

**Transformational processes
the development of economic
systems in conditions of
globalization: scientific bases,
mechanisms, prospects**

**Collective monograph edited by
M. Bezpartochnyi**

ISMA University
Riga (Latvia) 2018

**Ekonomisko sistēmu attīstības
transformācijas procesi
globalizācijas apstākļos:
zinātniskie pamati,
mehānismi, perspektīvas**

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The authors of the book have come to the conclusion that it is necessary to effectively use scientific approaches to the management of the development of economic systems, tools for optimizing economic activity in order to increase efficiency. Basic research focuses on assessing the effectiveness of innovation, inventory management, determining the cost of liquidation, forming national competitive advantages and levels of competitiveness, studying and managing business culture and ensuring food security. The research results have been implemented in the different models of financial intermediation and banking system, financial stability, bankruptcy procedures, increase of efficiency of transport and logistic processes, use of Internet technologies, ensuring the efficiency of international and global world negotiations. The results of the study can be used in decision-making at the level of international business, ministries and departments that regulate international relations, ensuring security and overcoming imbalances. The results can also be used by students and young scientists in modern concepts of the development of economic systems in a globalizing environment.

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**INNOVATION ACTIVITIES
OF SMALL AND MEDIUM –
SIZED ENTERPRISES AND
THEIR FUNDING IN THE
SLOVAK REPUBLIC**

It is generally acknowledged, that small and medium – sized enterprises (further as “SMEs“) are the backbone of all economies, as well as a key source of economic growth, dynamism and flexibility. Small businesses are particularly important for bringing innovative products or techniques to the market.

In Slovakia, similarly to other developed economies, SMEs are nowadays recognized and classified as a basis of economy. They represent 99.9% of the business sector. However, SMEs must overcome many obstacles in the implementation of innovative processes so they are often prevented from realizing their innovative ideas. Therefore, bigger attention and support from the state is needed in innovation area, particularly regarding small and medium-sized enterprises.

The aim of this article is to present innovation activities of SMEs and their funding in the Slovak Republic (SR). At the end we propose some measures for improvement of innovation activities of SMEs, esp. measures connected with their funding. Before that, we start with the overview of the history of SMEs in the SR, their environment and position in the national economy.

The bases of the study on SMEs in the SR and their innovation activities are legal acts of the EU and of the SR and statistics data. When writing this article, we used the methods of theoretical generalization, analysis and synthesis, analogy method, statistical analysis, abstraction and concretization, which enabled us to conduct a comprehensive study.

History of SMEs in the SR

Only little attention was paid to small businesses in a history. Business theorists have paid attention to the prosperity of large businesses. In the Slovak Republic, until 1990, no attention was paid to small enterprises, as this category of enterprises did not exist. In terms of development, particular attention was paid to SMEs in 1971 when the so-called Bolton's report (Great Britain) came into being. It has significantly changed the attitude towards small and medium-sized enterprises.

According to Bolton's report:

1. SMEs have a relatively small market share and practically cannot significantly affect the market in any way,
2. SMEs are managed by owners - entrepreneurs, owners' families, co-ownership and not mediated through the formal management structure,
3. SMEs are independent enterprises, they are not a part of another larger enterprise.

The viability of SMEs has steadily grown and significant features were attributed to them, as they have become the most powerful engine of any market economy due to their flexibility.

The rapid growth of SMEs in the world and the growth of their importance have been linked to, among other things, the rise in unemployment, which averaged around 5-6% in the second half of the 1970s. Gradually, however, it increased rapidly and reached more than 10%. In the 1980s, increased attention was paid to this issue and job creation programs were developed through direct and indirect support for SME development. In Slovakia, with regard to the beginnings of market economy development, this process took place only in the 1990s. Only in 1990, in connection with privatization and transformation of the economy, the importance of SMEs started to be considered more significantly in the SR. The rapid growth of SMEs in our conditions was recorded between 1991 and 1992, and their development was conditioned by a number of factors. We present the most important ones:

1. The gradual disintegration of large state-owned enterprises in the process of the first wave of large privatization and the emergence of a larger number of SMEs,
2. Return of property to citizens as part of restitution,

3. Liberalization of business relations and the emergence of a larger number of SMEs with foreign ownership (Belanová, 2015).

From the view of the recent past, world economic and financial crisis has had a major impact on the development of SMEs in the Slovak Republic as well as in other EU countries.

The number of medium-sized enterprises still remains below the level of abundance of entities in 2008, especially of small enterprises, as in 2016 it reached only 43% of the number achieved in pre-crisis year 2008. On the other hand, in 2016, for the first time since 2008, number of natural persons – entrepreneurs increased, not only of small and medium enterprises – legal entities. In 2016, the trend of declining of small and medium-sized enterprises was halted. In the year-on-year comparison, the number of established small and medium-sized enterprises increased by 11.8% (or by 6,192) to 58,838.

