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# Contents

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# Editorial

Dr Marta Golonka, Jagiellonian University

In recent decades, the Visegrad Group has functioned at best as a separate geographical area or, at worst, as an object of a political and economic competition both between its founding nations as well as between the East and West. This often divided region, with its complicated historical relationships, has witnessed various tensions, hardly making it an economic entity which structurally exhibits a cohesive whole. The divergence in economic paths of the region was evident in its lack of a joint policy towards EU accession. However, all of this has changed in recent years, bringing the V4 countries together to the attention of the international community, business consultants and analysts. The V4 have emerged from the recent economic crisis as a bloc which together can contribute to the changing balance of power in the global order and encourage a transformation of the European Union itself.

In this policy paper, the focus is on the concept of the Middle Income Trap, as it applies to the V4. The significance of this research stems in part from the need to identify new growth models for the next phase of reform in the V4, and in part, from the recognition that the region faces the danger of economic stagnation if it does not re-assesses the successes and failures of the past years of reforms. To qualify the V4 group as a new European regional tiger, changes need to be made to improve its prospects for sustainable economic development and growth. Primarily and most significantly, a unified vision will need to be implemented to encourage the creation of a stronger and more integrated V4 group.

The concept of the MIT has already been discussed in the introductory parts of this paper, as well as in the complimentary opening theses. Summarising the research and conferences conducted during this project, we can safely suggest that there is a real danger in the V4 of getting stuck in the middle, and falling into this mid-income level trap. Our research and experts have agreed that Poland, Slovakia, the Czech Republic and Hungary all face similar challenges with respect to their future growth patterns. The diagnosis of this situation suggests that solutions will be based on complimentary policy mixes, which will be able to transform the V4's intrinsic capabilities to real output growth and increasing standards of living for their populations.

The most fundamental change witnessed in the V4 in the overhaul of their political and economic systems of the last decades was due to a single external factor: integration with the

European Union. With the enlarged European Union channelling funds to the new member states, imposing unified regulations and driving openness in trade and the free movement of labour, the whole CE-20 region, led by the V4 countries, demonstrated how a successful transition to a market economy can take place. Signs of catching up and attaining economic consolidation with the rest of the continent were highly evident. However, the recent global financial and economic crisis reversed many of the achievements. The difficulties faced by the Czech Republic, Hungary, Slovakia and to some extent Poland, are not the subjects of this paper. It is nonetheless important to emphasize that the region fought its way out of the economic turmoil and has re-emerged stronger. This paper thus describes policy recommendations that would consolidate the successes reached so far and create new opportunities for the future.

The authors believe that, while substantial, political and economic relations between the older EU member states and the V4 are no longer sufficient to sustain the kinds of growth levels in the long run, which would ensure complete convergence within the Union. Impressive as the EU integration model has been in spurring growth across the V4, it is domestic policy responses which will, in the future, create a much more significant impact on the V4 economies than reliance on the external dimension. To decrease the gap between the levels of development across the EU and strengthen economic convergence in the V4 region, policy makers, business and other stakeholders will have to re-focus on the domestic side of reform.

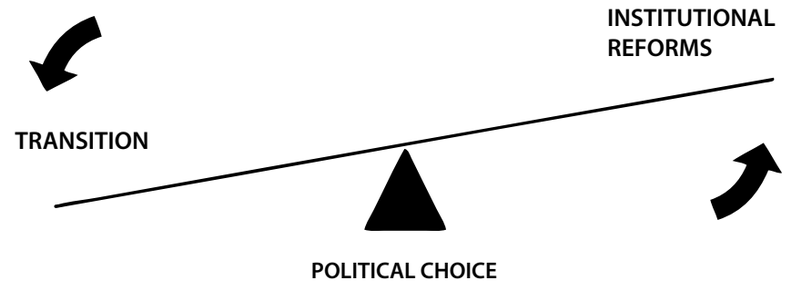
Moreover, as the Greek crisis has shown, currently the EU as a whole faces numerous crises. Deep reform in the EU, from both political and economic perspectives, is necessary. Despite numerous efforts to resolve the crisis in the Eurozone, the final compromise on Greek membership and its economic policy reform programme simply displayed a lack of unity, solidarity and integration within the EU. Austerity and fiscal prudence have become buzzwords for battles within the EU. The Union needs new impetus for deeper integration if it is to stay viable as an international player in the global arena. The V4 should take part in this debate and contribute to formulating new ways of thinking across broader economic policy objectives. The virtues of capitalism are such that Schumpeter's Creative Destruction is fundamental in constructing new models of growth for Europe. The V4 can gracefully teach the rest of the continent lessons in such creative destruction.

In this special edition of policy recommendations for V4 countries, "Middle Income Trap in V4 Countries? Analysis and Recommendations", the authors have looked at various challenges and opportunities across the region. Most of the research has demonstrated that economic policies for the next phase of transformation and integration in the V4 countries will have to address the more difficult issues of institutional reform and social policy in addition to continued macroeconomic consolidation. To escape the possibility of economic stagnation, the V4 countries will have to primarily focus on solving the deeper causes, not symptoms, of the aspects of the middle income trap.

## Reforming the Causes, not Symptoms

Deeper reform requires avoiding the so-called seesaw effect in economics. When one side of the reform "seesaw" is considered complete, but is only shallow, (transition), the other side can rise and create further problems (institutional reform). Reaching the balancing point is extremely difficult. Authors such as Dani Rodrik have argued that the most important factor in successful long term policy reform is solving the *causes* and not the *symptoms* of the initial dilemma. Identifying the root cause is a complex process, but necessary to ensure sustainable policy reform. For example, in the V4, legal implementation, interpretation, predictability and stability of the law are often criticised. To avoid the seesaw effect, the culture of corruption should be addressed, followed by appropriate legislation, and not the other way around.

Fig. 1. The Seesaw Effect. Source: own complication




As such, these policy papers consider how to solve the problems, causes and reasons behind many of the dilemmas faced by the V4. Domestic policy recommendations across the V4 are geared to address older challenges, such as post-economic crisis responses, as well as newer ones, to suggest possible building blocks for future growth models. Innovation and non-conventional thinking is coupled, in these papers, with more a conservative assessment of, for example, debt consolidation. The emphasis lies on modernisation of leftover legacies from the first phases of transition. Institutional reform sits on top of all the agendas. Similarly, opportunities for the development of human capital are discussed at length, with continued reform of the educational systems as a number one priority across the V4. Demographic trends will tend to dominate the choice for various economic strategies, with differentiation across the region surrounding birth rates and ageing populations.

Most of the policy papers shift their orientation from over-simplified macroeconomic strategies and towards deeper microeconomic policies, which depend on further investment in creation of knowledge economies. In addition to strengthening the foundations of making the region more attractive to foreign investors, increasing domestic saving levels and making fiscal policy more effective remain important objectives. Recommendations stem from reshaping the current debt formula for Hungary, to reaching higher thresholds of capital per worker and domestic capital in Poland, to encouraging reinvestment of profits in the Czech Republic. In the case of Slovakia, according to the authors, the recommended institutional design and economic model to follow is that of Finland.

A reinvented industrial policy will address many of the legacies of transformation, reorienting some of the patterns and structures of the trade balances. National champions are worth supporting and do not necessarily distort markets, as other examples of emerging economies in Asia have demonstrated. In general, a more strategic trade policy will enable the V4 to better

target their comparative advantages as well as strengthen their position in internal negotiations within the EU's Common Commercial Policy Framework. An EU-wide competition policy, along with state aid, will need to be implemented and enforced in a more transparent and consistent manner, to make sure that market distortions are indeed avoided.

As far as social policy is concerned, the authors of the regional papers share a common perspective on reforming the pillars of the market economy, namely healthcare and education. Reorganisation and restructuring of the healthcare sectors and their financing will improve their operative rationalisation. Targeted welfare programmes and unemployment schemes might reduce the dominance of the so-called grey and black economy models so evident in these countries. Streamlining and simplifying the multiple forms of temporary employment contacts will improve the stability and consistency of hiring workers, making job seeking a more efficient process. This might also address the so-called brain-drain phenomenon visible across the entire region, as skilled migrants leave their countries for better jobs abroad.

It is suggested across the board that the V4 governments implement far-reaching changes to systems of financing research and development, lagging well below the EU average in all the countries. This low level of financing R&D across the region is recognised as the most important risk to long term growth. The public-private partnership concept similarly seems to be malfunctioning across the V4. Focused incentives and assistance to Small and Medium Enterprises could be a step in improving the relationship between government, business and academia in building R&D clusters within the V4. Efforts should be made to lower market-driven and tax-driven risks of undertaking R&D activities by pro-innovation policies that offset some of the costs involved.

In the papers a strong focus remains on creating opportunities to develop new technologies in the promising sectors of ICT and digital services, as well as energy and environment. The use of EU funding could enhance future development of a V4 competitive advantage in these sectors, by expanding the investment capital and institutional oversight available. Reducing the digital divide in V4 societies is a number one priority. Supporting the exploitation of non-conventional energy sources and renewable energy, together with developing eco-friendly technologies ranks second. Summarising these recommendations, it is clear that the effectiveness of the projects should be judged, rather than their scale.

Finally, the policy papers target the difficult area of institutional tinkering and regulatory reform. Poland might make better use of the received EU funds with a focus on reforming its procurement and bankruptcy laws. Czech governments might provide better, more predictable and smarter regulation by strengthening social dialogue and political agreement over longer-term solutions. Similarly, Slovakia needs to strengthen inter-ministerial consultations and cooperation to make the legislative process more transparent and efficient. Hungary faces legal challenges, particularly in the areas of competition between energy providers or in implementing international best-practices across healthcare and education sectors. Criticism surrounds the selection procedures of various institutional projects and regulatory harmonisation with EU law, for example, the so-called gold-plating in the Czech Republic.



Evolution means than the V4 should make a leap in competitiveness of their level of wages and efficiency. Creating an environment for entrepreneurial culture to flourish will be a large part of the productive enhancement process. Flexibility of the labour market and other structural reforms will have to accompany social and cultural shifts. The policy agenda can stretch from buttressing a business friendly environment to further integration with the EU and Eurozone, boosting technology transfer to reforming taxation or combatting corruption and the culture of endowment. As the economies approach the technological frontiers, the V4 will have to transition to indigenous innovation. To begin the difficult process of truly raising competitiveness in the service sector, some reforms will show the need for further liberalisation and deregulation, while others will be based on investment in human capital. A larger capital stock will require more savings to make this work.

Last, but not least, the V4 will have to rethink their insufficient economic diplomacy initiatives, as their successful presence in global markets will only be achieved with a more strategic approach to international brand promotion and cooperation between ministries, business and the larger Non-Governmental Sector community.

## Summary

We would like to invite you to learn more about our research and analysis through the following four policy papers, as the main results of the second part of our project:

- *Breaking the Glass Ceiling and Starting Steady Economic Convergence in the Czech Republic: Difficult but not Impossible*
- *Policy Recommendations for Hungary 2015-2023*
- *Is the Middle-Income Trap a Real Risk for Poland?*
- *Middle-Income Trap in the Slovak Republic: Policy Recommendations*

Earlier, we presented out opening statements, definitions of the MIT and a broad overlook of the region in the first publication, "Middle-Income Trap in V4 Countries? Opening Thesis".

The main conclusions of our experts' research were presented to a large group of opinion makers, stakeholders and leaders of the V4 Group in the spring of this year. These regional events in Prague, Bratislava, Budapest and Warsaw were an excellent opportunity to raise awareness of the underlying questions of regional cooperation in economic development and integration of the V4. It seems to us that all four countries should consider strengthening their diplomatic and economic relations within multiple networks of public-private partnerships, with the aim of supporting the region's position in the global value chain race.

# Breaking the Glass Ceiling and Starting Steady Economic Convergence in the Czech Republic: Difficult but Not Impossible

Kryštof Kruliš, Research Fellow, Association for International Affairs (AMO)

## 1. The Years after Transformation and the Glass Ceiling

Foreign direct investments (FDIs) were key engines of the economic growth in the decades following the economic transformation. They were attracted by the relative strength of human capital together with lower costs of labour, the Czech Republic's convenient geographic position, and by membership of the country in the EU (since 2004) and its internal market. The FDIs brought new managerial and technological innovations to the whole economy, improved labour productivity and even invested more private money in research and development in comparison to Czech-owned companies.

EU funds, despite notorious problems in the Czech Republic with their drawing, also significantly spurred economic development. On a per-capita basis, the Czech Republic is the country that gains the most finances from the EU funds within the whole EU (Špok et al., 2014a). The effect could have been even greater if the Czech Republic had developed a better way of their distribution and mechanisms of control of their effective use, instead of focus on unnecessary formalism and burdening red tape.

The Czech population has a relatively high inclination for accumulation of savings, but the role of domestic capital in the economy over the last 25 years has lagged behind the above mentioned sources of growth (FDIs and EU funds). This has been true not only for the relative weakness of domestic capital in contrast to Western standards but also for the very conservative ways of use of capital by households. Bank deposits are still the dominant means for savings for households. Unlocking possibilities of small size investments would help the economy and at the same time allow the Czech population to profit more on economic growth.

At the beginning of transformation in the 1990s and after the dissolution of Czechoslovakia in 1993, economic indicators granted the Czech Republic a secure hold on first place among the Visegrad Group countries. By its GDP per capita, the Czech Republic was ahead of the rest of the peloton by a wide margin. This comfortable margin has, however, shrunk considerably: in the case of Slovakia, the long term difference between Czech and Slovak GDP per capita has now been almost fully erased. The Czech GDP per capita stalled roughly at the level of 80% of the EU average (already reached by the Czech Republic in the previous decade). From

the perspective of the Czech Republic, it thus may seem that the imaginary "glass ceiling" (the "middle-income trap" for Visegrad Group countries) could be somewhere around the level of 80% of the GDP per capita of the EU average (Kruliš, 2015).

## 2. Grounds for Development

### 2.1 Initial Overview: Origin of Capital, Profit Reinvestment and Labour Productivity

Before contemplation about the strategies for future economic growth, it is useful to start with a brief overview of the drivers that have influenced the economy so far. Such an overview may help in designing a strategy to fit the current situation.

A vast majority of the enterprises (98%) operating within the industry sector are owned by Czech nationals, but the remaining 2% of foreign-owned enterprises represent 58.9% of the total industrial turnover, 50% of the added value and 45.1% of employees in the industrial sector (Ernest, 2014). The key automotive industry is the sector most dominated by foreign-owned enterprises (Ernest, 2014). This is a result of mixture of factors. Several key companies were privatised to a strategic partner from a foreign country, including Škoda Auto and the big banks Česká spořitelna, Československá Obchodní Banka and Komerční Banka. Foreign capital also played an important role in green field investments and was thus by far the biggest beneficiary of the investment incentive schemes.

It is estimated that the aggregate registered capital of the whole corporate sector in the Czech Republic amounts to 2.65 trillion CZK, of which 50% (1.32 trillion CZK) is held by Czech citizens and 40% (1.06 trillion CZK) by foreign owners (of which 0.43 trillion CZK is held in tax havens); the remaining 10% belongs to undisclosed holders (Bisnode, 2015). The biggest foreign investors in the Czech Republic are from the Netherlands, Germany and Austria (Bisnode, 2015) [1]. Over time, the foreign holdings have been increasing both in absolute terms and in comparison to the holdings of Czech citizens. During the last 4.5 years, foreign holdings of registered capital in Czech companies have increased by 2.5 percentage points, from 37.5% in December 2011 (Bisnode, 2015).

The gradual "aging" of FDIs in the Czech Republic brings a general trend of increasing repatriation of dividends to the detriment of profit reinvestment, and this trend was further worsened during the financial crisis when the parent companies drew liquidity from their foreign subsidiaries (Czech National Bank). In 2013, the total amount of profit reinvestment was 95.3 billion CZK, which was the highest absolute amount since the pre-financial crisis profit reinvestment peak in 2007 (Ministry of Trade and Industry). Investment incentive schemes are used, especially in the manufacturing sector, to increase motivation for profit reinvestment. Around 80% of new projects administered by the Czech Invest agency in 2013 were in the category of profit reinvestments (Ministry of Trade and Industry). The repatriation of dividends attract particular attention of the public and media, in particular in the financial sector. This is partly due to the concerns about maintaining the current stability of the Czech banking sector and partly also due to the high level of bank fees that Czech banks traditionally impose on their clients.

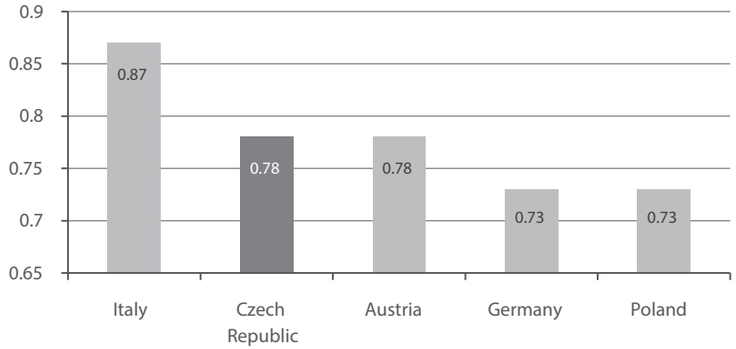
1 The statistics for the Netherlands are, however, influenced by its tax legislation, and the real FDI source is in many cases situated elsewhere (Ministry of Trade and Industry).



In 1995, one work-hour represented the created value in the amount of 161 CZK; this almost tripled to 428 CZK in 2013, which represents a real increase in labour productivity of 59.7% during this period (Kučera, 2014). The biggest increase of labour productivity (on average 3.6% annually) was between 1995 and 2008, while the period 2009 to 2013 showed only a mild average annual increase of 0.2% (Kučera, 2014). The biggest increase of labour productivity was in the manufacturing sector (by 246.8%), followed by the wholesale-retail (by 124.3 %) and ICT (by 63.9 %) sectors (Kučera, 2014).

The rate of average labour productivity to average labour costs in the Czech Republic is far worse than in the other countries in the region. The average hourly productivity outcome of a Czech worker is worth 13 EUR, similar to that of a Slovak worker, but the costs of a work-hour in the Czech Republic is higher (10.3 EUR) in comparison to the hourly wage of 8.1 EUR in the Slovak Republic (Pícl et al., 2014).

**Fig. 1. Comparison of Cost of Effective Labour Units.** Source: Own chart based on data of the Office of the Government of the Czech Republic [access on: 17.05.15].




