovakia is to stabilize this value on 6 % by 2020. Even though Slovakia is slowly retreating from this value, the target and real value are lower than the EU 28 average. On the contrary, the growing trend is being shown in the share of 30 – 34 years population with tertiary education (27.9 % in 2015; preliminary data). The target value for Slovakia (and for the EU 28 as well) is 40 %. In the context of pursuing the long-term quantitative target of the population with tertiary education share, the fundamental question regarding the quality of higher education and addressing of labour market needs arises here.

Table 2.2
Selected Indicators of Education

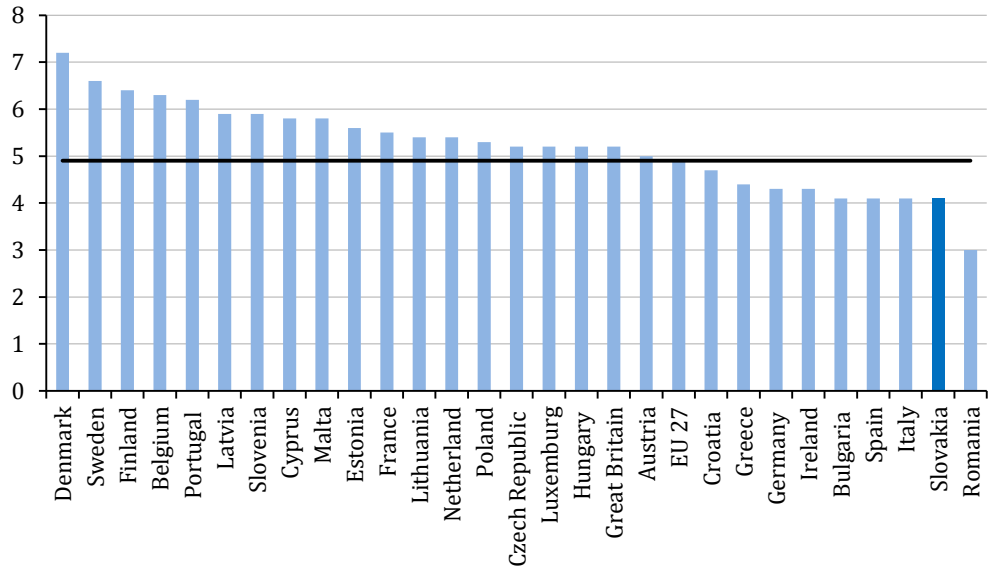
	2007	2008	2009	2010	2011	2012	2013	2014	2015
Share of population with early school leave in cohort 18 – 24 years (%)									
EU 28	14.9	14.7	14.2	13.9	13.4	12.7	11.9	11.2	10.9p
Slovakia	6.5	6	4.9	4.7	5.1	5.3	6.4	6.7	7.1p
Share of 30 – 34 years old population with tertiary education (%)									
EU 28	.	31.2	32.3	33.6	34.7	35.9	36.9	37.6	38.5p
Slovakia	.	15.8	17.6	22.1	23.2	23.7	26.9	26.9	27.9p
General government expenditures on education									
EU 28	4.9	5.0	5.3	5.3	5.1	5.0	5.0p	4.9p	.
Slovakia	3.5	3.5	4.2	4.2	4.1	4.1	4.0	4.1	.
General government expenditures on tertiary education									
EU 28	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	.
Slovakia	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.7	.
Participation in lifelong education (% of 25 - 64 years old)									
EU 28	9.3	9.4	9.3	9.1	9.1	8.9	10.5	10.7	10.6
Slovakia	3.9	3.3	2.8	2.8	3.9	3.1	2.9	3.0	3.0

Source: Eurostat database (2015), **.** – data not available; p – preliminary data.

In the field of education funding, the Slovak economy belongs to a group of the EU 28 countries with the lowest public expenditures on education (Figure 2.3). In 2014, 4.1 % of GDP was spent on education (84 % of the EU 28 average) from public funds. Significant lags are present in secondary education, where only 0.7 % of GDP from public funds was assigned in 2014, which is only 37 % of the EU 28 average. Public funding of education (all grades combined) does not show such a large lag behind the EU 28 as it does in fields like R&D, Health or Defense. Therefore, the attention of public policies should not primarily focus on the growth of resources, but above all on the effectiveness of their use and the internal functioning of the education sector. Especially, in the context of demographic change, the decline in a number of enrolled students, the quality of higher education, remuneration, regional schools, etc.). One of the expected measures focused on secondary education and better addressing the needs of the labour market in 2015 has been the development of so-called Dual Education system. This should be ensured by the adoption of Law on Vocational Education and Training (no. 61/2015 Coll.). The law defines a dual system of education "as part of the vocational education and training of students based on contract, the performance of student practical training directly at the employer's

workplace and funding of practical training by employers." (ProBono, 2015). If a student is studying the field listed in the list of apprenticeships with an insufficient number of graduates for the labour market needs, the incentive scholarship will be provided to student funded by the state budget. The aim of the law is to create better conditions for greater employers' involvement in the vocational education and training. The income of participating students is social contributions free, the employer involved in the system may reduce its tax base of 1,600 EUR per student (for 200 hours of practical training). Other fields of education were out of attention as lapidary stated in the EC report on 14 July 2015; "Only limited progress has been made in the field of teaching conditions improvement, the creation of undergraduate programs focused on professional development and increase in the share of Roma children attending facilities for education and care in early childhood. In the area of ensuring wider participation of Roma in vocational training and higher education, no measures were taken." (EC, 2015).

Figure 2.3
Public Expenditures on Education in EU 28 (2014)



Source: Eurostat database (2016).

Also, a lifelong education is worth of mention. Slovakia lags behind the EU 28 in participation on lifelong education (27 % of educated among 25 – 64 years old). This could be a barrier not only to innovative progress and desired structural changes but also for solving the problems of the labour market.

The development of knowledge-based society is largely subject to dynamic use of ICT in all spheres of society. Table 2.3 presents some indicators of ICT penetration into society (households, businesses, and public administration). The number of households with Internet access increased in Slovakia. In 2015, the growth achieved 79 % of households. Digital literacy derived from the share of citizens who frequently (daily) use the internet, slightly decreased to the level of 60 % in 2015. In terms of new ICT infrastructure creation, Slovakia got closer to the EU 28, when a number of households with access to the broadband internet was 78 % (the EU average is 80 %). ICT use in the business sector, measured as the share of business revenues from e-commerce in total revenues increased to 21 % in 2015 and exceeded the EU 28 average. We may conclude that use of ICT in business sphere in Slovakia (in internal processes, customer or public administration communication) is relatively broad and in comparison to the EU 28 is above average standards. In 2015, ICT use in Slovakia prevails in the business sector rather than in households.

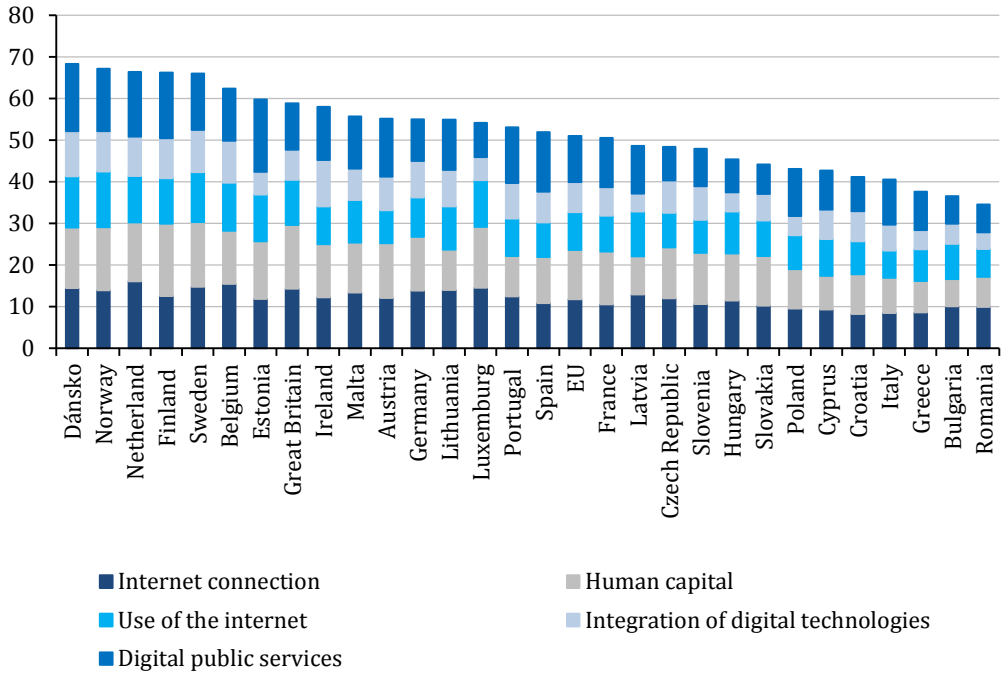
Table 2.3
Selected Indicators of ICT penetration into Society (%)

	2009	2010	2011	2012	2013	2014	2015	EU 2015
Share of households with Internet access	62	67	71	75	78	78	79	83
Share of citizens who regularly use the Internet	49	58	56	60	61	62	60	67
Share of households with broadband Internet connections	42	49	55	72	70	76	78	80
Share of citizens who use the Internet to interact with public administration	38	50	48	42	33	57	51	46
Share of citizens who use the Internet banking	26	33	34	40	39	41	37	46
Share of citizens who use the Internet for e-commerce	16	19	23	30	30	31	35	43
Share of business revenues from e-commerce in total revenues	11	11	16	12	17	16	21	17

Source: Eurostat database (2016).

The European Commission uses for the assessment of digitalization level the Index of Digital Economy and Society (DESI). The index assesses five dimensions: internet access, human capital, use of the internet, the integration of digital technologies and digital public services (Figure 2.4). According to this assessment in 2015, Slovakia was considered to have under-developed digitalization while the worst results were achieved in the field of digital public services.

F i g u r e 2.4
Index of Digital Economy and Society 2016



Source: European Commission (2016).

Digital switchover of public services was one of the priority areas. There was assigned about 900 million EUR in programming period 2007 – 2013/+2 and a separate operational programme was created just for the switchover (OP Informatisation of Society). There were investments to informatization also from the other OPs, however in a smaller extent. By the end of 2014, the area Informatisation of Society had contracted 1.173 billion EUR and withdrawn 585.6 million EUR. However, the result

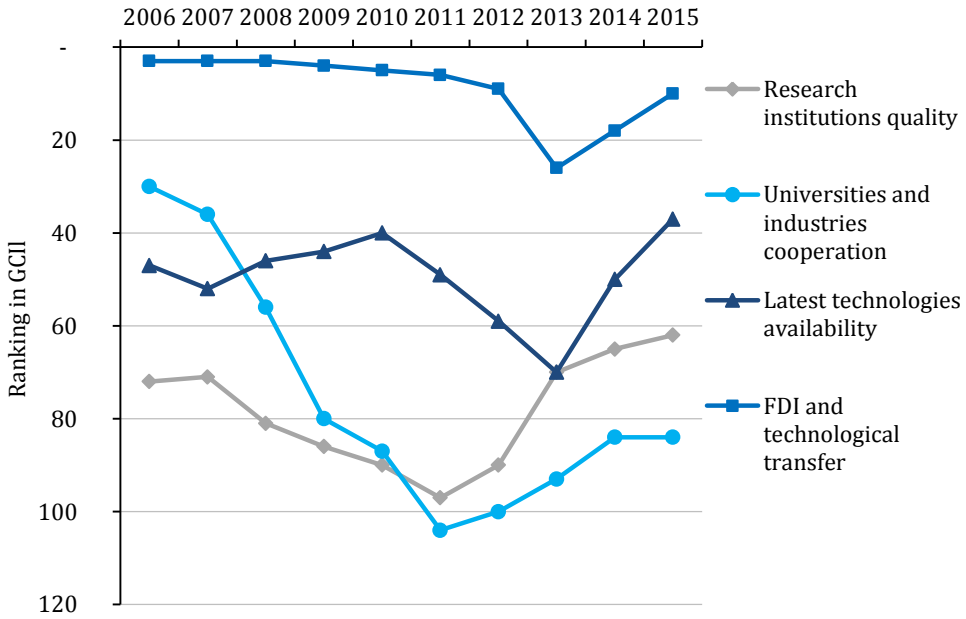
of the EU funds implementation and the overall approach to the digitization of the public sector are assessed significantly negative. Realized e-Government services are hard to use, poorly designed and overpriced, the maintenance of the services is estimated to cost in upcoming five years additional resources (estimate of Slovensko.digital is 500 million EUR). The decisions on the allocation of resources have been implemented in non-transparent conditions and with low participation of professionals, low implementation management and lack of focus on the citizens needs as users.

Innovations, education, and ICT use are the engines of economic development and competitiveness. According to the latest report of World Economic Forum about overall competitiveness, Slovakia ranked 67th out of 140 evaluated countries (in 2014, Slovakia ranked 75th). Slovakia is considered (based on GDP per capita) to be developed economy and belongs to a group of economies whose development is according to WEF methodology driven by innovation (a group of 38 countries). The Slovak system of higher education, which is crucial for the competitiveness of the economy ranked as 56th (improvements by three ranks), Technological readiness is at 44th rank (improvement by eight ranks), and Innovation ranked 66th (improvement by 12 ranks). In the quality education pillar, the highest-ranking indicators were Internet access in schools (32nd), and higher education enrollment rate (50th). The lowest ranking indicators were Quality of the education system (121st) and Quality of management schools (95th). In the Technological readiness pillar, the FDI and transfer technology indicator ranks 10th (improvement by eight ranks) and achieves one of the best ranks within whole GCI ranking. FDIs are perceived as a key factor of the Slovak economy innovation and prove the continuing model of its technological and economic catching-up. Slovakia had a relatively well-performing indicator of the Internet use (26th rank). In the Innovation pillar, Slovakia had a relatively good international position in Utility patents (39th). The lowest ranking indicators of innovative development were Government procurement of advanced technology products (87th) and Innovative

capacity (77th). Figure 2.5 shows the evolution of selected indicators of innovation and technological development in Slovakia by WEF. Selection of four WEF indicators documents ongoing innovation model based on the import of finalized technology and FDI and on the other hand, insufficient role of domestic R&D capacity.

Figure 2.5

Development of Some WEF Qualitative Indicators of the Slovak Economy



Source: WEF (2016).

The basic overview of the Slovak economy structure in terms of technology and knowledge-intensive factors is provided in Table 2.4. Despite the lack of national factors (R&D / education), we can observe quite comparable structure in some ways of the Slovak economy to structure of the EU 28. In the recent period, the employment mostly reached/outperformed the EU 28 average in high/medium-high industries. Similarly, in case of employment in sectors with high technology, Slovakia has already reached about 94 % of the EU 28 level. In 2015, the Slovak import of goods with high technology represented

16.5 % share in total foreign trade, which ranks Slovakia among the European countries with the highest share. On the other hand, 9.7 % share of export goods with high technology in the total foreign trade puts Slovakia to the under-performing group of the EU 28 countries.

Table 2.4
Selected Indicators of Technological Intensity in Slovak economy

		2009	2010	2011	2012	2013	2014
Knowledge intensive activities	EU 28	35.0	35.4	35.6	35.7	35.8	35.9
(% of total employment)	Slovakia	29.1	30.3	30.5	29.8	30.1	30.9
Knowledge intensive activities – Business	EU 28	13.4	13.5	13.7	13.8	13.8	13.9
services (% of total employment)	Slovakia	10.1	10.1	10.4	10.1	9.6	9.9
Employment in high level technology sectors	EU 28	3.7	3.7	3.8	3.9	3.9	3.9
(% of total employment)	Slovakia	3.5	3.8	4.1	4.0	3.6	3.7
Employment in sectors with high and medium-high technology	EU 28	5.6	5.5	5.6	5.6	5.6	5.7
(% of total employment)	Slovakia	8.6	8.6	9.7	10.2	9.8	9.4
Foreign trade of industries with high technologies	Import	10.6	10.9	12.7	15.3	16.5	16.5
(% of total foreign trade)	Export	5.8	6.8	6.8	8.1	9.6	9.7

Source: Eurostat (2016).

* * * *

When evaluating the previous period, even now, we cannot state any significant change in the development of qualitative factors of the economic development. Even though there is a slight increase in the R&D expenditures, there is still a stagnation in share of business sector R&D funding. In the area of R&D funding and innovation base development, the growing trend of internationalization persists via growth of foreign resources in R&D expenditures. Regarding prerequisites formation, 2015 was the last year of programming period 2007 – 2013/+2 where the EU funds could have been withdrawn. The areas, such as education, innovation or ICT are a long-term key points of the European agenda which logically reflected in Slovakia's economic policy. It turns out that strategic framework and the method of implementation and use of the EU funds were far from being optimal. In many cases and particularly in the informatization of public sector we can talk about the lost opportunities of the EU funds use. The funds, which flowed into public

R&D were used for modernization of technical infrastructure, but it is far from the only sufficient catching-up innovation factor. From a certain point of view, we can appreciate the mobilization of “group of actors” in the “knowledge sector” at the end of 2015 and beginning of 2016. The activities of workers in education and especially the part of the ICT sector grouped in the platform Slovensko.Digital can provide the necessary momentum for inevitable changes in the functioning and effectiveness of the public sector.

3. EXTERNAL ECONOMIC RELATIONS

Unlike to the previous three years, in 2015, the current account in the balance of payments ended up with a negative balance at the level of more than 1 billion EUR what represents 1.3 % of GDP (Table 3.1). It is clear from the results of individual items of the current account that the surplus balance of goods and services did not outweigh the deficit in the primary and secondary income. While the capital account ended up with a relatively high surplus in 2015, the financial account recorded a negative balance (net borrowing from abroad) of nearly 900 million EUR. The negative results of the financial account were mainly caused by other investments and within them by loans.

Table 3.1
Main Components of the Balance of Payments Development in the SR, 2011 – 2015

	2011	2012	2013	2014	2015
Balance of goods (EUR million)	-36	2,506	3,048	2,859	1,836
Balance of services (EUR million)	-270	421	411	85	91
Balance of primary income (EUR million)	-2,406	-1,210	-691	-1,650	-1,827
Balance of secondary income (EUR million)	-786	-1,034	-1,321	-1,194	-1,115
Current account (EUR million)	-3,497	684	1,446	100	-1,016
Capital account (EUR million)	885	1,415	1,064	730	2,790
Financial account (EUR million)	-3,402	319	-1,212	-1,662	-878
Balance of goods/GDP (%)	-0.1 %	3.5 %	4.1%	3.8 %	2.4 %
Current account/GDP (%)	-5.0 %	0.9 %	2.0 %	0.1 %	-1.3 %
Financial account/GDP (%)	-4.8 %	0.4 %	-1.6 %	-2.2 %	-1.1 %

Source: NBS (2016a); own calculation.

Table 3.1 provides basic information on the evolution of the main items of the balance of payments in Slovakia during last five years, based on the 6th edition of the *Balance of Payments and International Investment Position Manual* – BPM6 of the International Monetary Fund (IMF) which serves as the standard framework for compiling the statistics of transactions (The Balance of Payments) and stocks (International Investment Position) between the given economy and the

rest of the world.[7] The latest IMF manual provides a number of changes including new and already mentioned concepts of primary income and secondary income. The concept of primary income corresponds to income plus some items of current transfers from previous BPM5 and the concept of secondary income approximately corresponds to the current transfers in BPM5 (NBS, 2016c).

Increase of Foreign Trade Dynamics

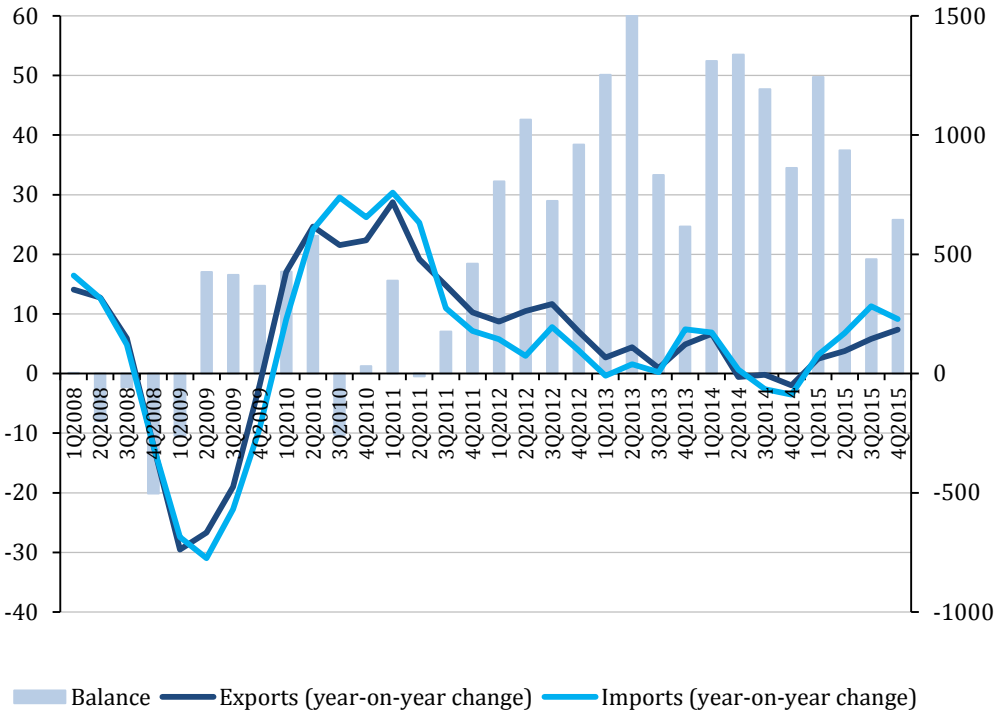
In 2015, the total export of goods increased by 5 % in comparison to previous year and was mostly driven by the automotive industry. The total import increased even more – by more than 7 %. It resulted in re-acceleration of the foreign trade dynamics, increase in export performance of the Slovak economy to almost 87 % of GDP and increase in its import intensity to almost 83 % of GDP. Despite this performance, the foreign trade was not the main driver of the Slovak economy. The foreign trade balance was indeed positive for the fourth consecutive year, however, was lower than in previous years due to more significant increase of imports than that of exports. It is captured in Figure 3.1 which shows the development of foreign trade in individual quarters during past eight years, i.e. from its slump at the end of the last decade.

During the year 2005, Slovakia achieved the highest surplus in foreign trade with Germany (5.6 billion EUR), while the highest negative balance was recorded with China (4.4 billion EUR) and the Republic of Korea (4.1 billion EUR). In 2015, a relative strong decline occurred in exports to slower performing Chinese economy (1/4) and to the sanctioned Russian economy (almost 1/3) compared to previous year. About 85 % of the Slovak export headed to the European Union (year-to-year

[7] The manual was revised along with adoption of the *System of National Accounts 2008* (2008 SNA) and the *European System of National Accounts 2010* (ESA 2010) in order to ensure consistency between the external and domestic macroeconomic statistics. The balance of payments and international investment position data in previous BPM5 methodology are continuously published, but only to reference period December 2014 and they will not be updated for previous periods. After this period, the data are already compiled and published based only on the new methodology.

increase of the export volume by over 6 %), which is the highest share across the whole European Union. The volume of imports from the EU increased nearly by 13 % year-on-year and its share in the total import of Slovakia reached 66 %. (SO SR, 2016).

