UNEMPLOYMENT IN SLOVAKIA BETWEEN 1998 AND 2016 – ONE OF THE SYSTEMIC PROBLEMS OF THE NATIONAL ECONOMY

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Abstract
Since economics emerged as a distinct field of study, no other single factor has occupied so central an analytical role as labor. The main goal of this paper is: (i) to review recent labor market developments; and (ii) to examine the causes of selected structural problems in the Slovak labor market. The Slovakian unemployment rate is one of highest in the European Union. Long-term unemployment is a significant part of this unemployment. This paper looks at the reasons for this long-term unemployment. Slovakian unemployment is the main economic problem in Slovakia, affecting not only economic growth but also the social stability of some families. Regional differences are examined in this paper as well.

Key words: *economic policy, employment, jobs, unemployment, social policy*

JEL Classification: *A1, E2, F2*

I. INTRODUCTION

The National labor force is one of the key determinants of success in the international competition between nations. The ability to compete internationally in the labor market reflects on the overall competitive ability of the national economy. The labor market consists of the demand for workers, which is created by employers, and the workforce, consisting of those individuals seeking employment. The motivation of each actor in the labor market is different. Employers, on one hand are are aiming to maximize profit. That means that when real wages are growing *w/P* (w stands for nominal wage, P for price level,) employers demand less work. On the other hand, individuals offer more work when real wages *w/P* are growing. The labor market will be cleaned up at the point *[L*; (w/P)*]* that corresponds to the aggregate employment level *L** and the real wage rate *(w/P)**. At this point, individuals offer exactly the amount of work that employers hire. This status is called full employment and represents the level of the natural rate of unemployment. During periods of full employment there will continue to be frictional and structural unemployment. Frictional unemployment is the result of the constant movement of the workforce in the labor market, including people leaving jobs and looking for new jobs, new entrants into the job market and those who are re-entering the workforce, for example people returning to work after taking parental leave. Frictional unemployment is a reflection of the time spent looking for employment during these transitions. Structural unemployment is linked to the mismatch between supply and demand in the labor market that arises from the expansion or decline of individual sectors. Structural unemployment is a case in which, given the supply of available labor, it is possible to reduce unemployment by moving the unemployed between sectors, professions and regions. (Jackman, Roper, 1987)

Unemployment is one of the most serious economic and social problems. It is usually measured by the unemployment rate indicator *u* where *L* represents the number of employees and *U* the number of unemployed: *u = U / (U + L)*. The unemployment rate is the term used in the case of lacking paid workplaces for the workforce that are suitable and qualified for work. It is shown, it is defined as the percentage of individuals in the labor force, who are in search of a job, but who do not have a place to work. (Aurel, 2017]

II. THE LABOR MARKET THEORY WITHIN DIFFERENT ECONOMIC SCHOOLS

The importance of labor as a production factor has been commonly emphasized already in English mercantilist literature, but emphasis has traditionally been placed on the amount of labor supply related to public power policy primarily oriented towards securing the largest amount of labor at the lowest cost.

Adam Smith (1925) emphasized the primacy of work as a decisive source of economic wealth in the introduction of his *magnum opus* The Wealth of Nations. Smith did not consider all work to be of equal

economic significance. He measured a country´s wealth by the proportion between the number of those who were employed in useful labor (as he called it), and those who were not so employed. One of Smith´s main tasks was to seek out the cause of the improvement of labor productivity. These he found principally in the phenomena of economic specialization and the division of labor. The recognition of the importance of this division within society was not original with Adam Smith. In a work as early as Plato´s Republic (1871), we find division of labor identified as economically significant. *"…all things are produced more plentifully and easily and of better quality when one man does one thing which is natural to him ... and leaves other things.*" (Plato, 1871, p. 191)