If judged purely from the perspective of labour costs without a substantive increase of labour productivity, the Czech Republic would remain a less attractive destination for investments than the other countries of the region. This would be true for FDIs and domestic capital alike. The level of labour productivity varies significantly in individual sectors. Comparative advantages remain in the manufacturing sector and in the automotive sector in particular (Pícl et al., 2014). If the remaining sectors would also want to develop the potential for wage increases, employees and their organizations should focus not only on tough wage negotiations with employers but also actively contribute to enhancement of skills that may lead to higher productivity, including a pro-innovative approach of employees, development of relevant up-to-date knowledge (including e.g. IT skills) or improve client orientation in the sector of services.

### 2.2 Saving Levels and Savings of Households

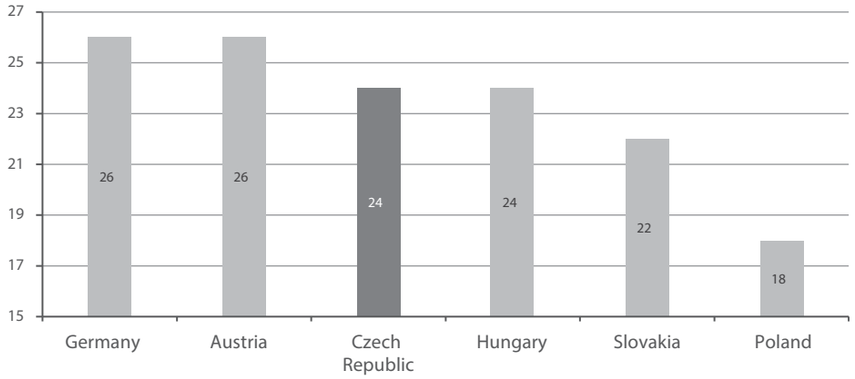
The effective use of domestic savings is one of the key factors of economic convergence. The Visegrad Group countries cannot grow simply through wage increases but must enhance their income also through maximizing yields on capital of households.

From the long term perspective, the level of **gross national savings** (the part of the gross disposable income which is not spent on final consumption expenditures) in the Czech Republic is considered low, particularly when compared to proportion rates in Germany and Austria (Mandel and Tomšík, 2013). It is assumed that the optimal **gross national saving rate** (the gross national savings divided by gross disposable income) in the Czech Republic should be within the range of 25% to 30% (Mandel and Tomšík, 2013). This rate indeed tended to be around the 30% margin throughout the 1990s and most of the first decade of the new millennium. Since the financial crisis in 2009, it has plunged to a level slightly below the 25% margin and exceeded it only in 2012 and 2014 when it reached 26% and 26.3% respectively (Czech Statistics Office, 2015). The **gross saving rate of households** in the Czech Republic is in the long term between 10% and 12% (Czech Statistic Office, 2015). The Czech Republic is close to the gross saving rate of households average of the EU28 and several percentage points below the average of the euro area (Eurostat, 2015).

Czech households show a counterintuitive tendency to increase saving rates in times of economic crisis and lower it in time of economic optimism (see also Mandel and Tomšík, 2013). The gross saving rate of households thus reached its all-time peak of 13.6% in 2009, the year of the financial crisis (Czech Statistic Office, 2015). This could be interpreted as representing caution in Czech households, deterring consumption in order to prepare for worse times. Since 2009, the gross saving rate of households gradually declined and reached 8.6% in 2014 with growing economic optimism, showing the lowest rate since 1995 (Czech Statistic Office, 2015). This habitual tendency of households, together with the austerity measures of the government, could be connected with the prolonged "W" shaped economic recession that the Czech Republic witnessed between 2009 and 2013 (Kruliš, 2014). During the financial crisis, the Czech households did not lose trust in the Czech financial system. The cash currency in circulation in 2009 and 2010 decreased by 11.7 billion CZK (the first such decrease since 1997) and during the same two years, the deposits in banks increased by 176.3 billion CZK (Mandel and Tomšík, 2013).

In the level of **gross savings as percentage of GDP,** the Czech Republic maintains the highest percentage of savings in the Visegrad Group region (Hungary reach the same level only in 2013) and is situated somewhere between the Visegrad Group and Germany and Austria on the upper side (Fig. 2).

**Fig. 2. Regional Comparison of Gross Savings in 2013, in percentage of GDP.** Source: Own chart based on World Bank data [access on: 03.06.15].






However, the biggest change brought about by the financial crisis in the Czech Republic concerns **net savings** (i.e. gross savings after taking into account the consumption of fixed capital). The level of net savings slumped from a level above 8% of GDP in 2008 to 1.69% in 2009 (Fig. 3 and 4).

**Fig. 3. Net Savings in Czech Republic, in percentage of GDP.** Source: Own chart based on OECD data [access on: 15.05.15]

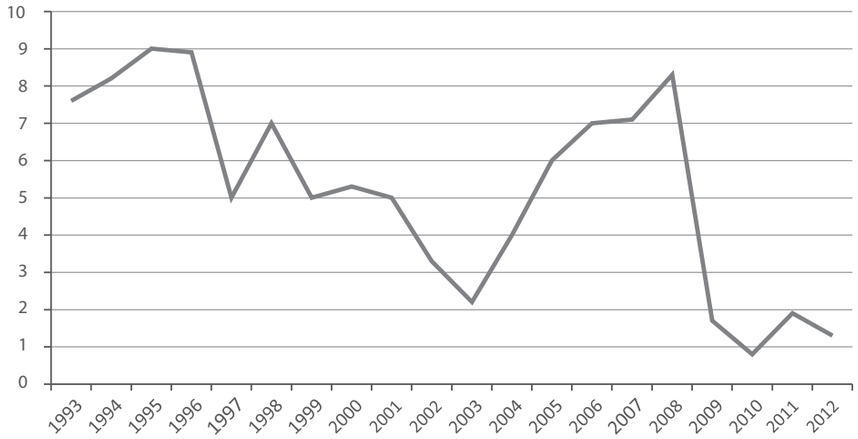
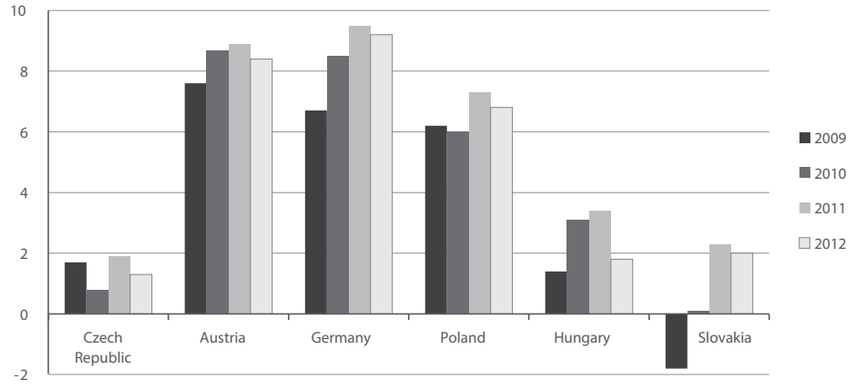



**Fig. 4. Regional Comparison of Net Savings, in percentage of GDP.** Source: OECD [access on: 15.05.15].




The level of net savings remained low in the following years, hitting the bottom of only 0.82% of GDP in 2010. The situation was alarming even in comparison with the surrounding countries. By 2012, the Czech Republic had the lowest net saving rate (in percentage of GDP) within the region, outpaced also by Slovakia, which grew from its negative net saving level in 2009.

With gross savings still relatively high in proportion to GDP, the low level of net savings could be interpreted as signalling a high level of consumption of fixed capital without adequate level of its restoration.

From the perspective of stock savings, the Czech population characterizes itself by its high savings. The *Household Savings Index* by ING bank shows that an average household in the Czech Republic could finance its expenditures for 3.6 months from its savings, as income is 29% higher than expenditures of households (ING, 2015). This widespread ability of households to finance their expenditures manifests the relatively egalitarian character of the Czech society. 61% of households are concerned, putting Czech Republic among the top ranking European countries just after Luxemburg, Austria and Turkey (Sillmen, 2014).

The aggregate of finances in the financial market (i.e. finances of physical and legal persons held at financial institutions or in cash currency) has been constantly growing (from 2008 by 4 to 6% annually) and reached 4.4 trillion CZK at the end of 2013 (Ministry of Finance, 2014). The aggregate savings of households is also constantly growing (4.6%) and reached 2.6 trillion CZK by 2013 (Ministry of Finance, 2014). The most widely used form for savings by households is bank deposit without fixation, with 40.5% of the aggregate of households savings (Ministry of Finance, 2014). This is one of the reasons for the high level of independence of banks in the Czech Republic from inter-bank financing.

Aggregate numbers confirm that Czech investors are strongly conservative, with low risk resistance and a high preference for short-term and liquid investments. Financial institutions meet with strong general scepticism towards longer term financial investments and a horizon of 15 years is not acceptable for most savers (Barta, 2010). The Czechs belong to a group of countries with lowest holding of listed shares by households, with total investments in listed shares oscillating around 1.5% of the total savings (EUROSKOP, 2013).

Unlike the Stock Exchange in Warsaw (GPW), the Prague Stock Exchange (PSE) is far from having a reputation of a place where domestic firms would commonly look for capital. About ten firms contemplate Initial Public Offering (IPO) at PSE every year but only one or two decide to actually do it (Investiční Web, 2014). The rather disproportionate score between PSE and GPW in regards to the number of IPOs (in 2014, it was only 1 in Prague to 31 in Warsaw) is partly explained by analysts by reference to the Polish government's use of the Stock Exchange for privatisation of state companies, while the Czech government prefers to find strategic investors in privatisation deals (Kovanda, 2015). The relatively easy access to credit financing through banks and the non-functioning pension reform is also listed among reasons for the lower number of IPOs at PSE (Investiční Web, 2014).

The ratio of client bank deposits to bank loans is 146.4%, the third highest in the EU after Luxemburg and Belgium (Ministry of Finance, 2014). While this brings a high level of stability in the Czech banking sector, it also raises questions on whether the domestic capital could not be used more efficiently for its holders and for financing needs of the business sector.



# 3. Tools of Growth

### 3.1 Importance of EU Funds in the Economy

The Cohesion Policy funds represent a substantial part of the public investment and are used as a precious additional source of capital. The Czech Republic is a net beneficiary from the EU budget. On a per-capita basis, the Czech Republic is the EU country that gains the most funding (Špok et al., 2014a). In the new financing perspective 2014-2020, the annual allocation of EU cohesion funds for the Czech Republic slightly decreased as a result of EU enlargement (Fig. 6).

**Fig. 5. Annual Allocation of Cohesion Funds in the Czech Republic by Financial Perspective. Source: Europeum (Špok et al., 2014a).**


The Czech Republic was able to draw 99.54% of its allocation in the period 2004-2006 (Ministry of Finance, 2010). Results for the financial perspective 2007-2013 will be far worse and the Czech Republic might be unable to draw between 5% and 10% of its available funds (Špok et al., 2014a). The issue of how to better draw EU funds is thus under focus of media and general debate, and sometimes outshines the equally important issue of project effectiveness and added-value.

By mid-May 2015, the Czech Republic had three confirmed National Programmes to be financed from the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) in the period 2014-2020. They included Operational Programmes in the areas of (i) Transport, (ii) Environment and (iii) Enterprise and Innovation for Competitiveness[2]. Several other programmes were still under negotiations between the European Commission and representatives of the Czech government.

The Operational Programme for **Transport** will manage a total budget of 5.4 billion EUR (of which 4.7 billion EUR comes from ERDF and CF) for the implementation of the national transport strategies which aims "to upgrade the existing road and railway infrastructure and to develop adequate and sustainable transport networks in the country. The expected impact shall include:

- 140km of reconstructed or upgraded railway lines
- 8km of new or upgraded metro or tram lines
- 140 new or upgraded mobile rail assets
- 95km of new motorways and expressways on the TEN-T network
- 15,000 kW additional capacity for recharging of e-vehicles

2 The new aspect of the period 2014-2020 is that the national priorities are obliged to follow the EU priorities as defined in Strategy Europe 2020 (Špok et al., 2014a). In the Czech Republic this could be a valuable source of enhanced pressure on governments to maintain a stable and hierarchical system of strategies that match Strategy Europe 2020 and provide a longer term framework for their implementation.

- 40km new or upgraded major roads in the regions
- the deployment of intelligent transport systems (ITS), resulting in fewer accidents in urban areas" (European Commission, 2015a).

The incomplete highway and fast railway infrastructure is a major hindrance to economic growth and leads to wasting some of the opportunities linked to its convenient geographic location in Central Europe. The actual length of highway network in the Czech Republic is 1,242 km, which is only slightly more than half of the whole planned network of approx. 2,180 km (Českédálnice, 2015). Several of its important parts are still missing, including a connection to Austria, the northern horizontal East-West connection that would be parallel to the spinal and worn out southern D1 (Prague-Brno) highway, and the outer circuit around Prague, the lack of which results in transit transport through the capital city (Kruliš, 2015a).

The Czech Republic has the second densest railway network worldwide. It is at the level of 199 km of railroad per every 1,000 $km^2$ of land area, while the highest railway density worldwide is in Belgium at 211 km. The fastest train connection between the biggest Czech cities and connections to the main cities in the surrounding states is, however, three times slower in comparison to the French TGV (Kruliš, 2015a).

The frequently changing governments and leadership in agencies in charge of transportation networks were the main problems of transportation constructions in the previous decade. This also resulted in frequent changes in strategic documents and construction priorities[3]. The legislative burdens that limit scope of manoeuvring for state agencies when acquiring land for transportation construction (in particular in limits of possible compensations that the agencies could offer to land owners) and possibilities of variously motivated obstructions prolonged several important transportation construction projects by many years. Finances from EU funds thus can help with construction but on its own cannot accelerate the process, as it has been hampered more by the abovementioned difficulties than by lack of finances.

The Operational Programme for "**Environment**" will manage the total budget of 3.1 billion EUR (of which 2.6 billion EUR comes from ERDF and CF) with five main priorities including "improvement of water quality and reduction of flood risks; improvement of air quality in human settlements; improvement of waste and material flows and reduction of environmental burdens and risks; conservation and care of nature and landscape; and energy savings in the public sector. The expected impact shall include:

- 60,000 additional people served by improved wastewater treatment
- 150,000 additional people served by improved water supply
- 80,000 residents to benefit from flood protection measures
- Annual increase in waste recycling capacity of 700,000 tonnes
- 1,600 measures to support species and habitats
- Annual reduction in greenhouse gas emissions of 620,000 tonnes of $CO_2$
- Decrease of final energy consumption of public buildings of 2,000,000 gigajoules(GJ)" (European Commission, 2015b).

3 An answer to this could by an initiative by Czech deputies in the parliament that intend to stipulate specific priorities for transportation construction by an act of parliament so that it is harder to change it with every change at the post of minister of transportation (Hruška, 2015).



The funds in this programme are a vital source for financing of environmental projects by municipalities and allow them to pursue projects which would otherwise heavily burden their budgets for decades in the future.

The Operational Programme for "**Enterprise and Innovation for Competitiveness**" will manage the total budget of 7.9 billion EUR (of which 4.3 billion EUR comes from EU funds). It aims at enhancing a competitive and sustainable economy based on knowledge and innovation through focus on four main priorities: "development of research and innovation; development of entrepreneurship and SMEs competitiveness; energy and resource efficiency in SMEs and support of low carbon technologies; and development of high speed internet networks and sophisticated ICT services. The expected impact shall include:

- Support to more than 1,970 enterprises through grants under the Research and innovation Thematic Priority
- Create 12,000 new jobs in enterprises supported under the SMEs competitiveness Thematic Priority
- 600 new applications for protection of intellectual property rights
- Annual decrease in greenhouse gas emissions of 300,000 tons $CO_2$
- Create 50 new or modernised innovation infrastructures
- Increase innovative low carbon technologies" (European Commission, 2015c).

Implementation of this operational programme should reflect various negative experiences of the 2007-2013 period so the projects can bring higher effectiveness and provide more added-value. In December 2014, the National Convention on EU, a platform grouping together representatives of Czech state and Czech civil society, focused on the issue of the drawing of EU funds and provided recommendations based on experience from the current practice. This concerns all phases of a project, starting with project selection, followed by project realization and ending with a subsequent impact evaluation.

The selection phase should enhance its transparency, involve independent evaluators more frequently, and secure feedback on denied project proposals (so that the bidders can reflect on their mistakes in their next projects). The selection criteria should be clear and allow for exact evaluation of the effectiveness of the project in comparison to other assessed projects. They should not only reflect the bidders' skilfulness at drafting the project (Špok et al., 2014a, Špok et al., 2014b). The effectiveness in the phase of project realization has been sometimes hampered by increased costs of administrative burdens of the recipients (including for instance obligations to provide detailed timesheets) so that a substantial part of any project budget is no longer "eaten" by outsourced services of project administrators instead of going towards achieving the aims of the project (Špok et al., 2014a, Špok et al., 2014b). The project impact evaluation phase should be focused on the evaluation of projects real impact, - instead of mere administrative formalities - and continually use its findings to improve the selection and implementation phases (Špok et al., 2014a, Špok et al., 2014b).

On the side of the state, it is also highly important to keep an institutional memory in the authorities that administer the programmes. Unfortunately, the high level of fluctuation of personnel has resulted in a diminished ability to evaluate the projects' effectiveness. It has also increased the administrative burden on project recipients, unnecessary focus on formalities

and brought frequent changes of interpretation of the rules that are in connection with the unclear Czech legislation. This resulted in discouraging a large number of potential bidders, who would have increased competition between projects and thus provide higher effectiveness and more added-value (Špok et al., 2014b).

### 3.2 How to Increase R&D Expenditures

Gradual build-up of the knowledge economy is an important aspect of the economic convergence of the Visegrad Group countries to the EU average and in particular to the German speaking countries at its Western border.

Since 2006, expenditures on education and research and development have been at a constant level of 11.1% of the sum of public expenditures, below the EU average of 12.4% (Pazour et al., 2014). Public expenditures on science and research in 2012 represented 33.2 billion CZK and 46% (up from 42% in 2010) of the total expenditures on R&D in both the public and private sectors (Pazour et al., 2014). Foreign-owned companies invest 52% of the total expenditures on R&D in the business sector and they cover 95% of their expenditures from private money, while the Czech-owned companies statistically cover one-third of their expenditures from Czech or foreign public finances (Pazour et al., 2014). The highest expenditures on science and research in the business sector come from the automotive industry (of which 80% from Škoda Auto) followed by the machinery industry (Pazour et al., 2014).