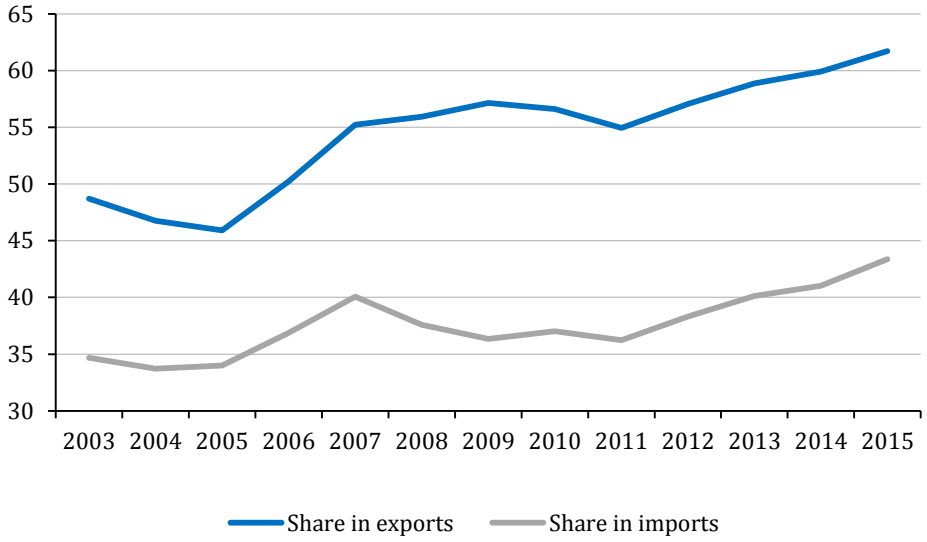
Figure 3.1
Year-on-year Changes of Exports and Imports (left axis, %) **and Foreign Trade Balance** (right axis, EUR million) **in Individual Quarters of 2008 – 2015**



Source: Based on NBS data (2016a).

From commodities point of view, the greatest dynamics of export acceleration was recorded in personal vehicles and other vehicles principally constructed for the transport of persons. This fact is related to the development on the import side, where most of the increase was recorded in vehicles parts and accessories. Thus, the share of machinery and equipment industry keeps growing trend in the Slovak foreign trade. In 2015, it reached more than 60 % share of exports and nearly 45 % of imports (Figure 3.2).

Figure 3.2
Share of Exports and Imports of Machinery and Equipment in Total Exports and Imports of the Slovak Republic in 2003 – 2015 (%)

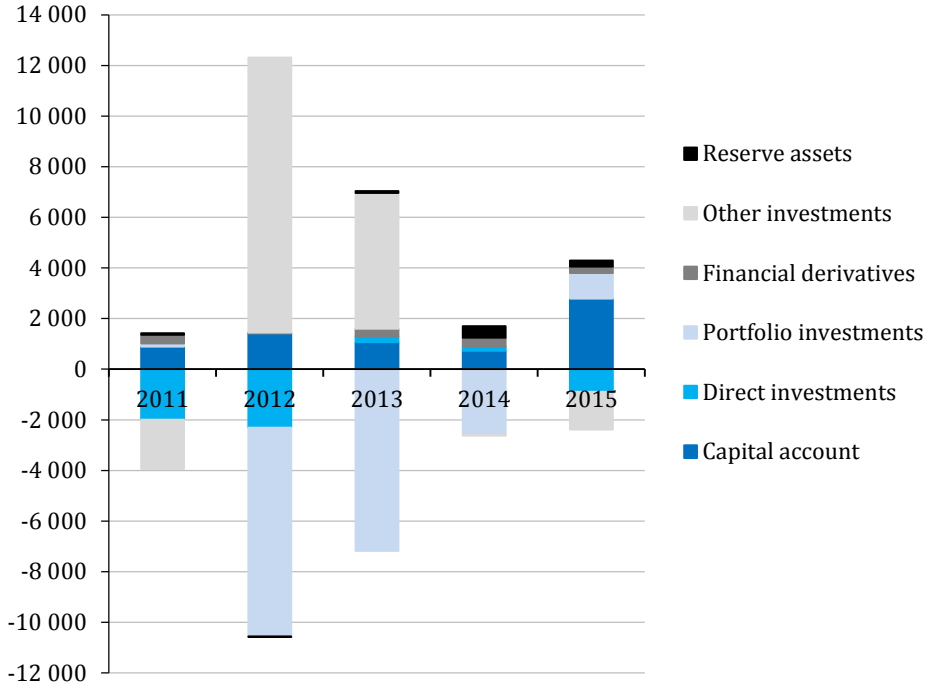


Source: NBS (2016a); own calculations.

Continuation of FDI Inflows to the Automotive Industry

More detailed information on the development of the capital account and five items of the financial account (direct investments, portfolio investments, financial derivates, other investments and reserve assets) are provided in Figure 3.3. Unlike in previous years, in 2015 portfolio investments experienced positive balance and other investments balance ended up negative. In the case of foreign direct investments (FDI), the BPM6 brought a change. Instead of present principle based on the direction of FDI, the investments are now reported based on a gross basis (assets and liabilities), i.e. the net values are recorded with consideration of basic gross transactions. As to FDI, Slovakia recorded lower net increase in assets (acquisition of new assets minus the decrease in assets) than the net incurrence of liabilities (issue of new liabilities minus repayment of outstanding liabilities) in 2015. This resulted in a overall negative balance of direct investments.

Figure 3.3
Capital and Financial Account of the Slovak Republic in 2011 – 2015
(EUR million)



Source: Based on NBS data (2016c).

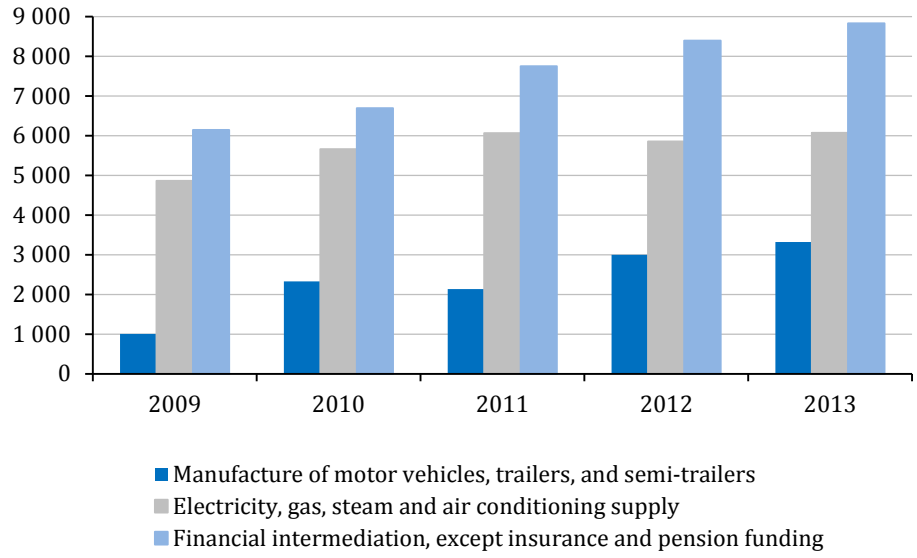
According to the latest data, the FDI amounted to more than 43 billion EUR in Slovakia at the end of 2014 (NBS, 2016c). More than 39 billion EUR of this volume came from the European countries (30 billion EUR from the euro area Member States), more than 3 billion from Asian countries and less than 1 billion EUR from the Americas (mainly from North America).

The FDI in the three dominating sectors during the last five years with data availability are shown in Figure 3.4. The financial services still retain the highest share. Foreign direct investments in this sector (including insurance, reinsurance and pension funds) exceeded 10 billion EUR, i.e. more than a quarter of the total FDI in the Slovak economy. Foreign investments in the energy sector are around 6 billion EUR for several years and the automotive industry, with more than 3 billion

EUR in 2013 and significant multiplier effect in the economy, gradually strengthens its position.

The perspective of FDI inflows to Slovakia in the upcoming years is quite promising and connected with the automotive industry, whose importance as the key sector of the Slovak economy continues to grow. This trend is clearly visible mainly since the second half of the last decade (despite the output decline during the Europe-wide recession in 2009; Figure 3.5) when Slovakia was producing automobiles already in three plants – Volkswagen (since 1991), PSA Peugeot Citroën (since 2003) and Kia Motors (since 2004).

Figure 3.4
FDI in Slovakia in Selected Sectors (EUR million)



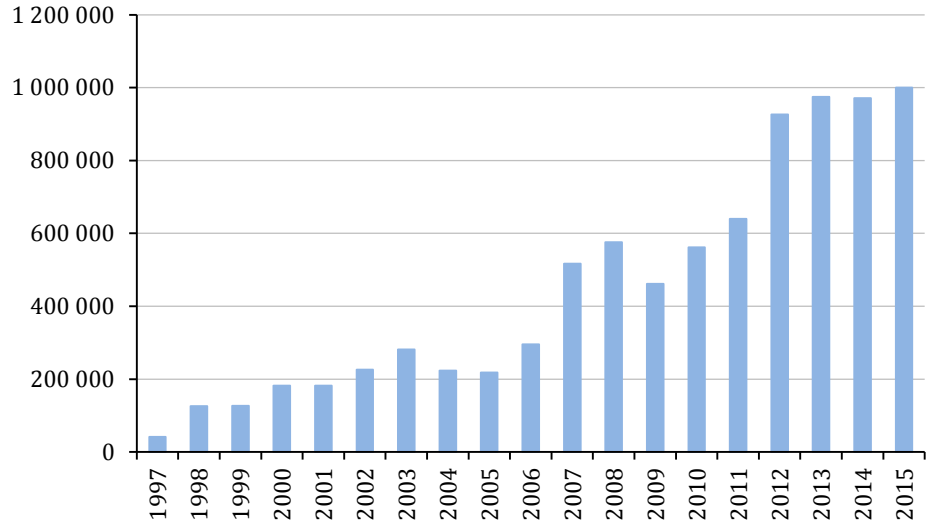
Source: Based on NBS data (2016c).

In 2015, despite the emission scandal of Volkswagen, the production of passenger cars in Slovakia and their export continued to grow. The total annual production of the sector (i.e. three plants) exceeded 1 million passenger cars for the first time in the history, what is equivalent to 184 cars per 1,000 inhabitants. Thus, Slovakia has strengthened its leading position as the largest producer of cars per 1,000 inhabitants in the world.

Due to the increasing vehicles production, the network of suppliers for the automotive industry is gradually expanding. It takes place in both ways, by the arrival of subcontracting firms from abroad and by the emergence of the new Slovak companies. The share of automotive industry in GDP is about 12 %, the share in total industrial production 43 % and its share in industrial exports 35 % (almost all production is intended for foreign markets). The sector employs more than 70,000 people directly in the production of vehicles. If induced jobs are included (in industrial and service sectors), more than 200,000 employees work in this area (ZAP SR, 2015).

Figure 3.5

Development of Car Production in Slovakia (volume)



Source: Based on <www.oica.net> data.

The three automobile producers operating in Slovakia are reaching limits of theirs production capacities; however, due to the fact there is another fourth automobile producer heading to Slovakia, the rank of Slovakia is likely to remain the same in the upcoming years. In August 2015, the Jaguar Land Rover (JLR) signed a memorandum of intent to build a new plant in Nitra with the Slovak government and the investment contract in December of the same year. After the

construction and commencement of production of the fourth plant JLR in Nitra, increase in annual production of the automotive industry by further 300,000 units is expected, which will even more strengthen the position of the sector in the economy.

In 2018, JLR – the British brand belonging to the Indian group Tata Motors – should start producing luxury off-road vehicles in Slovakia. It would be the first plant in Europe (except the UK). The company should invest about 1.4 billion EUR and create about 8,000 new jobs, almost half of them directly at the plant in the industrial park in Nitra and the other half in the network of subcontractors. The JLR could also attract other subcontractors to Slovakia.

Several countries including Mexico, the United States, the Czech Republic, Hungary, and Poland were competing for this investment. Poland has made it to final selection with Slovakia. The decision in favor of Slovakia was influenced by strong establishment of the automotive industry, developed network of subcontractors enabling to save logistics costs, good logistics infrastructure, operation of high technology, an attractive balance between labour costs and labour skills, membership in the euro area and a promise to build a strategic industrial park near Nitra. The important role was also played by government investment incentives. The question is whether promised incentives are not too costly compared to expected benefits from investments. The other question is whether the Slovak economy focusing mostly on the automotive industry would still be able to offer enough skilled labour force.

Given the fact that a substantial part of the JLR investment would be imported, we could expect a lower impact on the Slovak GDP during the investment phase than in the production one. In order to maximize the positive effects on the economy, it is important to achieve the highest possible share of the Slovak subcontractors in production, to perform activities with a higher share of added value and to employ the highest possible portion of workers from Slovakia.

However, the growing specialization further increases fragility of the Slovak economy, even more, when considered that it is a cyclical sector

(durable goods) which performs well during the economic boom and conversely, it may experience a sharp decline in case of economic crisis. The risk for Slovakia is partially diversified by orientation on production of different types of vehicles for different markets (in addition, some vehicles types are not produced anywhere else). In case of luxury cars, which would be produced by JLR and are also produced by Volkswagen Slovakia, weaker consequences in case of any future crisis could be expected in comparison to the production of the middle and lower classes vehicles. Those are more responsive to the effective demand reduction of middle and lower income classes which are most affected by the symptoms of crisis.

In addition to already mentioned investment, also other investments are heading from abroad to Slovakia. They are mostly supported by investments incentives from the government and spread to various regions, including the still lagging region of Eastern Slovakia, as well as to different sectors (information technology, automotive, food, energy, and others). These investments include not only new investment projects, but also the extensions of existing activities of companies already operating in the Slovak Republic.

* * * *

The preparation and launch of new production and export capacities in the Slovak (especially automotive) industry creates conditions for strengthening of domestic economy performance in the upcoming years. The increase of foreign demand contribution to economic growth is expected to be accompanied by improvement in the balance of goods. Based on NBS (2016b) estimation, the contribution of production of the new investments in the automotive industry (JLR and Volkswagen) to GDP dynamics could be 0.7 p. p in 2018. According to the Institute for Financial Policy (IFP) MF SR, new production of the two plants can contribute to growth of the Slovak economy with 0.5 p. p. in 2018 and 1.1 p. p. in 2019 (IFP, 2016).

However, the future development in domestic and particularly foreign environment shows signs of uncertainty. The future development of

trade partners performances (especially China and Russia) remains one of the risks regarding foreign demand for the Slovak products (including vehicles) and services. At the European level, there is a threat of possible breakup of the Schengen area, which would have negative impacts not only on the free movement of persons but also on the transport of goods across the borders of the EU Member States.[8] Regarding FDI inflows to Slovakia, the potential risk could be political instability in the country.

[8] More on this topic in Chapter 4.

4. EUROPEAN CENTRAL BANK 'S MONETARY POLICY AND THE EUROPEAN UNION'S DEVELOPMENT FROM THE SLOVAK REPUBLIC 'S POINT OF VIEW

The European Union and its Member States continue to face a range of major challenges and risks from the external and internal environment. Although the development of some macroeconomic indicators slightly improved in 2016, the monetary policy of the European Central Bank (ECB) does not appear to be much effective despite its continued loosening.

Moreover, the current situation in Europe, including the migration crisis and the UK attitude towards the EU membership with its (potentially) serious consequences indicates that the future of the European integration is uncertain. On the one hand, ongoing (although so far not very successful) efforts for deepening of European integration can be observed. On the other hand, a threat of breaking up of the Schengen area, with the risk of the UK leaving the EU or Greece leaving the euro area, acts in precisely opposite direction. In needs to be pointed out that a free movement of persons and integrity of the Union was considered as granted a few years ago.

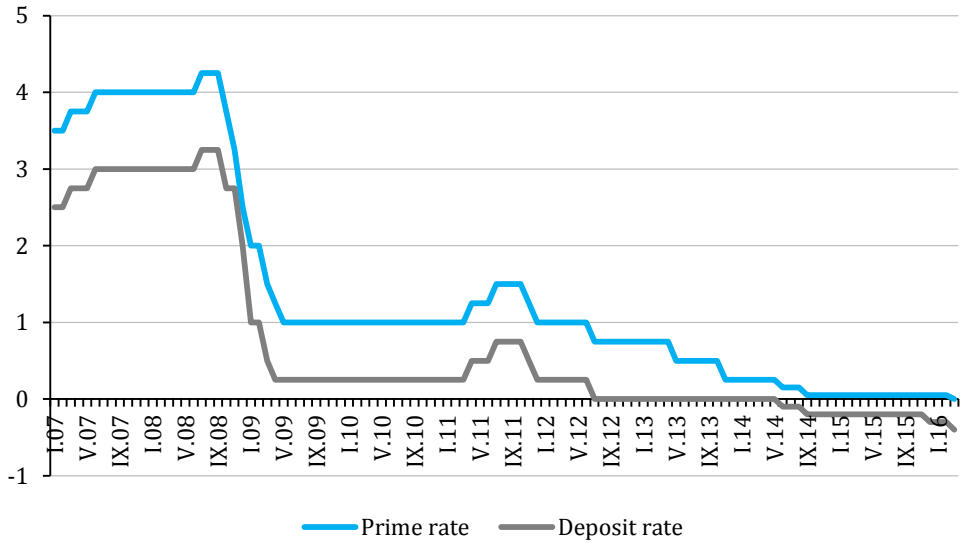
The chapter focuses on the current situation in the EU and especially in the euro area, including the ECB's monetary policy, future (ambitiously planned) direction of European integration as well as the risk factors of its future development. The final part of the chapter focuses on the upcoming, first presidency of Slovakia in the EU Council.

Unprecedented Loosening of Monetary Policy

The ECB is trying to boost economic growth and accelerate inflation or avert deflation by a number of instruments. In September 2014, reduction of the prime interest rate to 0.05 % and deposit rate to -0.20 % was implemented (Figure 4.1). About more than a year later, in December 2015, the deposit rate was reduced by a further ten basis points to -0.30 % with the aim of increasing motivation for banks to

provide loans to the private sector. Another change in the interest rates was implemented in March 2016, when the prime rate has reached previously unimaginable level of 0 % and deposit rate -0.40 %.

Figure 4.1
Development of the key ECB (European Central Bank) **Interest Rates**



Source: ECB (2016).

The central bank of the euro area uses also the opportunity for expanding and intensifying quantitative easing (QE) launched in March 2015. In December of the same year, QE was extended for another six months, i. e. by the end of March 2017 (initially at least until September 2016 or until there is an alignment of price level with the ECB's inflation target of below, but close to, 2%). In March 2016, an increase in the volume of monthly asset purchases was implemented from 60 billion EUR to 80 billion EUR, summing up to more than 1.7 trillion EUR. In addition to government bonds and some regional bonds, the ECB also included corporate bonds from the euro area with an investment grade rating in the program. It happened due to lack of suitable bonds for filling the ECB's monthly quotas of purchases.

Moreover, the ECB launched four 4-years programs of lending to commercial banks, so-called TLTRO, used also in the recent past. Their

aim is to support lending in the euro area. Therefore, commercial banks have unrestricted access to the capital of the central bank at very competitive interest rates – interest rates can be reduced even to the level of the deposit rate, i. e. the ECB would pay to commercial banks for the borrowing of money followed by provision of loans to the real economy.

The current developments in the euro area do not suggest that the implementation of an extremely expansionary monetary policy (where minimum space remains for further easing) could be particularly successful without increased efforts of governments in the euro area Member States. After the decline of harmonized consumer price index by 0.1 % recorded in September 2015, the euro area had returned to deflation again in February 2016, when the decline of 0.2 % was experienced. Based on preliminary estimation also in the next month, the decline by 0.1 % was experienced (Eurostat, 2016), mainly due to energy prices developments. According to the March 2016 forecast of the ECB, the inflation in the euro area will reach 0.1 % by the end of the year, which is far below the ECB's inflation target of 2 %.

There is a chance that in response to these developments, the ECB will further reduce the deposit rate or expand QE (either regarding its duration, monthly volume of bond purchases or the type of assets to be purchased). Such steps would intensify the risks of monetary policy conduction in an unprecedented manner, whether it is the risk of creating price bubbles or "addiction" to QE, resulting in its difficult termination and consequences. The longer QE is applied, the harder it will be to return to implementation of standard monetary policy.

More and more loosened monetary policy of the ECB reflects in a greater or lesser extend in the development of interest rates of the Slovak government bonds as well as in the development of rates on deposits and loans in the Slovak banking market. Interest on loans, including mortgages, is dropping again to historically lowest levels, government bonds with shorter maturities are sold at a negative rate (not only due to good management of government but particularly due to lack of other investment alternatives). The yields on 10-year Slovak bonds stay mostly

below 1 %. In February 2016, the yields even dropped to 0.56 %; lower remuneration has been recorded only in a few EU countries, mostly the euro area core countries (Germany 0.17 %, Netherlands 0.37 %, Luxembourg 0.43 %, Czech Republic 0.46 %, Finland and Austria 0.53 %) (Eurostat, 2016).

An extremely low interest on government bonds, on the one hand, creates favorable conditions for further indebtedness (funding or pre-funding) of the country and promotes economic growth. Such indebtedness (advantageous at first glance) is on the other hand not possible due to the current acting of the Constitutional Act on Fiscal Responsibility as debt brake. Moreover, a growing indebtedness of the state, in the long run, increases the risk of unsustainable public finances. At the same time, sooner or later, there may be an increase in interest rates on government bonds and thus increased pressure on the management of national governments.

Genuine Economic and Monetary Union versus Disintegration?

There are continuing efforts to strengthen the Economic and Monetary Union (EMU), which began with the so-called *Five Presidents' Report*[9] *Completing Europe's Economic and Monetary Union*[10] in mid-2015. In October of the same year, the document *Towards a Genuine Economic and Monetary Union* with specific actions for the first phase has been adopted by the European Commission. The schedule for completing Economic and Monetary Union in Europe, contained in *The Five President's Report,* is as follows:

- Phase 1 – *deepening by doing* (1 July 2015 – 30 June 2017) – using existing instruments and treaties to boost competitiveness and structural convergence, completing the financial union, achieving and

[9] President of the European Commission in cooperation with the President of the European Council, President of the Eurogroup (eurozone Finance Ministers), President of the European Parliament and the President of the ECB.

[10] Based, inter alia, on the report *Toward a Genuine Economic and Monetary Union* (2012).

maintaining responsible fiscal policies at national and euro area level, enhancing democratic accountability.

- Phase 2 – *completing the EMU* – an agreement on concrete, far-reaching measures to complete institutional structure of the EMU, including the Ministry of Finance of the euro area; more binding convergence process (set of commonly agreed convergence benchmarks).
- The final stage (at the latest by 2025) – after full implementation of all steps, a deep and genuine EMU would provide a stable and prosperous place for all citizens of the EU Member States that use the single currency. The EMU would also represent an attractive place for other EU Member States to join if they are ready to do so. Creation of political union is expected.

