

# Small and Medium-Sized Enterprises in the Context of Regional Development of Slovakia

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**Abstract**—Regional development is a process of objectively implemented changes that have a positive impact on the comparative advantages of the regions, economic performance and affect competitiveness of the regions. Regional development therefore means the development of a defined territory, as well as practical activities performed by actors operating in the region. The set of activities pursued has directed towards - economic development, social development, environmental development, but also development of transport and infrastructure, or development of business environment. The study deals with the development and changes of selected socioeconomic factors of higher territorial units in Slovakia and with the analysis of the development of small and medium-sized enterprises (SMEs) in Slovakia. Analysis of economic and social indicators in the context of the evolution of SMEs have had their reasons. The emergence and development of SMEs in the conditions of the Slovak Republic has very closely related to the regional development that has occurred in recent years in Slovakia. Paper has been prepared by using the secondary analysis and comparative analysis of socio-economic statistical data from Statistical office of the Slovak republic to analyze the impact and status of development of SMEs in context of regional development. Part of the observed differences in regional development may be due to commuting to work. By working in one area and living in another region, commuters have tended to increase GDP per capita in the region where they have employed and to decrease GDP per capita in the region where they have resided. Due to the action and existence of SMEs, regions have gained a competitive advantage.

**Keywords**—*regional development, Slovakia, economic growth, small and medium-sized enterprises*

## I. INTRODUCTION

The business environment is still a crosscutting topic of many studies and researches. Governmental changes in individual policies directly affect and influence it. The topic of sustainable development have resonated in studies, analyses, policies and strategies of many major world or international organizations. The European Union (EU) is engaged in sustainable development issues, too. Many policies of the EU have focus on promoting development. Cohesion policy is one of these policies. The focus of cohesion policy has geared to economic, social and territorial cohesion and solidarity between Member States. Implementation of the policy has applied through the established financial instruments, called Structural funds.

Cohesion policy has programmed for a 7-year period and its objectives have geared to regional development. Regional policy represents one of the European Union's investment

policies. Through effective regional policy, it is possible to ensure the development of the region, which has had a positive impact on the development of the business environment. Small and medium-sized enterprises (SMEs) have had a significant impact on economic performance and employment; they are the driving force behind innovation, employment and social integration. SME support has represented part of the European Union's investment policies as well as support for regional development.

## II. RESEARCH OBJECTIVE

The primary purpose of regional development is to achieve sustainable regional development at different social and economic areas. Sustainable regional development could be achieved by mixing social and profit-oriented activities to achieve the increasingly potential for realization of the planned economic value. In order to do so, a well-structured system and supporting environment in the society must be achieved. The research objective of this paper has been to conducts analysis of the following elements of regional development: the context of regional development and evaluation of actual situation of SMEs in Slovakia. The goal has been to analyze the current situation, as well as the needs, challenges and opportunities for development of SMEs in the Slovak regions on the regional level NUTS3 (self-governing regions), through a statistical socio-economic analysis of selected regional indicators. Such analysis, covering the strengths and weaknesses of various areas relevant to the development of entrepreneurship in the region, although largely fragmented, has represented a core concept for further activities and actions. Paper could serve as a guide for the next steps of our research through clear findings, conclusion and recommendations.

## III. METHODS

The research has processed by using a wide scale of the scientific methods and procedures. First part has focused on the different definitions. This section was prepared by using the analytical methods – casual analysis and synthesis. Scientific publications, scientific articles, papers by various authors have been analyzed for preparing the theoretical background of paper (e.g. Smoleň, and Dudic [1]; Kajanová [2]; Výrostová [3], Buček and Rehák and Tvrdoň [4], Cihelková [5], Maier [6], Rentková and Roštárová [7], Šlahor, Komorník, Gabrišková, Vicieník [8] or Simanová and Stasiak-Betlejewska [9], Šlahor, Barteková and Gasperová [10]). Results part has consisted of the main findings according to statistical data obtained from the Statistical Office of the

Slovak republic [11], [12] and Slovak Business Agency [13]. Paper has been prepared by using a comparative historical and descriptive analysis as well as empirical case study of situation of SMEs in context of regional development. Based on the findings, recommendations for future research have provided in conclusion of paper.