The Czech Republic had and still has the opportunity to employ EU funds for financing projects that enhance R&D, innovation and knowledge-economy-driven growth. Unfortunately, the benefits of various projects have been lowered by a too formalistic system of project selection, realization, and subsequent evaluation without sufficient focus on effectiveness of the projects. This leads not only to the discouragement of a large part of potentially effective projects but also to the creation of a whole industry of project management. For instance, in the area of professional training for companies, entreprises specialize in drafting project applications and put price competition ahead of real added value and effectiveness of the outcome project (Špok et al., 2014a). It seems that large use of EU funds may lead to some market distortions, if it is done without proper reflection on effectiveness and real added value.

Much criticism has surrounded the creation of big research centres financed from EU funds. Some of the 48 biggest research centres appear to lack the ability to finance their operational costs. The initial assumption that the research centres would be able to finance about 30% of their operational costs from their own activity has been reduced to almost zero (Bobůrková, 2015). This also represents a future threat, as the research centres would consume a significant share of the public budget dedicated to science and research, especially after 2023 with the possible end of the related EU funding programmes (Kreč, 2015). Several leading scientists have already recognized that there are more research centres than are sustainable, both for financial reasons and due to a shortage of adequate staff (Bobůrková, 2015). A significant disadvantage could also be that the European Centres of Excellence and the Regional Centres for Science and Research were not built in the capital city of Prague (Havlíček et al., 2014).[4] This is unfortunate as the capital city has a cosmopolitan character with by far the best potential to attract foreigners, including foreign scientists. The situation with research centres is a clear example of how EU funds could distort the environment in a specific sector, if their distribution is not done with sufficient focus on effectiveness and sustainability.

It is important to dedicate a certain amount of public finances to core theoretical research. At the same time, it is important to gradually increase the pressure on cooperation of researchers with potential users of the research, both from public and private sectors. An increasing share of grants should include, as part of their allocation criteria, that the outcome of the project could be utilized in practice by end users, as for instance the Program Omega with a budget of up to 309 million CZK for the period 2012-2017 (Technological Agency of the Czech Republic, 2015). The space for enhanced application of this principle is not only in the area of technical research but also in the area of social sciences. In technical sciences, it would create pressure on scientists to engage more with the business sector. This would also create necessary networking and could bring more money from the private sector into science and research. In the area of social sciences, it may bring better collaboration between researchers and public authorities and orient research outcomes more towards the actual needs of the public. For instance, in creation of positions of the Czech Republic to various proposals debated in EU institutions the public authorities often seek feedback and opinions from universities, such as law schools and economic faculties. This is, however, mostly provided on a voluntary basis and without entitlement for remuneration. At the same time, universities receive part of their money for research under various programmes, for instance Specific University Research which brings together academic workers, graduate and postgraduate students (Ministry of Education, Youth and Sports, 2015). Each programme could dedicate a certain part of money to projects which would respond to actual needs of the public authorities in various sectors.

### 3.3 Czech Knowledge Economy: the "Silicon Valley" of the Automotive Industry?

The development of a knowledge economy could bring about a much needed increase in productivity and provide better earning possibilities. It could be a bridge towards higher added-value in the production chains for the whole economy. In 2011, the industrial sector employed 38.3% of the Czech workforce, which represented the highest share of industrial sector employment in the whole EU (Doležalová, 2014). The highly developed industrial sector in the Czech Republic could be one of the anchors for gradual development of a knowledge economy in R&D facilities that could be built around the existing industrial base. For instance, the automotive sector is on the verge of a great revolution that could be brought about by development of automatically driven cars, new safety technologies and eco-friendly technologies. The Czech Republic could take advantage of its position in the automotive industry and the related sectors of car components and support further establishment of technological centers that would be involved in development of such innovations. Similarly promising sectors that could provide synergy with already established production and R&D facilities are those of nanotechnology, biotechnology, medical devices and cyber-security in the IT sector. However, companies operating in the knowledge economy would be coming to (and staying

4 The European Centres of Excellence were financed through the Operational programme for Science and Research for Innovation in the framework 2007-2013. The capital city, as a result of its higher GDP per capita, has a specific conditions for drawing EU funds than the rest of the country.

in) the Czech Republic only if it could offer a sufficient pool of highly skilled professionals who are at the top in their fields and an administrative environment that is supportive of creativity and cooperation between universities and business. This is similarly essential for growing Czech knowledge economy firms as well.

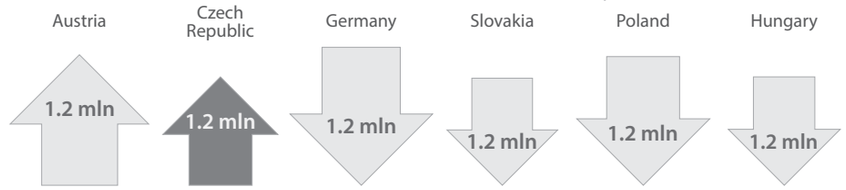
The industrial sector is, however, already complaining about the lack of employees with suitable technical education (Czech Invest). There are two possible answers. One is strengthening the motivation to study at technical schools and produce graduates with relevant knowledge and skills. The other is to facilitate incoming migration of skilled experts from abroad.

Functioning cooperation between universities and research facilities on one hand and private sector and public authorities on the other hand is one of the necessary means for boosting a knowledge-driven economy. A functioning university-business link is not only a potential source of money for university research, but also a prerequisite for universities and other educational institutions to prepare graduates with up-to-date knowledge and abilities. As it has been suggested by representatives of the manufacturing sector, the graduates of technical programs (at all levels of educational institutions) should not be only skilled in their specific fields but need to have actual IT skills as well (Kruliš, 2015b).

Even with substantial progress in reform of education, companies engaged in a knowledge economy can hardly rely on domestic experts and should also find the Czech Republic suitable for placement of their foreign employees. Companies engaged in R&D must sometimes bring together specialists with narrow specializations that could not be found on the Czech labour market. The Czech Republic must not only be open to this possibility but sufficiently attractive for such specialists to come. It can build upon a low cost of life in comparison to Western countries, but at the same time must also be able to offer a high quality of life to foreigners without knowledge of the Czech language. For this reason, the most suitable place for development of specialized clusters of knowledge economy is the capital city Prague and its surroundings. Prague could build upon its already developed services available for foreigners in English and further expand its potential in this sense. Possible improvements range from broadening of the offer of culture and entertainment to the option of organizing basic tasks with public authorities in English. To a lesser extent, other regional centres also have potential in this sense.

Looking into the future, the Czech Republic and Austria are currently the only countries in the region for which Eurostat predicts population increases until the year 2060, while for Germany, Poland, Hungary and Slovakia, significant demographic declines are predicted (European Commission, 2015d).

**Fig.7: Predictions of Demographic Evolution by Country in 2060 (millions of inhabitants).** Source: own chart based on European Commission data, 2015d






Even if this prediction is right, it would not mean that the Czech Republic is escaping the problem of a gradually aging population. The share of elderly people in the population (age 65+) is predicted to increase from the current 17.1% to 28.2% in 2060 while the working-age population (15-64) is to decline from the current 68.0% to 56.4% in 2060 (European Commission, 2015d). The strategies for effective use of human capital should reflect this trend and gradually prepare the economy for such a structural shift in demography. The educational institutions should be gradually prepared to train and retrain people in all age categories to be able to keep pace with technological developments and find suitable jobs in the market. Health-care and social-care related industries could be expected to further increase in importance, including medical equipment and pharmaceutical sectors. The key in leaping forward in economic convergence may be timely restructuring of the economy, so that it is adapted to the needs of future decades. In this perspective, these sectors are strong candidates to be winners.

# 4. Institutions

### 4.1 The Structural Issues of the State Institutions

The public sector is repeatedly reported as a bottleneck to economic growth and a glass ceiling for further economic convergence[5]. The Czech Republic unfortunately has a tradition of public administration that is rigid, too formalistic and rather cautious in regards to transparency (e.g. slow public releases of public contracts) that is essential for public control. This has been further exacerbated by the political instability and frequent changes of governments in the last decade and the fatal postponement of the coming into force of the statute for civil servants[6]. Czech legislation has been changed with unreasonable frequency. In the business sector, this causes the biggest problems for SMEs and individual self-employed persons that cannot spread costs on legal and other advisory into a large turnover. Frequently changed and weakly drafted legislation is also a hurdle for the public administration itself, as interpretation varies in different instances and in different branches of the institutions. The result is a bottleneck on development of economic activity, ranging from lower willingness of the private sector to face all this in drawing subsidies from EU funds (R. Špok et al., 2014b) to serious complications and unnecessary delays in construction in the real estate sector (Development news, 2015).

This negative situation is also characterized by the proliferation of so-called *gold-plating*, in which national implementation of EU legislation goes far beyond what is requested, and this often results in unnecessary increases in red tape and additional cost burdens on the private sector (Euractiv, 2012; Král et al.). To fight this, the state must also lead a really functioning dialogue with a broad range of representatives of the society and business spheres as soon as EU legislation is debated in Council. Czech stakeholders should also pay more attention to the European Parliament. Only in this way would it be possible to secure proper wording of clauses and exceptions in the EU

5 For instance the Digital Economy and Society Index (DESI) of the Czech Republic is relatively high in parameters of i) connectivity, ii) human capital, iii) use of the internet and iv) integration of digital technology, but the last factor v) digital public services is one of the worst in the whole EU, which significantly lowers the aggregate DESI position of the Czech Republic (European Commission, 2015e).

6 An act guaranteeing that a new government could change only the political course, but the professional administrative apparatus of ministries and of the all related state organizations would remain in place. The act finally become effective in the Czech Republic at the beginning of 2015.

legislation that are fitting to the Czech institutional framework. This would eliminate the easiest excuses for *gold-plating,* which consist of claims that the exceptions (secured in the legislative process by other states) could not be applied in the Czech institutional framework.

However, there are also some indications of positive changes in the structural issues of the state institutions. The act of status of civil servants finally came into force at the beginning of 2015. Other positive signals include assignment of impact studies for strategic decisions. The public administration assigns the preparation of impact studies that are necessary for important strategic decisions further in advance. For instance, the impact study on the Czech entry into the banking union of the EU and the recent assignment of an impact study on the impact of the Transatlantic Trade and Investment Partnership on the Czech Republic are already in the process of treaty negotiation. Improvement in communication among social partners, civil society and the business sphere on important strategic issues could be also a platform of the National Convention on EU organized by the Office of Government. Its success is however dependent on to what level the government is willing to hear the suggestions voiced at the Convention by the representatives of the private sector.

**4.2 Which Institutional Reforms Could Improve the Quality of Public Services and their Efficiency?**

The most effective public investments would be into reform of the institutional system. Not necessarily lowering the level of regulation or downgrading standards, but creating environment of *smart* regulation which would be predictable, adequately considerate to the needs of the private sector and without any unnecessary red tape.

In many cases, development in the public sector is hindered by unclear division of competencies between individual ministries. For instance various strategies in the area of the digital agenda are governed by the Ministry of Interior (eGovernment) and the Ministry of Industry and Trade (the digital economy). There is a constant call from the private sector for establishment of functioning coordination competency to one single authority which could overlook implementation of all strategies in this area and tie them with the strategies at the EU level and also at the level of Visegrad Group (Kruliš, 2015b). This is a minimum reform that could improve the way the Czech Republic implements strategies in the ICT sector. More ambitious reform could introduce an office of a *challenger*, already functioning in the United Kingdom at the Office of the Prime Minister, that would provide feedback on the work of the coordinator and put pressure on it in cases when it is not sufficiently successful or ambitious in implementation of the digital agenda strategies.

The principle of "digital by default", under which every new public service must be developed in an online version unless there are sufficient reasons to do otherwise, would help to cut down on red tape. At the same time, digital public services must be user friendly. Any new "intelligent" digital form must be firstly fully tested by its final users in beta versions and used only after all comments have been fully reflected upon.

A key to efficient public services is their long-term predictability and stability. Achievement of this is quite problematic in the Czech political culture, in which the opposition announces cancellation of fundamental reforms even before they are fully introduced by the incumbent government. This was the case, for instance, of the pension reform of the Nečas government, the cancellation of which has been already announced by the current government. A similar thing is happening now with the prepared electronic registration of invoices for tax evidence purposes. The current opposition claims that it will cancel it and even threatens to obstruct its adoption through procedural means in the parliament. The short-term political points gained over destruction and denial of reforms usually win out over real dialogue and longer-term solutions. The solution to this system that prevents long-term reforms could be: firstly to extend the dialogue about the reforms to a broader spectrum of the interested stakeholders and secondly prepare a reform (such as of the pension system or of the tax evidence tools) that would be a broadly accepted framework that intentionally allows space for parametric changes and adjustments in the future. The political agreement, and subsequently the law, could establish margins for the parametric changes so that the whole system is more predictable for its users.

## 5. Summary of Recommendations

The Czech Republic gains a lot from its position in the internal market of the EU. FDIs are a precious source of growth in the Czech Republic, helping to introduce new managerial and technological innovations to the whole economy and in contrast to Czech-owned companies invest more private money in research and development. The response to the increasing repatriation of profits by foreign owners should consist in increasing of attractiveness of the Czech Republic as a destination for new investments and reinvestments of profits earned in the country.

Due to the high regional competition for incoming FDIs, the investment incentives schemes are inevitable. The Visegrad Group platform could, however, serve as a basis for dialogue on how to develop these policies in the future. The competitiveness of the Czech Republic could be improved by other means as well. The most effective way in this sense would be to reform the institutional system and create an environment of *smart* regulation which would be predictable, adequately considerate to the needs of the private sector and free of any unnecessary red tape. Public incentives in this way would bring benefits to all, not only to the largest investments that are able to tap the investment incentive schemes.

The economic convergence of the Visegrad Group countries to the level of the EU average will still take decades. Any convergence strategy must take into consideration not only the current demographic situation but also the predicted changes, especially the most significant issue of the gradually aging population that is predicted for the whole European continent and could significantly influence both the demand side and the supply side of the economy. For this reason medical devices or pharmaceutical sectors could increase dramatically in overall economic importance. Focus on development of provision of health care and various services in social care could be important not only for our own population but could be offered as an export article.

The best strategy of development of knowledge economy in the Czech Republic is through support of clusters connected to the already existing, well-developed industrial base. Promising sectors that could provide such synergy could be the automotive, nanotechnology, biotechnology, medical devices and cyber-security in IT sectors. For instance the automotive

sector is on the verge of a great revolution that could be brought about by development of automatically driven cars, new safety technologies and eco-friendly technologies. The Czech Republic could make use of its position in the automotive industry and the related sectors of car components and support further establishment of technological centers that would be involved in development of such innovations.

While part of the funding of science and research must be reserved for core theoretical research, the significant part of the remaining science and research must be pressed (by economic means) into projects that could be utilized in practice by end users, either from the business sector or from the sector of public authorities.

As the labour market in the Czech Republic might not always be sufficient to provide the specialization needed by companies engaged in the knowledge economy sectors, it is necessary to keep an open door policy to incoming skilled professionals from abroad and further improve the quality of life that the Czech Republic can offer to foreign-language speakers. For this reason Prague and its surroundings may be the best suited place to locate the knowledge economy clusters, as it already has the most cosmopolitan character in the country any can offer the broadest services in English.

The capital in hands of Czech households is gradually increasing; however, in real purchasing power it is still smaller than it is standard in Western societies, partly also due to the currency intervention of the Czech National Bank in 2013. Without effective use of domestic capital, economic convergence is destined to be slow and the Central European "middle-income trap" scenario is threatening. The statistics constantly show that Czechs have strong saving habits and that there is a large portion of the population with savings that could be ready for small-scale investments. Bank deposits, however, remain the dominant means of how people save. As well, the ratio of client bank deposit to bank loans is 146.4%, the third highest in the EU (Ministry of Finance, 2014). This makes for a highly stable banking system with a potential for competitive environment in provision of credit by banks. It is sometimes also mentioned as the reason for the low level of IPOs at the Prague Stock Exchange, as companies have broad opportunities to finance themselves through banks.

For the sake of efficient use of domestic capital it is, however, very important to open more possibilities regarding where to invest and use the domestic capital leverage for further economic convergence. For this sake, it is essential to lower legislative barriers to small investments by households. The announced removal of regulatory licensing barriers on the installation of small private solar panels could be one way to go, even if it would still be a good investment only for a narrow portion of the population. Another example could be to review some civil law restrictions disproportionately burdening landlords renting apartments, which discourages many people from investing in real estate for rental purposes. Small investments could also be made available through modern instruments such as crowd-funding. Given the Czech situation, it could be a way to pool private money in support of technological and other innovative start-up companies and allow for a bigger share of population to participate in the development of the economy.

**References for this article are available online at: http://bit.ly/1LUqtHv.**



# Middle-Income Trap in V4 Countries? Policy Recommendations for Hungary 2015-2023

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## Introduction

Hungary's economic policy recommendations can be structured around the four strategic goals presented by Prime Minister Viktor Orbán at the German-Hungarian Chamber of Commerce on May 7th, 2015[1]. According to his interpretation, the four pillars of sustainable economic development are a competitive labour force, cheap energy, cheap capital, and innovation. In this policy recommendation paper, we summarise the most important policy recommendations of the Századvég Group in line with these four pillars of Hungarian economic policy strategy (Fig. 1).

**Fig. 1. The Effect of the Analysed Policies on the Four Pillars of Hungarian Economic Development.**
Source: Századvég Group

| | Competitive labour force | Cheap energy | Cheap capital | Innovation |
|---|---|---|---|---|
| **Macroeconomic policies** | | | | |
| Fiscal policy | x | | | x |
| Tax policy | x | | x | x |
| Monetary policy and financial intermediary system | | | x | x |
| **Microeconomic and social policies** | | | | |
| Economic development | x | x | x | x |
| IT development | x | | | x |
| Energy | | x | | x |
| Education policy | x | | | x |

Our recommendations might not be fully comprehensive. We are focusing on strategic tasks that follow the conclusions of our previous paper, *Middle-Income Trap in Visegrad Countries? The Case of Hungary* (Szotowski (red.), 2015). The new rules and goals of economic policy after 2010 are set, but the transformation of, for example, the public and higher educational systems and

1 http://www.kormany.hu/hu/a-miniszterelnok/beszedek-publikaciok-interjuk/orban-viktor-eloadasa-a-nemet-magyar-kereskedelmi-es-iparkamara-taggyulesen

the innovation system is far from over. The future of the Hungarian economy and the opportunity to escape the middle-income trap largely depend on whether efficiency enhancers take effect or their turbulence continues to burden the economy. Efficiency enhancers are here understood as instruments of the development policy, ICT development, energy policy and education policy. Due to the strategic changes in economic policy, the Hungarian economy started to show signs of growth in 2014 and tended to grow by 2-3% in the middle-run. Whether growth can be sustainable or even higher depends greatly on the quality of the most important macroeconomic policies and efficiency enhancers. Therefore we discuss in this paper the most important goals of fiscal policy – putting emphasis on tax policy – and monetary policy, including the financial intermediary system, as well as the most important efficiency enhancers. There might be a conflict of interest between certain policies, e.g. fiscal discipline and education spending. In this case, we propose a gradual realization of the related policy recommendations.