According to the European Commission, there has to be a parallel progress in four key areas until 2025, which are interconnected, namely: 1. towards the genuine economic union; 2. towards the financial union (completing banking union and speeding up the capital markets union); 3. towards the fiscal union and, 4. towards the political union which will provide the basis for all of these aspects through democratic accountability, legitimacy, and institutional strengthening (European Commission, 2015). The detailed content of planned procedures in these areas is shown in Table 4.1.

Further progress is necessary to achieve convergence among the euro area Member States. In short-term, according to *The Five Presidents' Report*, it should involve the creation of the euro area system of competitiveness authorities, strengthened implementation of Macro-economic Imbalance Procedure, stronger focus on employment and social performance and better coordination of economic policies within the revised European Semester. In the second, mid- to long-term phase, convergence process towards more resilient economic structures should become more binding. It should happen by agreed set of common standards at a high level defined by the EU legislation.

Table 4.1
Towards a Genuine Economic and Monetary Union

	Stage 1 – Immediate steps	Stage 2 – Completing the EMU
Economic Union	New boost to convergence, jobs, and growth	Formalizing and making more binding the convergence process
Financial Union	Completing the Banking Union Launch of the Capital Markets Union Reinforcing the European Systemic Risk Board	
Fiscal Union	New advisory European Fiscal Board	Setting up a fiscal stabilization function for the euro area
Democratic accountability, legitimacy and institutional strengthening	Revamping the European Semester Strengthening parliamentary control as part of the European Semester Increasing the level of cooperation between the European Parliament and national parliaments Reinforcing the steer of the Eurogroup Steps towards a consolidated external representation of the euro area Integration of the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union, the relevant parts of the Euro Plus Pact and the intergovernmental agreement on the Single Resolution Fund into the framework of EU law	Integrating the European Stability Mechanism into the EU legal framework Setting up the Ministry of Finance for the euro area with responsibility at the European level

Source: Juncker, Tusk, Dijsselbloem, Draghi a Schultz (2015).

Progress towards a stronger economic union should be accompanied by the completion of the fnancial union because they both are complementary and mutually reinforcing. Within the financial union, the single bank supervision has been already established. Furthermore, the Single Resolution Mechanism has also been agreed, but not yet fully implemented. The completion of the financial union still requires launching a common deposits insurance system and the capital markets union, which should be implemented in phase 1.

In a short-term, the current governance framework should be strengthen through the establishment of an independent, advisory

European Fiscal Board, which would coordinate national fiscal councils and contribute to better compliance with the common fiscal rules. A stabilizing function of the euro area formed in phase 2 would have the task to improve the cushioning of macroeconomic shocks and thereby make the EMU more resilient.

The democratic accountability and legitimacy are the key elements to strengthening accountability within phase 1 of deepening the EMU and are necessary for phase 2, where planned initiatives represent even stronger sharing of sovereignty and even more solidarity. To prepare for the transition from phase 1 to phase 2, the European Commission (in consultations with the Presidents of other EU institutions) should propose a White paper in the spring of 2017. It will include an assessment of progress made in phase 1 and outline of following steps for the completion of EMU in phase 2.

As evident from the outline above, the EU has an extremely ambitious plan. First of all, the euro area and also the EU 28 itself would most benefit from the strengthening of the existing governance framework, consistent fulfillment of commitments and compliance with the existing rules by all the Member States and European institutions. The existing rules are often bypassed or "bent", thus there is no guarantee that the new rules and measures will not be treated in a similar way.

The increased migration crisis has hit the EU in challenging times. Moreover, the Union reacts in an uncoordinated and slow manner. The process of finding a solution to the refugee crisis invoked further disputes among the Member States and thus deepened the inconsistencies within the Union. Multidimensionality (economic, social, cultural and security dimension) and the extent of the crisis may significantly affect the future of the Europe and European integration. Since the middle of last year, several Member States have implemented measures against the influx of illegal immigrants and the pressure on the existence of the Schengen area[11] has intensified. A mostly preferred

[11] The territory consisting of a part of Europe and several overseas territories within which persons and goods can cross internal borders at any point of the participating states without being subjected to any border checks.

common "European" solution of the problems, associated with immigrants mainly from Africa and the Middle East, is still far away.[12] The costs for the (already burdened) budgets of several Member States are unsustainably growing, which triggers pressure for the release of EU fiscal rules, and future economic benefits are often overrated.

From the economic as well as political point of view, there is a great risk of disintegration of the Schengen area, which would not only mean the end of free movement for people (as one of the four freedoms of the EU), but it would also negatively reflect in other three freedoms by complications and slowdown in movement of goods, services and capital. Even more importantly, the collapse of the Schengen area could trigger further disintegration in Europe. Given the positives resulting from the (functioning) Schengen area, its collapse could lead to its replacement by other alternatives involving a smaller number of countries (a sort of "mini-Schengen"), e.g. within the core of the monetary union (including Germany, Austria and Benelux countries). However, such a smaller group of countries would not reach the benefits of the current, greater zone with no border and customs checks.

Given the extremely high openness of the Slovak economy associated with more than 2/3 share of trade with countries of the Schengen area on the total foreign trade of Slovakia, the consequences of eventual disintegration of the area would be even worse for Slovakia than for other, less open economies. The slowdown in the movement of goods across borders and reduction in its volume would result in decline of competitiveness of the Slovak economy and limiting its performance.[13]

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[12] On 22nd September 2016, the Council of EU Justice and Home Affairs adopted, by quantified majority decision, to reassign 120,000 refugees through mandatory quotas among the EU Member States. The decision was disputed by Slovakia, the Czech Republic, Hungary and Romania; Finland abstained. Poland, which initially declared the common position within the framework of the Visegrad Group (V4), ultimately voted in favor. In early December, the Slovak Republic brought an action to the EU Council before the Court of Justice of the EU in Luxembourg for which it earned a considerable criticism. Given the fact that such a sensitive issue was decided by majority vote and not by consensus of all countries, the Slovak Republic asks the Court to declare the decision of the Council to impose provisional measures on international protection in favor of Italy and Greece invalid.

[13] The analysis of the economic consequences of the Schengen area collapse on Slovakia has been realized by the UniCredit Bank (http://www.kancelarie.sk/poradna/unicredit-co-by-znamenal-koniec-schengenu).

Another threat for future development of the European integration is a possible precedent in the form of UK withdrawal from the EU (so-called Brexit)[14] with subsequent negative impacts on the UK itself as well as on the whole EU. Along with the possible Brexit, the discussions regarding possible withdrawal of other EU Member States could get more intensive. At the same time, if the UK remained in the Union, an ongoing pressure on reforming the EU would be expected, which could be potentially beneficial for other Member States.

The Slovak Presidency of the EU Council – the Challenge in Difficult Times

The presidency of the Council of the EU represents a right of a Member State, but also an obligation at the same time. It belongs to one of the most important and most demanding tasks resulting from the EU membership. The Slovak Republic will take over the presidency in the second half of 2016 for the first time during its nearly 12-years EU membership. As a part of the Presidency Trio, Netherlands – Slovakia – Malta, Slovakia will replace Netherlands holding the position of the presiding country in the first half of 2016.

On the one hand, the presidency is an opportunity for Slovakia to strengthen its position within the EU and to draw attention to its priorities within the European policy. On the other hand, the Slovak Republic as the presiding country will have to act in compliance with the priorities of the Presidency Trio, priorities of the Slovak Presidency, the overall direction of the EU and the work program of the European Commission.

Organizational, technical and logistic aspects of preparation for the Presidency have begun already in 2012. The content (agenda of the Presidency Trio and agenda of the Slovak Presidency) became the center of attention in 2015. At the end of February 2016, the Slovak government adopted the agenda baselines for the Slovak Presidency of the EU Council. They represent a strategic framework for finalization of

[14] In June 2016, the UK will hold a referendum on the membership in the EU.

the Presidency priorities to be approved by the government in June, i. e. just before the start of the Presidency.

The departure point for the agenda baselines (as for the agenda of the Presidency Trio) is five priorities of *The Strategic Agenda for the Union in Times of Change* adopted at the summit in June 2014, underlying the work programs of the European institutions up to 2019. The priorities are as follows (European Council, 2014):

- Employment, growth, competitiveness;
- The Union protecting all citizens;
- The Energy Union with a forward-looking climate policy;
- Freedom, security and justice;
- The Union as a strong global actor.

One of the priorities of the entire Presidency Trio is the completion and deepening of the Single Market and full exploitation of its potential. At the time of the Slovak Presidency, there will be discussion on the Digital Single Market, the continuation of strengthening the Banking Union, enhancing effectiveness of the EU capital markets, the creation of the Energy Union with emphasis on strengthening energy security and improving environment for small and medium enterprises (SMEs). The extremely important topics will include finalization of the often criticized *Transatlantic Trade and Investment Partnership* (TTIP) between the EU and USA as well as the implementation and fulfillment of goals of *The European Fund for Strategic Investments* (EFSI). The Slovak Republic intends to support measures aimed at the promotion of inclusive growth and jobs as well as additional measures for the Member States focusing on effective implementation of *The Youth Employment Initiative*. At the same time, the Slovak Presidency will promote a balanced approach preventing abuses of social systems in the EU, providing social protection to workers and preserving their freedom of movement.

The Slovak Republic will take over the presidency at the times of intensified disintegration pressures. Depending on the outcome of the UK's referendum, it is possible that the Slovak Presidency will manage the launch of negotiations on withdrawal of the country from the EU. Regarding migration, Slovakia will have difficult task of coordinating

negotiations with the aim of formulating and implementing a common European solution and avert the collapse of the Schengen area, which could potentially start an irreversible disintegration process. Therefore, an important goal within the internal aspects should be strengthening the protection of the Union's external borders and the security of the Schengen area.

5. PRICE DEVELOPMENT

The year 2015 was in the field of price development very similar to the previous one when the established trend from 2014 continued and the price level was in a very slight deflation. Originally expected diminishing effect of domestic consumption catching-up has not yet been exhausted. This effect in combination with other several external factors led to the inflation stagnation without tendencies to slip into the deflationary spiral.

Ongoing Moderate Deflation

While in 2014, the deflation phenomenon appeared in the Slovak economy for the first time and raised concerns about its negative impact on overall economic performance, the continuous price decline was perceived as a risk-free factor. A similar price development was also observed in neighbouring countries, which continue in price stagnation for the second year far below their inflation targets.

The main factors contributing to the overall change in the price level may include:

- *The collapse of oil and gas prices*[15]
- *The recurrence of price decline in regulated industries* – the prices of regulated industries declined for the second year in a row. If compared to previous year, the pace of decline even accelerated to level -1.6 %.
- *The ongoing Russian embargo on food imports* – the decision to ban imports of some food products to the Russian market caused the excess of supply on the European market. It was mainly an indirect effect on the Slovak economy when the sanctions did not affect the Slovak exports significantly but rather influenced the imports of these products to the country. The largest price decrease of banned food products experienced pork meat which price fell in an average by 7 %.
- *Powerless ability of common monetary policy to influence the price level* – despite ongoing liquidity provision to the banking system through

[15] The second part of this chapter is dedicated to this topic.

the program of asset purchases (QE), the ECB failed to meet the inflation target or fundamentally alter the inflationary expectations of the Euro area residents (more in Chapter 4)

- *A lower price in rail and bus services* – the most significant drop in all categories of HICP (Harmonised Index of Consumer Prices) was recorded in the transport category in Slovakia. The prices declined by 7 % primarily due to a decline in fuel prices. However, a certain part of this decline may be caused by increased competition in the transportation market. Although the share of public transport in the HICP is relatively low, the adopted measures for cost reduction of work commuters and others may be a potential negative contribution to the development of this category.

When utilizing the production side of economy approach, we may observe that industries have continued the trend from the previous year. The prices of production for domestic market decreased by an average of almost 4 %. Moreover, the prices of production for export decreased at a lower rate close to 2 %. Such development may be caused by several factors like a rapid drop in oil prices resulting in a decline in prices for production cost items (more in the second part of the chapter).

The construction works prices were one of the few items which kept their inflationary character in 2015. A certain contribution to this development is associated with the increase of construction production, which experienced a significant growth and slight recovery in 2014. The growth of demand for construction products with a small lag of supply could result in the price increase.

An important role is also played by economic and non-economic factors when determining the prices of agricultural products. Among those economically based ones, the harvest size or seasonality can be mentioned; for non-economic based factor, it is, in particular, the implications of the Russian Federation embargo on imports of food products from the EU. This effect was partially offset by the export of food products to countries outside the EU and Russia with subsequent re-export to the Russian Federation. However, the embargo also caused the excess of supply on the European market and therefore put pressure on price decrease of banned products.

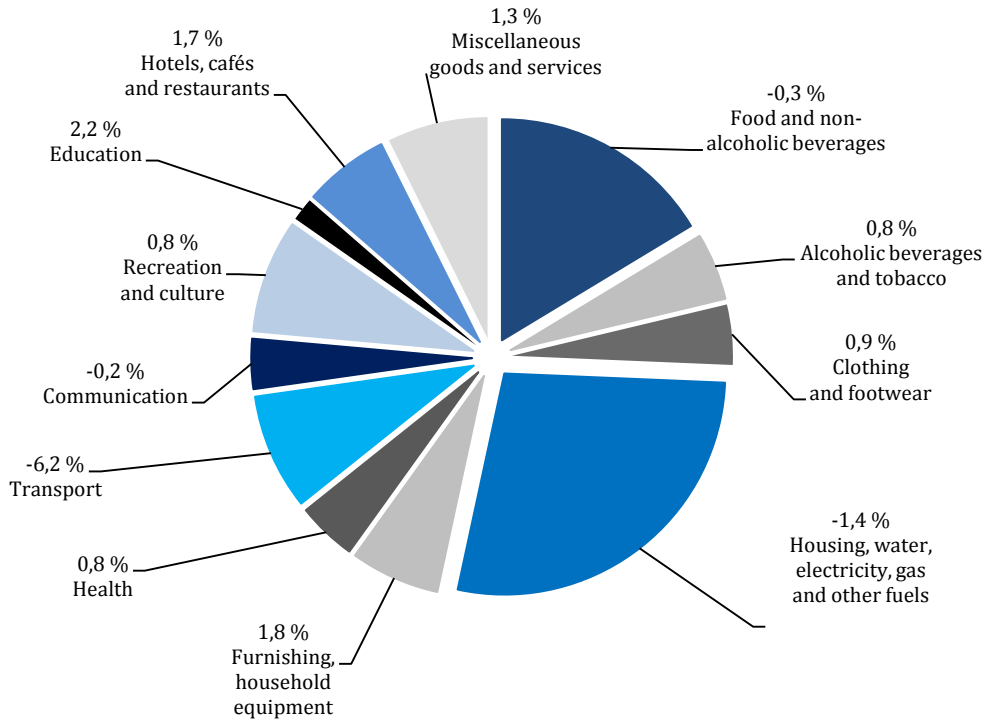
Table 5.1
Overview of the Main Price Indexes in Slovakia (%; 2015)

	2012	2013	2014	2015
Inflation rate (HICP):				
Euro area	2.5	1.3	0.4	0.0
Slovakia	3.7	1.5	-0.1	-0.3
Czech Republic	3.5	1.4	0.4	0.3
Hungary	5.7	1.7	0.0	0.1
Poland	3.7	0.8	0.1	-0.7
Industrial prices:				
Industrial producers prices – domestic	3.5	0.1	-2.4	-3.8
of which: Manufacturing	0.9	0.0	-1.0	-2.2
Industrial producers prices – total	2.0	-1.0	-3.5	-2.9
Industrial producers prices – export	0.7	-1.4	-3.3	-2.2
Construction work prices	.	0.7	1.3	1.8
Construction material prices	.	-0.8	-2.7	-0.8
Agriculture products prices	6.9	-4.9	-7.8	-2.2
Deflators:				
GDP deflator	1.3	0.5	-0.2	-0.3
Government consumption deflator	1.9	1.1	0.3	0.8
Private consumption deflator	3.5	1.3	-0.1	-0.1
Fixed investments deflator	0.2	0.4	-0.4	-0.1
Export deflator of goods and services	1.2	-1.9	-3.3	-1.3
Import deflator of goods and services	2.5	-1.4	-3.4	-1.3
Terms of trade	-1.2	-0.5	0.0	0.0

Source: Eurostat (2016); MF SR (February 2016); SO SR (2016).

In the field of various deflators' development, the deflator of private consumption decreased once again to negative values which could lead consumers to realize their postponed purchases. Additionally to that, the effect of growing economy and a positive outlook for the future has to be taken into account, ultimately leading to an increase in private consumption when compared to the previous year. Similarly, the prices in Slovak foreign trade declined. Thus the imported inflation as a traditional contributor to the growth of price level participated in the overall decline of the price level.

Figure 5.1
Year-on-year Change of the Price Level in HICP Categories in 2015 (size of categories are based on their weights in the HICP)



Source: SO SR (2015).

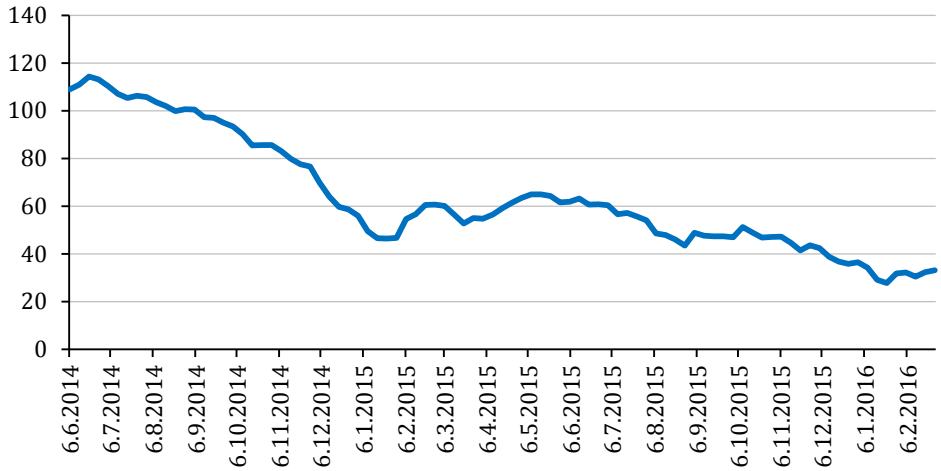
Collapse of Oil and Gas Prices

Since the mid-2014, the oil prices started to decline and reached their bottom in 2016.[16] The prices attacked the 12-year lows (recent lower oil price was in 2004). Among the several factors contributing to this development may be included the price war among the members of OPEC and US oil producers utilising the unconventional methods of extraction. Moreover, the countries with the ongoing high oil supply using the traditional way (with lower costs) are trying to push out from the market US producers using the new unconventional methods of oil extraction. While OPEC countries have the average extraction costs 32 USD / barrel, the US producers have 64 USD / barrel (IEA, 2016).

[16] A similar trend was followed with a small lag in the gas prices development.

As for the long-term determinants of such development, it may be attributed mainly to a long-term excess of supply over demand in the oil market as well as the slower growth of demand for oil in Europe due to the weaker economic growth of European countries (Karmažin, 2015).

Figure 5.2
Price Development of Crude Oil – Brent Europe (USD/barrel)



Source: International Energy Agency (2016).

Impact of Oil Price Decline on Economy and Inflation

From the macroeconomic point of view, the significant lower oil prices may represent a relatively strong incentive for real final consumption growth of households in countries with a substantial share of fuel and energy consumption in total households' consumption (Karmažin, 2015).

The following analysis should only demonstrate, but not point out to the direct and indirect impact of oil price decline on the Slovak economy. The aim is not to provide precise quantification. It is because necessary data for such analysis are published with an enormous time lag. Therefore, the specific values used in the analysis may have changed over the time. However, we do not expect that the extent of change would bias the analysis results and provide a misleading overview of the situation in 2015.

How Does the Oil Price Decline Reflect in the Economy?

From the inflation development point of view, the decline in the oil prices represents a strong disinflationary impulse with nearly instantaneous transmission to the prices of fuels (within a few weeks) and lagged impact on the other commodities produced from the oil or derived from oil.

The sectors directly affected by the fall in oil and gas prices can be identified with use of the Supply and Use Tables, which are an essential part of the National Accounts System.[17] We are focused on Use Tables, especially in Category B – Mining and quarrying and its use for final consumption or intermediate consumption[18] (CPA 2008 – Classification of Products by Activity; see Figure 5.3). Thus, the decline in oil and gas prices affects not only sectors directly linked to oil (production of refined petroleum products, electricity, gas, steam and air conditioning), but also other industries and services by a price decline of their inputs (glass production, construction sector, real estate activities, etc.).

Even more interesting is the look at the distribution of mining and quarrying products for further use when only about 7 % of these products were in 2010 used for final consumption or export and the remaining 93 % entered the production process as a further input (intermediate consumption).

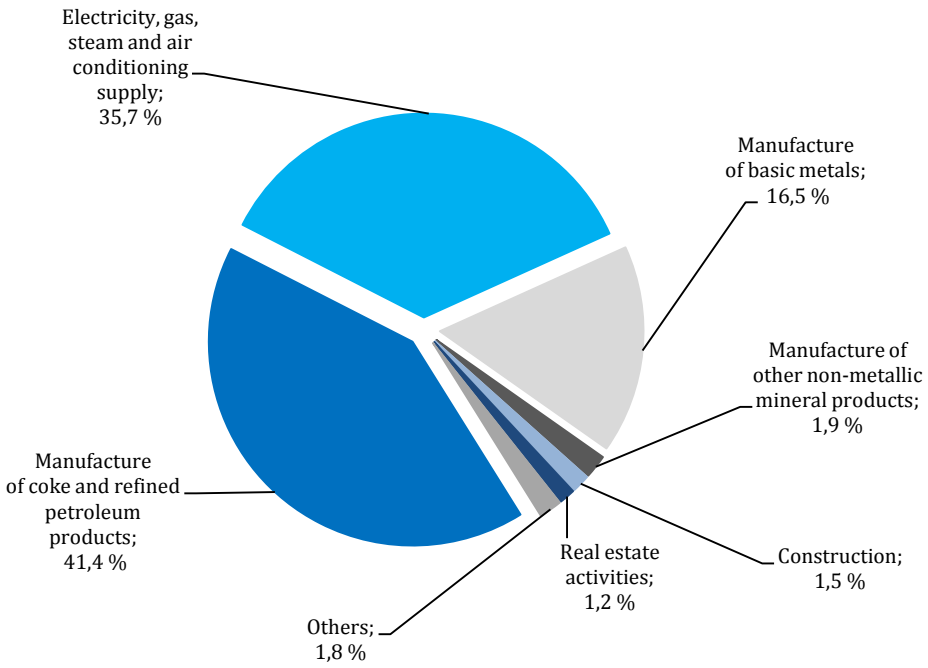
At first glance, the logical sector of land transportation in the structure of oil and gas use is absent. However, the decline in the oil and gas prices is transferred to this sector in the next step when the sector uses the products of coke and refined petroleum analysed in the previous paragraph. The look at the use table of coke and refined petroleum products (category C 19; CPA 2008) reveals that the land transport is the largest purchaser of its products with a volume close to a quarter of the production (23 % in 2010). The products of land transport

[17] The latest available use table data for the SR are from year 2010. Thus, the impacts are rather illustrative than real for the analyzed period.

[18] We are aware that this category also includes other products (e.g. coal and natural gas), but it has been verified that the oil price is a strong determinant of the remaining products with certain time lag.

sector are used in other service sectors, and the effect of oil and gas price decline spreads to the whole economy. The fall in the price of inputs will at least partially reflect in the price decrease of products for final consumption (depending on elasticity), and the overall effect of the price fall is multiplied.