Small and medium-sized enterprises in the SR are defined according to the *European Commission* Recommendation 2003/361, which sets out the main factors for determining whether a company is a **SME**; number of employees and either turnover or balance sheet total. We can recognize three categories of enterprises: Micro (less than 10 employees, turnover or balance sheet total \leq 2 million EUR), Small (less than 50 employees, turnover or balance sheet total \leq 10 million EUR), Medium-sized (less than 250 employees, turnover \leq 50 million EUR or balance sheet total \leq 43 million EUR).

This categorization makes it possible to compare the situation of SMEs in the SR with the state of the business sector in the European Union.

Generally it can be stated that in a single market without national borders, it is important to base the measures in favor of SMEs on a uniform definition in order to ensure the comparability of data on SME development within the EU and to limit distortions of competition.

Environment of SMEs

Creation of an appropriate business environment is an important factor in the small and medium business (as well as in the whole corporate) sector development.

To get an idea on the development where the SMEs operate, we describe the state and ongoing trends within the environment of small and medium-sized enterprises in Slovakia.

Regarding the indicators of production and employment, we observe the following development.

In the years before the onset of the financial and economic crisis Slovakia reached accelerating pace of growth, in 2007 it was even the highest GDP growth of all EU countries. The intensity of the decline in 2009 is caused mainly by large openness of the economy, ie, its dependence on foreign trade. In 2016, the pace of growth, despite a slight slowdown compared to the previous year, exceeded not only the average of the European Union countries, but it also belonged to the highest among the neighboring countries, respectively euro area countries.

The high level of unemployment has been one of the most serious problems of the Slovak economy. After a gradual decline since 2004, the crisis caused a turning point here.

The situation has began to stabilize even in this area. In 2016, there was historically the highest number of employees. In the SME category (including NP – entrepreneurs), employment increased by 3.5% (by 46.4 thousand persons) year-on-year to 1 368 782 persons employed. Employment growth in the SME sector was the most significant since the pre-crisis year 2008. Because the number of economically active population has not decreased, the increase in employment has been also reflected in a decline of the unemployment rate, which has fallen to one-digit levels after ten years.

The growth rate of consumer price levels has had a downward trend in the long term (from 2000) with fluctuations in individual years.

Concerning the regulatory environment, there are various international rankings for its evaluation. They are a good reference for investments. There are dozens of them and they are developed by very different actors (from international institutions to credit rating agencies). We show the position of Slovakia in one of the most important ones, Doing Business, which is elaborated by the World Bank.

In the latest Doing Business 2018 rating, Slovakia has dropped from 33rd place to 39th place in the overall ranking. The spot rating deteriorated from 75.15 points to 74.90 points. An interesting fact is that Slovakia has only worsened in the area of "Resolving Insolvency" from 70.53 to 66.08. This suggests that the main factor behind the downfall was overlapping with other country that means a relative deterioration in the business environment.

From the SMEs perspective, an appropriate tool for the evaluation of business environment is the EU policy Small Business Act (further as

“SBA“) which has been implemented since 2008. It is a follow-up of the European Charter for Small Enterprises from 2000. The aim of SBA is to ensure the SMEs achieve revenue growth and competitiveness and manage to successfully assert themselves in the global market. This would promote the overall economic development of the EU what would contribute to the Europe 2020 strategy.

Slovakia’s SBA profile has more weaknesses than strengths. Over time, its performance has seemed to stagnate in many SBA areas rather than catch up with the EU in general. There are major concerns in some of the core areas of the SBA, namely Responsive administration, Skills & innovation and Internationalisation.

Second chance is the fourth area where Slovakia trails the EU average. With the exception of Second chance, Slovakia has not managed to improve its performance in any of these areas since 2008. Even in this area, the country’s progress was so modest that it did not manage to catch up with the EU average.

On the positive side, on Environment Slovakia consolidated its above-average performance compared with the rest of the EU.

While Slovakia’s overall score is only on a par with the EU average in Access to finance and Single market, there have been encouraging trends in both areas, such as improved access to loans and an increasing share of SMEs trading within the EU.

Development of the SME sector in the SR

In order to improve the business environment for development of SMEs, it is necessary to assess their position and monitor development. A deeper analysis of the SME sector in the context of time allows identifying existing trends, expecting future developments and preparing measures to ensure the optimal development.