# 1. Macroeconomic policies

### 1.1 Fiscal Discipline

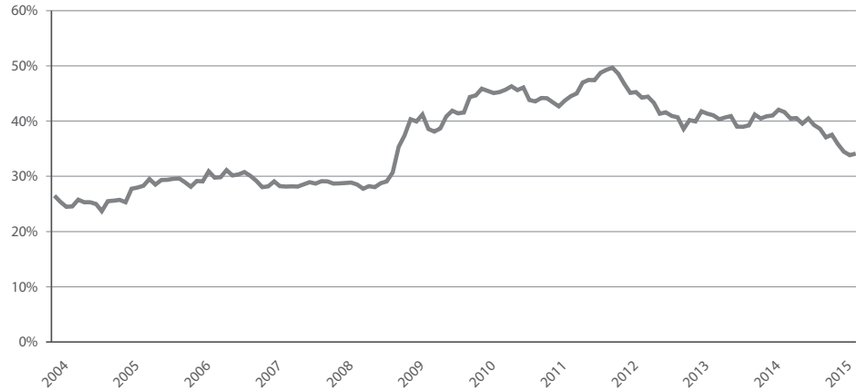
One of the most important objectives of the second and third Orbán cabinet was to stabilise the fiscal condition of the country. As a result, the European Commission removed Hungary from the excessive deficit procedure (EDP) list. The main goal linked to this is the preservation of fiscal stability: Hungary needs to retain the fiscal rules of the EU, namely the 3% deficit rule and the reduction of gross debt ratio. The third Orbán government complied with the former every year and also succeeded in reducing the government's gross debt.

The obligation of debt reduction formulated in the Fiscal Compact (the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union) will apply to Hungary beginning in 2016. Under the debt brake rule, governments with debt-to-GDP ratios exceeding 60% are required to reduce the debt at an average rate of at least 5% per year (TSCG, 2014). In addition, domestic rules also monitor the issue of debt ratio. According to the constitution, the debt rate should be reduced every year until it reaches 50% of GDP. As well, the Act CXCIV of 2011 on *Economic Stability* of Hungary records a debt formula which limits the nominal growth rate of debt. From our perspective, this formula is not appropriate; it does not suit the requirements of the contemporary economic conditions as it is too rigorous – its anticyclical character predominates.

The debt formula needs to be reformed rather than abolished, so that it can take economic fluctuations (recessions and upswings) more into account. It is obvious that the debt rate should be reduced, and an efficiently functioning regulation could help further enhance the credibility of the fiscal policy. **We recommend that the Hungarian government increase the consistency and credibility of its fiscal policy by reshaping the current debt formula.**

In addition to the government's determination regarding debt reduction, another success is noteworthy: the cut in the proportion of government debt denominated in foreign currency. These efforts should be continued (Fig.2). We advocate continuing to reduce the foreign currency exposure of debt and to increase the share of non-financial residents as debt-holders. As a result, debt-financing would be less subject to external shocks. The drastic devaluation of domestic currency goes hand in hand with the rise in debt service, meaning an additional burden on the budget. Households are better creditors since they would presumably not flee from their domestic investments (because of their economic interests) and consequently ensure a more predictable environment for the budget.

**Fig. 2. Government Debt Denominated in Foreign Currency (percentage).** Source: Central Bank of Hungary (MNB) [access on: 25.05.15].




### 1.2 Tax Policy

The tax policy in Hungary has functioned under very clear guidelines since 2010. On the one hand, it favours families – this can be seen through the introduction of family tax credit and its additional expansion. On the other hand, the "more payment for more work" principle is also present in the single-rate income tax system. The government organised the burden-sharing according to a tax policy principle which was also recommended and stressed by the OECD: reduction of tax burden on labour along with a rise in consumption taxes (with the exception of some staple foods). Besides ensuring a proportional sharing of the public burden, it imposes special taxes on certain industries.

From this perspective, we propose a further reduction of taxes on labour. The implementation process can be subject to discussion and needs further policy evaluation. Beyond the reduction of the tax burden on labour – as long as the government wants to achieve full employment – the reduction of burdens on employers will be crucial.

In spite of the fact that these reductions partly appear in the job protection action plan (which promotes the employment of career entrants, women with young children and people above age 55 with tax credits), it would be important to widen the coverage and to implement general reduction in social security contributions – but only along with the assurance of a balanced social security scheme[2]. This recommendation is even more important in that, after a certain period of crisis of the labour supply, the labour demand will form a constraint to

2 In the current paradigm and with the actual parameters, the balance of social security sub-system is ensured untill 2030, thanks to the reforms after 2010.

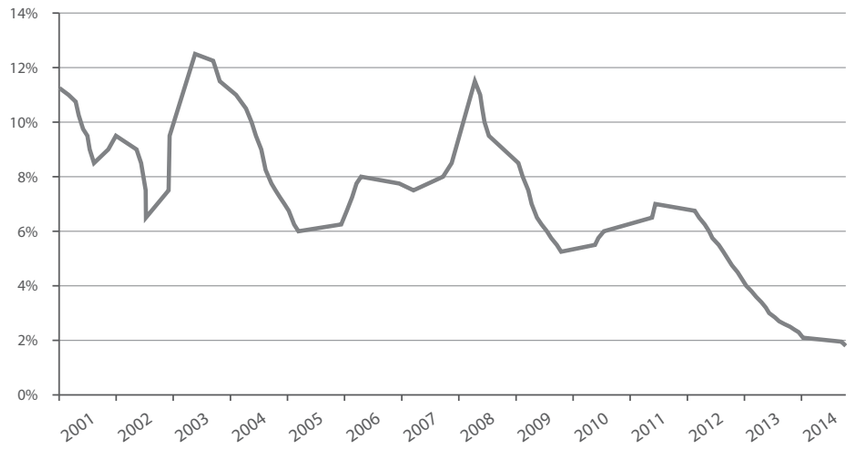
reaching full-employment. The easement of job creation, namely the reduction of employer burden, could contribute to achieving this aim. Consequently, as tax rates decrease to an adequate degree on the employee side but employment still needs to be expanded, it would be similarly worth cutting the burden on employers.

The government does not retain special taxes in the long term. A clear sign of this purpose is the fact that the budget for 2016 lightens the constraints on banks, reducing sectoral special taxes and replacing the tax base on the 2014 balance sheets. All these reforms could boost lending, which would promote growth in the long run. In the case of t*axes* on utility systems, the government is ready to give up part of the tax revenue in exchange for new investments and considerable modernization in the sector. We consider the gradual abolition of special taxes to be important – but the need for this has already been identified by the government as well (Fig. 2). This should be implemented so as to maintain the balance of budgets.

### 1.3 Monetary Policy and Financial Intermediary System

The Hungarian central bank base rate has been unreasonably high for a long period, which disadvantaged the growth potential of the economy and made the financing of gross state debt more expensive. Thanks to the country's better perceptions of risk and the global quantitative easing, the central bank reduced the benchmark interest rate to an all-time low level (Fig. 3). This can contribute to the stimulation of the economy.

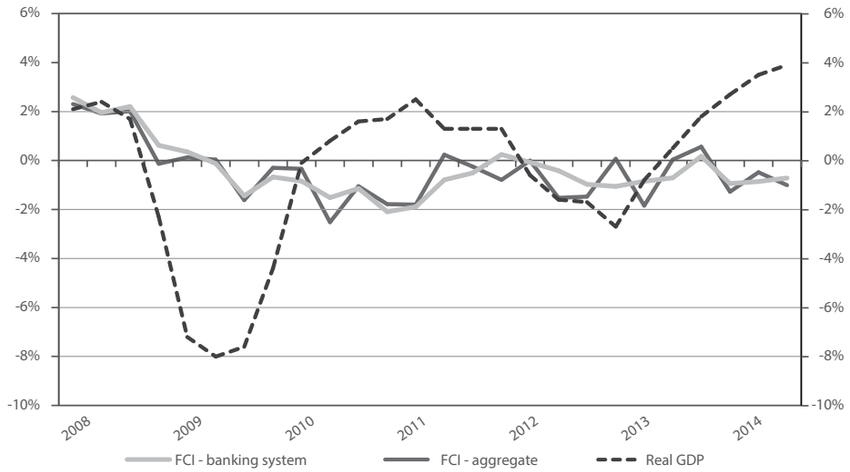
**Fig. 3. Base Rate of the Central Bank of Hungary.** Source: MNB [access on: 25.05.15].




The improving judgement of Hungary among investors contributes to the decrease in the interest burden on the country, which ensures additional resources for the budget as a final result. The continuous reduction of the gross state debt is a sine qua non of the improvement of the country's investor evaluation and credit rating. The reduction of foreign-currency exposure of debt and the mitigation of dependency on major investors play an important part in it. In the case of the former, the government managed to achieve considerable results; the foreign currency ratio of debt largely decreased, and as a result the dependency of Hungary to external shocks (caused by exchange rate volatilities) lessened. The citizens have a growing role in financing of debt, allowing for a more advanced calculability. **We find it important to continue efforts in order to curtail the stock of debt nominated in foreign currency (not only state but also private sector debt) and to encourage an increase of the share of domestic resources instead.**

The improvement of the financial intermediary system is also essential for economic growth. The first step in this direction is the termination of special bank-sector taxes. This could increase risk-taking opportunities and moderate credit supply constraints. At the same time, we need to question what to expect on the demand side. In order to encourage private sector credit demand, trust in the banking sector must be restored. The fair banking measures of the central bank came into existence with this aim. Additionally, the central bank's new regulations restrain excessive indebtedness – this could prevent Hungary from falling into a new financial crisis or at least decrease its risk of emergence. Moreover, the central bank introduced the Credit Growth Programme (NHP) for a temporary phase in order to restart lending. **Since there is still no active lending in absence of this programme, additional incentives would be needed in order to prevent a moderate lending environment from emerging after the NHP.**

**Fig. 4. Financial Conditions Index (FCI) and Annual Real GDP Growth.** Source: MNB [access on: 25.05.15].



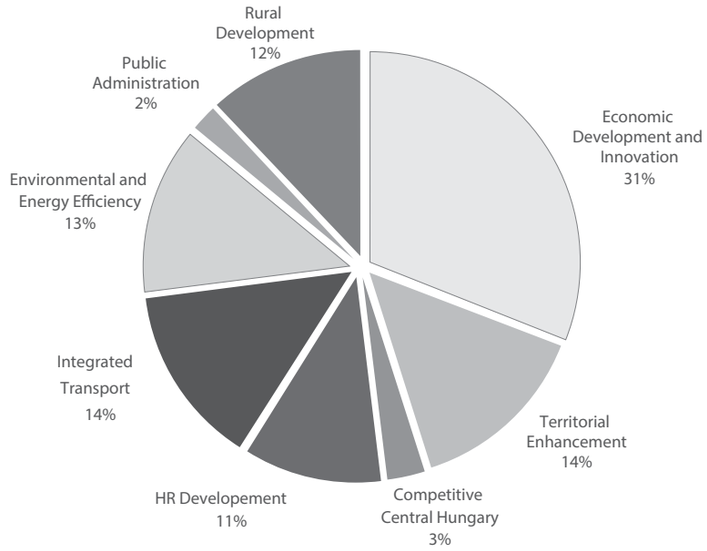

*Note: The annual increase in the FCI shows the contribution of the financial intermediary system (banking sector) to the annual growth rate of real GDP. While the banking sector sub-index only comprises the variables related to lending, the 'total' index contains monetary conditions, i.e. the interbank rate and the exchange rate as well (MNB).*

## 2. Microeconomic and Social Policies

### 2.1 Development Policy

Being an EU member country, the most important tools of economic development of Hungary are provided by the EU development funds, whose coordinated utilization can assure the conditions for the realization of the priority targets of employment, competitiveness and energy efficiency. Although at the beginning of the 2007-2013 financial perspective Hungary benefited from a 26.2 billion EUR budget, in the 2014-2020 period, Hungary can implement enhancements only with funds amounting to 21.85 billion EUR. Because of the reduced seven-year financial framework, the Hungarian government can manage about 15% less resources than in the previous period. This decline represents a loss in other categories than economic development. The prominent status of economic development is illustrated by the fact that one-third of the entire EU funds was attached to the Economic Development and Innovation Operational Programme (EDIOP), while numerous additional economic projects were financed by the regional development programs (Territorial Enhancement Operative Program – TOP, Competitive Central Hungary Operational Program – CCHOP) and the Rural Development Operational Program (RP). The following chart duly illustrates that the above-mentioned four-economic-policy related operational program consumes 60% of the entire seven-year financial resources.

**Fig. 5. Allocation of Resources among Operative Programs (2014-2020).** Source: Own chart based on the indicative tables of Operational Programmes 2014-2020, Ministry of National Development of Hungary [access on: 25.05.16.].




*Note: Rural Development and Public Administration and Development Operational Programs are not yet accepted by the European Commission.*

The classification of employment, energy and rural development policy under the priorities of economic policy represents the governmental approach, which considers that economic development does not only mean the sporadic improvement of enterprises and their operational environment, but also involves a broader enhancement of social and environmental supportive conditions. Thus, in the 2014-2020 period, closer coordination of governmental economic policy and development policy can bring about a decisive change. In order to foster this process, the EU programme managing "Directive Authorities" were returned to the ministries, creating an institutional coordination of governmental policy-making and implementation of development policy. As a result, the planning and execution of economic priorities became easier and more flexible.

In the framework of strategic economic priorities, strong focus has been dedicated to the support of domestic SMEs, the extension of business research-development-innovation (R&D) resources, to the inspiration of energy-saving and employment. With this multiannual effort aimed at strengthening SMEs, government could enhance the level of employment at least in the medium term. Moreover, the reindustrialization policy of the government could also benefit from the EU funds, so that a sector-based focus could emerge in support of enterprises and in certain prioritized R&D branches, in line with the EU "S3" Strategy for regional specialization.

However, there are serious challenges to the utilization of EU funds supporting economic development, which must be solved by finding adequate responses in order to assure the realization of priorities. In the field of SMEs, the most crucial problem is that only 40-50,000 out of 700,000 SMEs operating in Hungary were able to take part in EU calls for projects. However, there are numerous "sleeping", "invoice providing", "constraint" or "income-supplementing" firms among micro-enterprises. Besides SMEs, there are better operating enterprises with domestic capital, whose support can enhance a stable increase in employment. To this end, government should improve the access of SMEs to EU funding and use a demand-based analysis to determine why these companies shy away from these tenders.

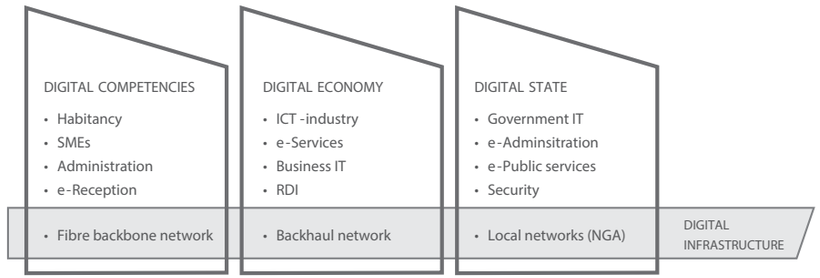
Although there is a public debate about the ways to strengthen domestic SMEs, the planning documents focusing on the utilization of EU funds lack numerous basic problem-solving solutions. First of all, there is no visible financial tool that could help the liquidity problem of SMEs in case of payment delays or a sudden growth phase. Second, the domestic SME sector is usually weak in making business plans and has very limited knowledge about the conditions of entering international markets. For these problems, the creation of a professional mentor system could provide an adequate solution, but there are no signs of this or any other initiatives. Third, if we cannot mitigate the employment-related social contribution burdens of SMEs with domestic budgetary or EU resources, neither can we expect a resounding impact from the economic development policy based on EU financial resources. Furthermore, domestic SMEs typically cannot afford the entire payroll of their employees, thus the fear of a stricter financial controlling procedure can explain their dropout from EU tenders. Finally, brainstorming for the designation of the focuses of economic development is not sufficient in the long term: it is necessary to measure and quantify the sectorial relations, supply patterns, sectorial effects

of EU developments and the comparative and competitive advantages towards international trends, so that our country would be able to execute well-targeted industrial development in the coming decades.

### 2.2 ICT Development

In the field of information and communication development, Hungary does not belong to the leading EU countries, although it is making efforts to make up lost ground and to reach the policy goals of Digital Agenda for Europe (DAE, 2010). In order to catch up and exploit the advantages of digital technology, the government determined the policy lines for the 2014-2020 EU development period in the National Info-communication Strategy (NIS), then created the document entitled *Green Book on the Development Trends of Info-communication Sector* (Green Book). This precisely identifies the round of duties connected with regulation, development and public policy falling under the Hungarian and EU policy goals. The strategic documents classify four major topics in the field of ICT and also name a horizontal group besides. The structure of the pillars is the following:

**Fig. 6. Development Structure of the Pillars of NIS and Green Book.** Source: Own chart based on Green Book data, 2014 [access on: 25.05.15].




In the field of digital infrastructure, one of the main development areas determined by the government is (in accordance with the goals of DAE) the development of Next Generation Access Networks (NGA). Anticipating the 2020 deadline, Hungary aims to build a network that covers 100% of households by 2018. The goal is to accelerate market-based infrastructure developments, and to materialize non-commercial projects with adequate support everywhere, in order to have no NGA-free area in Hungary. To reach 100% coverage by 2018, even the development of backhaul networks is necessary in some areas – the strategic documents describe these particulars as well. Regarding infrastructure, highlighted initiatives aimed at expanding the coverage of public institutions (healthcare, educational, local and community organisations) and at consolidation and development of governmental networks. The good news is that, according to 2013 data, Hungary is the closest country to full NGA coverage with its 75.7% value among the examined countries (Eurostat, 2013).