Figure 5.3
Percentage of Mining and Quarrying Products Utilization as Inputs for Other Sectors (%; 2010)



Source: Eurostat database (2016); own calculations.

According to the ECB analysis, the decline in the overall rate of HICP would reflect in 2/3 by the direct effect on the prices of petroleum products and 1/3 through indirect multiplication within the sectors of the economy. This is so-called "primary round of price decline". However, if a sudden change in prices remains at low levels for a longer period and it would change the so-called "inflation expectations", the overall effect could increase the impact of "secondary round" when there is a change in purchasing behaviour of customers (ECB Bulletin, 2010).

The more detailed estimation assumes that 10 % fall in prices would cause a decline of 0.4 p. p. directly in the HICP category – Energy, which weight in the overall index is about 10 %, and a further indirect effect another 0.2 p. p. in all other HICP categories in the time span of three years. If we use the following model for assessment of current oil and gas price decline (fall by 70 % compared to the value of 6/2014), the results will represent the aggregate negative contribution of -2.8 p. p. by a direct effect on the energy category in HICP and another 1.4 p. p. in indirect effect to other categories of the index. The total contribution of oil and gas prices reduction would have the cumulative effect close to -1.5 p. p.[19]

It is necessary to note that this development took place gradually and mentioned negative contribution was spread over several years. Also, it is equally important to be aware that the estimates were based on 60 – 80 USD / barrel price. This is close value to the year 2015 average. However, the monthly development of oil price was strictly negative, and the contributions of each category might vary.

Thus, the question is why the overall price level was rather stagnating in Slovakia and did not decrease to even further values if there was such a negative contributor to price level development. The answer may be in the fact that the oil price decline was partially compensated by the low elasticity of transfer to HICP – Energy category as well as to the fuel prices (Table 5.2).

The Table 5.2 shows that the effect on fuel prices is significantly limited when the price of oil is low. It is mainly due to the impact of excise duties. Since the method of their calculation does not depend on the price of oil and the amount of excise duty per 1,000 litres remains constant, the room for the transfer of oil price decline at low levels is limited.

As the Figure 5.4 demonstrates, Slovakia had the highest value of excise duty in gasoline in absolute terms among all neighbouring countries. Its value accounted for 48 % of the final price of gasoline which is about 9 p. p. more than in the country with the lowest excise duty on gasoline – Hungary (39 %). Therefore, we may conclude that the

[19] The cumulative effect computed as $(0.1x - 2.8) + (0.9x - 1.4) = -1.54$ p. p.

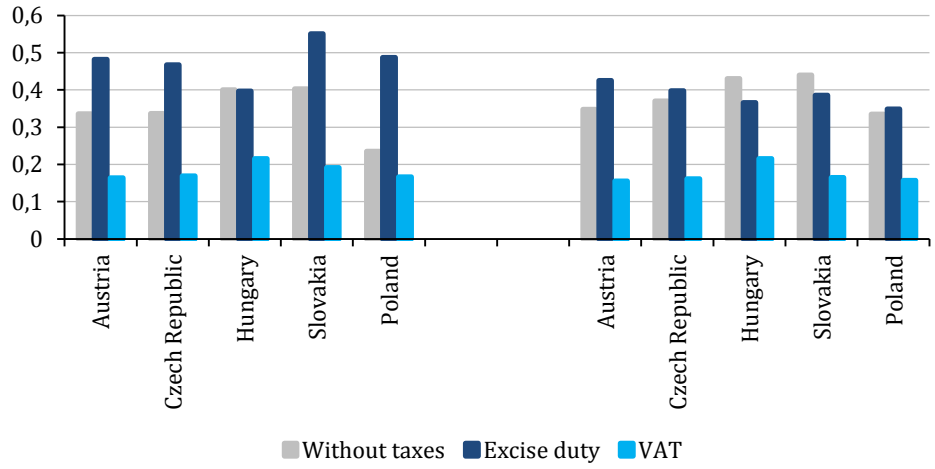
definition of excise duty on gasoline definition with already higher fuel prices in Slovakia (e.g. compared to Poland) prevented the price decline and acted anti-deflationary.

Table 5.2
Elasticity of Oil Price Transfer to HICP – Energy Category and to Fuel Prices

Crude Oil	Weighted Average of Oil Price Transfer to HICP – Energy	Petrol	Diesel
20 USD/barrel	16 %	19 %	19 %
40 USD/barrel	26 %	32 %	32 %
60 USD/barrel	33 %	41 %	41 %
80 USD/barrel	38 %	48 %	48 %
100 USD/barrel	42 %	54 %	54 %

Source: ECB Bulletin (2014).

Figure 5.4
Components of Gasoline Price (left panel) **and Diesel** (right panel) **in March 2016** (€)



Source: European Energy Portal (2016).

Is the Inflation Going to Recover?

The several factors will determine whether Slovakia will achieve the reappearance of overall price increase after two years of low deflation. One of the most important factors will be the development of oil prices which should achieve the correction of prices in 2016 and stabilize at higher average levels than in 2015. This would create inflationary impulse which would affect all sectors of the economy.

However, the effectiveness of ECB monetary policy will be equally important. If we assume that the transmission mechanism of monetary policy works with a time lag (even the ECB itself admits that its length is currently unable to estimate), the results of non-standard measures on inflation development could be revealed in 2016 leading to support of price level growth.

Also, the continuing trend of European economies growth could lead to an increase in the price level (driven by demand) of the Member States of the EU and provide the important inflationary impulse to the Slovak economy.

Moreover, last, but not least, an important determinant of the price developments in the Slovak economy will be the behaviour of domestic consumers. The changes in their inflation expectations (the expectation of continued deeper deflation) and consumption postponed to the future may have a negative effect on overall inflation. However, the probability of such development is rather low.

It is also necessary to deal with our ability to forecast such changes. Retrospectively to the previous year (April 2015), all significant prognostic institutions (including our estimate) believed that the y-o-y change in the price level will be at 1.4 % (our estimate was 0.8 – 1.3) in 2016. However, under the influence of already mentioned facts, they were forced to correct their forecasts and estimates range below 0.5 % level. Therefore, it is a very difficult field in which a real development is very hard to predict.

* * * *

The development of price level in following year (2017) should not negatively affect the positive signs of economic growth acceleration. Also, the recent developments in energy markets and consumers behaviour indicate that the price level will continue to stagnate at a level close to zero. However, if the expected correction in oil prices will not take place and the ECB will not be able to increase the velocity of money effectively, we cannot reject the option that the overall change in the price level may be for the third time in a row in very mild deflationary levels.

6. PUBLIC FINANCE AND THE EU COHESION POLICY

The year 2015 was specific in public finance in several ways, but most of all, it was the last year in which it was possible to implement the Cohesion Policy in the 2007 – 2013 programming period. The fiscal implementation of Cohesion Policy programs started due to delays in preparation of strategic documents in 2008. However, the financial implementation was not developing evenly; in other words, we could observe a year-on-year (y-o-y) decline in spending in some years. After a relatively slow start at the beginning of the programming period, the highest y-o-y increase in spending has been achieved in 2015. This substantial amount of financial resources has influenced the balance of the central government budget as well as the real economy.

In the last nine years, the lion's share of public investments in Slovakia has been financed mainly from Cohesion Policy. Despite undeniably positive effects of Cohesion Policy interventions on the growth of the Slovak economy, such over-reliance on these resources posed a risk for the future development and sustainability of economic growth. The Cohesion Policy should play an additional role in (capital) expenditure at the national level, but in the case of Slovakia, the national resources play only marginal role. Excessive over-reliance on EU funds can lead underestimation of other economic policy instruments (Frank and Jeck, 2015). Inefficient management, implementation, monitoring and auditing of these resources in the years 2007 – 2015, significantly affected the implementation itself. The shortcomings in the audits resulted in the suspension of payments in operational programmes by the European Commission. Furthermore, the transport infrastructure development is a very time demanding process, the Environmental Impact Assessments (EIA) tends to be problematic as well as the public procurement, which was in some cases set for a specific group or individual bidders leading to overpricing and reduction of efficiency in used resources. Asthe result of these shortcoming, leads to corrections by the European Commission, which are then funded by the central government budget since they are not reimbursed from the EU budget.

In 2015, the political cycle 2012 – 2016 was completed, which allows us to evaluate the conducted fiscal policy during this period. Detailed changes in the conduct of fiscal policy since 2012 has been elaborated in previous editions of the Economic Development of Slovakia. Therefore, we will limit ourselves to a more general assessment of the previous political cycle.

We can conclude based on the current development that the fiscal policy had two basic objectives in the area of revenue: the adoption of measures in the field of individual and corporations tax rates by adjusting the tax laws, increasing pressure for more effective collection of direct and indirect taxes, as well as in changes in the pension system. The medium-term budgetary objective of the policy targeted a balanced general government budget on a structural basis in 2017. Based on preliminary data for 2015, we may conclude that the trend towards this objective has not been achieved. Despite the gradual reduction of the deficit, we can observe that the decline occurred on the structural basis only in 2013. In the following years, the level of structural balance was always higher than in 2013. Moreover, no major reforms have been implemented in sectors which exibit long-term inefficiencies and are traditionally negatively influencing the efficiency of public spending.

The unsolved and postponed structural reforms in the healthcare, social and education sectors represent a serious risk to the stability of the public finance in long-run. The same conclusion is observed in the Country Specific Recommendations for Slovakia in the framework of the European Semester (European Council, 2015). The European Council points out that despite Slovakia was able to reduce the deficit below 3 % of GDP; there are still several persisting issues that need to be addressed. From the standpoint of the Council, Slovakia has the poor quality of the business environment reducing the attractiveness for domestic and foreign investors, primarily due to lack of efficiency and quality of public administration and the judiciary system. The public administration is influenced by high staff turnover and inefficient human resources management system. The efforts to reduce corruption have also only limited results. The analytical and monitoring capacities and

mechanisms for financial management have not been sufficiently strengthened yet.

The public procurement remains an issue. It is necessary to increase cost efficiency in the health sector to ensure the long-term sustainability of public finance. Implementation of so-called eHealth aiming at an increase in quality of health care is delayed for more than four years despite spending of significant financial resources (about 45 million EUR). The health sector is in comparison with neighboring countries less effective due to general system settings, the existing hidden infrastructural debt, and *rent-seeking* activities. The heading towards a balanced budget on structural basis is constantly postponed. Therefore, the medium-term budgetary objective is not respected. Achievement of structurally balanced general government budget on sustainable level will require, in addition to the already carried out steps on the revenue and expenditure side, the substantial structural reforms in the already mentioned sectors.

Furthermore, the underdeveloped and insufficient evaluation culture of planned or implemented policies in Slovakia is a critical issue. Thorough evaluation of expenditure would give a clear signal whether an investment is socially and economically beneficial and effective.

After the end of the current programming period in 2023, it will be necessary to mobilize substantial amount of domestic resources to offset the decline of external funding from Cohesion Policy. Given the fact, that it is impossible to expect any substantial increase in tax rates, the increase in efficiency of expenditure will be one of the main measures to concentrate the domestic resources to the areas where they will bring the highest benefit.

Development of the General Government Budget Balance

According to preliminary data, the general government deficit in Slovakia amounted to 2.97 % of GDP in 2015 (Spring notification, Eurostat, 2016) (Table 6.1). The preliminary date show, that achievement of the medium-term budgetary objectives in 2015, had not been achieved.

According to the newly appointed government and its Programme Manifesto, the structurally balanced budget should be achieved in 2020.

Table 6.1

Development of the General Government Deficit in 2008 – 2015

Indicator		2008	2009	2010	2011	2012	2013	2014	2015
Net lending / borrowing	EUR mill.	-1,555	-5,076	-5,032	-2,887	-3,046	-1,933	-2,098	-2,124
Net lending / borrowing[1]	% GDP	-2.3	-8.0	-7.5	-4.1	-4.2	-2.6	-2.8	-2.7
Primary balance[2]	% GDP	-1.0	-6.5	-6.2	-2.6	-2.4	-0.7	-0.9	-1.1
Cyclically adjusted primary balance[3]	% GDP	.	.	-6.0	-2.1	-1.6	0.6	-0.1	-0.8
Structural balance[4]	% GDP	.	.	-6.7	-4.1	-3.5	-1.3	-2.1	-2.4
Gross general government debt	EUR mill.	19,205	22,923	27,622	30,485	37,618	40,178	40,404	40,861
Gross general government debt	% GDP	28.2	35.9	41.1	43.5	52.1	54.6	53.5	52.5
Net general government debt[5]	% GDP	22.8	32.2	37.6	41.3	45.9	48.2	50.0	48.7

Note: 2014 data are preliminary.
1 Net lending/borrowing including the second pension pillar costs (Eurostat definition).
2 Primary balance is the public administration balance adjusted for interest paid.
3 Cyclically adjusted primary balance is the primary balance adjusted for the cyclical component.
4 Structural balance is the public administration balance adjusted for the cyclical component and one-time effects.
5 Net general government debt is the gross general government debt minus liquid financial assets.

Source: MF SR (2016a).

Table 6.2

Consolidation Effort in 2010 – 2015 (EUR million)

	2010	2011	2012	2013	2014
Net lending/net borrowing	-3,499.4	-3,230.1	-2,175.0	-2,144.4	-2,042.2
Cyclical component	-98.7	-105.2	-315.4	-247.6	-146.4
The costs of II. pension pillar deploying	-845.9	-722.5	-417.4	-435.3	-455.2
Interest paid	-1,084.4	-1,322.1	-1,362.7	-1,375.0	-1,425.6
Consolidation efforts	1,941.8	145.5	735.3	-565.1	970.8
Structural balance adjusted for the EU	-3,031.2	-2,750.4	-1,848.0	-3,652.3	-2,443.1
Fiscal impulse	1,804.6	280.8	902.4	-1,804.3	1,209.2

Source: MF SR (2016a). Data for 2015 are preliminary.

The Central Government Budget Development in 2015

In contrast to the approved budget the tax revenue had been higher by 575 million EUR, which had a positive impact on the central government budget in 2015. The total revenue was about 30 % higher than planned, representing on cash basis an increase of 1.73 billion EUR in 2015.

Table 6.3
Central Government Budget Development in 2012 – 2015 (EUR million)

Indicator	2012	2013	2014	Planned 2015	Actual 2015	% of compliance 2015	Year-on-year change, %
Total revenue	11,830	12,797	12,496	14,494	16,233	112.0 %	29.9 %
of which:							
1.Tax	8,463	9,135	9,293	10,037	10,612	105.7 %	14.2 %
of which:							
Tax on personel income	234	214	239	40	64	160.0 %	-73.2 %
Corporate income tax	1,733	2,003	1,917	2,305	2,607	113.1 %	36.0 %
Income tax coll. by deduction	167	178	175	145	162	111.7 %	-7.4 %
VAT	4,307	4,735	4,919	5,254	5,510	104.9 %	12.0 %
Excise taxes	1,979	1,977	2,009	2,090	2,096	100.3 %	4.3 %
2. Non-tax	695	1,283	1,637	1,144	1,274	111.4 %	-22.2 %
3. Grants and transfers	2,670	2,379	1,566	3,313	4,346	131.2 %	177.5 %
of which:							
Income from EU budget	2,127	2,175	1,257	3,272	4,280	130.8 %	240.5 %
Total expenditures	15,640	14,820	15,420	17,478	18,166	103.9 %	17.8 %
of which:							
Current expend.	13,657	12,968	13,441	14,931	13,507	90.5 %	0.5 %
Capital expend.	1,983	1,854	1,979	2,546	4,658	183.0 %	135.4 %
Deficit/Surplus	-3,810	-2,023	-2,923	-2,983	-1,932	64.8 %	-33.9 %

Note: Total revenue from the tax on personal income are higher, but given the fact that it is the revenue for the regional government, the values within the central government budget are low.

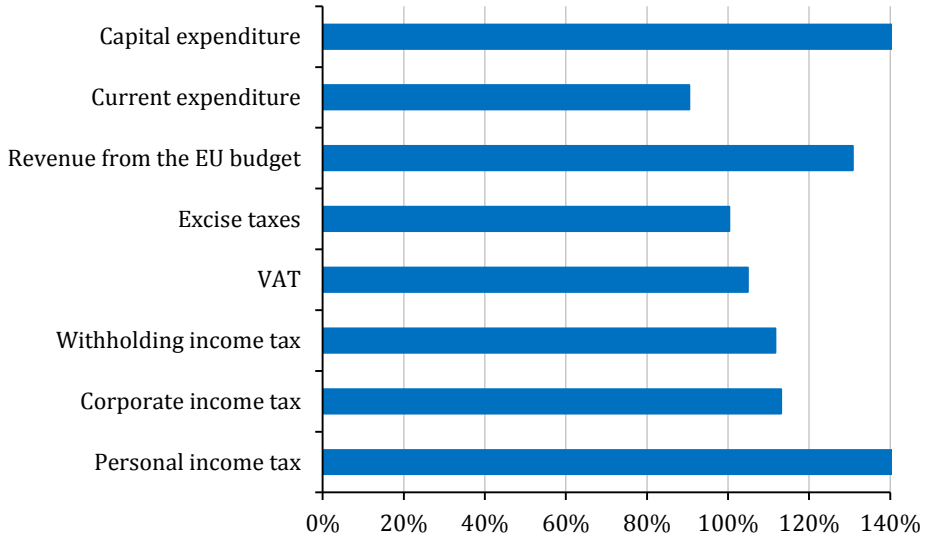
Source: MF SR (2016c); own calculations.

A more detailed look at the tax revenue shows increase mainly in corporate income tax (CIT) by 302 million EUR. The Slovak self-

governing regions and municipalities received in total 2 billion EUR from the personal income tax (PIT) (59 million EUR higher amount than planned). The positive trend was also observed in the field of tax on goods and services collection. The collection of value added tax (VAT) was higher than planned by 255.7 million EUR due to the positive development of household consumption and measures adopted to prevent tax evasion.

The central government budget expenditure were higher than planned by 687.9 million EUR in 2015. In a closer look at the structure of expenditure, we may observe the largest decrease in the expenditure by 1.4 billion EUR than planned mainly in current expenditure. Particularly in the area of transfers to individuals and non-profit legal entities, the expenses were lower by 225.8 million EUR. The expenditure on goods and services were lower by 856 million EUR. Further savings which amounted to 132.9 million have been achieved, due to lower interest rates on government bonds.

Figure 6.1
Fulfillment of Selected Revenue and Expenditure of the Central



Source: MF SR (2016c); own calculations.

The end of the 2007 – 2015 programming period also reflected in the central government budget revenue. The revenue were higher by 1.03 billion EUR (30.8 %) than planned and amounted to 4.28 billion EUR.

The Central Government Budget Deficit and Central Government Debt

According to the above-mentioned positive development of the central government budget revenue and despite the higher expenditure by 17.8 % than planned, there has been a decrease of the budget deficit on y-o-y basis by 34 %. The central government budget deficit amounted to 1.9 billion EUR.

On the expenditure side of the budget, the main increase accounted for capital expenditure, which were significantly higher than in previous years mainly due to the implementation of Cohesion policy programmes from the ending 2007 – 2013 programming period. The volume of capital expenditure amounted to 4.6 billion EU in 2015. In 2012 which was the second best year in this programming period, the volume of capital expenditure reached only 1.9 billion EUR.

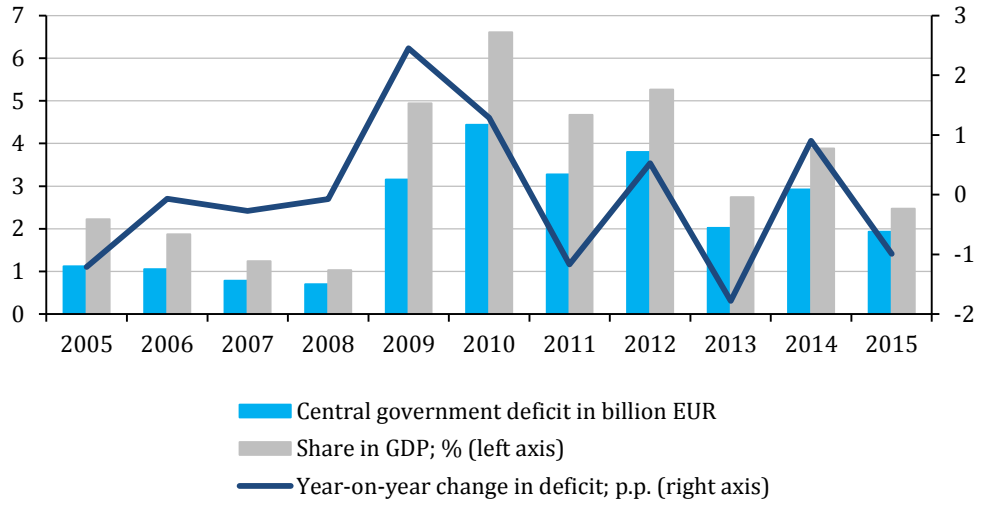
Despite the expectations that the pace of implementation will increase in 2015 due to the ending of programming period 2007 – 2013, the achieved result is impressive. The volume of financial implementation is approximately 2.5 times higher than in 2012. Despite the fact that this investment boom represents a significant economic stimulus for Slovakia, it is necessary to point out to the risk of possible corrections by the European Commission. Given the volume of spending, there is a high probability that part of the expenditure may not-eligible or not implemented according to the regulations, which will lead the European Commission to apply correction and negatively affect the central government budget in following years.

In comparison to 2014, a slight increase in the volume of central government debt occurred by 640 million EUR in 2015. Due to changes in ESA 2010 methodology and higher GDP growth than central government debt growth, debt-to-GDP ratio is improving. In 2015 a decrease by 1.1 p. p. was recorded compared to the previous year.

A more detailed look at the structure of central government budget expenditure, reveals a particularly high increase in capital expenditure, which exceeded the planned level by approximately 2.1 billion EUR and amounted to 4.6 billion EUR in 2015. The reason for this development have been mentioned in the previous paragraphs of this chapter.

Figure 6.2

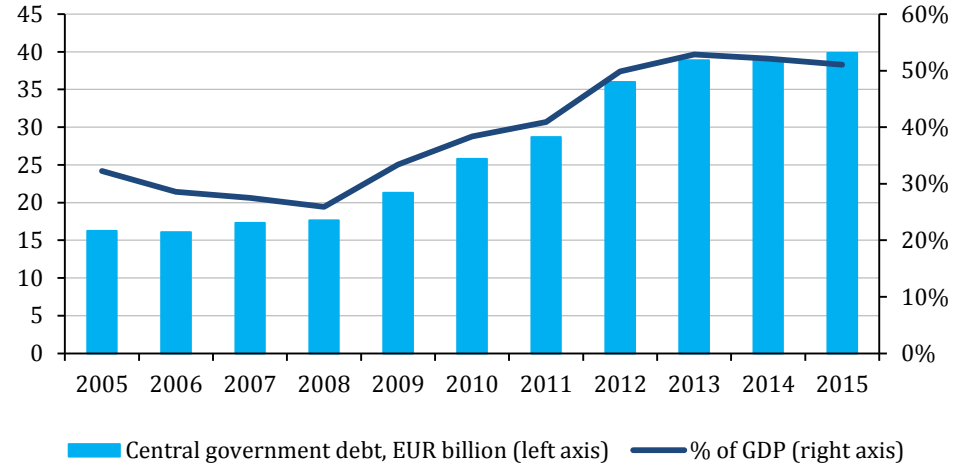
The Central Government Budget Deficit in 2005 – 2015



Source: MF SR (2015c); own calculations.