Ricardian economics (Ricardo, J. S. Mill, Marshall, Edgeworth, or Pigou) represents the beginnings of the classical system. From the standpoint of their formal theoretical systems, the classical economists approached the study of the labor market mainly in terms of its proportional share of the income of the nation. For them the question of what determined the general level of wages constituted the principal problem. Classical economic thought concerning wages centered upon the doctrine of the wages fund. It represented a theorem concerning the demand for labor rather than a theory of wages. One of the main principal weaknesses of this doctrine was its reliance upon what seems an almost naïve belief in the fixity of factor proportions in the economic process. (Ricardo, Works, 1:95)

The classical theory of wages came under increasing attack in 1860s, and following the publication of W. T. Thornton´s On Labor, was explicitly repudiated by John Stuart Mill in 1869. (Mill, 1869)

Clark (1894, 1902) has been able to integrate the classical theory of declining yields with a neo-classical marginalist approach – the notion that competitive prices are determined on a margin unit by contribution to the utility or production of the final piece or agent. This theory applied equally to all factors of production and effectively brought together the concepts of production and distribution, fully incorporating the concept of labor into the competitive market scheme. Marginal productivity in Clark´s terminology is the key to the natural law of wages that he had sought.

Prewar economics of labor was enriched by Pigou (1943). He had a keen interest in the quality of labor and placed much emphasis on the value of education and training in enhancing labor productivity. He emphasized that the world of ideas was the real source of economic well-being.

A second major contribution to the prewar economics of labor was J. R. Hicks. In his work, Theory of Wages (1932) (Hicks, 1935) Hicks examined the increase in the power of trade unions and state wage regulations. He stated that the theory of determination of wages in the free market is simply a special case of the general theory of value. *In genere* Hicks is one of first economists to bring the problem of trade unions into labor economics.

John Maynard Keynes (1936) in his *magnum opus* The General Theory of Employment, Interest and Money, criticized the neoclassical concept of voluntary employment. According to Keynes, aggregate demand determined the overall level of economic activity in a country and inadequate aggregate demand could lead to prolonged periods of high unemployment. His paradigm states that, due in part to price stickiness, the interaction between aggregate supply and demand may lead to stable unemployment equilibria (something that neoclassical economists never supposed) – and in those cases, it is the state, and not the market, that economies must depend on for their salvation.

Austrian economics describes the main obstacles to the efficient functioning of labor markets as the activity of trade unions monopolizing labor supply and state intervention in the labor markets (primary minimum wage). Arthur Laffer, one of the main authors of Reaganomics, created the Laffer curve. Laffer pointed out that high tax burden on workers would lead to reduction in the amount of labor supply. Friedman focuses on adaptive expectations and applied the rational expectations hypothesis on the Philips curve.

The concept of human capital was prominent in economic thinking for a long time. Modern labor market theories emphasizing human capital are based on a large number of its predecessors such as William Petty, Adam Smith, Nassau Senior, A. C. Pigou, and others, highlighting in particular the national resources of human capital. The modern work on human capital, however, bears little resemblance to its intellectual antecedents except perhaps in terms of its most fundamental conceptualizations, for it represents a more theoretically quantitatively and rigorous oriented approach. Founders of the modern concept of human capital are identified as J. Mincer, T. W. Schultz and mainly G. S. Becker. These authors emphasize that human capital is the ability, skill, and motivation to apply these abilities and skills. (McNulty, 1980, Kadeřábková, 2003).

Becker´s (1964) analysis focuses on tuition of college students. He proved that the wages of trainees did not match their marginal earning but were lower than the total cost of their training because these trainees were willing to pay for education that would increase their value in the future for other employers. In terms of economic concepts, human capital is therefore perceived as a long-term investment, either in education or training, and other factors increasing the qualification of the labor force.

III. THE DEVELOPMENT OF UNEMPLOYMENT IN SLOVAKIA AND COMPARISON WITH SELECTED COUNTRIES

Figure 1 compares the unemployment figures in Slovakia between 1998 and 2016 with countries in the political alignment known as the Visegrad Group (consisting of Czech Republic, Hungary, Poland and Slovakia, and also known as the V4). Slovakia and the other countries in the V4 have frequent multilateral negotiations and close political and economic ties. Figure 1 also includes Germany, (the main Slovakian economic partner,) the 28 European Union countries and the 19 Eurozone countries.