**IV. THEORETICAL BACKGROUND**

The concept of a region has many meanings and definitions. Defining and classifying regions is possible based on the definitions written in the publications of various authors, such as Vrostová [3], Buček - Rehák - Tvrdoň [4], Cihelková [5], Maier [6]. The region can generally be defined as a boundary. A more detailed definition has derived from the approaches and selected criteria for the purpose of the definition. The basic definition of the region has provided in Slovakia by law. Act No. 539/2008 Coll. on support for regional development, as amended. [14] §2 par. 1 states: “a region is a territorial unit defined according to the classification of statistical territorial units.” Slovak legislation has referred to the Decree of the Statistical Office of the Slovak Republic No. 438/2004 Coll., as amended [6]. The Decree issued a classification of statistical territorial units dated July 19, 2004. The Decree has regulated the classification of statistical territorial units for the needs of regional statistics, particularly in view of the need to identify comparable regional statistical data within the European Statistical System. Classification has divided territory into 3 regional levels (NUTS 1 as a whole country, NUTS 2 as a region, NUTS 3 as a self-governing region) and 2 local levels (LAU 1 as district, LAU 2 as municipality / city), in case of the Slovak Republic. The areas of the NUTS 2 regional level have covered:

- the Bratislava Region (the area has defined by the territory of the Bratislava Self-Governing region),
- West Slovakia (the area has defined by the territory of the Trnava Self-Governing region, Nitra Self-Governing region and Trenčín Self-Governing region),
- Central Slovakia (the area has defined by the territory of Žilina Self-Governing region and Banská Bystrica Self-Governing region)
- East Slovakia (the area has defined by the territory of Prešov Self-Governing region and Košice Self-Governing region) [6].

Spatial economics in the region's analysis has based on the definitions of Janović [5]. “The region is a clearly demarcated geographical unit that has its political, governmental and administrative, ethnic, social, human and cultural dimensions.” Cihelková has added the economic dimension to economic analysis [5]. The region's analysis has focused on the concrete indicators of economic development, which may been the region's production factor, the availability of factors of production, the degree of mobility. Regional Economy has analyzed the region as an open economy with interactions to other regions. In this context, analysis of regional development has been important.

The European Parliament (article 2) defined sustainable development. “Sustainable development means the improvement of the standard of living and welfare of the relevant populations within the limits of the capacity of the

ecosystems by maintaining natural assets and their biological diversity for the benefit of present and future generations.” [15]. European strategy for sustainable development has covered economic, social, environmental and financial aspects, as well as coherence of European policies and governance at all levels:

- harnessing globalization: trade for sustainable development;
- fighting poverty and promoting social development: to reduce extreme poverty in the world by 2015 (people who live on €1 a day or less);
- sustainable management of natural and environmental resources: to reverse the trend of the loss of environmental resources by 2015 as well as to develop intermediate objectives in the sectors of water, land and soil, energy and biodiversity;
- improving the coherence of EU policies;
- better governance at all levels: which means strengthening the participation of civil society, and the legitimacy, coherence and effectiveness of global economic, social and environmental governance;
- financing sustainable development [16].

“Regional development is a set of social, economic, cultural and environmental processes and relationships that are taking place in the region and which contribute to enhancing its competitiveness, sustainable economic development, social development and territorial development, and balancing economic disparities and social disparities between regions” [14]. Actually, many approaches, models and concepts have explained regional growth and development. Each concept has explained regional development from a different perspective otherwise formulated recommendations and suggests strategies. Research analysis has used the division of concepts by the group of authors around Buček [4]. The authors used the distribution of Capellini and Moll, from which Maier and Todling [17], Pike and Rodríguez-Pose and Tomaney (2007) have based. Concepts have divided into exogenous concepts of regional development and endogenous concepts of regional development. First concepts have been oriented on support and intervention of external factors. Second concepts have been oriented to support for factors available to the region. Theoretical concepts based on endogenous factors point to the large role of small and medium-sized enterprises (SMEs).

SMEs have comprised three different categories on enterprises – micro-enterprises, small enterprises and medium-sized enterprises.