The execution of development in the field of digital competencies is planned on three levels by the strategy of the government (residential, corporate and administrative). It aims to reduce the social digital gap and increase not only the use of e-administration and e-healthcare services but also the share of internet users by developing the info-communication skills of the public. The strategy highlights the expansion of public places with internet connection. Nevertheless, it can be considered as a great impediment that the V4 countries are near- or below-average both in the share of internet users and in the share with basic command of digital skills. In the case of development of competencies, it is worth mentioning that the reason for the lag is not the absence of tools and infrastructure but motivation – so the way of reducing digital divisions lies in education, knowledge dissemination and raising awareness.

In the course of developing domestic SMEs, the intensification of online presence is an important objective of the governmental efforts, for which motivation of corporate leaders and the raising awareness of possibilities of ICT is necessary. In the public administration, skills development is needed for public servants, healthcare and social workers, and teachers. In particular practical e-administration knowledge, and for teachers the improvement of digital skills as well as the enhancement of ICT use for educational purposes are priorities. In achieving this objective, education reforms play an important role: the role of ICT needs to be redefined and the practical possibilities of ICT use should be integrated into higher educational training. As a result of this, the number of ICT professionals could grow, and the harmonisation of higher education with market demands, and cooperation with corporations could be worked out. At the same time, an emphasis should be put on increasing the involvement of girls in the earlier stages of education and on strengthening their orientation towards ICT careers.

The plans of the government (within the pillar of the digital economy) in order to support ICT corporations include the incubation of ICT start-ups, the initiation of early stage financing opportunities, assistance for innovative Hungarian start-ups in making their ideas marketable and the intensification of international presence. A further significant aim is the internal IT development of SMEs with the spreading of ideas like e-commerce, e-billing, e-signature and *cloud* computing solutions. In this connection, the government regards the creation of adequate regulation environment as its main task – which reduces the mistrust of market operators.

Within the pillar of the digital state, the aim is to build up the systems of central and territorial bodies both in the back office and services sectors. Digitalization, development and linking of state registers, reduction of paper use, the rise of the share of e-administration services and the creation of inter-operability belong to the priorities of the government.

The e-Reception pillar has set as its goals the digital catch-up of socially disadvantaged groups, social awareness-raising and the formation of digital solidarity. As an effective tool, it supports the establishment of intelligent cities. Developing intelligent city infrastructure can help the introduction of digitally underdeveloped groups into the benefits of ICT. In the field of Rights Data Integration (RDI), the rise of ICT projects, the enhancement of corporate participation and the incentivizing of universities and market participants to cooperate is among the government's plans. Last but not least, another element of the strategic documents is computer security. In this area, experts encourage the introduction of safety quality tools and services in public administration and the conversion to the all-round SLA system so as to maximize security. The plans include prevention training against internet abuses in order to increase the safety of children – teachers and parents should be involved in these programmes.

Part of the implementation budget of the Hungarian plans is under design, but according to the preliminary estimations the costs are between 540 and 560 billion forints (NIS, 2014). The largest sum of money, 200 billion forints, goes to the digital government pillar. As a result of its nature, the pillar of digital infrastructure has a large budget as well, this being 150 billion forints. The plan for the financial background of the digital economy pillar is far from complete; there is no ready budget for many tasks yet, which is why the current budget of less than 95 billion forints cannot be viewed as the final amount. Among the four pillars, the budget for development of digital competencies is the smallest, yet it still reaches nearly 50 billion forints. The financial support for the horizontal factors (e-Reception, RDI and computer security) is not fully clarified yet; the plans show only small amounts: 31 billion to e-Reception, 9.2 billion for the RDI pillar, and 120 million forints for the security tasks.

**2.3 Energy Policy**

The Hungarian energy development concept aims to find solutions for three sectorial challenges that cause serious problems for the Hungarian energy sector in terms of competitiveness and energy security.

The first group of provisions intend to decrease the electricity prices of non-residential users, in order to increase the competitiveness of relevant companies and improve the investment climate. The bulk of the price reduction could be reached by the limitation of wholesale energy prices. At present, despite the extension of interconnector capacities and the merger of the Czech-Slovak-Hungarian energy stock exchange, Hungarian wholesale energy prices still remained high in regional comparison. Hence, it must examine the possibility of unlocking additional transmission capacities at interconnector stations.

For non-residential users, higher than EU average energy costs and transformation of the production framework (which supplies the heating sector) are a huge competitive disadvantage. The reduction or the abolition of these kinds of taxes and fares could be realized by investments into energy savings in buildings using district heating, modernizing the heating sector, and assuring tax benefits for users generating renewable energy. Moreover, it may be practical to provide tax advantages and international tender resources for the utility companies, so that they can realize network modernization. For non-residential users, it also raises considerable obstacles, in that through the fees built into energy prices they have to cover the costs of renewable electricity generation as well. In this situation, with a fast implementation of EU legal acts fostering the creation of a supportive system for green energy generation, the government could reduce the user burdens. In addition, further cost-reduction could be achieved with the utilization of the advantages of renewable heat generation, because these investments are financed by EU funds. Therefore, the government could avoid increased electricity prices if it fulfils its commitments regarding renewable energy production by extending renewable heat generation rather than renewable electricity generation. Finally, the state could also promote the improvement of the companies' competitiveness through inspiration investments. To this end, it is highly recommended to introduce a system of voluntary energy efficiency agreements, whereby companies make commitments to energy savings and the state provides them with tax refunds for the necessary energy efficiency investments.

The second section of energy proposals is intended to mitigate the risks of domestic gas transit and changes in global energy prices. For this, the most obvious solution is the reduction of natural gas usage, which could be achieved with extended energy efficiency programs in the building sector, and the reconstitution of heat generation supported by renewable and waste-based energy. The National Strategy for Building Energy expects a 49 PJ primary energy saving by 2020, whereby 700,000 flats and 2,400 public buildings would be restored, which means a considerable investment of 1,800-1,900 billion forints. At the same time, the implementation of building energy projects requires multiple financial incentives due to the long payback periods, therefore operational programs and revenues from $CO_2$ sales should cover these costs. In addition, with the district heating development plans and the combination of the non-refundable supports with alternative financial tools, the effectiveness of resource utilization and its impacts could be increased by 20-40%. The needed investments will be realized with the financial support of the EU-provided Environmental and Energy Efficiency Operational Program.

In order to reduce the risks, it is crucial to encourage again the exploitation of domestic natural gas. Boosting exploitation of non-conventional energy resources could offer a practical solution for this challenge. Compared to other countries, Hungary has high taxes on non-conventional exploitation, because the corporate tax and the so called "Robin Hood" tax take a significant part of the profit. Given these conditions, the spread of more expensive non-conventional technology cannot be expected, thus the reduction of taxes on non-conventional natural gas exploitation is crucial to increasing domestic natural gas extraction. Recently the reduction of the mining contribution to 2% has been passed, but the income tax of both conventional and non-conventional energy providers is 31%, which causes loss-making investments in this field. Instead of this, governments should introduce a special income tax system with progressive tax rates as the Polish government once did; if the revenue of a mining company exceeds twice its expenditure, then the company is obliged to pay a 25% tax, while in any other case this amount is 12.5%. When making a loss, there should be no tax paid.

Along with a properly encouraging and predictable regulatory environment for 2020-2025, the extraction of approximately 3-4 $m^3$ of non-conventional natural gas can be assured on a yearly basis, covering 35-45% of the annual domestic consumption, which would be sustainable over 30 years. This is very important, because the domestic conventional resources are dwindling; therefore, without boosting non-conventional exploitation domestic natural gas extraction will further decline from its current 20% share. Moreover, taking into account the above-mentioned tax advantages, enhancing non-conventional natural gas extraction could produce 5-7 billion forints revenue (at current market prices) from the mining contribution, with an annual amount of 3-4 billion $m^3$ extracted natural gas.

Along with the rising domestic extraction, the realization of transit infrastructure investments serves the same goal with the diversification of supply routes and resources. In this case, the fundamental interest of Hungary is the building of natural gas pipelines transporting natural gas from the "transit country" Turkey to Hungary, and the construction of the Croatian and Polish LNG terminals at Krk and Świnoujście, providing Hungary with access to LNG. It is also in the interest of Hungary that the new pipeline network does not serve to maintain the monopolistic position of Russia. For this reason, it is important to assure the technical, legal, and

regulatory framework so that the recently discovered 1000 $m^3$ natural gas field in the Levant – between Cyprus, Israel and Lebanon – could become accessible, and transportable through transit pipelines.

Finally, the third part of the energy development concept concerns proposals linked to expand the nuclear capacities of Hungary in order to maintain a share of the domestic electricity production. Regarding the fact that in the early 2030s the old reactor, with a capacity of 2000 MW, will be shut down, a responsible government must assure for its citizens a safe and affordable energy supply over the long term. Therefore, in order to maintain the sustainability of long- term electricity production, the Hungarian government decided to build two 1200 MW power plants which will be operational around 2025-2026.

If Hungary had not opted for the long- term maintenance of nuclear energy generation, the response to the long-term electricity demand would have been assured by the construction of coal and gas firing power plants, the expansion of renewable electricity generation, or the extension of electricity imports. However, the raising prices of $CO_2$ quotas can increase the generation costs of power plants, whose environmental effects are still significant. The utilization of renewable resources ensures clean electricity generation, but its support raises the consumer prices, and because of its weather dependency, the growing share of renewable energy generation requires greater regulation of power plant capacities. Natural gas fired power plants are not viable among the current market conditions, and there is still no sign in Europe that they will return to a competitive position in the near future. In addition, with the construction of natural gas power plants energy dependency would increase further, and besides the supply risks, the external exposure of energy prices would rise as well. Although the price of imported electricity and its infrastructural costs are low, if the lost generation capacities are not replaced in the upcoming years and if imports rise further, it would make Hungary more exposed and dependent.

If we examine the alternatives of nuclear power plant expansion, it is clear that under the current market conditions, and with the information at its disposal, the Hungarian government made the right decision when it committed itself to the expansion of the PAKS nuclear power plant and the maintenance of nuclear energy generation.

### 2.4 Health Policy

In the healthcare sector, several development points appear. Thus the situation of the workers, the stopping of debt reproduction and the reform of the healthcare system could be the main three strains of healthcare renewal. Besides the issue of healthcare workers**,** three other main sources of problems were identified.

First of all, **the wage situation of healthcare workers** is crucial. There were wage rises only in 2012 and 2013, but in 2014 there were no changes to wages, which remain low.

**Fig. 7. Remuneration of Hospital Nurses, Ratio to Average Wage, 2011.** Source: OECD Health at a Glance 2013. [access on: 25.05.15].

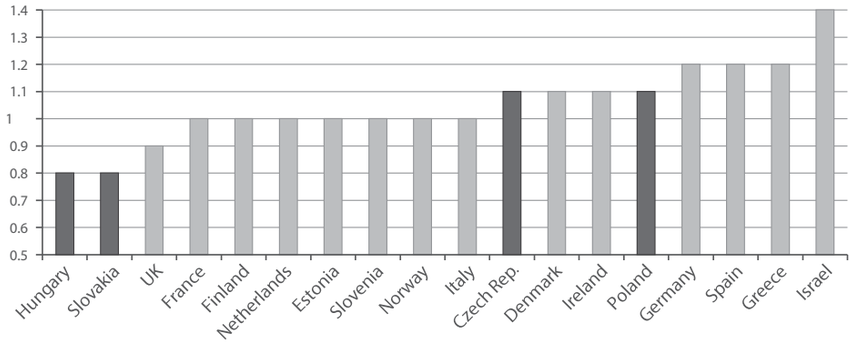
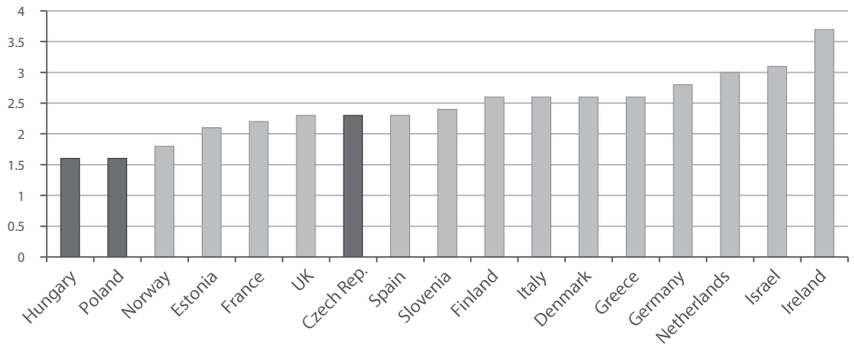



**Fig. 8. Remuneration of Doctors, Ratio to Average Wage, 2011.** Source: OECD Health at a Glance 2013. [access on: 25.05.15].




*Note: In 2012 and 2013, there was a wage rise as it is mentioned above, but the actual health care relative wages are still low.*

Second, there have not been any substantive changes in this sector for years; therefore the Hungarian healthcare system faces serious systemic challenges and burdens. Third, as a result, many healthcare workers have left the country or the profession, and both patient number per worker and overtime rates are too high. Replacement of the missing workers is not simple, taking into account the required expertise, the unattractive career-path and the wages, thus a very intense workload has emerged in the healthcare working conditions. Fourth, regarding the working environment, the condition of hospitals and consulting rooms covered by universal health insurance fund is worsening, and the workers have to adapt to it. Consequently, it is much harder or probably impossible to provide the same and equal quality of healthcare services to patients with deteriorating medical equipment and hospitals. Keeping these facts

in mind, in order to improve the working conditions and the financial background of health-care workers, a rise in wages cannot be postponed – in the case of nurses a 100% rise is needed as well as the introduction of the promised career-model.

**Stopping debt reproduction** is the second main source of the innermost systemic healthcare problems. At present, the fees and real costs in the system differ largely (on the one hand these have not been corrected by inflation for 10-15 years, on the other hand the improvement of technology and the use of more expensive tools have not been taken into account either). The techniques applied in the financing should be reviewed, which is at least a year-long process. In order to stop debt-reproduction, an immediate rise in the basic fees should be proposed. Since the efficiency improvement from the reorganization will bring results only in the medium term, the reduction of expenditures cannot be planned until that time. The financial resources that were reserved in 2015 with the aim of debt consolidation are only enough for the mitigation of suppliers' losses.

Finally, the third fundamental issue is the entire **reorganization of the healthcare system**, which cannot be postponed any longer, at least partly. In the case of the health-care system, both the financing system and the structure need re-examination and reconstruction. We have already mentioned the problem concerning to the financial system – we presumably came to the conclusion that more financial resources would be needed, so this could be ensured only in the case of a proper budget background.

With the improvement of technology, the length of hospital stay has gradually decreased. As an international tendency, the number of hospital beds in active care are decreasing, as opposed to chronic care, which is characterized by an increasing trend (considering the ageing society's demand for nursing). The reduction of the number of beds is inevitable to ensure the efficient and economic working of the health-care system. This will only bring its expected results (reduction in expenditures) if the fix costs become reducible, which means that certain hospitals could be closed down. Politically speaking, there is very little chance for this solution, since the idea is unpopular among voters. Meanwhile, the emigration of healthcare workers also represents a burden on the current healthcare system; the operation of a smaller system could temporary handle this challenge as well. During the reorganisation, the interests of the patients should be taken into account, since home-care is not deeply rooted in Hungary and the resources for it are also more scarce than abroad.

### 2.5 Education Policy

One of the greatest challenges of the Hungarian public education is the emerging problem of disadvantaged students' education. In this regard, we can make two statements. First, in Hungary the social background of students can have primary influence on learning performance, as has been proven by OECD PISA statistics. According to PISA findings (OECD, PISA 2012), in 2012 the family's socio-economic background explains Hungarian students below-average performance in 23%, which considerably exceeds the OECD average of 15%. Secondly, the homogeneity of Hungarian schools regarding the composition of the children's social background is excessively high in international comparison as well. In case of countries achieving excellent results at PISA tests, disadvantaged children participate to a greater share in socially mixed type schools. Within the OECD, the share of these mixed type schools is 42.5% ; however, this ratio amounts only to 25% in Hungary (OECD, PISA 2010), which means that our country falls within the lowest third of this ranking.

The segregated schools possess more inadequate material conditions and a less effective educational environment than normal schools. According to OECD statistics, disadvantaged Hungarian students achieved a 23-points lower performance than the required level, while their performance in normal mixed type schools exceeds the required level by 26 points. Because of the lower performance of students, it is important to focus on the role of the inadequate learning environment which poses serious challenges not only for socially disadvantaged students but for normal students as well.

In addition, the PISA test also highlights that the most significant distinction between the best and the worst performers is the difference of time spent at learning. Regarding OECD findings, the outstanding performers spent 1 hour 45 minutes more time at learning than the average. Therefore, it has an essential role whether teachers spend more time with the realignment disadvantaged students within mentoring programs or obligatory after-school sessions. But in order to realize that, education policy needs mentor teachers who are able to carry out after-school education with disadvantaged students.

According to available data (KSH, 2013), in 2013 there were 747,746 students in Hungarian schools, among which there were 220,479 disadvantaged students, which represents approximately 30% of the total number of students. Furthermore, disadvantaged students are heavily concentrated in terms of geography, especially in the eastern counties where the ratio of disadvantaged students can reach up to 40%. In these parts of the country, a greater representation of Roma families can be observed as well, because of their social background; this situation results in more than 300 schools and 5,000 classrooms in the country where there is a strong Roma majority, which further strengthens the tendencies of ethnic segregation.

At the same time, education policy can provide potential for social integration and more competitive human capital, which cannot be achieved by other kinds of development policy measures. However, to this end, it is crucial to transform the framework of the Hungarian public education. In order to realize an effective reform, the government should implement some of the international best practices of successfully integrating education systems.