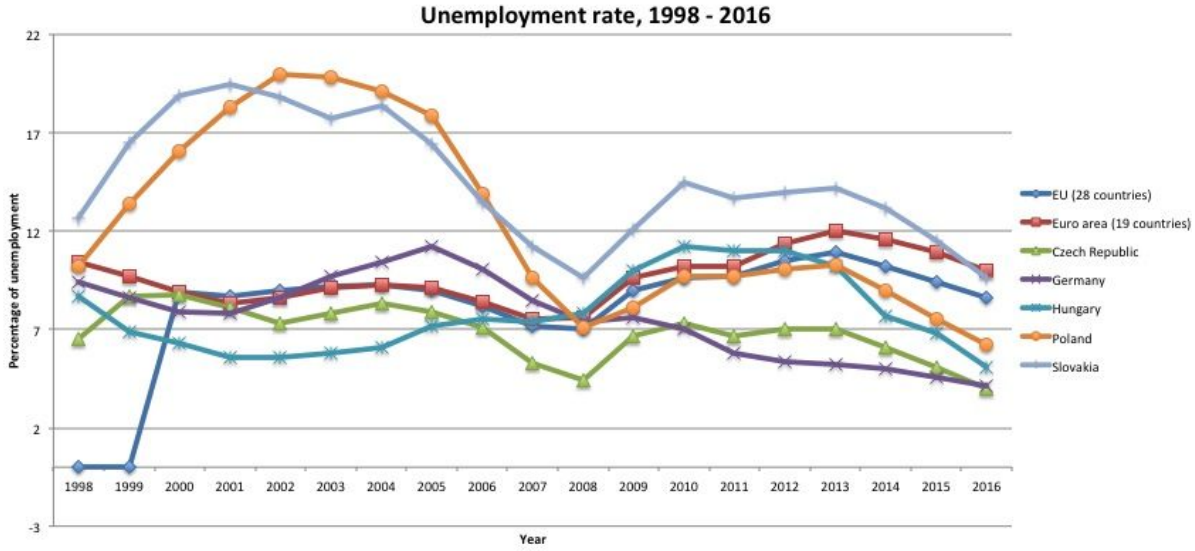


Figure 1 – Development of unemployment (1998-2016)

The source of the information in Figure 1 is Eurostat. Unemployed persons are defined as comprising of persons between 15 and 74 years of age who were: (i) without any work during the reference week; (ii) at a time available for work (means were available for paid employment or self-employment before the end of the 2 weeks following the reference week); (iii) actively looking for any paid work (means had taken steps in the 4 weeks period ending with the reference week to seek employment or self-employment or who found a job to start later (means within a period of, at most, quarter of the year)).

It is obvious that unemployment is a long-term problem in Slovakia. Slovak unemployment is one of the highest in international comparison. Over the last 18 years, the average unemployment rate was 14.5 %, well above European Union average (or OECD average). The Slovak labor market was considerably weaker when compared to neighboring countries. Among the surveyed countries, only Poland had higher unemployment figures (between 2002 and 2006). Even in 2008, when Slovakia experienced its lowest unemployment rate, this rate was still one of the highest in the European Union. In the pre-crisis period (before 2009) long-term unemployment has decreased. In 2009 (with the arrival of the crisis) unemployment is again considered the main problem. The Slovak financial sector has not been hit as much as in other countries, but the labor market was the most affected. A small and open export-oriented economy is dependent on the economic situation of its business partners. The financial crisis was imported into Slovakia. The slowdown in economic growth followed by a recession led to a significant drop in orders (the most important sector of the Slovak industry is the automotive industry) and the fall of many Slovak firms into red numbers, resulting in mass redundancies. The Slovak economy has lost more than 140,000 workers in a short time. (Dinga, Ďurana, 2015)

The source of the information in Figure 2 is Eurostat. The share of long-term unemployment is the share of unemployed working force (unemployed 12 months or more) in total active population.