TABLE I. DEFINITION OF SMES

<b>Company category</b>	<b>Employees</b>	<b>Turnover</b>	<b>Balance sheet total</b>
micro	<10	< €2 million	< €2 million
small	<50	< €10 million	< €10 million
Medium-sized	<250	< €50 million	< €43 million

Source: [10]

The official European Commission definition of SMEs has taken account of three different factors as is shown in Table 1 [18]:

1. level of employment,
2. level of turnover,
3. and size of the balance sheet.

SMEs have been largely involved in regional development. SMEs have been major employers; fulfil the role of innovators and the user of the latest technologies. Problems of SMEs, their importance for the economy, the interdependence on regional development began to be addressed in the 70s of the 20th century. Interest in SMEs has grown mainly due to their ability to react flexibly to changes in the environment and their viability. SMEs have gradually become an important element of any market economy. The new formatting SMEs have been more effectively used available resources and introduced new business ideas and new approaches. The frequency of the emergence and disappearance of companies has been about twice as fast in the SME sector, which has contributed to increasing the productivity of the sector. The relationship between the emergence and disappearance of SMEs in the context of regional development has been analyzed by Buček, Reháč, Tvrdoň [4] on the base of Maier and Todtling [17].

SMEs, especially their founding, extinction and development have had a great importance in analysis of the regional development. The emergence and disappearance of large companies cannot be compared and analyzed just like SMEs. The conditions for regional development, regional attractiveness, regional competitiveness and the regional business environment have provided an important basis for the emergence and dynamism of SMEs development. If regional attributes have been appropriate, it can be discussed that SMEs are one result of regional development. Maier and Todtling [17] have identified two sets of factors:

1. Factors affecting the emergence of new businesses – regional, sectoral, size and qualification structures. A region with high barriers to entry, low dynamics, and low purchasing power, established by large firms has been less likely to be attractive for setting up new SMEs. On the contrary, a region with a higher level of education has been attractive for setting up new SMEs.

2. Factors affecting the development of newly established businesses have been access to risk capital, size and dynamics of the local market, sufficient production factors (land), effective and favorable local policy.

## V. RESULTS AND DISCUSSIONS

### A. SMEs

SMEs have been an important part of the business environment but have been the important base for economies of many countries. In 2017, SMEs in the EU-28 non-financial business sector accounted for [19]:

- almost all EU-28 non-financial business sector enterprises (99.8%),
- two-thirds of total EU-28 employment (66.4%),

- slightly less than three-fifths (56.8%) of the value added generated by the non-financial business sector,
- micro SMEs were by far the most common type of SME, accounting for 93.1% of all enterprises and 93.3% of all SMEs in the non-financial business sector.

The localization character has prevailed in SMEs, often representing local capital or local ownership. SMEs have been therefore indispensable for the region. In 2017, using the data from the Statistical Office of the Slovak Republic, 203,092 micro enterprises were registered in Slovakia. Fig. 1. has showed the development of the number of small enterprises in Slovakia.

Figures 1 and 2 have clearly showed that small enterprises (Fig. 1.) and medium enterprises (Fig. 2.) have significantly represented in the structure of enterprises in Slovakia. The development of the number of SMEs in individual regions has have a growing tendency.

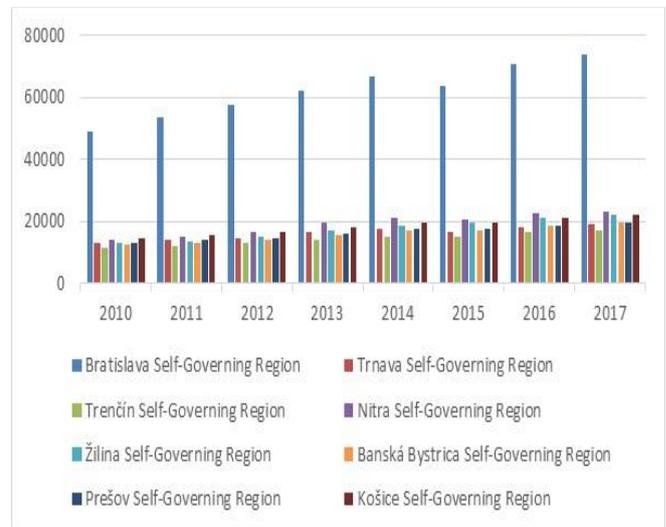


Fig. 1. Number of small enterprises in Slovakia 2010-2017. (source: authors)