Figure 6.3

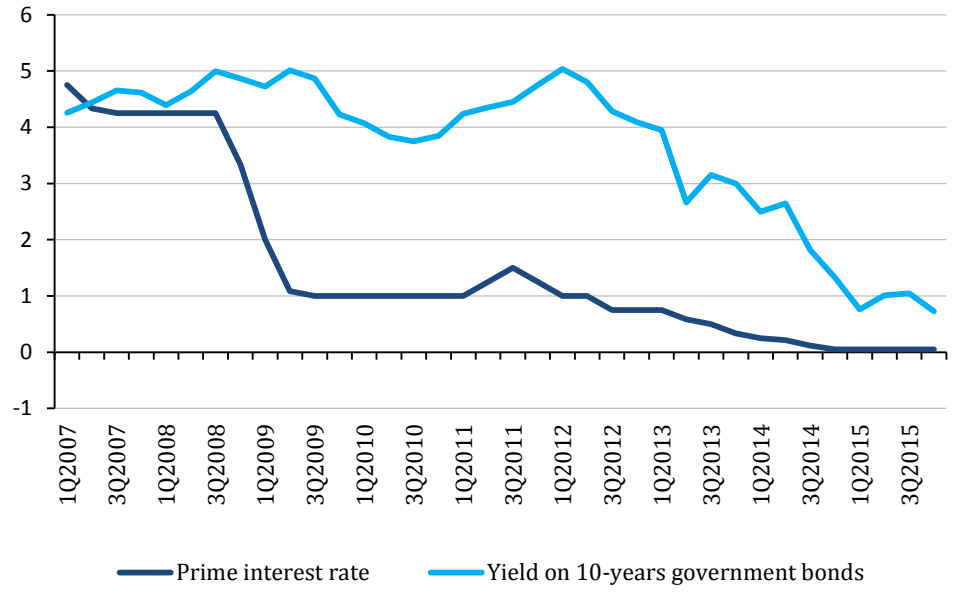
Central Government Debt in 2005 – 2015



Source: MF SR (2015b); own calculations.

The quantitative easing policy of the ECB resulted in the decrease of the interest rates for government bonds in recent years. While the average yield in 2008 or 2012 was close to 5 %, the average yield was 0.72 % by the end of 2015 (see Figure 6.4). In the case of bonds with shorter maturities, Slovakia recorded an acceptance of bonds with a negative interest rate in the auction. We may expect as the outcome of more active measures of the ECB in 2016 that the trend will continue in upcoming years and contribute lower expenditure for general government debt interest payments.

Figure 6.4
Interest Rates on 10-years Slovak Government Bonds by their Maturity in 2007 – 2015 (%)



Source: Macroeconomic Database NBS (2016).

Financial Position of Slovakia vis-à-vis the European Union Budget

Slovakia's entry to the European Union led to the incorporation of financial flows from and to the EU to the national budget. Given the performance of the Slovak economy and the performance of individual regions measured by GDP per capita in purchasing power parity, the

Slovak Republic is in a position of the net recipient of the funds from the EU budget, mainly from the EU Cohesion Policy. From 2004 to 2014, Slovakia received 9 billion EUR from the EU budget.

Table 6.4
Expenditure of EU budget in Slovakia in 2007 – 2014 (EUR million)

	2007	2008	2009	2010	2011	2012	2013	2014
1. Sustainable growth	669	852.8	633.5	1,208	1,096.8	1,646	1,439.2	1,120
1.1 Competitiveness for growth and employment	33.7	43.3	48.7	11.8	40.9	70.4	58.4	69.2
1.2 Cohesion for growth and employment	635.2	809.5	548.8	1,096.1	1,056	1,575.7	1,380.8	1,051.7
1.2.1 Structural funds	451.9	510.1	385.9	633.7	917.6	1,212.9	812.1	1,026.3
1.2.2 Cohesion fund	183.3	299.4	198.8	462.4	138.2	362.7	568.7	507.2
2. Preservation and management of natural resources	380.5	357	513	676.5	647.9	618	566	532
3. Citizenship, freedom, security and justice	13.7	11.1	8.5	8.7	29.2	12.6	11	5.6
4. EU as a global partner	9.9	11.5	26.6	0.3	0.5	0.5	0	0
5. Administration	9.6	9.4	10.8	11.5	10.7	9.7	9.9	10.2
6. Compensation	0	0	0	0	0	0	0	0
Total	1,082.7	1,241.8	1,192.4	1,905	1,785.1	2,286.8	2,026.1	1,668.8

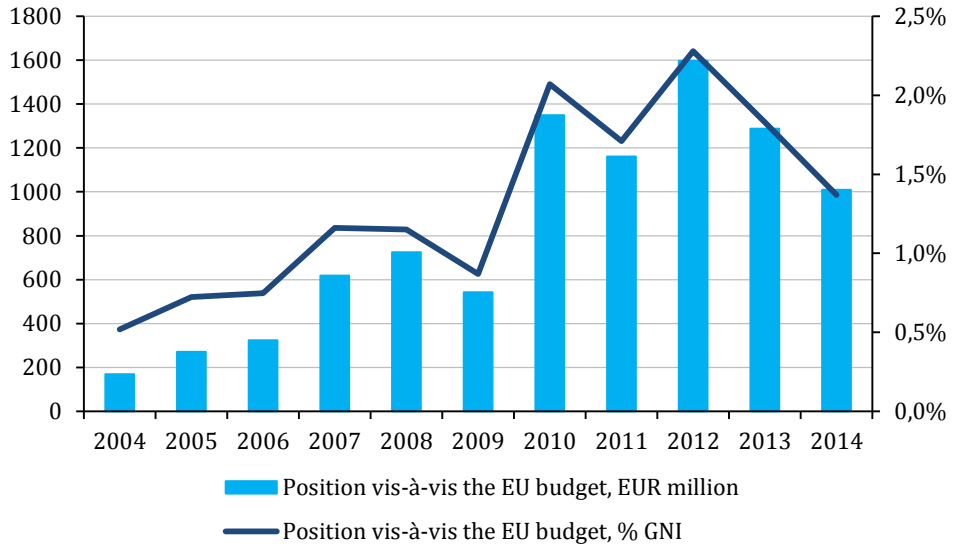
Note: 2015 data were not available at the time of chapter publication.

Source: European Commission (2016).

Since Slovakia's entry to the European Union in 2004, we can observe a gradual, though not a linear increase in its net position towards the EU budget. While the net position of Slovakia was approximately 0.5 % of gross national income (GNI) in 2004, it reached 2.3 % of GNI in 2012. Due to data unavailability, it is not possible to quantify the net position of the Slovak Republic by the end of 2015. However, due to the unprecedented pace of financial implementation in 2015, we can expect that even after the adjustment of expenses for corrections, the net position of the Slovak Republic will be close to 4 % of gross national income (GNI).

Figure 6.5

Net Financial Position of the SR vis-à-vis the EU Budget, 2004 – 2014



Note: 2015 data were not available at the time of chapter publication.

Source: European Commission (2016).

EU Cohesion Policy Implementation in 2007 – 2013 Programming Period

The year 2015 was the last one in which it was possible to spend resources from the 2007 – 2013 programming period due to the application of the n+2 rule. When compared to previous years, the significant increase in financial implementation occurred in all operational programs and greatly exceed our expectations our estimation from previous year. On the one hand, this development can be considered as favourable, because the Slovak Republic managed to maximize the revenue from the EU budget; on the other hand, it is questionable to what extent these expenses were implemented efficiently and contributed to fulfilling the of objectives of the National Strategic Reference Framework (NSRF) and individual operational programmes. The implementation of Cohesion Policy during the

programming period 2007 – 2013 was influenced by many factors that have significantly affected its implementation, in particular:

- Delays in preparation and approval of the NSFR and the individual operational programs.
- Low absorption capacity on the side of beneficiaries.
- Insufficient stability and quality of administrative capacities at national and regional level.
- Lack of experience with projects submission by possible final beneficiaries.
- Lack of domestic financial resources needed for co-financing projects, mainly infrastructural projects on a regional level.
- *Rent-seeking* behavior, lack of transparency and problems related to public procurement of major projects causing substantial delays in their implementation.
- Change in competences between authorities responsible for the management and implementation; institutional instability (e.g. transfer of Central Coordination Authority during the programming period).
- Excessive administrative burged imposed on beneficiares, often beyond the EC requirements.
- Cohesion Policy has been the only relevant instrument of regional development (relative resistance to the political cycle in the area of planned expenditure, the negative effects of the political cycle on implementation).
- The objective to reduce regional disparities has not been achieved. However, without the Cohesion policy intervention, the disparities between the Slovak regions would have been even higher. (Radvanský et al., 2016).
- The Cohesion Policy was focused on construction of infrastructure and addressing the existing internal debts in the economy. (e. g. transport infrastructure, research and development, social issues, environment, healthcare, public infrastructure).
- Support of R&D infrastructure development, however without an adequate national contribution and stimuli for qualified human

resources in this area. Preference of projects supported by the Structural Funds over other support schemes, such as the 7th Framework Programme or Horizon 2020.
- Support for municipalities, which were able to provide project and adequate co-financing.
- Substitution of domestic investments by the funds from the EU.

Have the Cohesion Policy Fulfilled its Objective?

The objective of the NSRF was to "significantly increase the competitiveness and performance of the regions and the Slovak economy and employment by 2013 while respecting sustainable development." The strategic priorities of 2007 – 2013 programming period were: Infrastructure and Regional Accessibility (aimed at increase of infrastructure density in the regions and increase of efficiency related to public services); Knowledge-Based Economy (aimed at development of sources for long-term sustainable economic growth and increase of competitiveness of industry and services); Human Resources (aimed at employment growth, increase of labour force quality for the needs of knowledge-based economy and increase of risk groups social inclusion (NSRF, 2007).

Despite the ambitious settings of NSFR strategic goals, the competitiveness increase of the Slovak economy and regions was also determined by other factors, which were not addressed and influenced by Cohesion Policy. the competitiveness of a country is determined by factors related to the overall regulatory and institutional set-up and functioning of the public administration. The factors, which are essentially determining the competitiveness of countries and regions are:

- Quality of institutions providing public services for citizens and business (law enforcement and the length of trails, trust in the political system, protection of property rights and intellectual property, the level of corruption, judicial independence and efficiency of public resources);

- Developed transport infrastructure (road, marine, rail, air);
- Favorable macroeconomic environment (a stable price level, the level of public debt);
- Quality and availability of individual levels of the education system;
- Availability of electronic services and internet access;
- Labor costs (costs or price competitiveness);
- Quality, stability, predictability and simplicity of the tax system;
- Efficiency and flexibility of the labor markets;
- Localization of sectors with high added value enhancing the capacities and possibilities of regions to attract a skilled and educated workforce.

From these, undoubtedly important, but not complete list of factors, it is clear that the Cohesion Policy could influence only some of them. From the ranking of Slovakia in the competitiveness rankings, whether produced by World Economic Forum or World Bank, it is obvious that Slovakia did not experience the improvement in the global comparison in the period (2007 – 2015). It is quite the opposite.[20] The situation was caused by main factors, which were not subject to Cohesion Policy interventions and they are related to the overall institutional environment and functioning of public services.

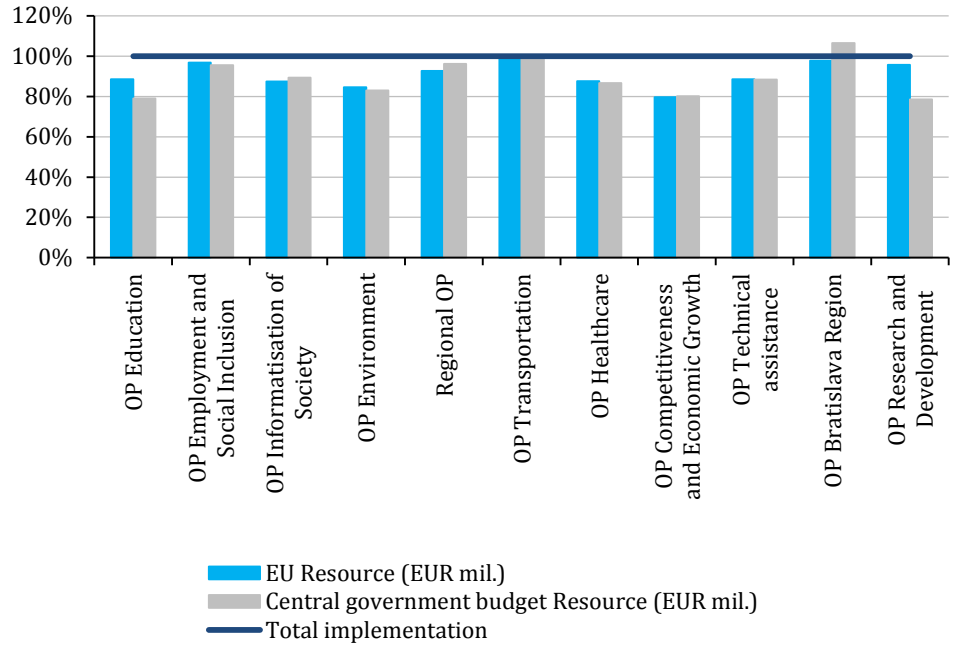
Other compared countries also pursue the necessary structural reforms and adopt measures, which allow them to move up in the mentioned rankings. It is important to stress the fact that these rankings do not represent an exact scientific comparison of competitiveness among the countries. They are largely based on a combination of so-called soft and hard data; the largest proportion of rankings is based on a survey of relevant actors and the combination of hard data on the development of a particular economy.

Towards the end of 2015, the financial implementation reached 92 % of total allocation for the 2007 – 2013 period. When compared to the previous year, it was and increase by 27 p. p. representing an annual spending of 1.7 billion EUR. In absolute terms, the amount of EU

[20] Although the Slovak Republic experienced gradual shift upwards in these rankings in recent years, its ranking is still lower than it was in 2007.

spending reached 10.6 billion EUR and 1.7 billion EUR has been co-financed by the central government budget.

Figure 6.6
State of Commitment Withdraw in 2007 – 2013 to 29th February 2016 by Operational Programs (%)



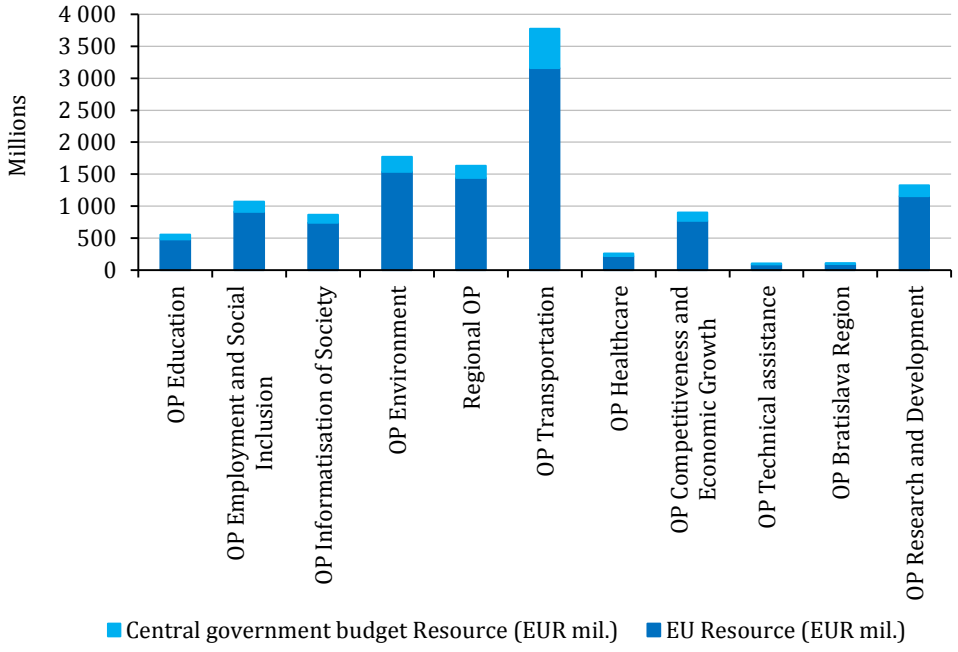
Source: MF SR (2016d), Own calculations.

The volume and structure of spending reveals that investments to transport infrastructure in OP Transport accounted only for one of the factors increasing the competitiveness of the Slovak economy (Figure 6.7)

The investments under OP Environment and Regional OP were not primarily directed to investments increasing the competitiveness of the Slovak economy. Undoubtedly, the quality of the environment and regional public and transport infrastructure are prerequisites for the growth of the competitiveness. However, they are no sufficient factors for sustainable development. On the other hand, certain measures for the promotion of renewable energy sources (namely, the promotion of energy production in small hydro power plants), counteracted to the sustainable development of natural resources. Realized and planned investments to these energy sources raise legitimate concerns about

their negative impact on local ecosystems when compared to their economic benefits. The improvement in environment impact assessment of any substantial investments should be significantly strengthened and represents an ongoing recommendation of the European Commission in the relation to the Slovak Republic.

Figure 6.7
State of Commitment Withdraw in 2007 – 2013 to 29th February 2016 by Operational Programs (EUR million)



Source: MF SR (2016d), Own calculations.

A significant amount of resources (approximately 1 billion EUR) were invested via the OP Informatisation of Society. Due the complications with the implementation of this programme and its complexity and need for amendments to a large number of acts and lower legal forms related to its implementation, the goals of the OP have been only partially achieved. The digitization and preservation of cultural heritage are the unquestionable benefits of this program. However, there are doubts about projects whose functionality was focused on either digitization of already existing administrative procedures or services that do not

provide any added value to citizens due to their complexity or malfunction (e. g. in the form of saved time and comfort in communication with the public administration).

In recent years, the Cohesion Policy resources have become an integral part of public finance and the source of a large proportion of public investments. Despite their undoubted positive effects on the Slovak economy, the over-reliance on Cohesion policy is unsustainable in long-term, especially given the end of the current programming period in 2023. We may assume that the programming period 2014 – 2020 with allocation higher than 15 billion EUR represents the last possible period with such high allocation. We may expect that many Slovak regions will reach GDP per capita level higher than 75 % in 2020 and will become so-called transition regions with a limited access to EU funding.

Similarly, to the previous programming period, the start of the present programming period is rather late in terms of financial implementation. Furthermore, the announcement of calls for projects is not progressing in optimal pace. If there is not any significant improvement in the abovementioned processes, we can expect similar development of financial implementation as in the previous programming period i.e. a gradual increase in 2017 with significant finish at the end of 2023.

7. SELECTED ISSUES OF EMPLOYMENT DEVELOPMENT

The employment has been recovering little by little since the recession in 2009; the development in this area of economy undoubtedly lagged behind the recovery in production and did not correspond to favourable dynamics of GDP growth. Until 2013, the dynamics of employment change exhibited uncertain results. Even though by the end of 2013 the economy reported an employment increase by 44,000 employees[21] compared to 2010 (when the post-crisis decline hit its bottom), the year-on-year change in 2013 was (almost symbolically) zero after fluctuating development in the previous years.

The visible improvement in employment trends could have been observed in 2014 when a more dynamic recovery took place. The growth in the number of working persons in the Slovak economy was accelerating over the year. The employment growth peaked in the last quarter of 2014, reaching 2.6 % in y-o-y. In 2015, we saw a continuation of this trend, however, in this case, we can not talk about the surprising[22] or unexpectedly high increase in particular time of a year (as was the case of 2014). The employment grew evenly throughout the year at the similar pace as we had witnessed in the mentioned fourth quarter of 2014 (2.5 to 2.7 % in particular quarters of 2015).

The final annual average value of employment growth at level 2.6 % in conversion to absolute values represents employment increase (compared to previous year) by 61,000 persons – the number of working persons in the economy in 2015 reached the level 2.4 million for the second time in the history of Slovak Republic. The first successful year regarding employment was in 2008. Specifically, in 2015, there were 2,424,000 persons employed in the Slovak economy (according to the Statistical Office estimated by LFS methodology). For comparison, in

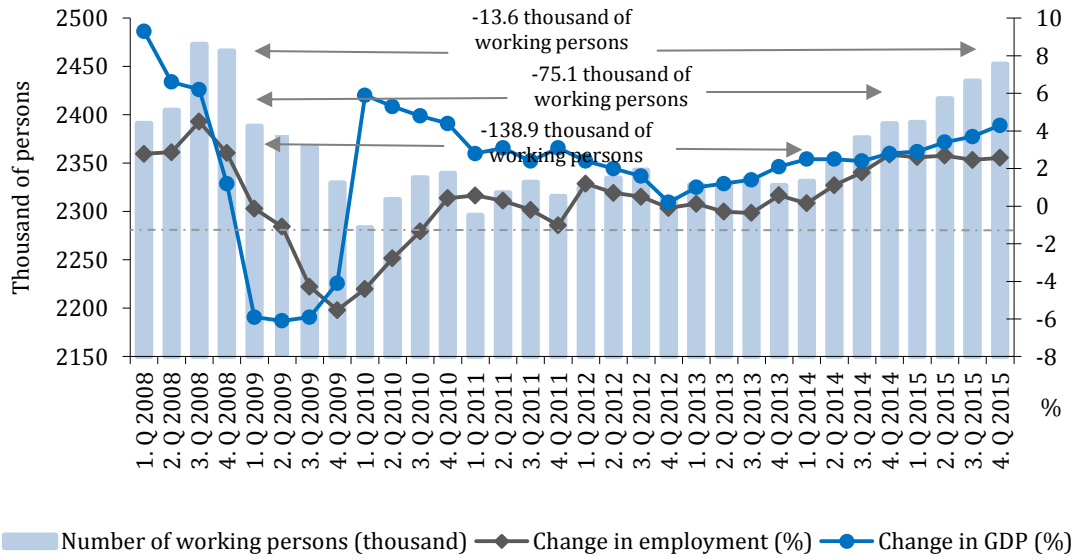
[21] The difference in the number of employees by LFS (Labour Force Survey) between the first quarter of 2010 (employment decline bottom) and the last quarter of 2013.

[22] When taking into account the relationship between economic growth and employment known in our country in the past, the recorded positive development in employment at the end of 2014 was assessed as more favorable than expected. Although the output growth did not reach the pace what seemed in the past to be necessary for employment growth. This applies also when taking into account the standard lag of employment development after the GDP development (see Morvay et al., 2015).

2008, when the Slovak employment reached the highest value – the number of employed persons was 2,434,000, thus higher only by 10,000.

The already mentioned increase in employment by the end of 2014 reduced the "post-crisis shortfall in employment" in y-o-y to almost by half.[23] The ongoing positive development in the year 2015 reduced the shortfall (compared to the end of 2013) to tenfold. Towards the end of 2015, there were only about 13,600 less working people than in the same period of 2008, when the Slovak economy was struck by external shock resulting in employment decline (see the number of working people in Figure 7.1).