It is clear from Table 2 that most Slovak unemployment is long-term unemployment. This was a fact even before the financial crisis in 2009. The problem the long-term unemployed face is that the longer they are out of the workforce, the harder it is for them to find new employment. Their skillset and training become outdated or replaced by newer innovations, that they are not exposed to. Long-term unemployment in Slovakia is significantly higher than the average in the European Union and Eurozone countries. In comparison with other EU countries, only Croatia, Spain and Greece have higher long-term unemployment rates.

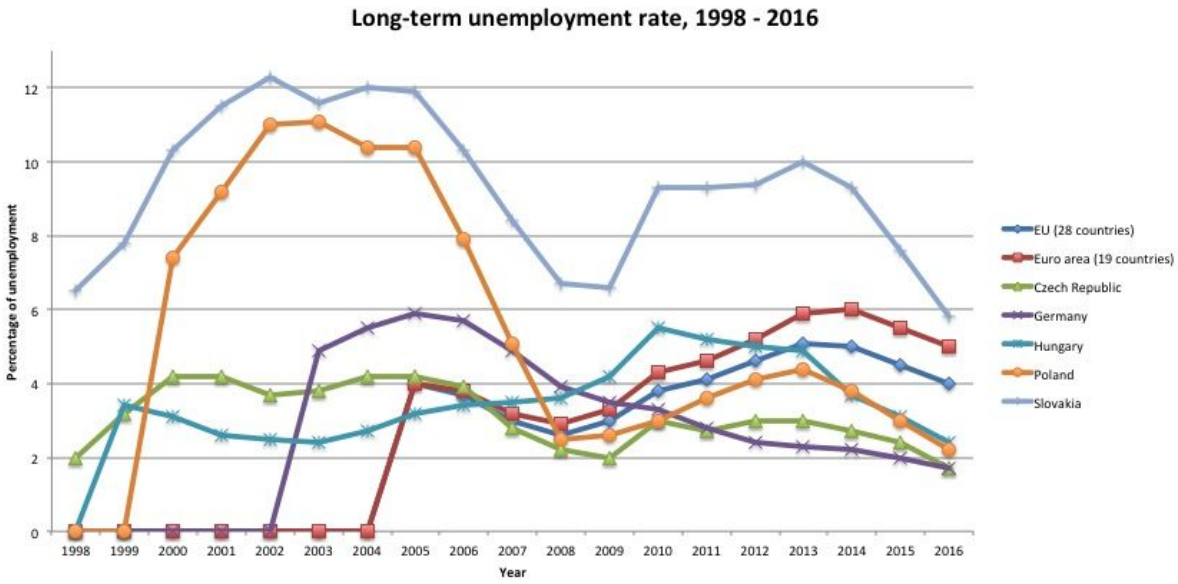


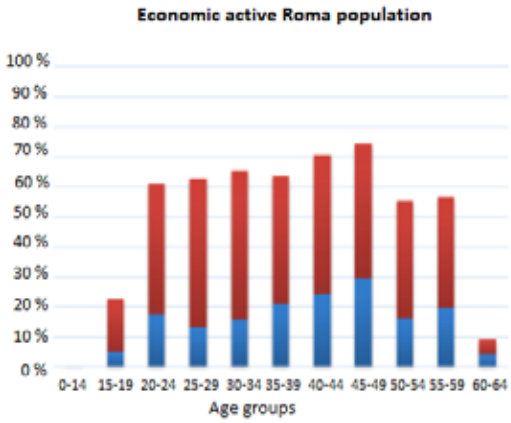
Figure 2 – Development of long-term unemployment rate (1998-2016)

IV. MAIN REASONS BEHIND THE HIGH UNEMPLOYMENT RATE

In general, the reasons behind Slovakia's persistent unemployment problem are the following:

(i.) **Poor structure of the economy**. Slovakia's persistent unemployment might have its roots in the fact that much of Slovakia's industrial development took place during the socialist regime. (Compare this to Czech industrial growth, which began prior to World War II). During the era of communism, Slovak industry was heavily dependent on the importation of cheap energy and raw materials, primarily from the Soviet Union. Almost one quarter of the machine and electrical industry was based on arms production. The post-communist economic transformation hit the labor market much harder in Slovakia than it did in the Czech Republic. (Stroehlein *et al*., 1999) (Stroehlein, 1999). Since the opening up of markets to the world economy after the Velvet Revolution, Slovakia has experienced a relatively rapid growth in labor productivity, but this was accompanied with relatively low net job creation. The growth rate was driven by new export-oriented sectors with relatively low labor-intensity. The positive demand effects of global integration of Slovakia in the world economy have been offset by international competitive pressure, leading to labor saving growth without generating a large number of working positions. (Onaran, 2008)

(ii.) **Exclusion of low-skilled and discriminated Roma population reduces labor supply**. Of the estimated 400,000 Roma in Slovakia, only approximately 130,000 Roma are registered as job-seekers. Besides a high unemployment rate, the Roma adult population face low labor market participation. Almost 40 % of the Roma population is out of the labor force – neither employed, nor looking for a job. These inactive persons are very often socially excluded and the longer they are out of the workforce their abilities and skills rapidly deteriorate. Their disadvantage in the labor market is defined by their low qualification and they often come from a socially unfavorable environment. Many young Roma do not finish school and after their initial job searching period they soon become discouraged. A large number of the younger Roma population are not seeking jobs and are out of the labor force mainly due to family reasons. This population is, on average, more likely to have a family and children, which affects the amount of time they can devote to the searching of a job. More than 10 % of the Roma population who are of working age are inactive due to family reasons (compared to 1 % among the majority population). Also, many Roma have given up on seeking a job due to the scarcity of job opportunities for them. They do not believe there are jobs available for them. (Machlica, 2014)



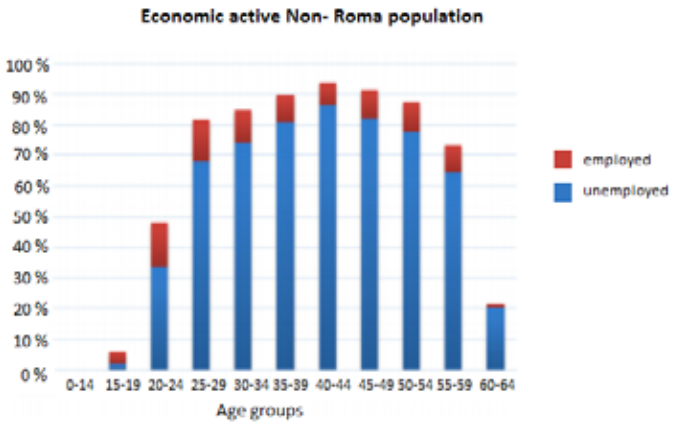


Figure 3 – Economic act. Roma pop.

Figure 4 – Economic act. Non-Roma pop.

Low performance of the Roma population in Slovakia in the labor market can be summarized in a few main points: wide-spread discrimination, different preferences of Roma population (for example time and societal preferences) and low education and qualification.

(iii.) **Tax burden on labor income, especially for low-skilled workers.** High employer social security contributions account for a large part of the high tax burden on labor income and labor costs for employers. Because of the relatively low skill levels of workers in Slovakia, the high employer social security contributions price the low skilled labor force out of the labor market. Roughly half of Slovakian tax revenues are from personal income taxes and social security contributions (53.5 % in 2013), which is a slightly higher share than the average in Organization for Economic Co-operation for Development (OECD) countries (51.9 %). Moreover, employer social security contributions accounted for about 24 % of total labor costs in Slovakia, while the average in the OECD countries is 14.3 %. (Remeta, 2015) At the same time, high employer contributions reduces job creation and acts as a barrier to higher employment as the gap between labor productivity and costs of labor. Higher levels of social transfers are often associated with a higher probability of workers being inactive or unemployed for longer periods.