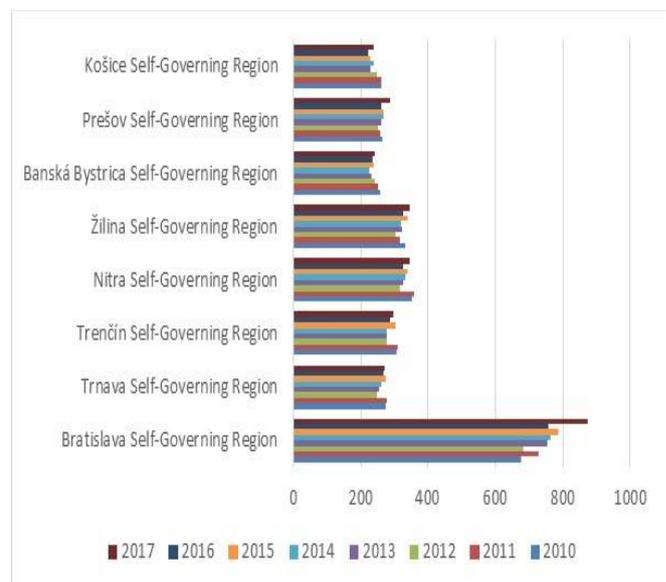


Fig. 2. Number of medium-sized enterprises in Slovakia 2010-2017. (source: authors)

The year-on-year decline in the number of small enterprises has been registered in the Bratislava Self-Governing Region (decrease by 4.80%), the Trnava Self-Governing Region (decrease by 4.31%), but the decrease was recorded also in Nitra Self-Governing Region and Prešov Self-Governing Region in the period 2014/2015. Year-on-year change, a decrease in the number of medium-sized enterprises has been recorded for most self-governing regions in the years 2001/2012 and 2015/2016. The number of medium-sized enterprises declined continuously in Košice's self-governing region from 2011 to 2013.

The development of the number of established SMEs has not been consistent in Slovakia over the past ten years. After 2008, the number of newly emerging SMEs has greatly reduced because of the crisis. The business environment was gradually getting out of the crisis, but the number of newly emerging SMEs grew slowly. Fig. 3. has showed different interesting findings. Due used data, the peak in abundance establishment of SMEs achieved in 2013. Then there was another fall, which could be due to the introduction of tax licenses in 2014. The reduction in the number of newly established enterprises can be observed between 2013 and 2015 by approximately 28%. After 2015, the number of SMEs created has risen again.

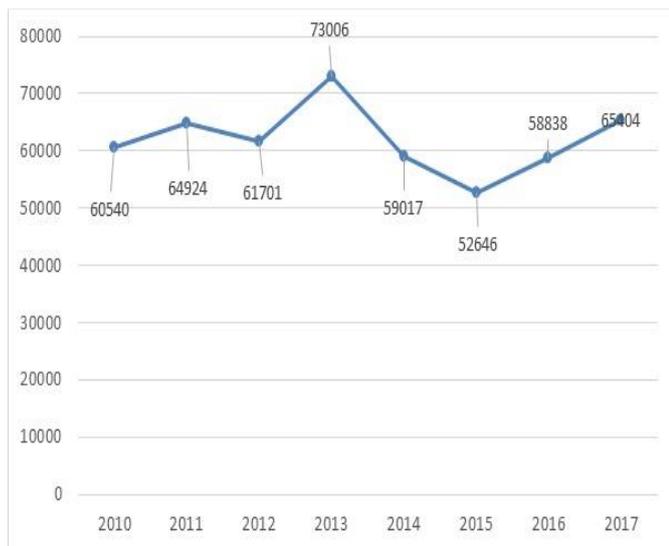


Fig. 3. Development of the number of SMEs in Slovakia 2010-2017. (source: authors)