Figure 7.1
Quarterly GDP and Employment Developments, 2008 – 2015



Note: GDP based on quarterly national accounts at constant prices, reference year 2010 (constant prices calculated by chain-linked volumes with reference year 2010, ESA 2010 methodology), Employment based on LFSS, Number of working persons in thousands, columns – left axis; year-on-year changes in %, lines – right axis. "Post-crisis shortfall in employment" (in working persons) in legend – comparison of 4th quarter 2008 with the same period of 2013, 2014 and 2015.

Source: Based on SO SR database (SO SR, 2016c).

[23] Comparison of the last quarter of 2013 and 2014 to the situation at the end of 2008 (Q4). While in 2013, the number of working persons was still lower by 138.9 thousand persons compared to the same period in 2008, it was lower only by 75.1 thousand in 2014. In 2015, the post-crisis shortfall in employment has accounted for only 13.6 thousand working people (difference between the last quarter of 2008 and 2015; Figure 7.1)

Thus, Figure 7.1 illustrates that attribute the year 2015 to be a year of the employment recovery in Slovakia is appropriate; the number of working persons approached historical maximums of 2008.

To be precise, it is necessary to add that the alleviated shortfall in employment (to -13.6 thousand working persons) was parallel with the increase in the number of economically active persons by almost 55,000 (between the end of 2008 and 2015). This slightly relativizes the success in reduction of the crisis effects on employment. It also suggests that persisting negative difference in employment is not a result of the demographic change (the decrease of population in working age occurred but along with the growth of economically active population).

The changes in the employment in this part of the chapter are analysed primarily by the development of the category "working persons" under LFS methodology. The changes in employment development in other statistics based on category "employees" are unable to capture shifts in the share of various forms of employment in the total employment. The adopted amendments in tax and social system contributions settings in recent years may have led to changes in the form of employment in certain categories of employed persons (and they probably did). After the introduction of the full contribution obligation on work performed by the agreements, the number of so-called "agreement workers" significantly decreased (this topic was addressed in last editions of this publication). The increase in taxes and contributions for entrepreneurs probably led to decrease in the total number of entrepreneurs. At the same time, the number of employees increased. Similar to that, the managers and shareholders of companies rather became also the part-time workers in their companies[24] and expanded the employee category. Indeed, the overall employment growth of 2.6 % was achieved by growth in the number of employees (2.9 %) even in 2015, the number of entrepreneurs increased only marginally (LFS – SO SR, 2016a). The number of individuals – entrepreneurs decreased in y-o-y by 8.4 % (to approximately 338.5 thousand) and of which the number of self-employed fell by 6.1 % to 316.460 (compared to the number at the end of the year; SO SR, 2016b).

[24] Due to the healthcare and pension insurance deductions.

Therefore, it is necessary to distinguish between the change/growth in employment defined only by the category employees (where the rapid growth may occur at the expense of employment reductions in other forms of employment) and the growth of employment based on the category of "working persons" (wider category than standard contract employees). That in addition to employees includes workers under agreements, individuals – entrepreneurs (including self-employed) and other categories. Of course, this methodology has its limitations[25] and change in the definition of "working persons" certainly brought some inaccuracies in y-o-y comparison. More specifically, the topic of employment reporting will be elaborated later in this chapter.

Sectoral Overview of Employment Development

The recovery of the labour market was most beneficial for the manufacturing, when the total annual growth of employed in the economy (61,000 persons) was formed by the increase by 48,000 workers in this sector.[26] The manufacturing sector, employing 600,000 persons in total, represents about a quarter of the whole employment in Slovakia. It is the continuation of the trend from the end of 2014, when we noted that significant increase in the employment in industrial sectors was a key factor in employment development turnaround - unlike in 2013, when an employment decline in the industry sector along with construction sector mostly contributed to stagnation in the total employment in Slovakia. Employment growth in the industry corresponded to the development of other parameters in 2015. Sales (own performances and goods) grew in industry by about 9 %, the index of industrial production (based on 2010 level)[27] increased to 137; of which only in manufacturing to 149 (of which the main sectors of vehicles production even exceeds 181); labour productivity grew

[25] Main limitation is the multiplication of sample to obtain data for the whole economy.

[26] Number of working persons based on LFS.

[27] Index of industrial production adjusted by working days; expressed as the average month in 2010 = 100; based on SO SR: the Economic Monitor of Slovak Economy.

especially in the second half (in total, increased by 6.9 % in y-o-y) (SO SR, 2016b).

Among the other sectors with the greatest increases in employment (LFS) were Trade, Transportation and Storage, and Information and Communication. (Besides LFS, the employment growth in these sectors is documented also by development of employment in quarterly statistical reports).[28] From the public sectors, the highest increase was experienced in the Education.

Similarly to the previous year, the development in the Construction sector was evolving in opposite direction and the number of working persons shrunk by almost another 10,000 (the largest decrease of employed persons from all sectors based on quarterly reporting) also in 2015. The decline in employment of construction sector has preserved since the crisis, despite the turnaround in sales. They experienced the y-o-y increase by 20 % in 2015 after three years lasting decline. Therefore, the assumption about the positive impact of accelerated implementation of the EU funds in the construction sector has not been proved. Thus, the turnaround in sales was driven by a significant increase in labour productivity. It grew (also after several years of decline) by 19 % in 2015 (SO SR, 2016b). The high productivity growth in construction was recorded especially in the second half of the year.

Are the EU funds Responsible for Employment Growth?

The favourable development in employment is mainly caused by improving overall conditions in the labour market, which for the second year reflects an increase in economic activity. Particularly in 2015, when increase in investment activity and expansion in key sectors of the economy was experienced. A good sign regarding structural changes in the economy and long-term sustainability of job creation is also a solid employment growth in selected market services. The positive sentiment

[28] Other methodology of employment reporting; LFS compared to quartely reporting includes also people paid for activation work, persons on maternity and parental leave and persons working under agreements.

in the domestic and external environment (for the second year in a row, the economic sentiment indicator is holding close to the level 100, for details see Chapter 9 – Outlook for 2016 and 2017) allowed the ease up on pressure for productivity growth. Together with the drawdown of inventories, it contributed to the willingness to restore part of the employment.

The European Commission considers also some legislative changes as an additional factor of growth in employment, such as an increase in minimum wage[29] and reduction of social contributions burden for low-income groups (EC, 2015).[30] The improvement of labour market situation (including wage growth) helps to increase domestic consumption, and in a low inflationary environment is presumed to strengthen further the domestic demand and support economic growth in the upcoming period.

As explained in Chapter 1 of this publication (Overall Economic Development), the employment growth which occurred even under more moderate economic growth rate than in the past (change in the relationship between economic growth and employment compared with the period before the crisis), was supported by additional factors, such as the growth of activities covering stronger domestic demand, the increase in employment in the public sector,[31] strengthened employment policy

[29] For 2016, the minimum wage was increase from 380 € to 405 € (for the lowest category of work type). In practice, this amendment entails on costs increase for employers (and higher government revenues in corresponding increase in tax and contribution collection from the assessment base of the minimal wage than would be the net income increase of an employee earning the minimum wage). The EC probably means the greater willingness of some groups of unemployed to be employed due to the increase in the minimum wage. However, to increase the motivation of unemployed and inactive persons was also the goal of some other measures adopted since the January 2015. The amendment to the Act on material need introduced the concurrence of wage and social benefits receipt for the long-term unemployed (unemployed and inactive for more than one year) whose wage does not exceed twice of the minimum wage and those living in household already receiving benefits in material need. The aim of the legislative amendment was to allow a substantial increase in incomes of those who choose to work and not remain in material need (in terms of known "work pays").

[30] The idea was to introduce the tax deduction for health insurance for low-income groups, which will reduce health insurance contributions. In addition to changes in health insurance, also changes in social security and in the Labour Code have been adopted since 1 January 2015. The Labour Code amendment modifies the definition of dependent work – the definition is reduced for the condition of working for wage or remuneration. The amendment also changes the several provisions on Agency employment).

[31] In recent years, not just 2015.

or methodological changes in the calculation of employment/un-employment rates.

Another significant moment that contributed to a positive development in employment during past two years was the rapid implementation of Structural and Cohesion Funds of the EU. The analysis of the impact of cohesion policy on the development of Slovakia (Radvanský et al., 2016) estimated the effect of the EU funds on employment by an econometric model HERMIN. The model results compare alternative scenarios for employment development with and without the EU funds. They came to conclusion that by the end of 2014 there were 79,000 job positions created due to the European funds (estimation) and by the end of 2015 (the last two years of the EU funds implementation) in total 124,000 job positions (additional job positions during the whole programming period, under assumption of 89 % rate of implementation). It means that only in 2015, the accelerated implementation of the EU funds contributed to 45,000 new job positions.

However, an important aspect is the sustainability of created jobs in this year. It is estimated at the level of 33 % for 2015 (the sustainability is defined as jobs created will last for at least three years). The highest number of job positions incurred due to the EU funds (during the entire programming period) was estimated in the market services sector (57,000 job positions, of which 24,000 are sustainable), in the industrial sector (11,000 job positions with a high level of sustainability – 98 %) and the construction sector (35,000 job positions, however, only 5,000 are sustainable). Given the high elasticity in the construction sector, the generated job positions are linked to the period of the specific project realisation and after its completion, the extensive expiration of job contracts supported by the EU funds is expected.

It is necessary to highlight the statement in the report that the implementation of cohesion policy contributed to the reduction of the unemployment rate in all regions of Slovakia. In the case of no EU funds were withdrawn, it is estimated that the unemployment rate in 2010 – 2014 would be 3 to 4 p. p. higher (Radvanský et al., 2016).

However, as the statistical data shows (SO SR), the construction sector mentioned earlier was influenced by the investment inflows in a specific way. The stagnation of activities and the lack of new projects in the years after the crisis can be documented in simple comparison: while domestic construction production in new constructions, reconstructions and modernization was annually declining after 2008, even greater slump was prevented only by construction production abroad and in recent years by slight increase in domestic production in section of repairs and maintenance. The year 2015 brought a significant breakthrough, the construction production only in new domestic projects and renovations increased after years of decline by more than 25 % (total construction production by 18 %).[32] Despite that, the employment in the sector did not experience any sign of increase; the increased production was eventually covered by already mentioned strong productivity growth. The employment in construction also fell in LFS methodology, which besides standard employment contracts includes also working persons working under agreements, seasonal workers and individuals – entrepreneurs. And the construction sector constitutes about 9 % of total employment in the Slovak economy.

Another key sector which development is crucial for the future direction of the economy is the automotive industry. Industrial production in the vehicles production exceeded the index value 181 in 2015,[33] which is one of the highest values of industrial production index. For example, even sales in the related field of internal sectoral trade (sale and repair of motor vehicles) increased by 16.7 % y-o-y (SO SR, 2016b) in 2015. The medium-term forecast of labour demand (Lubyová et Štefánik et al., 2015) predicts to the subsector of manufacturing – production of vehicles – the largest relative employment growth among all subsectors of manufacturing. The employment should increase between years 2015 and 2025 in car manufacturing by 17 %, which corresponds to increase in a number of employees in the sub-sector from

[32] Of which the construction production increased in Bratislava region up to 40 % and in the Kosice region by 35 %.

[33] Average monthly value in 2010 = 100.

95,000 to 111,000 employees. The automotive industry is one of the key areas of industrial production since this sector belongs to the specialisations of the Slovak industry. However, it is necessary to highlight the risks of forecasting trends in the employment in this area. In addition to benefits and allowances from the government, investors make their decisions based on the reputation of the sector in the economy (including information on the quality, price as well as the availability of labour). Moreover, particularly in this sector, even one significant investment could mean a potentially big deflection from forecasted values of employment change. A proper example would be the announced investment of British producer Jaguar Land Rover, which plans to start production in Slovakia in September 2018 and create 2,800 new jobs by the year 2020. For further information on the automotive industry in Slovakia, see Chapter 3 – External Economic Relations.

Will a Solid Growth in Employment and Wages Persist in the Future?

At the turn of 2015/2016, a higher rate of employment growth was recorded (according to monthly statistics) particularly in the services sector, the industry sector (of which in manufacturing) and in trade (of which in wholesale). The National Bank of Slovakia (NBS) considers the employment growth in services and trade as an outcome of the indirect effect of finalised projects funded by the EU funds. This should reflect an increased demand in these two sectors (NBS, 2016). Unlike this, in the case of the construction sector, the National Bank assumes coverage of increased activity (reflecting the finalisation of projects funded by the EU funds) by work performed under agreements, which are not reflected in monthly statistics. Therefore, the increase in activities of the sector was not reflected in the employment growth (ibid). However, as we have already mentioned, the employment growth did not also occur in LFS methodology (this methodology captures the work performed under the agreements). The argument that the rise in construction activity was reflected more strongly in wages is proven to be correct. The nominal wage in the construction sector grew gradually month to month during

the second half of 2015, the dynamics of its growth soared from 4 % in July to 11 %[34] in December (SO SR, 2016b). A decent average wage growth also occurred in other sectors, more than 5 % growth rate was experienced in subsectors sale and repair of motor vehicles, transportation and storage, and in accommodation in 2015. The positive development in the demand for Slovak workers earned an average wage growth by 2.9 % (average for the whole economy in 2015). Thus, the average monthly wage in Slovakia increased from 858 € in 2014 to 883 € in 2015. The highest wages were achieved in the information and communication sector (average wage of 1,751 €, of which tele-communication industry drives the wage growth with the average wage of 2,019 €), while the lowest salaries were achieved in accommodation and food service activities (533 €).

Since the results in 2015 were influenced by one-off factors with temporary effects, we assume that the employment growth will moderate in 2016. This expectation could come true particularly in trade. The employment growth in the services is influenced by a long-term trend of structural shifts (strengthened domestic demand should continue in support of employment growth). In the case of manufacturing, the possible employment growth slowdown in some of the sub-sectors may be offset by persistent strong growth dynamics of employment in key sub-sectors (automotive industry).

Despite the diminishing effects of accelerated EU funds implementation and expected moderation in employment growth, the sustained economic growth will ensure the level of wage growth at about the same level as we witnessed in 2015. Therefore, the wages should continue to grow at about 3 % pace. A potential slowdown in wage growth in the private sector will be in fact partially offset by the increase of tariff wages, given the effect of obligation that the government committed in the case of state/public servants.

The threat to the future development is rather a lack of adequate labour in some sectors, where unemployed persons can not fill emerging

[34] It was the highest average wage growth rate among the main industries.

jobs due to training and vocational inconsistency. Therefore, the employers will be forced to employ the labour from abroad or persons in the cohort of elderly (experienced) skilled employees. Indeed in 2015, the highest growth rate of employment was experienced in the cohort 60+, the y-o-y growth was over 15 %, which makes it the strongest growth rate of employment among age cohorts, but also it was much stronger compared with the previous periods.

The short-term labour migration was an another factor, which contributed to the solid employment growth on the one hand, and represented the outflow of the professional labour force on the other hand in 2015. The number of persons working abroad for less than one year and the number of persons commuting to work abroad (LFS) grew by more than 10 % y-o-y in 2015. The largest portion of these labour migrants is employed in the aforementioned construction sector (37,000), in the industrial sectors (36,000) and sector health and social assistance (32,000). In total, nearly 150,000 were commuting to work beyond the borders of Slovakia in 2015.

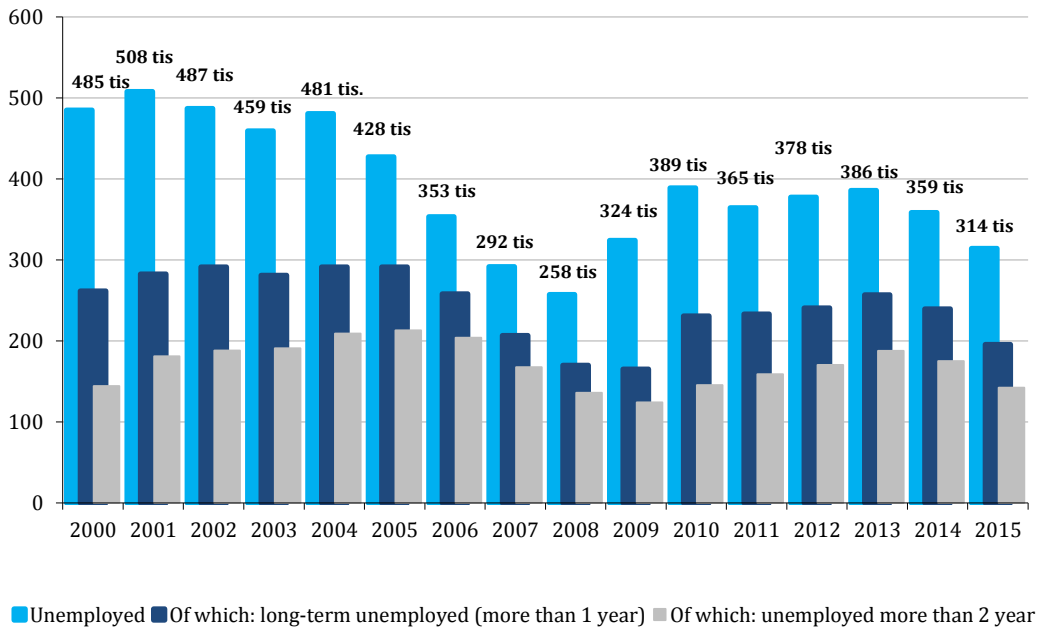
The Unemployment Decline in Progress

The decline in unemployment occurs since 2013; already in 2014 we could have seen unambiguous confirmation of a positive trend of unemployment decrease when in y-o-y 27,000 less unemployed were estimated (LFS). Also in 2015, the downward trend in unemployment continued, this time the number of unemployed shrunk by another 44,000, resulting in a total number of 314,300 unemployed. While in 2014 there were still about 101,000 unemployed more compared to the pre-crisis year 2008, recent favorable development in employment resulted in 2015 to decline in this post-crisis unemployment increase to 57,000 persons (Figure 7.2).

The positive sign is that the fastest and significantly decreasing was the number of unemployed in categories with the longest duration of unemployment. The number of unemployed whose are out of work a) 6 months to 1 year, b) 1-2 years, c) more than two years decreased in y-o-y

by about one fifth (in all of these categories). The long-term unemployment (lasting more than one year) is one of the most serious and the most persistent problems of the Slovak labour market. Therefore, a positive fact is that y-o-y decrease in long-term unemployed by 43,900 is almost identical to the (already mentioned) total one in unemployment in Slovakia. In 2015, the decrease in the number of long-term unemployed was the main reason for the overall decrease in unemployment in Slovakia. As a result, the share of long-term unemployment in total unemployment declined from 67 % to 62 %. The parallel decline in long-term unemployment and total unemployment occurred for the first time since 2008. The fact, that long-term unemployment generates the largest component of unemployment, and the extent to which it contributed to a decline in total unemployment in 2015 can be seen in Figure 7.2.

Figure 7.2
Development of Total Unemployment and Long-term Unemployment with its Components (2000 – 2015, in thousand persons)



Note: Based on LFS.

Source: Based on SO SR (2016c).

This development (although, it is a different unemployment reporting methodology) corresponds to the fact that the average length of registration in job seekers register in the labour offices decreased from 17.4 to 16 months in 2015. The registered unemployment rate decreased from 12.8 % to 11.5 %.

Changes in Methodology Helped to Decrease Unemployment

The post-crisis recovery of domestic demand may be considered as one of the most important factors in the strong trend of unemployment decrease when the Slovak economy probably surpassed the original dogma of jobless growth. In the past two years, the economy was successful in this area of registered unemployment rate decline published by Central Office of Labour, Social Affairs and Family (COLSAF). However, in the same period, there were some methodological changes in this indicator, which could even further highlight the downward trend.

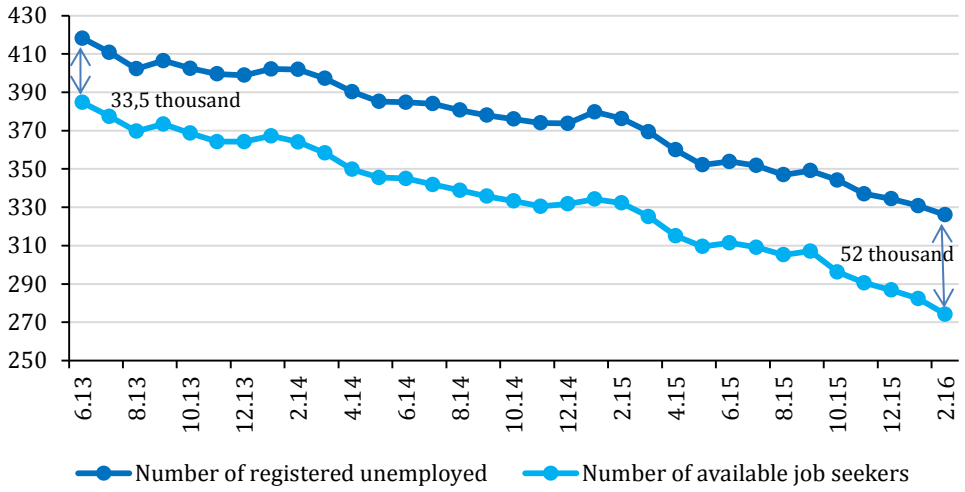
Unavailable Job Seekers

The analysis was conducted for a period 6/2013 – 2/2015 (the latest available data). The period was selected due to methodological changes resulting from the amendment to Act no. 5/2004 from March 2013, which came into the force since May 2013 and is valid until nowadays.

The more detailed insight into the development of two categories observed in Figure 7.3 reveals that the number of available job seekers declines at a higher pace than the total number of registered unemployed. Since the starting point of the analysis, the number of unavailable job seekers increased from 33,500 to nearly 52,000 representing the 55 % increase. Such an increase logically supported the reported decrease in unemployment, however, without the creation of

any new jobs.[35] What stands behind this increase in the unavailability of job seekers, though?

F i g u r e 7.3
Development of Registered Unemployed and Available Job Seekers
(June 2013 – February 2016); in thousand persons)



Source: COLSAF (2016).

Small Municipality Services and Voluntary Service

The methodological changes implied by the amendment to the Employment Services Act no. 5/2004 Coll. change the categories of job seekers, in which, the category of unavailable job seekers was enlarged by job seekers, who undertake the small municipality services or voluntary service during the reporting month.