One of the international best practices proposed to implement is the *"co-teaching"* model (also known as the *"one teach, one support"* model) which ensures – such as in the United Kingdom or Finland – adequate conditions for the realignment of disadvantaged students. This practice guarantees support which is currently unavailable to poor students. The essence of this method is that the development and skill-improvement of a disadvantaged student is provided in common sessions with other students. Unlike conventional methods, the "one teach, one support" model involves two personnel members, with one teacher and one mentor teacher with special vocational abilities, engaged in the education of the same class. Mentors provide professional assistance mainly in timetable scheduling, individual improvement of students and the designation of the curriculum. In this model, it is important that, besides ordinary courses, teachers spend additional time during after-school sessions with the

students. Moreover, in order to achieve the best results, teachers and schools make efforts to support families, thus creating more flexible cooperation with the parents. The expected costs of the implementation of the co-teaching model would take approximately 25 billion forints, regarding the increasing number of courses and mentor teachers and the additional costs of contribution to acknowledge difficult working conditions and special education.

Besides the co-teaching model, there are also numerous international examples that should be implemented in our education system. In the case of the Singaporean education policy, it has been proved that the advantages of integrative education can be maintained with the simultaneous application of the elements of segregation and integration. From the 5th school year, Singaporean students are divided into different streams according to their performances, where they can get an education suitable to their capabilities, while attending common courses in the meantime as well. Of course mobility between streams is guaranteed, thus there is possibility for advancement also for those students whose capability and learning skills evolve later than usual. In addition, it is also the achievement of the Singaporean education policy, that the government maintains a well-developed early warning system that provides information about disadvantaged students and their families for the schools. Thanks to this system, social problems could be avoided more efficiently and the cooperation of schools and parents can be extended. The partial implementation of the Singaporean example can be fostered by the above-mentioned co-teaching practice, because it ensures the educational realignment of disadvantaged students without the creation of different streams. Furthermore, the early warning system could provide meaningful assistance, especially in the rural areas with small villages and farms in Eastern Hungary, thus ensuring the possibility of more efficient territorial realignment.

Regarding international best practices, we must also mention the example of the Netherlands. In the 1990s, the social disintegration became more critical than ever, therefore the Dutch education policy created a proactive support system for disadvantaged families in order to ensure the equal access of public education for every student, thus fostering social integration. This supportive system was successful and the social integration was reset once again, hence the family supports are still in effect. According to financial data (EU, 2015), the Netherlands contributed approximately 100 million EUR to the educational support of disadvantaged students in 2015. Regarding this example, the Hungarian educational policy has to find a better coherence between realignment targets of education and the family support system in order to maintain an effective education system in terms of social inclusion and competitiveness.

Finally, it is essential to mention the example of Finland, which deserves special attention from the perspective of co-teaching method, as the Finnish model became famous for its high teaching quality and student-welfare. Among the numerous positive characteristics of the Finnish educational system, the obligatory after-school education for all students is the most important in this case. In Finnish schools, there is relatively less homework, thus the teachers have enough time at their disposal to be engaged with students during informal afternoon day-care occasions. This practice seems to be very useful in the perspective of personal skills improvement and the realignment of lower performing students, which is proven by the results of Finnish students on PISA tests. Although it may vary from the Finnish example, the Hungarian implementation of the co-teaching practice can also assure an excellent framework for the effective planning and utilization of after-school education, but only provided that the government employs highly qualified teachers and mentor teachers.

**Summarizing table**

| | |
|---|---|
| **Macroeconomic Policies & Targets** | |
| Fiscal policy | Reform the Hungarian debt formula<br>Reduce the *foreign* currency exposure of debt |
| Tax policy | Cut the burden on employers<br>Implement general reduction in social security contributions<br>Gradual abolition of special taxes |
| Monetary policy and financial intermediary system | Reduction of the gross state debt<br>Curtail the stock of debt nominated in foreign currency<br>Additional incentives in order to facilitate e-lending |
| **Microeconomic and social policies & Targets** | |
| Development policy | Improve market access for SMEs<br>Supportive mentor system<br>Reduce financial burdens of SMEs<br>Proper utilization of EU funds |
| ICT | Reduce the digital divide in society<br>Integration of practical ICT capacities into higher education<br>Build an NGA network covering 100% of households by 2018<br>Increase the use of e-administration, e-healthcare services, and the share of internet users<br>Expand the number of public places with internet connection<br>Support ICT corporations (early stage financing opportunities, assistance in making SMEs' ideas marketable, intensification of international presence) |
| Energy | Decrease electricity prices of non-residential users<br>Reduce energy taxes<br>Tax benefits for network modernization and renewable energy generation<br>Energy savings in the building sector<br>Voluntary energy efficiency agreements<br>Support the exploitation of non-conventional energy sources<br>Execution of the current nuclear development program<br>Geographical diversification of energy (gas, electricity) supply |
| Healthcare | Improve the working conditions of healthcare workers and raise their wages<br>Stop debt reproduction<br>Reorganize finances and institutional system<br>Operative rationalization |
| Education | Focus on social integration and realignment<br>Work towards more equal performances among students and regions<br>Implementation of the "co-teaching" practice<br>Adaptation of best practices: early warning system, targeted family support system, student welfare, informal after-school skills improvement, and stronger cooperation with parents<br>Strengthen practical vocational education on secondary, tertiary and adult education in order to increase activity |

**References for this article are available online at: http://bit.ly/1LUqtHv.**

# Is the Middle-Income Trap a Real Risk for Poland?

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Poland is often held up as an example of a successful process of economic transition. In fact, gross domestic product (GDP) has grown rapidly over the last 25 years and influenced changes in other macroeconomic indicators like income and general labour market conditions. In the post crisis period, the Polish economy was one of the fastest growing in the European Union. However, this was not caused by extraordinary effects of reform but by a significant decline of most European economies. In other words, our economy registered only relative growth in comparison to its competitors in the EU.

A key to understanding the real condition of the Polish growth is the composition of the GDP. During a period of rapid development, from the dotcom bubble to the beginning of the global financial crisis, entering the European Union the structure of Polish growth was very diversified. Private and public investments were almost equal, and household spending increased significantly as well. Turbulences in the last five years have changed this proportion: our growth is driven by household consumption and by public spending, especially co-financed by European Funds, resulting in accumulation of public debt. Private investments are shrinking and are affected by the general market uncertainty.

Persistence of this trend creates a risk of permanent decrease of GDP growth due to slower investment growth and inefficient public spending, which is even more reduced by debt-to-GDP ratio limits. The middle-income trap is a risk for Poland.

**Table 1. Composition of the Polish GDP. Source: Central Statistical Office of Poland**

| GDP component | 2000-2008 | 2008-2013 | 2000-2013 |
|---|---|---|---|
| **Domestic demand** | 137.4 | 107.1 | 147.2 |
| **Private spending** | 134.5 | 110.2 | 148.2 |
| **Public spending** | 139.9 | 107.8 | 150.8 |
| **Gross capital formation** | 144.8 | 98.4 | 142.5 |
| **Investments** | 141.8 | 104.9 | 148.7 |

## Role of Capital in Economic Development

According to general micro- and macroeconomic assumptions, time horizons should be considered as short, medium and long term. The first two horizons are used to describe an economy in short and medium equilibrium accordingly. Economic development is therefore part of a long-term analysis, where all factors are variables.

Theoretically, economic development (the output) is an aggregate production, function of capital (K) and employment (N), that might be specified as follows:

$$Y = f(K, N)$$

Economically speaking, capital refers to a sum of assets belonging to companies (machinery, know-how, intellectual property, funds), while employment is related to the number of people employed in the economy. This is obviously a simplification used for a number of reasons. As a matter of fact, capital components are involved in the production process to varying degrees and highly educated employees provide a more efficient output than labourers. Moreover, an extremely important third factor in economic development is technology, although it is not taken in account in the above-mentioned formula. In other words, it reflects the ways and techniques by which labour is transformed into final products.

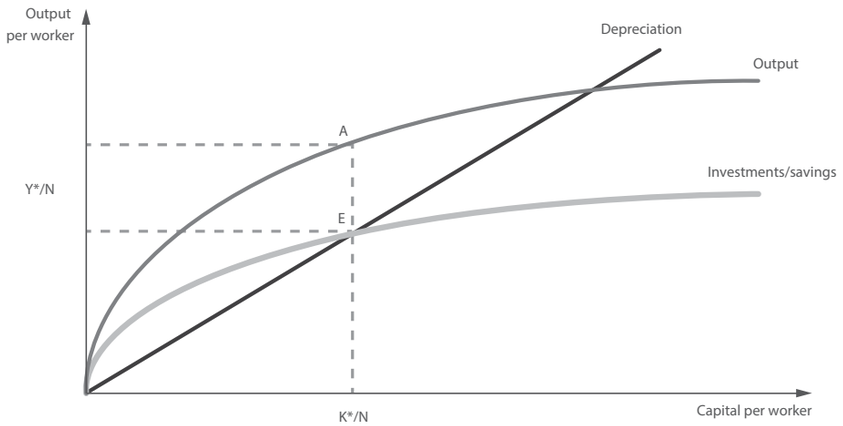
In order to compare economies to each other, components of the aggregated production function must be divided by the number of people. The converted function is as follows:

$$Y/N = f(K/N, N/N)$$

$$Y/N = f(K/N, 1)$$

The first derivate of the above function is negative, which should be interpreted as decreasing marginal benefits, linked to an increase in employment while capital remains unchanged. As labour productivity improves but the level of capital is constant, the output should grow more and more slowly: successive increments become smaller. The same results appear with the reverse situation: growing capital and unchanged employment.

**Fig. 1: Long term Output Function.** Source: Olivier Blanchard

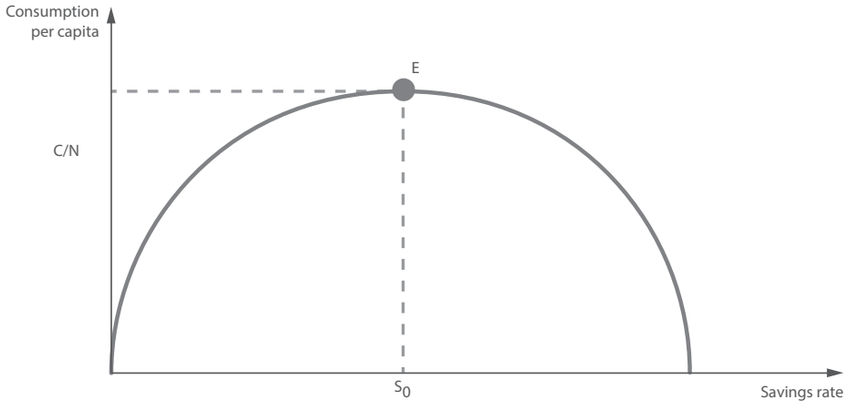



In such a function of production, the increase of Y/N indicates the economic growth per capita, which may come from two sources:

- Increase in equity attributable to each employee, i.e. an increase of the level of capital per worker (horizontal axis).
- Development of technology (vertical axis)

Increasing the level of capital per worker requires investments, which in macroeconomics are equal to savings, defined as the difference between disposable income and consumption, coming from both private and public sectors. Assuming an unchanged level of disposable income in the short term, a savings raise leads to a decrease in consumption and production, to a negative output gap and finally to recession. As Robert Solow proved, a higher propensity to saving may only momentarily improve economic growth, as after reaching a given threshold another increase of higher savings rate is required to maintain level of growth. Since the savings propensity ratio cannot exceed 1, it is impossible to continuously raise savings. Achieving its highest value is equivalent to reducing the rate of consumption to 0, thus cancelling out production. Therefore, an optimal ratio of savings propensity should be a factor of long-term economic growth.

**Fig. 2: Saving Rate Golden Level.** Source: Olivier Blanchard

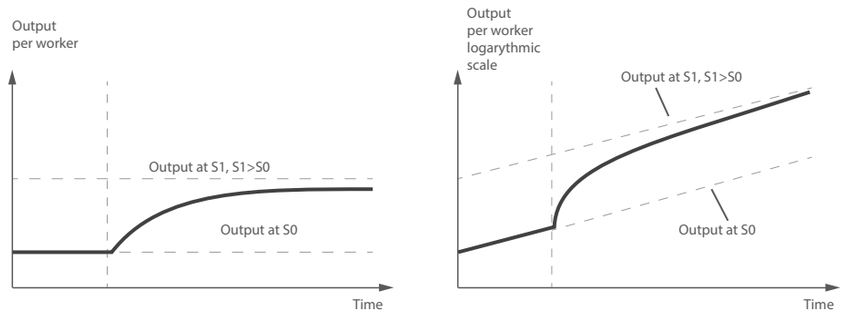



Olivier Blanchard has presented the so-called *golden level* of capital, as shown in Figure 2. Point E corresponds to the optimal savings rate *s0* at which consumption per capita reaches its maximum at the level of C/N. A rising savings rate from zero to *s0* leads to rising investments, production, income, and consumption. In the opposite, a further increase of savings propensity tends towards a drop in consumption.

Another way to increase economic growth and ensure its sustainability is technological development, which, if translated into productivity gains, can lower production costs, increase the volume of production and thus achieve economies of scale. From the macroeconomic perspective, this change affects the whole economy, resulting in faster and more stable economic growth. With the combination of these two factors (technological progress and

growth of savings rate), the production function (in Figure 1: Y/N) grows on a logarithmic scale, and therefore, economic growth is incomparably greater. The differences are clearly visible in Figure 3. The left-side chart represents a situation with rising savings rate from *s0* to *s1* and lack of technological progress. From the beginning of transition, the output grew consequently to a higher saving rate, but became stuck at this new level after the stabilisation of the saving rate. The right-side chart shows the same increase of the savings rate, but accompanied by technological progress. In this case, production increases continuously on the logarithmic scale.

**Fig. 3: Impact on the Output of Savings Rate and Technology Changes.** Source: Olivier Blanchard




Savings rates within the most developed countries are quite diversified. Four groups can be distinguished according to the ratio saving rates to Gross National Income (GNI):

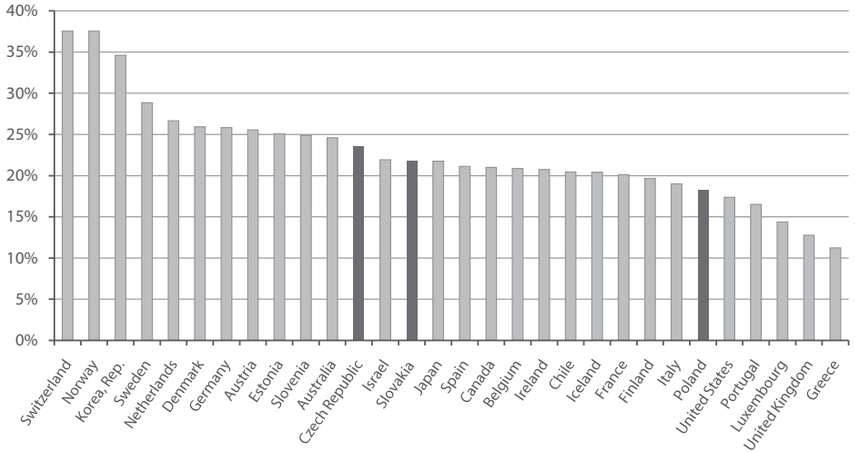
- Below 15% of GNI
- Between 15% and 20% of GNI
- Between 20% and 30% of GNI
- Above 30% of GNI

Together with four advanced economies, Poland is in the group with the second lowest saving rate (18.3%). Surprisingly, other CEE countries achieved significantly higher levels, e.g. 21.8% in Slovakia and 23.6% in Czech Republic. The Baltic States and other economies from the region show even better results. From the perspective of international competition, the situation raises a risk for Poland of deepening of capital disparity in comparison to its counterparts. This gap of capital will be filled by external capital, which may worsen the current account balance and create instability and risk of capital outflow.

Certainly, Norwegian results should be considered neither as an optimum nor as a target. Their Sovereign Wealth Funds are financed by extraction of natural resources (mainly oil) and their highly profitable export. Such a scenario might be relevant for Poland only if a domestic shale gas industry were to generate commercial profit on export activities. For now that seems to be very unlikely or even close to wishful thinking.

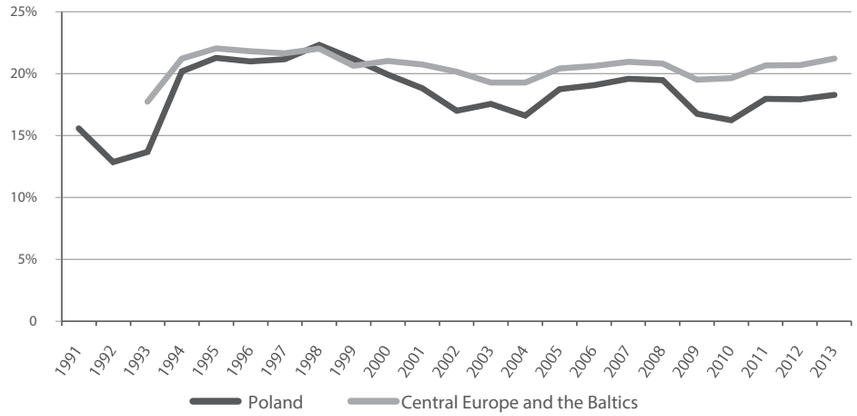


**Fig. 4: Saving Rates in OECD Countries in 2013 (percentage of GNI)** Source: OECD




Going deeper into the regional analysis of savings, it is clear that Poland has been decreasing its rate since the late 1990s. At the same time, all CEE and Baltic State economies have reached levels of savings above the 20% rate. Moreover, the gap is increasing: in 2013, the difference was the largest of the transition period – 3.9 percentage points. Furthermore, the volatility of Polish figures in the given period is significantly higher than in the whole region. The average deviation of the savings rate in Poland was almost three times higher than in other CEE countries.

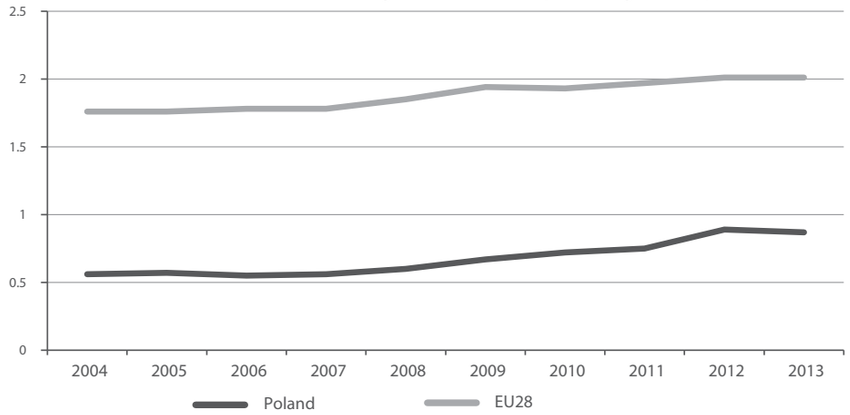
**Fig. 5: Savings Rate in Poland and CEE Countries in 2013 (percentage).** Source: OECD




The lack of savings in the Polish economy goes along with a very low level of research and development expenditures (R&D), as the EU average rate was more than two times higher than the Polish in 2013. Although the difference has significantly decreased since 2004, when the

EU average was more than three times higher, activities without a strong innovative character cannot be an accelerator of the catching-up process. The lack of domestic capital and of R&D are the two most important factors of risks for long-term growth in Poland.