The development of the number of newly established SMEs by region was similar. The difference can be found in the size of decline or growth. The growth in the number of newly established SMEs has been in the after-crisis period in all regions of Slovakia, with the peak reached in 2013. In 2014, there may be a significant drop in the number of newly established SMEs, especially in Bratislava region (a year-on-year decrease of 30%), Žilina Region (-14.53%), but also in Prešov Region (-14.82%). In Bratislava region, the number of newly established SMEs decreased by 32% in 2 years. In 2016 there was a recurrent increase, but the figure for 2017 still did not reach the 2013 values. The development for 2010-2017 has been prepared in Fig. 4. by using the statistical data. In the year-on-year comparison, the largest increase in the number of SMEs was in the Košice Region by 18.2%. After Košice region, the highest growth rates of newly established SMEs

was in Banská Bystrica Region (14.0%) and Prešov Region (13.6%).

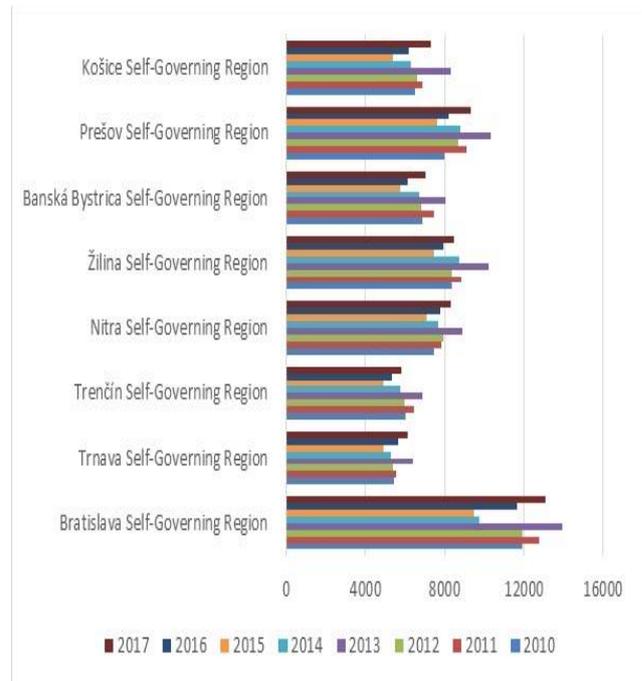


Fig. 4. Formation of SMEs/region during 2010-2017. (source: authors)

The trend of SME growth has been rising. The majority of SMEs disappeared in 2013. Even though the number of SMEs ceased to decline slightly in 2014 and 2015, in the years to come, the number of SMEs that have disappeared has risen again, as shown in the Fig. 5.

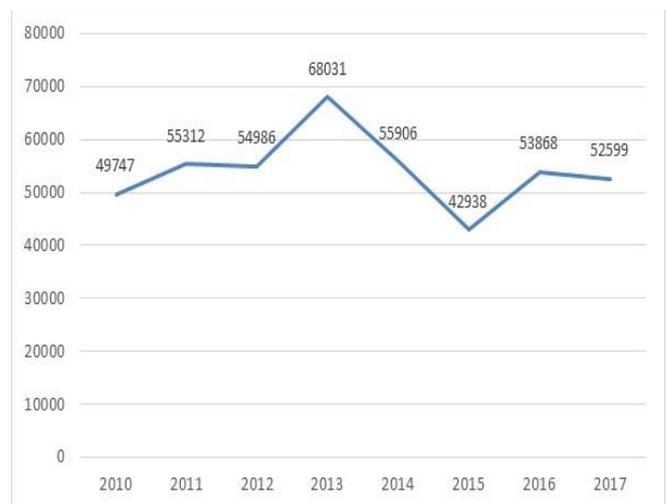


Fig. 5. Disappearance of SMEs during 2010-2017 in Slovakia. (source: authors)

Data in Fig. 6. show the development of SMEs that disappeared by region for the period 2010-2017. In 2013, the majority of SMEs disappeared in the Bratislava, Žilina and Prešov regions. In Bratislava region, the trend of the highest number of disappeared SMEs was maintained until 2017. The smallest SME disappeared during the reference period in the Trnava region.



Fig. 6. Disappearance of SMEs/region during 2010-2017. (source: authors)

**B. Regional Statistics**

Regional GDP (rGDP) has used to show the value of the final goods and services produced over a given period, mostly a calendar year, in the given region. Thus, GDP can measure production within a statistical territorial unit. In the case of rGDP, it is important to note that exclusively employees who have a permanent residence in the region did not have created the output of the economy in the region.