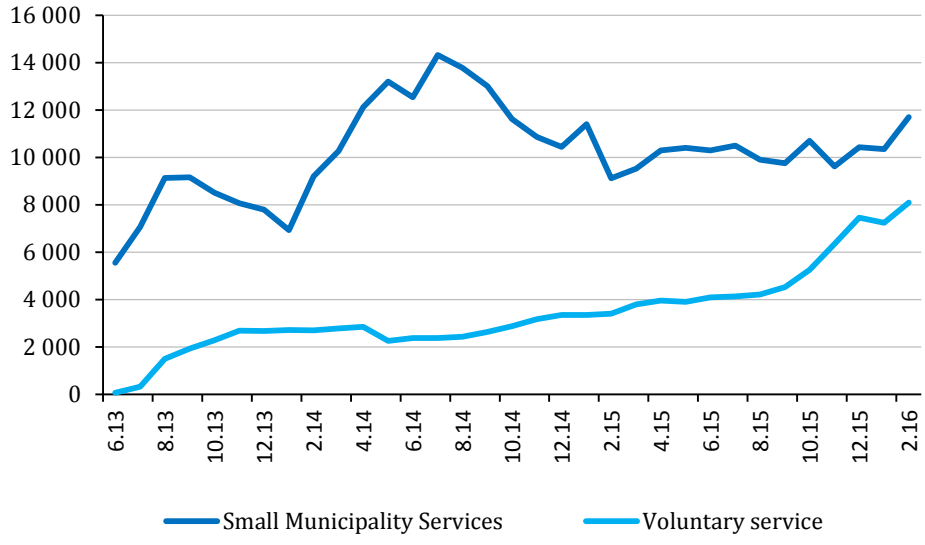
The number of job seekers undertaking small municipality services increased during the reported period and nearly doubled the original number, and the number of job seekers undertaking voluntary service increased from 65 persons in the June 2013 to 8,000 in February 2016. Therefore, in the last month of the analysis, the number of available job seekers was lower by almost 20,000 unavailable job seekers corresponding

[35] The registered unemployment rate does not include into the number of unemployed the persons who are not at the time of reporting available for job. These are the persons who are e.g. temporarily unable to work, under practical training, etc.

to 6 % of the total number of registered unemployed for these two categories.

Along with the category of small municipality services, there is also related an expansion of the definition for so-called "removal from the register for non-cooperation". After the amendment of the Material Need Act no. 417/2013 Coll., if the job seeker refuses to be engaged in small municipality services, he can be removed from the unemployment register for non-cooperation with the labour office. No job position is created, however, the unemployment rate declines.

Figure 7.4
Development in Number of Unavailable Job Seekers Engaged in Small Municipal Services and Voluntary Service (June 2013 – February 2016); in thousand persons)



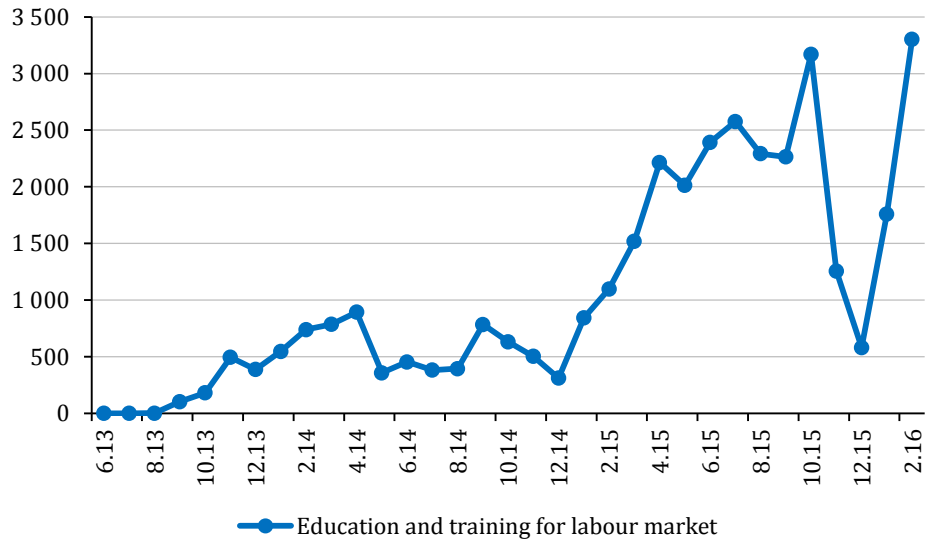
Source: COLSAF (2016).

Education and Training for Labour Market

The ending programming period for the EU funds also strengthened the efforts to implement active labour market policy and create the possibility for the highest possible number of job seekers to be employed by undertaking reskilling and training courses.

The increase from the beginning of the period, when no job seeker undertook the course for labour market preparation is very gradual and peaked just before the end of 2015. Such an increase can be perceived as a positive sign of development. In the long-term, it creates the conditions for better implementation of graduates in the labour market; in the short-run, the participants represented the contribution to the category of unavailable job seekers and thus reduced the registered unemployment.

Figure 7.5
Development in Number of Unavailable Job Seekers Engaged in Education and Training for Labour Market Service (June 2013 – February 2016); in thousand persons)



Source: COLSAF (2016).

Inclusion and Exclusion from the Unemployed Register

Moreover, the methodological changes in inclusion to the register of job seekers resulted in the breach of logical equation about the changes in number of registered unemployed "volume of unemployed at the beginning of the month + inflow of unemployed – outflow of removed and successfully placed on labour market = volume of unemployed at the of the month". After the methodology changes, there is a "waiting period"

of eight days during which the candidate for registration must prove the facts that are relevant for inclusion in the register. Failure to do so will start administrative proceedings of his exclusion from the register.

Hypothetically, such situation may occur (e.g. if the candidate for registration becomes unable to work due to illness) when the inflow of candidates for registration may include the persons who are at the same time captured in outflow from the register because they failed to prove facts relevant for inclusion to register during the "waiting period". In total, the data on inflow and particularly on outflow do not necessarily reflect the actual state of the art. This raises doubts about the credibility of such constructed indicators and obstructs their further empirical analysis.

Methodological Changes Help to Lower Unemployment

As we have demonstrated in the preceding pages, the registered unemployment rate published by COLSAF become a less transparent indicator, which describes the development of unemployment with bias compared to reality since the amendment in 2013.

However, the changes in methodology occurred also in the second indicator of the unemployment rate published by the SO SR on the basis of LFS. Since the 2nd quarter of 2013, the workers participating in activation work were included in the category of employed persons (change based on the ILO definition, SO SR, 2013). This change contributes to employment growth despite the fact that there are no permanent jobs created which challenges the results of employment growth (and hence employment).

However, the comparison in the development of these two unemployment indicators is not academically correct. Each one has its specific calculation methodology, which differs them from each other (e.g. use of different category for economic active population,[36] the inclusion of persons on parental leave, etc.).

[36] The Labour Force Survey uses the quartely estimate, while the registered unemployment use estimate valid for the entire calendar year.

In the end, we may conclude that the decrease in unemployment was primarily driven by the economic growth of the country and by domestic demand being challenging for job positions growth. However, it is necessary to note at the same time, the methodology changes underlined this trend in unemployment (and employment) reporting and accelerated the decline in the unemployment rate by several tenths of a percent compared to the results which would be achieved without the introduction of methodological changes.

* * * *

When assessing the development in the upcoming period, it is necessary to take into account that the 2015 results might have been overstated by extraordinary factors (particularly by accelerated withdrawn from the EU funds). These factors are non-sustainable and given the higher comparative base; a further employment development can be seen as a slowdown in its recovery, when in fact, it is actually favourable development.

However, the real problem is the sustainability of the jobs that were created recently. It is not only about jobs created due to increased investment activity supported by the EU funds, but also the jobs created by employment policies support in the context of ending political cycle. In this context, the risk for estimation of future development is also the increased inclusion of unemployed to activation work. Therefore, the question arises to what extent can be the jobs recently created considered as the permanent ones. Increased labour migration (only in 2015, the number of persons commuting to abroad increased by more than 15 %) along with the changes in the methodology of reporting of the employment contributed to better results in employment development in recent years (LFS reporting now includes all the persons older than 15 years performing in a given week at least 1 hour of work, among the others, also the persons participating in activation work and persons commuting to work abroad).

Similarly, the reporting system of registered unemployment (COLSAF) does not include the unemployed persons who undertake the small

municipality services or voluntary service. That means that they are absent in the formula for unemployment rate calculation. However, they are still included in the total number of job seekers.

Despite the pitfalls of changes in reporting methodology affecting the possibility for comparison of development with the previous and future periods, an overall improvement in the labour market (including wage growth) helps to increase domestic consumption. The low inflation environment creates a possibility for further strengthening of domestic demand and supports economic growth in the upcoming period. The trend of unemployment decrease should continue, as well as the trend of nominal and real wage growth.

8. OVERVIEW OF SELECTED LEGISLATIVE AND ECONOMIC POLICY MEASURES

In 2015, the relevant short-term economic document was the *National Reform Programme 2015*. The priorities (structural measures) of economic policy in the public finances were set as following in 2015: the reduction of the general government deficit towards a structurally balanced budget, the improvement in tax collection efficiency and the improvement of the pension system sustainability. The measures in the social sector should be focused on so-called dual education, pre-school education, inclusion of marginalized communities, reform of employment services, effective management and prevent the further indebtedness of public hospitals. The investments in transport infrastructure and the modernization of public administration and the judiciary remain as priorities.

Similarly to 2014, there were also some measures adopted in the context of the election campaign in the form of so-called Social Package in 2015. *The Second Social Package*, announced in 2015, included a number of standard changes in governmental subsidy policies, which does not directly burden the public finances (e. g. capacity expansion of kindergartens or primary schools, the contribution to the building insulation or green-energy resources for households; the renovation of common area in state hospitals) or significantly distort the business environment (i.e. a cheap bank account for everyone, invoicing between the suppliers in construction sector without inclusion of VAT). The increase in the minimum wage was also a part of the Second Social Package. As of 1st January 2016, the minimal wage was set to 405 € per month for an employee paid in monthly wage (hourly expressed as 2.328 € for each hour worked by the employee). The VAT reduction for basic groceries was also included in the Second Social Package; the increase in maternity benefits from 65 % to 70 % of original income; the increase of contribution to child care under three years from 230 € to 280 € per month to reimburse the nursery or nurseries; the contribution to school trips spent in nature and ski courses; the vacations for socially

disadvantaged families in the state institutions for free of charge and the reduction of medicines costs for children and pensioners.

The new Labour Code brought changes in the regulatory framework of certain areas of labour market policy (Act. No 14/2015 Coll). It introduces a new legislative framework for temporary assignment of employees. This applies particularly to temporary employment agencies (recruitment agencies), as well as other employers assigning employees to personal or corporate entities. The amendment modifies the dispatching of agency employees on a business trip; the prohibition of a temporary assignment to perform hazardous jobs in category 4; the length of the temporary assignment; as well as other obligations and limitations of the employer when employing the agency employee. The amendment also establishes an equal salary conditions for the agency and permanent employees. The intention of the adopted legislation is more strict regulation and protection of agency employees on the labour market. However, the conditions as such reduce the labour market flexibility. One part of the amendment to the Labour Code was the amendment to Pedagogic Employees Law aiming to resolve the issue of temporary layoffs of teachers during the summer holidays. The amendment stipulated that fixed-term contract of teaching staff can be arranged no shorter than by 31st August.

There was a number of legislative changes in 2015 that changed the conditions of the financial system functioning. The implementation of the European Solvency II Directive (European Parliament and Council Directive 2009/138/EC on taking up and the pursuit of insurance and reinsurance) was ensured by new Insurance Act (Act No. 39/2015 Coll). The objective of the new act is "to achieve better protection of insured and beneficiaries, to enhance competitiveness of the European Union insurers, to achieve deeper integration of the European Union insurance market and to ensure a better allocation of capital resources." (Pro Bono, 2015). It reinforces the supervision of insurance and reinsurance companies (better assessment of the solvency; the system of supervision will also include the monitoring of the quality aspects).

To improve consumer's position in the market, the amendment to the act on payment services was adopted (Act No. 405/2015 Coll). The aim of the act is to create a transparent environment for payment services providers, to establish the ground rules for the transfer of payment accounts at the national level, to facilitate the involvement of consumers in the market for payment accounts and to improve the consumers information. The amendment simplifies the transfer of payment account among the banks and changes the conditions of basic banking products provision – so-called Cheap Account for All can be claimed by everyone whose net monthly income is less than 400 EUR per month.

The amendment to the Deposit Protection Act (Act No. 239/2015 Coll) transposes the Directive of the European Parliament and the Council on Deposit Guarantee Schemes. The Directive harmonises "the financing, stress test of DGS, depositors information on the conditions of deposit protection and cooperation between DGS in the EU. At the same time, it represents an intermediate step towards building the third pillar of the banking union, which will be a single European deposit guarantee scheme. It will complete the first two pillars of the banking union – a single supervisory mechanism and a unified mechanism of crisis management" (Sujan, 2015). The deposits of citizens should be protected up to 100,000 EUR per depositor in one bank within the European Union. For banks in Slovakia, the deposit guarantee system has been adapted; starting 3rd July 2024, the amount of DGS available funds have to reach 0.8 % of covered deposits.

The aim of the amendment to the Act on Credit Institutions (Law No. 90/2015 Coll) is the ability of consumers "to repay their obligations before the agreed date of the mortgage. This creates a possibility to provide flexibility during the mortgage term, change the currency of mortgage to alternative currency at any time during the mortgage term while the mortgage provider is obliged to take measures to prevent exchange rate risk and ensure the smooth functioning of alternative dispute resolution". There is an expectation of more efficient functioning of the market along with the better protection and legal security for consumers and harmonization of the Slovak mortgage market

functioning with the EU market. The amendment introduced a maximum charge for repayment of the loan (max. 1.00 %), a compulsory disclosure of commissions for credit intermediaries, a withdraw from the credit agreement will be possible within 14 days after its signing. It also introduced the obligation of the bank to provide the reason for the rejection of the loan.

The expenditure side of the public finance was affected by the adoption of several regulations. Due to the transposition of three new European directives, the amendment to the Public Procurement Act (Act No. 343/2015 Coll) was adopted. The aim of amendment is "to streamline and accelerate the process of public procurement through the mandatory computerization, greater flexibility, reduction of administrative burden and facilitate the access to the market for the SMEs (Podnikam.sk, 2015). The most important change concerns the introduction of a new concept in public procurement – the ultimate benefit user; the public register of ultimate benefit users was established. The amendment also increases the financial limit for the obligation to commission below-limit contracts using electronic marketplaces from 1,000 EUR to 5,000 EUR (in case the procurer is a public authority, e. g. state authority). The procurer may conclude a new contract only if the tenderer is physically registered in the register of ultimate benefits users. The aim of this amendment is to regulate the so-called mailbox companies in the management of public resources.

The new regulation of the European Commission requested the amendment to the Investment Incentives Act (Act. No 65/2015 Coll). The amendment changed e. g. the conditions for new jobs creation (the condition of 10 % increase in the number of jobs was left out; the obligation of creating at least 40 jobs remained – a minimum job creation for technological centers is 30 new jobs). The conditions for investment aid have been eased in the regions with high unemployment. Another adopted changes are related to rationalization of decisions about granting the investment aid (exemption from the notification requirement, change in annexes submission, etc.). The state investment policy was also modified by the amendment to the Act on Proceedings

Related to Major Investments Preparation (Act No. 154/2015 Coll). The amendment expands the definition of a major investment. The aim of the legislative amendment is to ensure conditions for the effective use of vast unused territorial units for the implementation of integrated economic activities, particularly in industry, services, research and development, by accelerating and streamlining the organization of property rights, area and construction proceedings. The aim is to accelerate the preparation and implementation of major strategic (foreign) investments.

The amendment to the Act on Income Tax (Act No. 253/2015 Coll) introduced the changes in the taxation of health care provision, copyright income taxation, long-term investment saving or taxation of share on corporate income. According to the explanatory note of amendment, the main incentives of the changes are "…increase of tax incentives for population to invest in the capital market in order to promote capital market development, increase funding of the Slovak real economy by long-term savings of the population and continue in conceptual and systematic fight against tax fraud by definition of measures on the abuse of income tax act." (Najpravo.sk, 2015).

In the area of taxation, the changes have been brought by an amendment to the Value Added Act. It aims among other things to improve the conditions for the VAT application for SMEs and to facilitate compliance with fiscal obligations. The amendment reduces VAT rates for selected types of grocery (from 1st January 2016, the reduced 10 % VAT rate is applied to selected types of food); it establishes for SMEs a new regime for the VAT application – to pay VAT only for those invoices, which are actually paid by customers. It introduces changes in the regulatory statement – in the way the receipts from registers are stated; an inability to provide VAT collateral will not be a reason for VAT registration refusal; the start-up businesses in the phase of business preparation are not required to provide VAT collateral; the conditions for refund of excess VAT alleviate and will be returned in shorter period etc.

The amendment of the Tax Administration Act (Act No. 269/2015 Coll) was driven by the idea of taxpayers being more responsible for their tax obligations. It introduces a time element for charged fines (later the tax levied, the higher fee will apply). A single aggregated penalty for violation of several obligations is introduced (i. e. the absorption principle); a subsidiary tax declaration will be possible to submit even once a tax audit was launched; the amendment also affected the register of tax debtors (it will be updated on monthly basis, and the "criteria" for inclusion to the register has been significantly reduced). The changes also apply to electronic communication with the tax administration.

The reaction to the excessive construction development is reflected in the Act on Local Fees (Act No. 447/2015 Coll). It introduces the possibility of local government to establish a fee for construction. The new local tax becomes "the income of municipality; it will serve as a source for the construction of social and technical infrastructure necessary for construction development and also reduce the willingness of included parties to 'agree' on a variety of services" (SME, 2015).

The functioning of public administration and the use of its services will affect the amendment to Electronical Form of Public Authorities Administration[37] (Act no. 273/2015 Coll). The amendment aims to "make significantly easier delivery, charge payments to the public authorities, as well as relieve the recipients of this act from lengthy administrative duties. One of the key ideas of the amendment is the intention that the State should not require the provision of information which the authorities already have" (Dulaková, 2015).

Besides the tax legislation, also other new regulations impacted the functioning of the business environment. The Commercial Code (Act. No 87/2015 Coll) was also amended in 2015. The amendment responds in a large extent to the problems of insolvency and restructuring to increase the protection of creditors and liability of business owners for their loans. It should "increase the accountability of statutory bodies for deals that are unfavorable to the company, while limiting the possibility of implementing acts harming the creditors (Futej and Varešinský, 2015).

[37] The so-called eGovernment Act.

The amendment introduces a new institute – a company in crisis. The company is in a crisis when it goes bankrupt, or there is a risk of bankruptcy.[38] In this case, the settlement of creditors claims has priority over fulfillment of business owners, members of statutory bodies and other bodies involved in the management of the company. In this context, the amendment also regulates the financial side replacing the own funds and the ban on deposit returns for business partners. The business environment will also be affected by the new Waste Act (Act No. 79/2015). The aim of the amendment is more strict regulation of waste management, waste prevention, the promotion of re-use and waste handling. The amendment introduces a new concept – an extended producer responsibility, i. e. the obligation for producers to take care of the product throughout its life cycle.

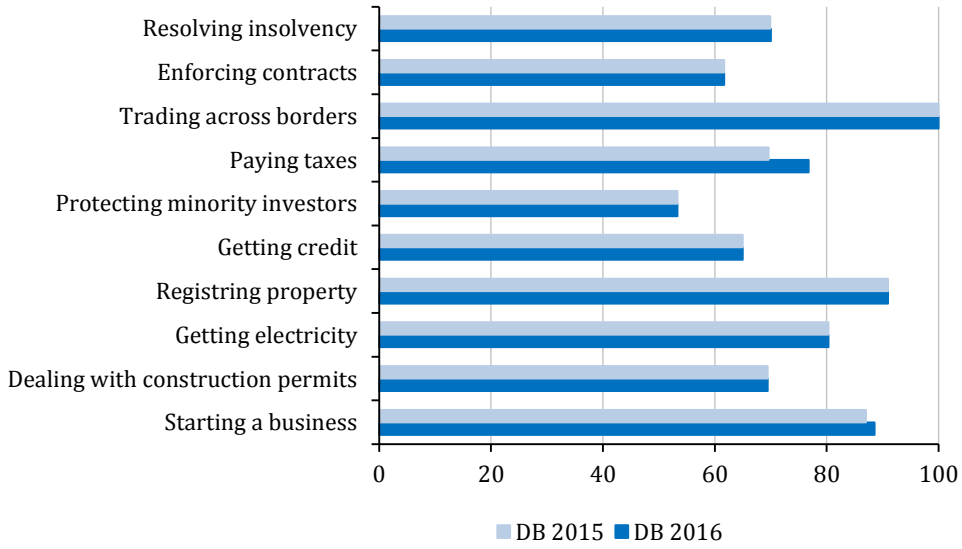
The business environment and competitiveness as the key factors for economic development are largely shaped by the policy measures of the state. In addition to legislative measures that are shaping the business environment in Slovakia, it turns out the key component of competitiveness becomes the quality of the public sector and its provided services. Most of the EC recommendations are directed to this area pointing out the number of weaknesses such as: the lack of efficiency and quality of public administration and judicial system, the lack of corruption prevention, limited capacity and inefficiencies in tax administration, as well as its inefficiency (expressed by low tax collection) and public procurement. The gaps remain in the national system of research and innovation (quality and relevance of scientific base and weak support of cooperation between academia and businesses). The limiting factor may also be a weak effectiveness of the Slovak health care (European Commission, 2015).

The levels of Slovak economy competitiveness, as well as the role of the public sector/public policies (as its factors), are evaluated in international rankings. The influence of adopted economic measures and regulations on economy and business environment development is

[38] Even in case if the ratio of its equity and liabilities is less than 8 to 100 (the value of equity / liabilities is less than 0.08).

evaluated in an annual report by the World Bank in Doing Business ranking. Slovakia ranked on 29 - 30th shared position with Slovenia (the same as in 2014) in 2015. For comparison, the Czech Republic ranked 36th; Hungary 42nd and Poland 25th. Slovakia achieved a relatively good position (measured by distance from the best-performing country in selected indicator – see Figure 8.1) in cross-border trade and legal form of company establishment. On the other hand, Slovakia lags in minors owners protection and contract enforcement. The highest progress was experienced in the field of tax payments compared to previous years.

Figure 8.1
Doing Business Indicators – Distance of Slovakia from the Best (%)



Source: World Bank (2015).

Based on broadly constructed Global Competitiveness Index, the Slovak Republic ranks on 67th rank (out of 140 economies) in 2015. The Global Competitiveness Report 2015 – 2016 (Schwab, 2015) places a corruption and an inefficiency of public administration among the most problematic fields of Slovak competitiveness. The Institutions pillar ranked as the worst one out of 12 evaluated competitiveness pillars. The worst ranked group of factors are public resources redistribution, public

trust in politics, non-standard payments and fees, courts independence, preference public clerks in court verdicts, waste of public resources, the burden of public regulation and efficiency of the public framework. The second group of factors under immediate state influence ranking very poorly in the World Competitiveness Report are elements of labour market efficiency. Such as flexibility of labour compensation negotiations, hiring and firing procedures, effects of taxation on labour willingness to work and capacity of the country to gain and keep the new talents.

* * * *

In 2015, the adoption of legal measures was strongly influenced by upcoming parliament elections and the strong presence of political marketing in economic policy (mainly in the second half of the year) and presentation of so-called "Second Social Package". The broad part of legal acts represented the transposition of EU legislative to the Slovak legal framework. It affected mainly the acts on financial markets performance. The incentives for these adoptions are deeper integration or strengthening of consumers rights. Similarly to previous years, the (systematic) effort to increase tax collection through new tax acts adoption persists in this year as well. Some legislative measures changed the role of the government as a primary performer of economic policy (changes in the investment policies). However, the key area remains – an unconditional increase of transparency and efficiency of public procurement (the amendment of Public Procurement Act and its "anti-post box" part).

9. OUTLOOK FOR 2016 AND 2017

The outlook is formed immediately after replacing the government, and it is yet unknown what kind of economic policy will be applied. After overcoming of recession and period with very fragile recovery, the Slovak economy matured to a period of relatively stable growth. It began in 2014 and is likely to persist beyond the horizon of our outlook.