Based on the data processed from the Statistical Office of the Slovak Republic (further as “SO SR”) there were 557 758 active entities in 2016, out of which 557 122 were small and medium-sized enterprises (i.e. they accounted for 99.9% of the total number of business enterprises). In year-on-year comparison the total number of active SMEs increased by 4.9%. The development of the overall number of active SMEs thus continues to be positive. Even the number of small and medium-sized enterprises – entrepreneurs which declined between 2009 and 2015, increased by 2.5% in 2016, as was the case of small and medium enterprises – legal entities (by 9.1%).

Out of the total number of entities, 97.1% were micro enterprises (541 719), 2.3% (12 662) small enterprises, and 0.5% (2 741) medium enterprises. There were 636 large enterprises which accounted for 0.1%. Natural entities – entrepreneurs comprised nearly two thirds (62.3%) from the total number of active SMEs in Slovakia.

Comparing the age structure of Slovak entrepreneurs with selected EU countries, Slovakia is characterized by higher representation of entrepreneurs in younger age groups. In 2016, according to Eurostat data, there was 12.8% out of the total number of inhabitants doing business in Slovakia in the age group from 15 to 29 years of age, 27.3% (6.7 pp more than in the EU) in the 30-39 age group and 30.8% (2.0 pp more than in the EU) in the 40-49 group. On the contrary, in the age category over 50, Slovakia has the lowest representation of entrepreneurs among the countries compared, which indicates the low entrepreneurial activity of older age groups of the Slovak population. 22.6% of entrepreneurs in Slovakia was in the age group from 50 to 59 years (4.6 percentage points less than in the EU) and 6.4% of entrepreneurs was in the age bracket from 60 to 74 years (by 8.9 percentage points less than in the EU).

The size structure of the business sector in the SR is to a large extent similar to size structure of enterprises in other EU Member States. We can mark as a characteristic feature of Slovakia a higher representation of microenterprises.

SMEs accounted for 99.8% out of a total of 23 million business entities in non – financial enterprises in the EU – 28. Representation of micro-enterprises has been achieved 93.0%, small businesses 5.9%, and medium – sized businesses 0.9%. The number of business entities in the SR represents the entire SR economy and the source of these data is the Register of Organizations of the Statistical Office of the SR.

According to data, SMEs in the SR represent 99.9% out of the total number of enterprises, while micro enterprises represent 97.1%, what is 4.1 pp more than in the EU countries.

Slovakia was ranked among the countries with the highest share of microenterprises in the total number of business entities within the sector of non-financial business economy in 2014.

Based on the data of the Statistical Office of the Slovak Republic, the number of newly established SMEs in the year 2016 represented 58 838, increasing by 11.8% compared to the number of newly-established SMEs in 2015. The trend of the decline of establishments of small and medium-sized enterprises was stopped. In 2016, the number of extincted

SMEs increased year-on-year by 20.5% to 53 878, out of which more than four-fifths (80.7%) were NP – entrepreneurs.

Every fifth (22.0%) active small and medium enterprise (including NP – entrepreneurs) operates on the territory of the Bratislava Region. Other regions are represented in the total number of SMEs ranging from 9.6% (Trenčiansky region) to 13.5% (Žilinský region).

In 2016, small and medium – sized enterprises represented 74.1% share in the employment of the business economy and 59.3% in the total employment in the Slovak economy. Compared to 2015, the share of SMEs in employment in the corporate economy increased by 0.5 pp. Share of SMEs in employment in the business economy has increased since 2006 to 2015 by 2.6 pp.

In 2014, small and medium-sized enterprises accounted for 66.8% of the total number of employed in the non-financial business economy in the EU-28, with a share of micro enterprises of 29.9%, small enterprises of 20.1% and medium-sized enterprises 16, 8%.

The currently achieved share of small and medium-sized enterprises in employment in the business economy in Slovakia in 2016 is 7.3 pp. higher than in the countries EU – 28. Micro-enterprises in the SR have the more dominant position when compared with EU – 28 countries within each category (a share higher by 15.4 pp).

The main economic indicators characterizing the development of SMEs increased year-on-year also in 2016. The increase in the added value of SMEs was 4.3%. In absolute terms, gross production (2.2%) and pre-tax profit for SMEs (+ 3.3%) also increased year on year.

In the foreign-trade exchange of goods, the dominant position is maintained by large companies.

From a territorial point of view, small and medium businesses can not reduce dependence on EU demand. Exports of SMEs to non – EU countries represents only 8.7% of the total exports of SMEs and Slovak SMEs compared with other EU countries are characterized by the lowest intensity of exports on the markets of third countries.

There were 4.4% of SMEs active in the high – tech sectors at the end of 2016. In the long run, the development of both the number and activities of SMEs in high-tech industries are characterized by increasing dynamism.