Differences in GDP per capita between regions of the same country were often significant, but it is very useful to know them. A target implemented regional or innovation policy could reduce the regional gap [20]. Regional GDP has used to evaluate the economic situation of individual regions and the analysis of their economic development. There is a noticeable difference between the regions in Slovakia.

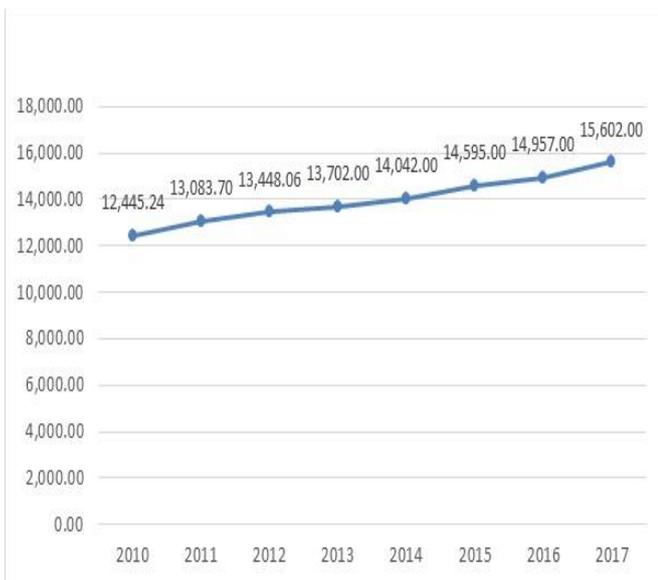


Fig. 7. GDP per capita at current prices for period 2010 – 2017 in Slovakia. (source: authors)

Fig. 7. show GDP per capita growth in Slovakia at current prices for 2010-2017. The year-on-year growth index is growing.

Fig. 8. illustrates the development of GDP per capita at current prices in higher territorial units in Slovakia during the period 2010 - 2017. In 2010, the rGDP for capita at current prices in the Bratislava region was EUR 30351, in 2017 the value was EUR 36705 that was the highest rGDP in Slovakia and far exceeded the average of Slovakia. For comparison, the rGDP in Prešov region was EUR 7163 in 2010 and value in 2017 was EUR 9338. Although the Bratislava region has seemed to be the first place in the development of rGDP, it is important to look at the percentage growth rate. In the monitored period, the indicator for the Trnava region was also above the average of Slovakia. However, it is essential to observe the percentage increase in the indicator. The indicator for 2010 and 2017 for the Bratislava region could be compared and the increase was approximately only 21%, on the other hand, the same indicator could be compared for the Prešov region and then, the increase was by 30.3%.

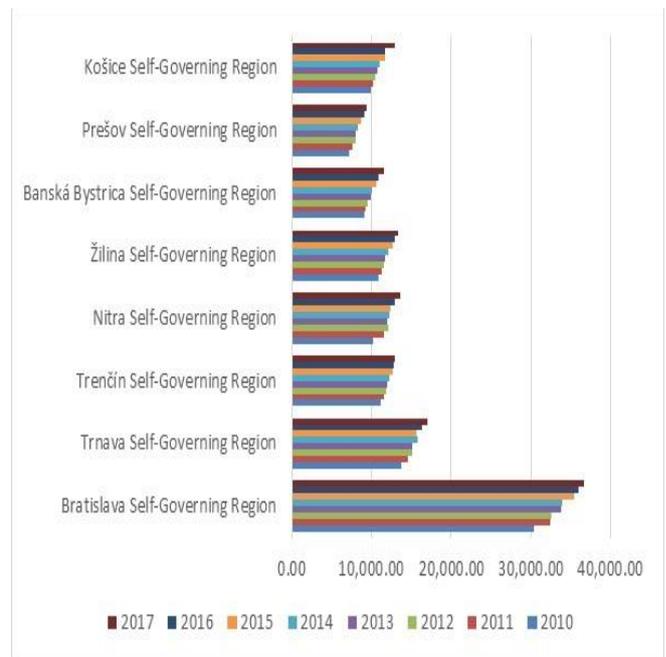


Fig. 8. rGDP per capita at current prices for period 2010 – 2017 in Slovakia. (source: authors)