It is appropriate to recall several arguments, which occurred in the previous chapters to be considered in the process of outlook formation:

1. The economy was on the path of accelerating growth while improving the level of macroeconomic stability for two consecutive years. It is crucial that the possibility of improving the parameter of the labour market was experienced at a relatively low real GDP growth rates. However, this was enabled by extraordinary factors (see below).
2. The development was "improved" in several areas due to 2015 being the last year in which was possible to draw resources of the cohesion policy in the programming period 2007 – 2013 (n+2 principle). After a slow start of resources withdrawal at the beginning of the programming period, the massive effect of resources withdrawal occurred in recent years. Naturally, this reflected not only in the parameters of public finances but also in the real economy.
3. The EU funds (Cohesion policy funds) were crucial for the public investments realization in Slovakia. An excessive one-sided reliance on these resources is a potential risk in the future; it may be associated with an underestimation of other instruments of economic policy. A well-known problem repeats: practically, there is no withdrawal of resources in the current programming period 2014 – 2020. While the last withdrawal of resources from previous programming period took place, the implementation of the current period is not taking place.
4. Although the deficit was reduced below the 3% of GDP level, it does not mean the risk-free public finances. The long-term unsolved problems in health care or education bring serious risks to public finance balance.

5. The monetary policy will be sending an ongoing incentive for the expansion. The transmission mechanism of ECB monetary policy works with a certain time lag. Therefore, the results of earlier non-standard measures to increase inflation and boost economic growth may occur in the year 2016. Further reductions in interest rates were added to earlier ECB expansionary measures in December 2015 and March 2016; The ECB also uses the opportunity for further expansion of quantitative easing (QE). This policy was extended to the end of March 2017. More and more loose monetary policy of the ECB reflected to greater or lesser extent in the development of the Slovak government bonds remuneration on deposits and loans in the Slovak banking market.
6. There is a cautious expectation of the deflation end in Europe (It is even more cautious due to the recurrence of consumer price decline in the Euro area in February and March). The ongoing upward growth trend in European economies supported by ECB policy could lead to cessation of deflationary tendencies. However, one has to be careful when predicting the "end of deflation" in the Slovak Republic. The previous experience from predictions of inflation/deflation in Slovakia should be a warning for such prediction.
7. The threat from the outside environment is any restriction on the free movement of persons and goods (a decay of the Schengen area). The current situation in Europe (a migration crisis, the attitude of Britain towards the EU membership and continuing problems of Greece) suggests that the direction of European integration is uncertain. The free movement of persons and membership of the EU states was perceived as a certainty until recent time. The questioning of these areas necessarily harms the economic climate. In the case of Britain remaining in the EU, it is likely that the increased pressure for reform will occur on the functioning of the Union, which could also be beneficial.
8. The existing large three car producers operating in Slovakia are reaching the limits of their production capacities. After the construction and production commencement of the fourth car producer Jaguar Land Rover (JLR), it is expected an increase of

annual production of the automotive sector by a further 300,000 units which will strengthen the position of the sector in the economy. The fourth car producer should start production of luxury jeeps in Slovakia in 2018. The full production capacity will probably be achieved in 2020 (both mentioned years are beyond the horizon of the outlook). Between 2016 and 2017, the economy will only be affected by the preparatory phase of the investment, not the production one. The preparatory phase should increase the flow of fixed investments, construction output, and imports. A significant proportion of the installed JLR investments will be imported – this phase is necessarily import-intensive. Of course, a significant positive impact on the Slovak economy can be expected in the later production phase. Moreover, for maximization of the positive impact of this investment is important to create a network of domestic subcontractors and induced activities (as in the case of car producers already operating in the Slovak Republic).

9. In the past, we have repeatedly pointed out to the poor development of qualitative factors of the economic development (the parameters of innovation activity, research, and development, the development of intellectual capital, etc.). Moreover, even in the current period, we cannot conclude a significant positive change. The strong inflows of the EU funds were also used to increase public expenditures on research and development (in particular, the scientific infrastructure). However, the development of corporate expenditures remained with no signs of recovery.

Comparison of Previous Forecast with Real Development

A critical evaluation of past outlooks brings an expectation of better formation in the future. While our outlook for 2015 is being confronted with the actual data on development (Table 9.1), we can conclude that:

- Forecasted accelerating growth rate appeared, but the real result exceeded our expectations. A slight discrepancy as a result of the projected and actual developments is given by the fluctuations in the

fourth quarter (in this quarter, the economic growth considerably accelerated). Forecasted values were in line with development in the first three-quarters. The growth rate was particularly extraordinary in the fourth quarter (and probably unsustainable) due to a significant contribution of the EU funds. The factor as such was not highlighted enough in our outlook – similarly as other institutions with their forecasts at the given time.

- We expected stagnation in the level of consumer prices. The fact that the price level was slightly decreasing is not far away from our forecast. Nevertheless, the real decrease in prices was a bit stronger than we expected in our outlook.
- The unemployment rate decreased to a level, which was out of our estimated interval. Moreover, it is true that we expected a noticeable drop in the level of unemployment. The concurrence of factors that invoked the reduction of unemployment in 2015 (the inflow of the EU funds, enhanced employment policy, methodological changes in unemployment reporting and enhanced economic growth) created the possibility for such a significant decline in the unemployment rate which already exceeded our expectations.

Table 9.1

Comparison of Forecast with Real Development

Parameter		2013 (r)	2014 (r)	2015 (f)	2015(r)
Year-on-year change in real GDP	%	1.4	2.5	2.8 to 3.3	3.6
Year-on-year change in GDP, current prices	%	2.0	2.2	2.7 to 3.3	3.3
Year-on-year change of workers, LFSS (%)	%	0.0	1.4	0.9 to 1.5	2.6
Unemployment rate, LFSS	%	14.2	13.2	12.1 to 12.6	11.5
Average annual change of inflation measured by consumers price index	%	1.4	-0.1	-0.1 to 0.3	-0.3

Source: Real data (r) for 2013 - 2014 based on SO SR, forecast (f) based on Morvay et. al (2015).

In total, our outlook essentially outlined the short-term development correctly: the acceleration of economic growth, a significant decrease in the unemployment rate with no price growth. However, the real changes were more pronounced than those outlined in the outlook. They were marked with excessive caution in the quantification, however, on the other hand, it did not estimate wrong directions of the upcoming development.

Expected Development of Basic Macroeconomic Parameters

The priority of this section is to outline the corridor of the most likely development of selected relevant parameters in the short-term horizon, but not a detailed quantification of them.[39] Therefore, we use the intervals for the expected economic parameters movement (which is a kind of corridor for our most probable scenarios – thus, not all scenarios of development are exhausted).

Based on available forecasts from renowned institutions,[40] we have to expect an uncertainty in the Euro area (determined by a Great Britain referendum on the EU membership, risk of deterioration in cooperation between the Member States due to the migration crisis and doubts about the stability of the financial system). However, the probability will not reverse the development of key variables. The economic growth in the Euro area, nor in Germany should not be lower compared to the one achieved in 2015. A slight acceleration of growth is expected in forecasts for 2016 (Table 9.2).

Despite an uncertainty mentioned earlier, the parameters of economic growth in the external environment should remain similar to those in 2015. The external environment would not have to have a dampening

[39] We utilize the expert estimates with use of less complex formalized (mathematical and statistical) methods. The detailed quantification of the medium-term development in a five-year horizon with use of the complex modeling approaches is available in another publication of Institute of Economic Research (see Radvanský, Lichner a Miklošovič, 2016).

[40] We use the forecast of European Commission (political institution), IMF (global financial authority) a IfW (academic research institute – Institut für Weltwirtschaft).

effect on the growth of Slovakia – if expectations of the Euro area risks will not be met.

Table 9.2
Forecasted Changes in Real GDP in the Euro area and Germany

	2015		2016 forecast	2017 forecast
Euro area				
Year-on-year change in real GDP; %	1.6	IfW	1.5	1.9
		EC	1.7	1.9
		IMF	1.5	1.6
Germany				
Year-on-year change in real GDP; %	1.5	IfW	1.9	2.4
		EC	1.8	1.8
		IMF	1.5	1.6

Source: IfW (2016), March 2016; EC (2016), February 2016; IMF (2016), April 2016.

In first months of 2015, the available data on the Slovak economy testify that sales, in the surveyed sectors, developed at the beginning of 2016 in a little less favourable manner than at the beginning of the previous year. Less favourable development was experienced in industry and construction, but more favourable in trade). True, it is only a brief overview of data for the first three months of the year – however, they claim that the "start" of 2016 was not better than the previous year (Figure 9.1 A – D).

For the development in 2016, it may also be important the fact that economic performance of business (non-financial corporations) was improved when compared to the previous year. The costs and revenues had relatively low dynamics, but the revenues development was more favourable than the development of costs. The favourable development was in financial results and logically also in the cost efficiency (Figure 9.2). The improvement in financial results may provide additional incentive for investment and expansion in short-term.

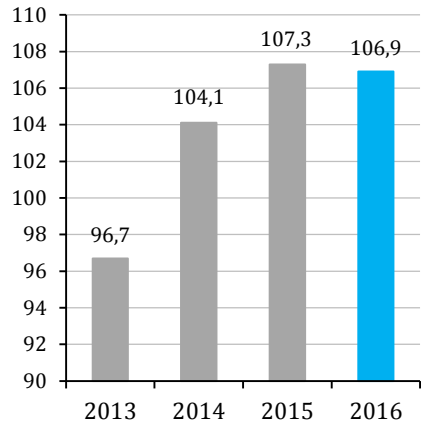
At the beginning of 2016, the development of price indices was similar to the one observed in the same period of the previous year. The consumers price decline at the same pace. The only noticeable difference is visible in the prices of agriculture products (Figure 9.3). There is no

evidence that the change in the price development will occur – the resumption of inflation is still questionable at the moment.

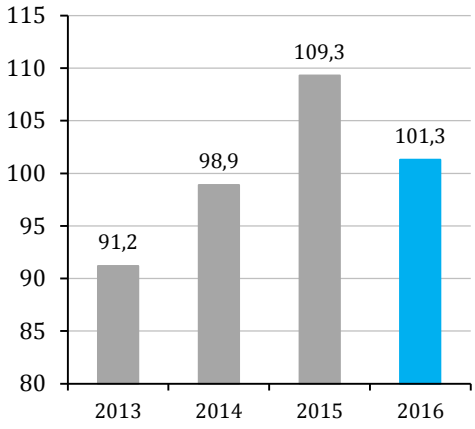
F i g u r e. 9.1

Dynamics indicators of selected branches (year-on-year indexes for the first three months of each year, the same period of previous year = 100)

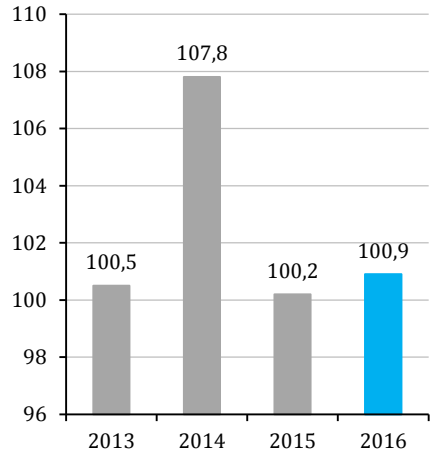
A. Manufacturing sales



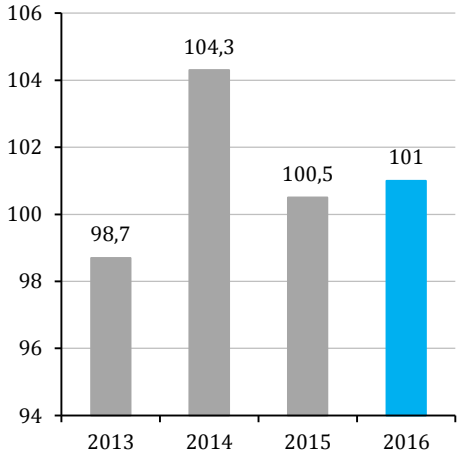
B. Construction sales



C. Wholesale sales



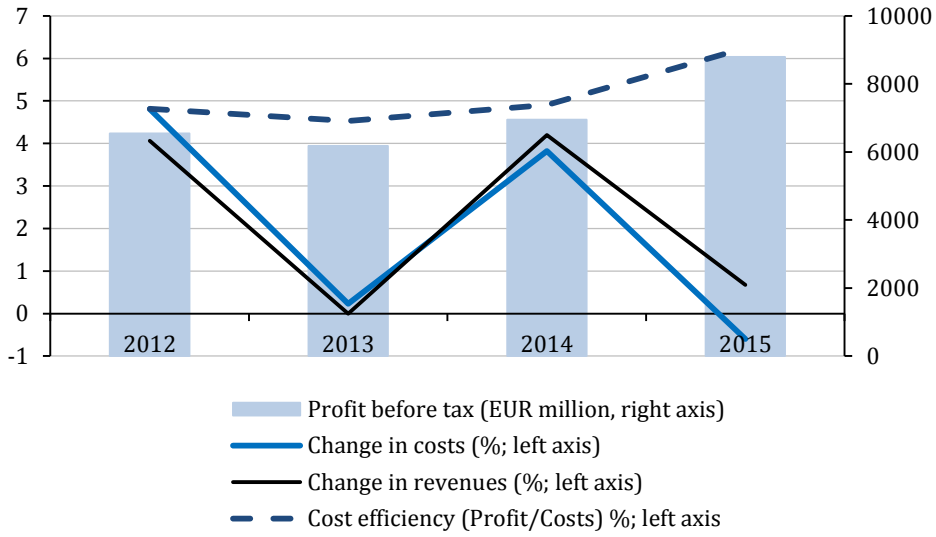
D. Retail sales



Explanation: Figure A is the index of revenues for own performances and goods in industry (sppy = 10, in constant prices); Figure B is the index of revenues for own performances and goods in construction (sppy = 100, in constant prices); Figures C and D are a year-on-year index of revenue from own performances and goods in wholesale and retail trade, excluding motor vehicle sales (sppy = 100), wholesale in current prices, retail in constant prices.

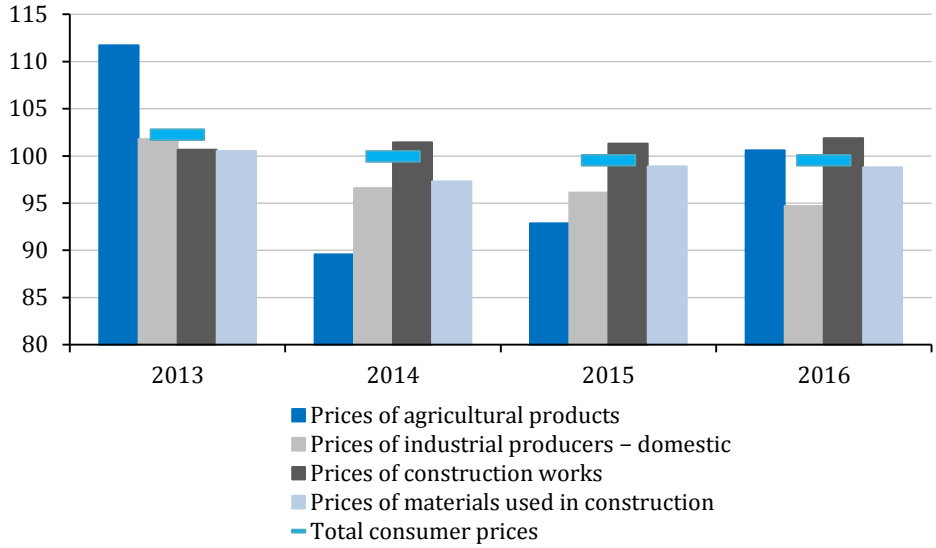
Source: SO SR, Slovstat database.

Figure 9.2
Development of Corporates Economic Results (Non-Financial Corporations) **in Slovakia**



Source: SO SR and own calculations.

Figure 9.3
Price Level Development Indicators (Average value for the first three months of the year)

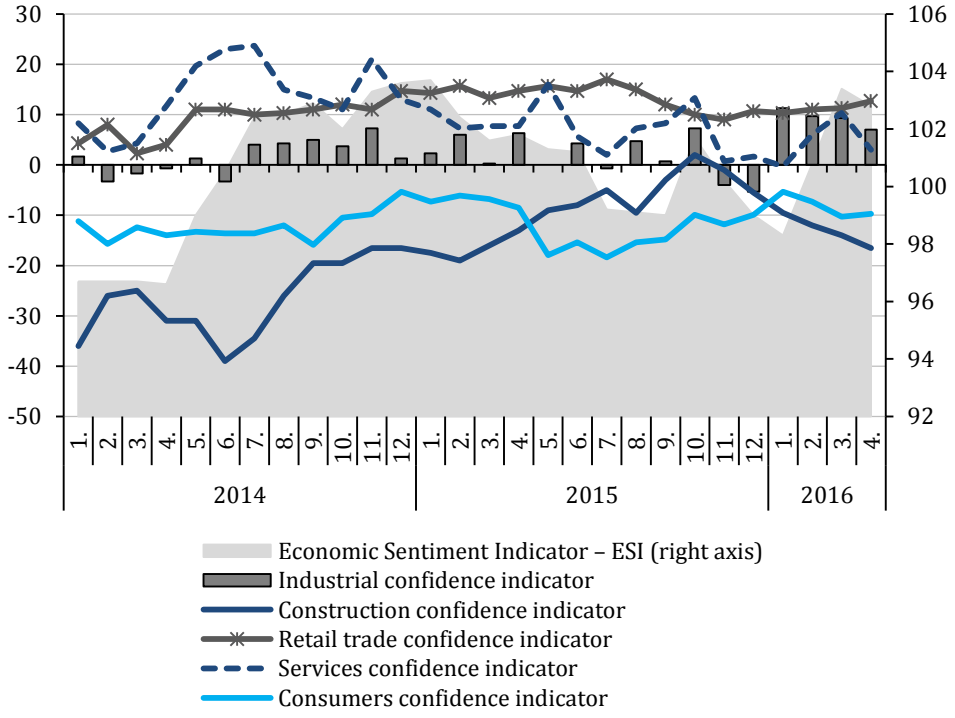


Explanations: Growth of consumer prices HICP. In all cases, there is a year-on-year index (sppy = 100)

Source: SO SR, Slovastat database.

We utilize the Economic Sentiment Indicator (published by SO SR, Figure 9.4) to reflect the sentiment and expectations in the economy. The development of its components leads to differentiated expectations for each sector: it suggests e.g. the improved expectations in the industry, but also slightly deterioration of expectations in the retail (compared to the same period of previous year). Overall, the level of climate indicator is at the beginning of 2016 at the comparable level with the one at the beginning of previous year. It represents a similar level of confidence in the economy as at the beginning of 2015.

Figure 9.4
Expectations in the Slovak Economy: Economic Sentiment Indicator (ESI) and its components (2010 level = 100)



Source: SO SR, Slovstat database.

Table 9.3
Forecast of Selected Macroeconomic Development Parameters

Parameter		2014 (r)	2015 (r)	2016 (f)	2017(f)
Year-on-year change in real GDP	%	2.5	3.6	3.2 to 3.7	3.5 to 4.0
Year-on-year change in GDP, current prices	%	2.2	3.3	3.1 to 3.9	3.3 to 4.1
Year-on-year change of workers, LFSS (%)	%	1.4	2.6	1.4 to 1.9	0.8 to 1.3
Unemployment rate, LFSS	%	13.2	11.5	10.0 to 10.5	9.4 to 9.9
Average annual change in inflation measured by consumers price index	%	-0.1	-0.3	-0.2 to 0.3	0.9 to 1.4

Source: Real data (r) for 2014 - 2015 based on SO SR, forecast (f) based on authors.

The quantification of selected macroeconomic parameters is shown in Table 9.3:

- As the last GDP growth rate (known at the time of this outlook formation) measured at the end of 2015 was exceptionally high due to extraordinary factors, we do not expect that GDP will maintain such high growth. We rather expect the real GDP growth to be close to values achieved in the first three-quarters of 2015 or slightly higher (but not at the level achieved in the fourth quarter of 2015). We expect a moderate acceleration of growth.
- The factors influencing an extremely significant decline in the unemployment rate will probably get weaker compared to the previous year. Especially, when taking into consideration that they were partly unique and unsustainable. Only some factors will have the same positive impact, which explained the decline in unemployment

rate in the previous period. Thus, we can hardly expect such a significant reduction in the unemployment rate in the years 2016 and 2017 as in the prior period. However, the declining tendency remains and is expected to be substantial. The induced job opportunities due to the fourth car producer establishment may contribute to a further decrease in unemployment (however, this effect is already beyond the horizon of the outlook).

- There are still not present any inflationary impulses. Although, we may assume that the factors causing deflation will gradually decrease (e.g. energy prices are not expected to decrease in long-term). It is unlikely that the deflation would deepen, but a more substantial growth in price levels is not expected either. Apparently, we may expect strong growth in real wages (in 2016, the growth rate of nominal wage is likely to be transformed into the real wage growth).

Table 9.4a
Expected Changes in Real GDP in SR by forecasts of various institutions

	2015		2016 forecast	2017 forecast
Year-on-year change in real GDP (%)	3.6	External institutions		
		EC	3.2	3.4
		IMF	3.3	3.4
		IfW	3.8	3.6
		Domestic institutions		
		IFP	3.2	3.6
		NBS	3.2	3.3
		IER SAS (Radvanský et al.)	3.4	3.8

Table 9.4b
Expected Rate of Inflation in SR by forecasts of various institutions

	2015		2016 forecast	2017 forecast
Average annual change in inflation measured by HICP (%)	-0.3	External institutions		
		EC	0.3	1.7
		IMF	0.2	1.4
		IfW	0.0	1.2
		Domestic institutions		
		IFP	0.2	1.6
		NBS	-0.2	1.3
		IER SAS (Radvanský et al.)	0.5	1.5

Table 9.4c
Expected Unemployment Rate in SR by forecasts of various institutions

	2015		2016 forecast	2017 forecast
Unemployment rate measured by LFS (%)	11.5	External institutions		
		EC	10.3	9.3
		IMF	10.4	9.6
		IfW	9.9	8.5
		Domestic institutions		
		IFP	10.4	9.5
		NBS	10.3	9.5
		IER SAS (Radvanský et al.)	10.4	9.6

Note: The forecasts were not created at the same time. This should be taken into account in their comparison. For example, at the time of IFP forecast publication, some final data were not available for 2015, which could affect the forecast.

Source: EC (2015), Winter 2016; IMF (2016), April 2016; IfW (2016), March 2016; IFP (2016); forecast of the Committee for the Macroeconomic Forecasts, February 2016; NBS (2016), mid-term forecast P1Q 2016; Radvanský, Lichner and Miklošovič (2016), April 2016.

* * * *

In broad outline, we may expect the similar trend to what we saw in 2015 – at the same rate of economic growth and a similar level of macroeconomic stability. However, the "aid" in the form of extraordinary inflow of the EU funds will absent. Therefore, the unusual phenomena present in 2015 will be further limited. They made the 2015 development unique, particularly: the favourable, above expectations development of (un-)employment or the investment expansion in double-digit pace. The set of positive phenomena from 2015 may not repeat, as it anyhow cannot have a permanent character.

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