**Fig. 6: R&D Expenses (percentage of GDP).** Source: Eurostat




## Financing of the R&D activities in the economy

R&D activities in Poland are driven mainly by the public sector, namely the government and higher education, which is basically linked to the universities. It seems to be difficult to distinguish administrative, didactic and scientific costs within this sector. The average ratio of governmental spending on R&D in relation to GDP is almost the same in Poland as in the EU, at approx. 0.25%. Nevertheless, real innovations should come from the real economy. The private side of the Polish economy is unwilling to spend money on uncertain R&D activities. In 2013, the share of private spending amounted only 44% of all R&D expenditures, while the EU average was 64%. However, it should be noticed that domestic business has significantly increased its engagement over the past 10 years.

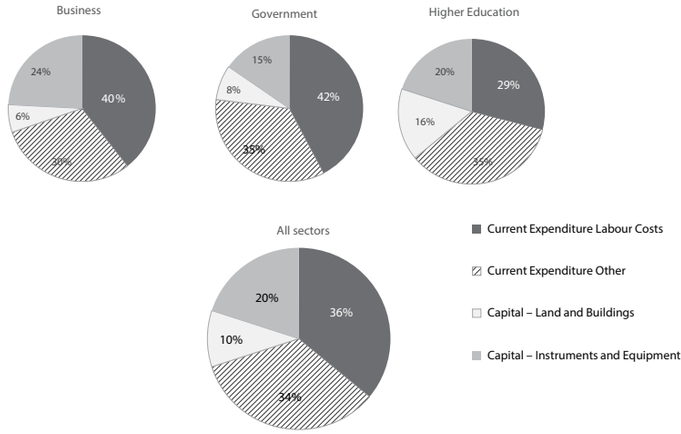
**Fig. 7: R&D Expenses across Sectors in 2013 and their Evolution with 2004 as base year (percentage of GDP).** Source: Own chart based on Eurostat data




A significant improvement in private R&D activity is clearly visible, as its contribution to GDP increased by 137% in 10 years. The question of effectiveness of R&D spending should be raised, even if a real evaluation of this kind of activities is not an easy task. First of all, there is a long way between spending money on R&D and the final positive output. Some of the research may not lead to any practical innovation, so a company may bear costs without achieving incremental sales arising from innovation. That uncertainty often prevents entrepreneurs from engaging in new activities. Second, when there is no link between costs and income, the tax authority can challenge R&D costs, which cannot be considered as tax deductible expenses. The burden of Poland's very complex tax law is another significant factor discouraging entrepreneurs from R&D activities.

A break-down of R&D expenses across sectors may give the answer to whether domestic R&D costs are effective or not. Generally speaking, labour costs play a crucial role in terms of R&D spending (36% of total). In both government and higher education sectors, the other current expenditures represent more than 35% of the total. This is a very important share, even more so considering that it is difficult to specify what exactly the purpose of the cost is. 16% of total R&D spending in the higher education sector is dedicated to new buildings. This cannot be considered as effective R&D activity, especially taking into account that the share is more than two times higher than in other sectors. The business sector is used to spending almost a quarter of R&D budgets on instruments and equipment – the largest ratio across all sectors.

**Fig. 8: Break-down of R&D Expenses in Poland in 2013 (percentage of GDP).** Source: Eurostat




The data show a rather healthy structure of R&D costs. The most effective activity is led by the private sector (relatively low share of current costs and high share of instruments and equipment). There is an urgent necessity to help increase R&D activities in this sector. **Pro-innovation policies should be applied**:

- **against market-driven risk**: As underlined above, R&D activity is very uncertain and potential profits generated by innovation in many cases are not achieved. Therefore entrepreneurs are resistant to taking risks. That could be changed by governmental support based on an

independent financial institution financed by EU funds. There would be two main purposes for such an institution:

- Support for entrepreneurs by collateral and guarantees: R&D activity being one of the most risky aspects of business, commercial banks set a very high cost of capital, too high to be an effective source of finance for R&D expenditures. Additional external collateral may decrease the costs.

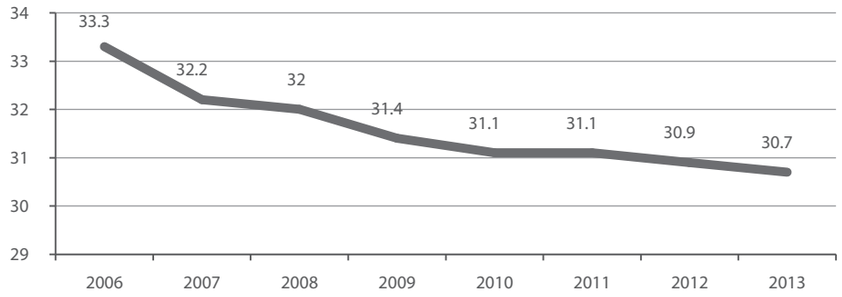
- Sharing risk of R&D activities with entrepreneurs: There are many financial tools which might be useful to achieve this goal. One of them is the special purpose vehicle – a joint-venture company established by an entrepreneur and an financial institution.

- **against tax-driven risk**: The issue seems to be quite difficult to solve. Public finance stability must be maintained – in that case revenue stability. However, a clear pro-innovation approach should be applied to encourage entrepreneurs to activate R&D funds. There is a necessity for tax reliefs which will leave no space for interpretation. Entrepreneurs need to be sure that their R&D expenses will be considered as tax deductible expenses by authorities.

Taking into account the lack of savings and R&D activities, EU funds might be considered as an instrument which can fill the gap and, as a consequence, accelerate long-term economic growth. EU funds should be spent on effective and renewable tools like guarantee and collateral funds, seed capital funds and credit tools for innovation activities co-financed by the government. According to research, EU funds improved GDP growth by 0.6 percentage points per year during the period of 2005-2016, only by indirect means.

It is also important to note that EU funds might also have supply-side effects. This effect is linked specifically to capital formation and savings in the economy. This channel, as specified in the paper, is a key factor which impacts on long-term growth. Another positive effect of EU funds in Poland is the slight fall in income inequalities, especially the geographic income distribution. Since entering the EU, the GINI index for Poland decreased by 2.6 percentage points. It does not mean that EU funds may be used as welfare expenditures. Economic strategy for Poland should be focused on equal economic growth of each region within the country. This is crucial since the catching-up process tends to economically polarize regions.

**Fig. 9: Evolution of the Gini Coefficient in Poland.** Source: OECD




## Role of the Institutions in the Economic Development

Since only 60% of economic growth dispersion is described by the neoclassical growth theory (R. Solow), it is highly recommended to find out the remaining factors that impact on economic development. One of them is the quality of institutions. According to the theory of institutional economics, the behaviour of rational individuals seems to be influenced by a range of institutions, including social and cultural background, law, and governance.

While analysing the barriers to economic growth in Poland, one must point out that the legal environment for businesses creates serious risks and uncertainties for entrepreneurs. There are three main groups of issues related to the Polish legislature:
- Taxation law
- Public procurement law
- Restructuration and bankruptcy law

The relationship between tax burden and long term economic growth is a key point in the public discussion. However, there is no clear evidence that lower burdens would have a positive impact on growth. Moreover, assuming an active role of the government as guarantor for innovation activities in the private sector and funder of the higher education sector, the government has to be able to finance pro-development policies. To stabilize or even decrease public debt, there must be equilibrium between public revenue and spending, because the issue is not about the level of taxation but about its quality, predictability, stability and certainty. Both the act on personal income tax and the act on corporate income tax have been changed more than two hundred times during the last twenty years, an average of almost one change per month.

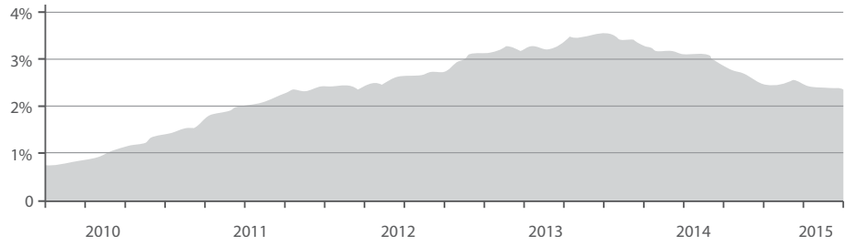
On top of that, although there are a number of executive documents for the general acts, the key problem of Polish taxation law remains the process of law interpretation. There are a range of institutions with the power to issue interpretations which become a publicly available source of law. In many cases however, the interpretations are contradictory to each other. As a consequence, entrepreneurs do not know which decision should be taken, as they receive different suggestions from the authorities. Another significant problem is the way in which the courts are used to interpret gaps in the law. There is no rule to resolve disputes in favour of taxpayers.

Since EU funds might be considered as an important tool in filling the gap between domestic savings and investments, the Polish institutional environment must be as efficient as possible. In 2013, the value public procurement amounted to 143.2 billion PLN, which equals 8.8% of GDP. The effective management of public funds seems to be a crucial thing which should generate direct positive effects on the economy in the short term, as well as indirect effects. Construction represents the biggest part of the public procurement in Poland, with almost 55 billon PLN coming from large infrastructural projects: roads, highways, railways, etc.

Such significant public expenditures focused on one specific sector should improve their performance. In reality, however, a wide range of bad practices resulted in a dramatic increase of bankruptcies in this sector. The ratio of bankruptcy (number of bankruptcies compared

to the number of registered companies) jumped from 0.8% in 2010 to 3.2% in 2013, a 300% increase in only three years. Conversely, in other sectors like industry, transportation, warehousing and logistics, the ratio is decreasing.

**Fig. 10. Bankruptcy Rate in Poland.** Source: KUKE




In the analysed period, a coincidence of two trends can be noticed: rising public expenditures on infrastructural projects and a simultaneously rising bankruptcy ratio within the construction sector tend to be confusing. The most probable reason for this was the malfunctioning of public procurement in Poland. In 92% of procedures, the lowest price was the only decisive criterion. Against a volatile background of resources, the prices offered by the contractor turned out to be unenforceable and unprofitable. As a result, in many cases contractors are forced to declare bankruptcy, creating a chain reaction affecting its subcontractors and providers.

The Bankruptcy and Reorganisation Law shapes institutional framework for businesses. According to this act, there are two types of bankruptcy:

- Reorganisation: based on agreement between the debtor and its creditors. The company is able to continue its activity after structural changes, e.g. employment reduction.

- Liquidation: the debtor is forced to sell its all assets as quickly as possible and pay off the creditors. In reality, only a small part of the debt is being paid.

Bankruptcy of the reorganization type amounts to only approx. 15% of all judgements. In most cases, liquidation results in unemployment of the company's workforce, loss of capital by the owner and loss of the debt. In other words, according to this strategy, each stakeholder loses. The problem is not in the regulation itself but in the execution of justice by the administration. It stems from a lack of economic education among lawyers.

## Conclusions

The Polish economy has made an impressive change after transition. In the last decade alone, Polish GDP per capita compared to the European level increased by 20 percentage points: from 47% to 67% in 2013. Among new member states, only five countries achieved slightly better results: Lithuania (+30pp), Romania (+26pp), Estonia (+25pp), Latvia (+23pp) and Slovakia (+22pp). Economic changes in the two remaining V4 countries revealed problems associated with the glass ceiling effect; both Czech Republic and Hungary started from a much higher level (accordingly: 74% and 60% of EU average). It means that each country must have a clear strategy describing actions to be taken to avoid being stuck in the middle-income trap.

- Increase of savings in the Polish economy

Poland's savings rate seems to be significantly below our European competitors. Government should consider the activation of regulated capital markets for innovative enterprises and encourage people to participate in the system with tax reliefs. It should be a part of the private pension scheme, which in fact was liquidated by the government in 2011 and 2014. The capital market should involve a wide range of financial institutions like the stock exchange, financial authorities, venture and seed capital and business angels.

- Use of EU funds as a support for innovation enterprises

A huge financial injection might be used to fill the gap of domestic savings. However, effectiveness is a crucial point, therefore EU funds should be used for guarantee and collateral funds for small and medium enterprises lacking the track records and assets needed to acquire credit from banks.

- Deep reform of the execution of the bankruptcy and reorganisation law

A relatively good law which provides the opportunity to set up a restructuring plan for companies in financial troubles is countered by a lack of economic education on the side of the administration of justice. Reform of this administration should result in a rising number of reorganisation-based bankruptcies.

- Deep reform of the procurement law

The massive inflow of EU funds to the construction sector resulted in instability and a number of bankruptcies, while in other sectors the rate of bankruptcies significantly decreased. It is advisable to prepare a deep reform of the procurement law to include different criteria in the procedures, not only based on the lowest price. Working in parallel, changes in the management programme for clerks could help to change their mind-set.

- Simplification and unification of the tax law and tax procedures

Unclear tax law and tax procedures increase business risks and prevent entrepreneurs from starting innovative initiatives. A guide on R&D costs should be issued for entrepreneurs, containing instructions concerning which costs are considered or not as tax deductible expenses, unquestioned by tax authorities.

**References for this article are available online at: http://bit.ly/1LUqtHv.**

# Middle-Income Trap in Slovak Republic: Policy Recommendations

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## Current Economic Situation

After a dramatic drop in economic output during the initial stages of transformation at the beginning of the 1990s, the Slovak economy turned the corner. The gross domestic product per capita in constant prices from 1997 to 2014 almost doubled to 13.4 thousand EUR. Contemporary Slovak economic history has experienced two distinct economic cycles with two differing models of economic growth. Both of these periods offer an interesting lesson in terms of identifying the potential new drivers of growth after the recent global recession.

The Slovak Republic was established on January 1st, 1993 with a heritage of relatively low public debt burden. In the mid-nineties, the government decided to utilize the space offered by the low level of state indebtedness for policy of higher budget deficits, aimed at jump-starting economic growth. One of the more tangible reflections of this policy was large outlays on construction of the underdeveloped road infrastructure, especially the highways. Increased government spending did indeed feed through into relatively salient growth rates of real GDP until 1998.

However, high levels of state budget deficits were also associated with high levels of foreign trade deficits, driven not only by imports of necessary technologies, but also caused by the fact that competitiveness of the manufacturing industries on the new export markets in the European Union (after the collapse of the previous traditional export markets within the communist bloc of countries) simply did not manage to keep pace with the fiscally-driven domestic demand which also pulled in higher imports. The so-called twin deficits of state budget and current account deficit were increasing and posed a ticking threat, especially to the regime of the pegged foreign exchange rate in which the koruna operated at the time.

The competiveness of the domestic manufacturing base was also influenced by altering the previous model of "coupon privatization" (through which masses of population became minority shareholders of former state owned companies privatized through a kind of IPO) to "direct privatization", predominantly through management buyouts or sale to the newly emerging class of local entrepreneurs, generally at rather advantageous terms, with the proclaimed objective of creating a local "class of capitalists". Lack of experience with management of such companies, however, often resulted in either their further transfer into hands

of foreign multi-national corporations with expertise in the given field, or very often into "arbitrage" between the actual book value of the acquired assets and the effective purchase price: through various sort of "siphoning" of corporate assets, local owners extracted short-term profits, often leaving the defunct companies (and their employees) up to their fate within subsequent bankruptcy proceedings.

As a result, although the fiscally driven economy reported relatively solid figures of real GDP growth, the unemployment rate was at the same time increasing into high double-digit levels approaching the 20% threshold. Fiscally-driven domestic demand contributed to elevated levels of inflation, which along with an effort to keep the local currency stable resulted in relatively tight monetary policy, with high double-digit interest rates. High levels of inflation were pointing towards an unsustainable pace of growth of the domestic demand and signals of over-heating of economic growth. Moreover, the escalation of the twin deficits along with the regime of the pegged foreign exchange rate resulted in mounting pressure on the official foreign exchange reserves of the Central Bank. This pressure became unsustainable in the autumn of 1998, when the central bank was forced to let the currency trade freely within the newly introduced regime of free-floating, followed by sharp depreciation of the exchange rate of the koruna. Significant weakening of the exchange rate was accompanied by a massive slow-down in economic activity, which for some corporations was exacerbated by the foreign exchange loans they drew during previous years in an effort to circumvent the higher levels of interest rates in the local currency. The economy fell into hard lending and a slight recession in 1999, spurred by the unemployment rate just below 20% at the turn of 2000 and 2001.

Unfolding of the macroeconomic imbalances at the end of the nineties and political change in the 1998 elections were catalysts for the economic policies which established the basis for the swift economic expansion during the decade preceding the 2009 recession. Wide-ranging economic and political reforms focused on integration into the EU and opening of the economy for foreign direct investments – both green-field and privatization-driven – contributed to a significant boost in the potential output of the Slovak economy. Subsequent fast growth rates also contributed to the lowering of the unemployment rate to the lowest levels on record. Although investments played an important role in this period of the expansion (along with recovery in final household consumption), deepening of the foreign trade integration (and economic integration into the Eurozone in general) created soil for significant improvement in export competitiveness and for acceleration of export growth.

Increased dependence of the Slovak economy on its major trading partners, especially Germany and the Eurozone, was rather evident during the 2008-2009 global crisis, when foreign trade along with investments acted as the main channel through which the recession in Eurozone propagated into the Slovak economy to a similar extent. On the other hand, it was the same channel – external demand – which also contributed to the relatively solid economic recovery in 2010 and subsequent years. Only in the most recent years has eventual recovery of the domestic demand, especially final household consumption propelled by steady trend of decline in registered unemployment and recovery in real wage growth, helped to overtake net exports as the major driver of real GDP growth. Given the high share of employment in predominantly export-driven manufacturing, as well as the extreme openness of the Slovak economy to foreign trade, it is apparent that this short-term dichotomy of domestic demand being stronger than external demand might prove to be just a temporary phenomenon, unless we see a more significant shift in the structure of economic growth that could eventually help to avoid the looming middle-income trap in Slovakia.