While it is essential to monitor the development of socio-economic data in the analysis of regional development, it is even more important to monitor and analyze the development of social disparities. Labor market indicators have pointed not only on social disparities but also on point to economic disparities. The regional rate of registered unemployment has been an essential indicator of the labor market. The regional unemployment rate has showed that one of the production factors, namely labor, has been used inefficient. Regional unemployment could be used as an indicator of spatial disparities in social exclusion [3], [20]-[25].

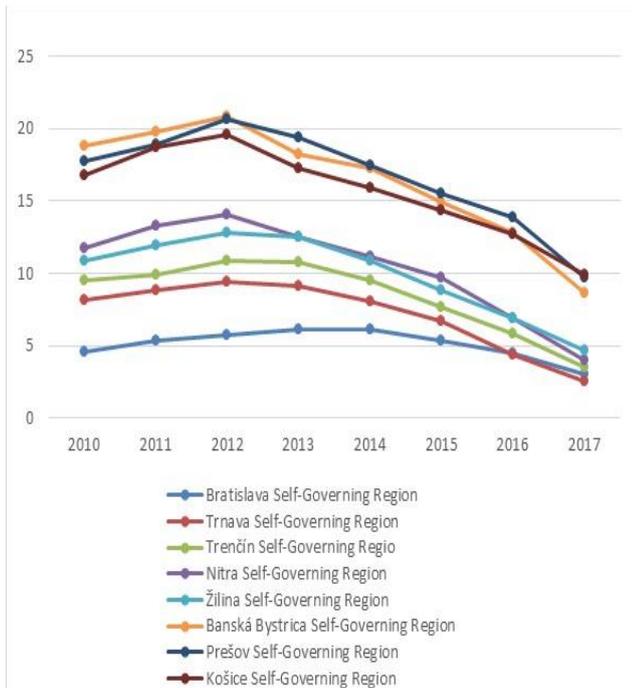


Fig. 9. Registered unemployment rate for period 2010 – 2017 in Slovak regions. (source: authors)

Fig. 9. shows the development of registered regional unemployment in Slovakia in the period 2010-2017 in the monitored regions. Fig. 9. shows that the lowest unemployment rate recorded in the Slovak Republic during the monitored period were the decrease from 4.63% to 3.05%. The development of the indicator was the same in all regions during analyzed period. The registered unemployment rate has been growing steadily from 2010 to 2012, in some regions to 2013. Since 2014, the unemployment rate has fallen. The most pronounced decline over the monitored period was in the regions of Banská Bystrica, Prešov and Košice.

## VI. CONCLUSION

Regional differences exist in every country. The selection of appropriate and correct indicators for their observation is important. When selecting socio-economic indicators, it is not important to observe only the development by using the time and value of this indicator, rather is more useful to use its year-on-year percentage increase or decrease. Part of the observed differences in regional GDP per capita may be due to commuting to work. By working in one area and living in another, commuters tend to increase GDP per capita in the region where they have worked and decrease GDP per capita in the region where they have resided. Thanks to the existence of SMEs in the region, it is possible to increase employment, increase regional GDP as well as regional income. An analysis of the number of SMEs emerging and disappearing in the region is also an important element that points to the business environment (regional, national) as well as the level of education (level of financial literacy and entrepreneurial literacy) in the regions. Statistics show that 8 of 10 established companies will survive first year, but only 5 out of 10 companies will live the fifth year of life. Due to the action and existence of SMEs, regions gain a competitive advantage. European cohesion policy supports the creation and existence

of SMEs. There are different reasons for interest in SME. SMEs have the ability:

- to create a large number of new jobs, new positions that are geared to the new needs of the labor market
- to influence the innovative potential in the region,
- to create a diversified and flexible industrial base and create a group of entrepreneurs who are able and willing to take risks in business,
- to stimulate intense competition, thereby creating an entrepreneurial culture of entrepreneurship,
- to create flexible networks and improve business relationships,
- to speed economic and social development and to reduce regional disparities.

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