(iv.) **Low level of skills and the declining trend in demand for manual workers**. The Slovakian economy demonstrates relatively weak performance in OECD skill related assessments. For instance, Slovakia ranked in the bottom 25 % among EOCD countries on the PISA mathematics and reading assessments, which is an achievement test given to 15 year old students to analyze whether they have acquired the skills and knowledge necessary to actively participate in modern society.

These low levels of skills are likely to affect productivity in the future. Moreover, thanks to changes in technologies and innovations, the economy can produce more material goods with less need for human capital. At the same time, globalization is shifting job production to poorer parts of the world with lower labor costs. This has affected employment in some sectors as well as in whole Slovakian economy. For instance, in 2008, 640,000.00 Slovaks worked in industries. This represented 26.3 % of labor force. By 2014 that number had dropped to 550,000.00 or 23.3 % of labor force.

(v.) **Impact of minimum wage on Slovakian labor market.** In the Slovak Republic the minimum wage is 435 EUR per month. (From the employer's perspective, of course, the total cost of labor is more substantial, see point iii, above.). According to surveys (for instance Brezáková, Pániková: "Influence of minimum wage on labor market – case of Slovak Republic") the minimum wage has a significant influence on employment in the Slovakian labor market, varying in size and effect between different groups. This significant influence on employment in the Slovak Republic can be seen primarily in the sectors of the labor force with below average wages (low skilled workers, low educated workers, low qualified, etc.). Employers will not hire job-seekers if they believe the worker will not produce value in excess of the minimum wage cost to the employer. As the minimum wage increases more job-seekers get priced out of the employment market. A high minimum wage results in the exclusion of the most vulnerable from the official labor market. Job opportunities of this group are limited. (Wilson, 2012)

Table 1. Differences in labor market between districts in Slovakia

Regions	Unemployment rate (%) *	Average gross nominal monthly wage (EUR)**	Nominal minimal monthly wage (EUR)	Share of the minimumwage to the average wage (%)
Prešovský kraj	11,31	683	435	63,69
Košický kraj	11,08	803	435	54,17
Banskobystrický kraj	10,07	751	435	57,92
Žilinský kraj	5,43	786	435	55,34
Nitriansky kraj	4,99	736	435	59,10
Trenčiansky kraj	4,09	812	435	53,57
Bratislavský kraj	3,60	1122	435	38,77
Trnavský kraj	3,11	799	435	54,44

Refences: Štatistická ročenka regiónov Slovenska 2016, Štatistický úrad SR, own calculations
* to date 1. 6. 2017
** year 2015

Significant regional differences also confirm the data of the Statistical Office (Table 1). In regions where the ratio between the minimum wage and the average wage is higher, the minimum wage limits the emergence of job opportunities more markedly than in economically more advanced regions.

(vi.) **Regulations on labor market and high levels of bureaucracy.** Different studies show that regulations implemented to protect employees have a negative impact on the absorption of the unemployed into the labor market. These types of regulations block the hiring process. Increased regulatory costs associated with terminating employees tends to discourage employers from hiring during periods of economic growth, because it will be too expensive to dismiss employees if the trend of economic growth is not sustainable for a longer period. (Condratov, 2014)

With regulations come associated bureaucratic complexities. For example the employment of one person can require as many as 84 bureaucratic acts over a period of 12 months. (Dinga, Ďurana, 2015) High regulatory burdens act to discourage employers from employing new workers and at the same time results in a shift of labor to the sphere of the gray economy.

(vii.) **Low mobility of labor force.** Labor mobility in Slovakia is the lowest among OECD countries. (Table 4) Even the higher salaries available in Bratislavský kraj (see Table 1) do not attract workers from economically less-developed regions. Thus, the low mobility of the labor force curbs the adjustment of job opportunities in the job market at the national level (Machlica, 2014) Many job-seekers in Slovakia refuse offered jobs in other parts of the country, because of commuting and the expenses associated with relocating to a more distant working place. Residing in areas with under-developed infrastructure may significantly increase travel time to more developed regions. A majority of the unemployed live in their own family houses located predominantly in areas with poor infrastructure and outside of the main economic centers (due to historical reasons people in these areas mostly live in houses they own).