There is a rule valid within the use of information and communication technologies in the SME sector that, the larger the enterprise, the higher the PC and the Internet usage. Compared to other EU countries, Slovak SMEs with a 11% share of enterprises,

which receive at least 1% of revenues from on-line sales, are ranked among the countries with below-average results in this area.

SME finance in the SR

In Slovakia, SMEs are primarily financed from their own sources, respectively from loans and leasing. According to Majkova (2011), these are the sources that they know and therefore they most often use them.

This fact is confirmed by the results of the research on access of the SMEs to external sources of financing which was realized by Slovak Business Agency in 2015 (SBA, 2016). The research was realized on a sample of 1000 respondents with an aim to find out the opinions and views of small and medium entrepreneurs toward the exploitation of external forms of financing. According to the outcome of the research, the most frequent source of the external financing is a bank loan (28%) and a leasing (15%).

Several international and national initiatives are dealing with the rating of state and development of financing of business in Slovakia. GEM NES is considered one of the most significant of them. After a slight decrease in year 2013 and in the upcoming 2014 it indicated relatively significant improvement of the situation and nearing to the positive part of the rating scale, thanks to the improvement of the rating of accessibility of all forms of financing with an exception of the access to the financing through calls for stock subscription (IPOs).

The financial crisis had a significant impact on lending to the corporate sector. Even though it was induced in the retail banking segment primarily, it affected especially the rights of companies in terms of lending.

In 2008 the Slovak banking sector was profitable and we document the high rate of credit growth. The situation has changed since this year. Banks responded to the crisis immediately, mainly by tightening of the lending conditions.

Risks associated with required guarantees had the highest impact on tightening of the standards, which were tightened especially for the category of SMEs (NBS, 2009).

Concerning the development of financing of SMEs in the SR in 2014, compared to year 2013 the state of provided entrepreneur credits of SMEs rose by 10.9%. It represents the most significant interannual rise since the year 2008. The extent of SMEs bank loans usage (the

share of SMEs-PO along with bank credits) rose interannually from 1.3% to 17.7%. The share of entrepreneurs, which make use of bank credits, rose interannually in all size categories of SMEs. Long-term highest share of entrepreneurs, which make use of bank credits, is in category of medium-sized enterprises (52.8%, rise of 0.4%). In category of small-sized enterprises 42.0% of the subjects seemed to make use of bank credits (interannual rise of 1.1%) and in the category of microenterprises 15.4% (interannual rise of 1.4%). The state-guaranteed loans are provided by the Slovak guarantee and development bank (SZRB), primarily to those SMEs, which do not possess sufficient credit security, or are considered to be unreliable for commercial banks. The basic principle of providing Guarantees for loans relies on the breakdown of risks between SZRB, the client and the partner subject. In the year 2015 the total sum of bank guarantee portfolio of SMEs was 109 mln. euro (interannual decrease of 3.5%). In contrary, state-provided guarantees for the SME rose in the interannual comparison by 46.2% to a sum of 38 mln. euro (SZRB, Eximbank). Average credit tariff rate of provided bank credits for SMEs in the year 2015, in accordance to National Bank of Slovakia data, decreased by 0.4% to 3.4%.

Financial support of SMEs

Despite the inconsistency of the economic and social importance of the SME sector, these economic actors are often underestimated, particularly in the area of finance. This has led to wide-ranging discussions on what measures should be taken to help SMEs. Statistics say that SME support has become an important part of the overall economic strategy of economically developed countries over the past 30 years. However, the importance of these enterprises is not only at the national level, but at the transnational level. The EU is also aware of the importance of SMEs.

In Slovakia, the forms of the financial support provided to small- and medium-sized companies can be divided into two groups:

1. Direct forms – grants, additional charges, export premiums, grants and financial means from the European funds, and other forms;
2. Indirect forms – advantageous credits, provision of financial guarantees, reduction of interests, tax allowances, consultations and a supply of information, state orders, and other forms.

So we can say that small and medium-sized enterprises in Slovakia may receive financial support from the Slovak Republic or from the European Union.

A. State policy of supporting the development of the small and medium business

According to Meheš (2012), several basic groups belong to the institutions providing support to SMEs at the level of national economy:

1. Central state administration bodies,
2. Specialized agencies,
3. Bank institutions, funds and other supporting organizations,
4. Interest, professional and other supporting organizations.