## Indicators of Risks of Middle-Income Trap

After the breakup of Czechoslovakia in 1993, the Slovak part of the former federation began its existence in a significantly worse economic situation than its western counterpart. According to Eurostat, GDP per capita in PPS in the mid-nineties was below 50% of the EU average, about 20 percentage points behind the level of the Czech Republic.

The reform period after 1998 contributed to a relatively quick catch-up by Slovakia, and in 2013, the GDP per capita in PPS differed from the Czech Republic by only seven percentage points. However, the dynamics of the catch-up towards the level of the richer neighbors in the West speaks for itself with regards to the risk of the middle-income trap: after a fast run-up from below 50 percentage points of the EU average all the way to 71 percentage points in 2008 – roughly within a decade, further progress begun to stall: within the next five years the Slovak economic catch-up added only an additional four percentage points, reaching 75% of the EU average in 2013.

Although one could argue about the drag exerted by the 2009 recession, on the flipside, even the recovery after 2010 was relatively salient for Slovakia in terms of real GDP growth, chiefly driven by external demand.

## Grounds for Development

Before dropping significantly in 2009, direct foreign investment between 2000 and 2008 averaged 2.5bn EUR annually, according to Eurostat data. This helped to boost the level of investments, especially at the beginning of the decade, up to 31.4% of GDP in 2001 (IMF data). In subsequent years, the total level of investment in the economy gradually moderated towards the levels of 20% of GDP. Gross national savings, which were lagging behind the total level of investments, rebounded from their lows of 17.7% of GDP in 2009, and in 2013 surpassed the level of total investments after exceeding 22.1% of GDP, according to IMF data.

After emerging from the brief hard-landing of 1999 and after the unemployment rate peaked near 20% in 2001, the opening of the Slovak economy also benefited the labor market and that started to reflect in the dynamics of the average wage development. Before the crisis of 2008, the average monthly real wage in Slovak industry increased on average in the range of 2.5-5.5% annually. After the crisis of 2009, it took until 2013 for the real average wage in industry to rebound back to the pre-crisis levels of near 5%.

The total unit labour cost increased on average by 4.8% annually between 1995 and 2004, having peaked at 10.7% annually in 1997 (Eurostat). A similar peak in the growth of unit labour cost growth was recorded just before the recession, when it accelerated to slightly over 6% YoY in 2008/2009. The average growth of the unit labour cost according to Eurostat over the past ten years (until 2014), however, subsided to 2% annually.

According to Eurostat data, average labor productivity per hour worked has been increasing on average by 4.6% annually between 1996 and 2006, after having peaked at 7.3% annually in 2002 and 7.1% in 2003. The recession temporarily dipped labor productivity into negative territory (-2.3% annually in 2009), though it later rebounded back above 2% levels in subsequent years. The ten-year average slowed down to 3% annually in recent years; however, the 5-year moving average declined from 5.2% in 2007 down to 1.8% annually in 2013.

During the nineties, Slovakia enjoyed a relatively high double-digit household savings rate, ranging from 10.12% in 1995 up to its peak of 13.84% in 1997. During the subsequent period of record-fast economic expansion after 2000, the household saving rate gradually narrowed, all the way down to 5.65% in 2006, compared to 12.58% in Czech Republic and 12.68% in Hungary, 16.2% in Germany and the EU average of 10.88%. Even though the households saving rate has gradually recovered in recent years (at 8.49% in 2013), it continues to lag behind not only the regional peers of Czech Republic (9.71%) and Hungary (10.65%), but also the EU average (11.03%), and  not to mention Germany (16.26%).

Despite a relatively low and declining savings rate, capital availability was influenced by the specific situation in the banking sector. An important part of the economic reforms of 1998-2002 consisted of the privatization of the major state-owned banks, after their balance sheets were cleared of the massive burden of non-performing loans, which at some cases exceeded 40% of the total portfolio. The total cost of the banks clean-up at the time was estimated to exceed 12% of GDP. Nevertheless, the new foreign owners found the newly privatized banks not only with cleaned-up loan portfolios, but also in an overcapitalized and over-liquid position, which was conductive to the swift expansion of lending activity. Despite relatively dynamic growth of lending activity in the decade preceding 2008 – and thanks to the Central Bank regulation on cross-border financing – the Slovak banking market remained over-liquid, with loan-to-deposit ratio remaining safely below the 100% levels.

## Tools of Internal Growth

Within the financial perspective of 2007-2013, the Slovak Republic was allocated almost 11.5bn EUR as part of the Cohesion Policy, and EU structural funds played a key role in financing public infrastructure, especially after the 2009 crisis.

According to the findings of Marek Radvansky and Ivan Lichner (2015), EU funds had a profound positive impact on the economic development of Slovakia:

"The Social Fund and the Cohesion Fund's induced additional growth of GDP in Slovakia starts to be significant in 2009, while the expected cumulative growth of GDP in current prices represents 5.3% in 2013 and 7.5% in 2015. (…) The year-on-year real growth of GDP in the period 2009-2015 was higher thanks to the Funds' implementation on average by 0.9 percentage point. In 2015, the difference in GDP in current prices between the basic and alternative scenario is more than 5.5 billion EUR." (Radvansky and Lichner, 2015)

They also identify a positive impact of the EU funds not only on investments, but also on household consumption:



"Cumulative additional consumption of households over the years 2007-2015 would increase in the Slovak Republic by 7% due to implementation of the Funds resources. This increased consumption would be motivated mainly by growth of employment; however, growth of the average salary would also contribute positively to the given phenomenon." (Radvansky and Lichner, 2015)

Despite ongoing wide regional disparities, Radvansky and Lichner concluded that EU funds also played an important role in the process of convergence of Slovakia towards the economic performance of the Western EU members. The authors also point out the positive impact of EU funds on increasing the average salary in Slovakia.

In the next financial perspective, the total allocation from EU funds is 14bn EUR, amounting to annually 369 EUR per capita and 2.8% of GDP. The number of operating programs is expected to decrease to nine over the next period and funds are likely to be redistributed in order to improve the rather weak absorption rate.

Infrastructure is expected to be the main priority for 2014-2020, as the highway network is still far from complete. This is perceived as a major obstacle in attracting foreign investors to the eastern part of the country. Hence, 26% of the total EU funds allocated for Slovakia will be used for infrastructure projects. In a country with the 6th highest unemployment rate in the EU, projects that tackle long-term and youth unemployment are likely to receive more funding (13%). Other priorities include Environment (20.6%) and Research &Development (14.5%).

## Support for R&D

According to OECD statistics, private enterprises' expenditure on R&D as percentage of GDP in 2008 declined compared to 1998, and Slovakia now ranks among the six weakest members of the OECD in that respect, with private R&D investments well below 0.5% of GDP.

The share of the Slovak R&D investment is deeply below the OECD average:

"Business enterprise expenditure on R&D (BERD) is considered important for innovation and economic growth. It has frequently been used to compare countries' private-sector efforts on innovation. For OECD countries, business R&D accounted for 1.65% of GDP in 2008, slightly more than in 1998 (1.45% of GDP)." (OECD, 2010)

There are various approaches towards supporting the private enterprises' expenditure on research and development. The OECD research points out two major routes of support via direct, or indirect incentives:

"Governments can choose among various tools to leverage private-sector R&D. They can offer firms direct support via grants or procurement or they can use fiscal incentives, such as R&D tax incentives. Direct R&D grants/subsidies target specific projects with high potential social returns; tax credits reduce the marginal cost of R&D activities and allow private firms to choose which projects to fund." (OECD, 2010)

The Slovak government has recently pursued a route towards enabling more indirect support of private sector R&D expenditures, but as the OECD indicates, the optimal mix is a matter of country specifics and differs among countries even in the case of developed economies.

"Countries differ in their use of direct and indirect support. The United States (through competitive R&D contracts) and Spain rely more on direct support, while Canada and Japan mostly use indirect support to foster industrial R&D. The optimal balance of direct and indirect R&D support varies from country to country, as each tool addresses different market failures and stimulates different types of R&D. For instance, tax credits mostly encourage short-term applied research, while direct subsidies affect more long-term research. A new indicator of this policy mix has been developed and gives a rather different picture of international comparisons of public support to R&D." (OECD, 2010)

As far as the design of particular tools for R&D incentives is concerned, the study of the CREST Working Group of 2006 offers insights into the available repertoire of the measures that can be employed, their proper target group as well as measures of their efficiency:

"The Working Group has reached some general conclusions that member states might consider when deciding on the most appropriate tax incentive:

- Countries with the ambition of increasing business R&D in general or for SMEs in particular are advised to analyse carefully the possible use of tax incentives as an important policy instrument.

- When introducing tax incentives, countries should assess the economic rationale and costs for state intervention and weigh up the most appropriate policy response, including how effectively tax incentives may meet the goals and objectives identified for R&D and innovation policies.

- Tax incentives should be easy to understand, stable in their design over time and transparent in order to reduce transaction costs as much as possible.

- When designing tax incentives, countries are advised to have a broadly based approach to which companies, R&D topics and types and costs should be covered, thus stimulating the breadth of R&D within and across firms and not unduly differentiating between different types of firms.

- If the objective of the tax-incentive is to increase the level of R&D substantially, and the associated loss of tax-revenue is acceptable, a volume-based tax-incentive seems to be the appropriate tool.

- If the objective of the tax-incentive is narrower, the choice between volume-based and incremental tax incentives should be based on a number of factors. Empirical studies and research suggest that both incremental and volume-based incentives can be effective in stimulating additional R&D, with no clear evidence that one approach is more or less effective than the other. Therefore, the decision needs to consider the specific aims and objectives of the policy in each member state.

- Volume-based tax incentives might be considered where the objective is to promote R&D or R&D firms generally, as they are easier to administer, lead to less distortions and are more predictable and stable over time. In the case that countries want to limit taxes foregone, they could consider the use of caps or thresholds.

- Incremental schemes might be considered where the objective is to support R&D start-ups or firms with high R&D growth, particularly where governments want to limit tax foregone due to budgetary limits.

- A combination of volume and incremental based incentives might be considered where the objective is to support both all R&D firms as well as targeting R&D start-ups, although the additional complexity involved should be examined.

- Instead of a low percentage level of support through tax incentives, governments could use caps or thresholds to ensure that the tax incentive has a substantial effect up to a defined limit, a system that in practice would be SME friendly.

- Certainty, simplicity and consistency should be the guiding principles for the administration of tax incentives. The effectiveness of a tax incentive depends on it being delivered and administered efficiently." (CREST Working Group, 2006)

## How to Boost the Knowledge-Driven Economy?

The OECD concludes in its 1996 study that, in order to fully understand the formal and informal interactions which contribute to building the knowledge economy, it is important to focus on analysis of human capital indicators, which include in particular knowledge stocks and flows, knowledge rates of return, knowledge networks and indicators related to knowledge and learning.

"The OECD economies are increasingly based on knowledge and information. Knowledge is now recognized as the driver of productivity and economic growth, leading to a new focus on the role of information, technology and learning in economic performance. The term "knowledge-based economy" stems from this fuller recognition of the place of knowledge and technology in modern OECD economies." (OECD, 1996)

Finland is considered to be one country which was particularly successful in developing the knowledge-based economy. Hence it can serve as very suitable role model for small countries of Central Europe such as Slovakia.

According to Carl Dahlman, Jorma Routti and Pekka Ylä-Anttila (2006), many of the elements of the Finnish success in developing the knowledge economy are tied to the specific circumstances of the Finish socioeconomic situation and developments, i.e. country specifics.

However, they point out that there are two types of elements of Finland's success story, which might be replicable outside of Finland: the first one is economic policies and the second one called "key institutions and procedures".

The authors admit that some of the economic policies that contributed to the Finland's success are "quite typical of the Washington consensus". These replicable Finnish policies include:

- Strong rule of law
- Strong governance and accountability
- Stable macroeconomic policy
- Strong financial sector (after the 1990s crisis)
- Openness to outside ideas and a free trade regime
- Strong focus on encouraging domestic competition.

Other transferable economic policies are identified by Dahlman, Routti and Yla-Anttila as "less typical of the Washington consensus," including the following:

- Strong welfare state, in particular, the very strong focus on education
- Strong focus on coordination of policies among key government agencies, and between them and the productive sector
- Strong focus on R&D and innovation
- New type of industrial policy
- Strong focus on the future.

Secondly, Dahlman, Routti and Yla-Anttila (2006) conclude that key institutions played a major role in the success of Finland when establishing and developing the knowledge economy. These elements are replicable: the Academy of Finland, the Technical Research Center of Finland, the Science Policy Council of Finland, the National Technology Agency, and Employment and Economic Development Centers.

Although created in Finland as early as 1943 (for the Academy of Finland), Dahlman, Routti and Yla-Anttila (2006) point out similarities across these institutions, as well as mechanisms, that could be transferable to other countries:

"While all of these institutions are specialized to serve different functions, their operational methods have certain similarities. It appears that all of these institutions (1) do a great deal of coordination of the different stakeholders and relevant actors, (2) have well-defined objectives and monitoring mechanisms, and (3) while they have a great deal of autonomy, ultimately, they also are very accountable to their respective higher authorities. The functions of these institutions serve as good examples of some of the specific needs that need to be addressed at a level beyond what is done by the individual private firms. Furthermore, many of their specific mechanisms such as competitive bidding, peer review, and incentives for cooperation across functional or firm boundaries are worthy of consideration for possible adaptation to the needs of other countries." (Dahlman et al., 2006)

The European Commission Competitiveness Report sums up the main reasons why development of the knowledge economy must play an ever-increasing role in the economic policy within the EU:

"Although the weight of manufacturing in the EU economy is decreasing in favour of services, manufacturing is increasingly seen as a pivotal sector. However, critical mass in the form of a minimum production base is needed. Industrial policy supporting innovation and external competitiveness can play a role to reverse the declining trend.

To this end, EU industrial policy needs to steer structural change towards higher productivity in manufacturing and better positioning of EU enterprises in the global value chain based on comparative advantages in knowledge and technology intensive products and services.

This is a must and a challenge for two reasons. First, the EU is lagging behind in productivity gains relative to emerging industrial powerhouses and some of its major competitors. The EU-US productivity gap, for instance, is growing wider again after years of narrowing. It is linked to a production efficiency gap caused by regulations, lower investment in ICT and intangible assets. In some sectors there is also a 'commercialization of research gap' between the EU and the US. Policies targeting not only creation of new technologies, but also knowledge diffusion through measures to stimulate the suply of skills on the one hand, and demand for R&D on the other can help bridge such gaps." (European Commission, 2013)

The EC Competitiveness Report concludes, that while the EU has substantial strengths when it comes to manufacturing, further progress in developing the knowledge-based economy is necessary to bridge the gap in productivity with the United States. Moreover, the EU does command several competitive advantages both with regards to the higher value-added manufacturing, as well as with regards to the knowledge economy as such. The European Commission Competitiveness Report points out:

"On the positive side, the report documents that the existing strengths of EU manufacturing are substantial. The revealed comparative advantage of EU manufacturing is linked to complex and high-quality product segments. By gradually increasing the complexity of their products, EU manufacturing industries managed to maintain their competitive position in 2009 compared with 1995. Moreover, EU manufactured exports have less embedded foreign value added than exports by third countries such as China, South Korea, Japan and USA.

The EU is a major producer of new knowledge in key enabling technologies. Its products based on industrial biotechnology or advanced materials have higher technology content than competing North American or East Asian products. Apart from advanced manufacturing technologies, EU products based on key enabling technologies are mature and need to compete on price. Adding more innovative and complex products to the product portfolio will help manufacturers move up the value chain." (European Commission, 2013)

## Institutions

As pointed out above in the case of Finland, development and strengthening of the key institutions plays an instrumental role in helping to develop a knowledge-based economy that could propel Slovakia out of the looming middle-income trap.

One of the structural issues of the public institutions is their tendency towards suboptimal functioning, especially when it comes to measuring effectiveness and efficiency of public spending. In their paper *"The Effectiveness and Efficiency of Public Spending"*, Ulrike Mandl, Adriaan Dierx and Fabienne Ilzkovitz (2008) indicate that there is clear potential for improvement in the efficiency of public spending:

"The efficiency in public services more generally and in public spending on education and R&D in particular varies significantly between countries. Clearly, there is potential for increased efficiency in public spending. The paper, however, also illustrates the difficulties of measuring efficiency and effectiveness. Progress has been made in developing the necessary measurement techniques, but there is a lack of suitable data to apply those techniques. Good quality data are needed because the techniques available to measure efficiency are sensitive to outliers and may be influenced by exogenous factors. Against this background, analyses based upon individual spending areas (function-by-function approach) seem to be a more promising approach to measure efficiency and effectiveness on a cross-country basis. In-depth analyses of the areas in question allow for a better identification of meaningful indicators. As efficiency improvements can be achieved in many different ways, a specific mix of short-, medium- and long-term measures aimed at enhancing efficiency and ultimately effectiveness could in principle be defined, which would be appropriate to the situation in the country under consideration. However, making this possibility a reality would require further improvements in the measurement of the efficiency and effectiveness of public spending." (Mandl et al., 2008)

**Summary**

From the viewpoint of Slovakia, it appears that in order to avoid long-term muddling through a middle-income trap, the case of Finland (and other successful Scandinavian countries of similar size) is worth further study for the purpose of tailoring the proper set of policy recommendations.

Apart from the country specifics, there is a number of economic policy recommendations and key institutions policies that seem to be also transferable to the Slovak Republic.

The key economic policy recommendations, that according to Dahlman, Routti and Yla-Anttila (2006) could be replicable in Central Europe include:

- Strong rule of law,
- Strong governance and accountability,
- Stable macroeconomic policy,
- Strong financial sector,
- Openness to outside ideas and a free trade regime,
- Strong focus on encouraging domestic competition.

**References for this article are available online at: http://bit.ly/1LUqtHv.**



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The Visegrad countries are developing as key-players on the global arena. Their businesses have become partners for some of the biggest investment companies in the world and they are now initiators of economic development in Central Europe. Nevertheless, each of the Visegrad countries presents some of the determinants of middle-income countries and might be threatened with an economic slowdown, as characteristic of a middle-income trap. Our main aim is to provide tailor-made policy recommendations for V4 countries to escape this threat.

The publication *Middle-Income Trap in V4 Countries? – Analysis and Recommendations* presents the results of a year-long project, initiated and led by the Kosciuszko Institute. The project was co-financed by the International Visegrad Fund and realized in cooperation with partner think-tanks from the Czech Republic, Slovakia, and Hungary. The project is under the honorary patronage of the National Bank of Poland.

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