Annual regional migration rate, average 2011-2013

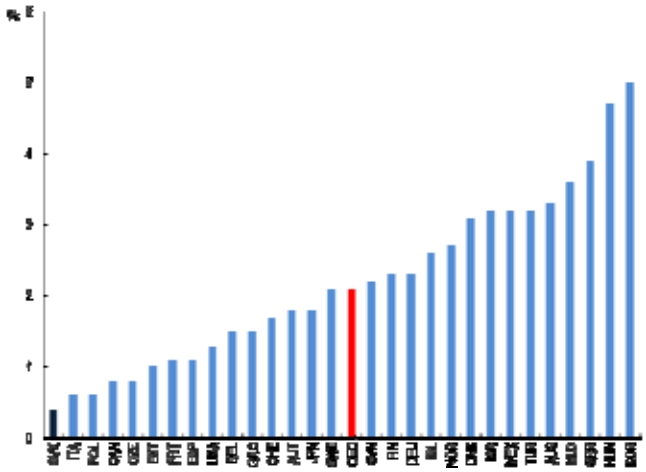


Figure 4: Flows across TL3 Regions, % of total population

V. CONCLUSION

According to the analysis, unemployment is a long-term problem in Slovakia. Over the last 18 years the level of unemployment in Slovakia was well above the European Union average. The labor market was considerably weak even when compared with neighboring countries such as the Czech Republic, Hungary, Poland or Germany. The Slovakian financial sector has not been hit as much as in other countries by the 2009 financial crisis, but the same cannot be said about the Slovakian labor market. The main problem of the Slovakian labor market is long-term unemployment. This was a fact even before the 2009 crisis. Once again long-term unemployment in Slovakia is significantly higher than the European Union average.

Based on the research findings, this study has come to the conclusion that a majority of the unemployment problem in Slovakia is caused by following reasons: poor structure of the economy; exclusion of low-skilled and discriminated Roma population; tax burdens on labor income; low skill levels and declining trends in the demand for manual workers; the impact of minimum wage on Slovakian labor market and the high level of regulations and bureaucracy**;** and low mobility of Slovakian labor force.

VI. RECOMMENDATIONS

The Slovakian economy is too dependent on EU funds. Nevertheless, funds need to be primarily directed towards less-developed regions. Regional cohesion needs to be based on increasing not only the number of jobs in less-developed and vulnerable regions, but also by developing better transportation infrastructure between regions. Increasing the mobility of the labor force could have a significant effect on reducing unemployment.

Changing labor force productivity, particularly important at low skills levels, should be increased through reforms and investments in education and training. These efforts would require structural changes in the Slovak Republic and only have effects in the long run. The business sector, in addition to the government sector, needs to play a more active role in raising worker skills and qualifications.

Lowering the tax wedge for low-paid and low-skilled workers to ensure that the costs of employing them are not excessive relative to their productivity is an effort which would work in the short run.

Minimum wages should be regionally determined. There is a huge wage gap between more and less-developed regions in Slovakia. The minimum wage should be based on average salary in these regions. It would be more economically advantageous to abolish the minimum wage altogether. The question is whether this is politically viable and possible in the context of the current political situation in Slovakia.

Decreasing government unemployment benefits will increase the motivation of the low-skilled labor force to seek jobs. The social benefits network has become a feather and not a trampoline to help the unemployed return to the working process.

Including Roma children into preschool education to improve and change their future employment prospects is necessary. Early intervention in terms of childhood education could be seen as a long-run investment. Preschool education should become compulsory and access to preschool facilities should be eased. Roma speaking teachers should work in preschool facilities. In problem regions, the number of primary school teachers should be increased. The enrolment rate of Roma children in compulsory education is quite similar to the majority of population in Slovakia, but this number sharply decreases in high school. State policy should work on getting Roma children to complete high school and to enter universities.

VII. ACKNOWLEDGMENT

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