At present, there exists a wide network of organizations in the SR which help to develop the small business not only at a level of the state and regions but also at a level of individual towns. A guarantor for the coordination of programs worked out to help the small and medium business is the Ministry of Economy of the Slovak Republic. In Slovakia, the most important institutions supporting the small business are: Ministry of Economy, Ministry of Finance, Slovak Guarantee and Development Bank, EXIM Bank, Ministry of Labour, Social Affairs and Family, Slovak Business Agency (former National Agency for Development of the Small and Medium Business), Funds of the Risk Capital, National Website for the Small and Medium Business, etc.

It can be said that the current support system is relatively unclear, it includes a number of actors who deal with SME support issues and it is also characterized by complex links. Attention is paid to central government authorities, whose roles concentrate mainly on policy making and resource acquisition, and especially to specialized agencies, banking institutions and funds that serve primarily to implement these policies, although their initiators and founders may be state administration bodies, further to interest, professional and supporting organizations.

Regarding the support to SMEs it was necessary to accept the legal definition of state aid to SMEs.

The first attempts of the Slovak Republic for the legal definition of State aid to SMEs go back to 1995, when the Law on state support for small and medium-sized enterprises was adopted. The purpose of this law was to modify state support for small and medium-sized enterprises and also to make such entrepreneurship a firm part of the structure of the national economy.

The adoption of a law Law No. 290/2016 on Support of Small and Medium-Sized Enterprises, effective as of 1.1.2017, was a significant step in determination of forms of the state aid to SMEs.

The law defines and decomposes the so- called “Better Regulation”. Better regulation means a summary of activities aimed at reducing the disproportionate regulatory burden on businesses and improving the business environment in the Slovak Republic with an emphasis on micro, small and medium-sized enterprises.

Support is provided:

a) ***In a direct form as:***

1. Non-repayable financial contribution under a special regulation,
2. Grant
3. Financial instrument under a special regulation.

b) ***In an indirect form as:***

1. Information and guidance in a field of business,
2. Education in a field of business
3. Support voucher related to the acceptance of services in the areas of support
4. Organizing and supporting of participation in traineeships, competitions, exhibitions or other business support events
5. Targeted reinforcement of the potential of a micro, small or medium-sized enterprise to increase its performance
6. Long-term professional counseling and training to improve entrepreneurial skills and professional growth

Small and medium-sized enterprises can also apply for support of the European Union.

B. Financial instruments of the EU (2014 - 2020) for a support of small and medium – sized companies

These include:

1. COSME is the EU programme for the Competitiveness of Enterprises and Small and Medium-sized Enterprises running from 2014 – 2020 with a planned budget of EUR 2.3 billion. The aim is to increase SMEs’ access to financial resources, to support entrepreneurs and their internationalization and to improve the business environment.

2. Horizont 2020 Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly EUR 80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market. By coupling research and innovation, Horizon 2020 is helping

to achieve this with its emphasis on excellent science, industrial leadership and tackling societal challenges. The goal is to ensure Europe produces world-class science, removes barriers to innovation.

3. InnovFin “InnovFin – EU Finance for Innovators” is a joint initiative launched by the European Investment Bank Group (EIB and EIF) in cooperation with the European Commission under Horizon 2020. InnovFin aims to facilitate and accelerate access to finance for innovative businesses and other innovative entities in Europe and consists of a series of integrated and complementary financing tools and advisory services offered by the EIB Group, covering the entire value chain of research and innovation (R&I) in order to support investments from the smallest to the largest enterprise. InnovFin is available across all eligible sectors under Horizon 2020, in EU Member States and Associated Countries. By 2020, InnovFin is expected to make over EUR 24 bn of debt and equity financing available to innovative companies to support EUR 48 bn of final R&I investments. InnovFin financing tools cover a wide range of loans and guarantees which can be tailored to innovators’ needs. Financing is either provided directly or indirectly via a financial intermediary, most usually a bank. Regarding SMEs, two forms are important:

a) InnovFin SME Guarantee provides guarantees and counter-guarantees on debt financing of between EUR 25 000 and EUR 7.5 m, in order to improve access to loan finance for innovative small and medium-sized enterprises and small midcaps (up to 499 employees). This facility will also be rolled out through financial intermediaries. Under the InnovFin SME Guarantee, financial intermediaries will be guaranteed or counter-guaranteed against a portion of their potential losses by the EIF.

b) InnovFin SME Venture Capital will provide, through selected intermediaries (e.g. investment funds, venture capital funds or vehicles that provide co-investment facilities for Business Angels or co-operate with Business Angels) equity finance for R&I, in particular in the form of seed and venture capital for enterprises in the early stage. The equity support will be channelled through intermediaries who target life sciences, ICT, or otherwise technological, non-technological, organisational or social innovation.

4. EU funds are financial instruments through which blurred the differences between the Member States of the European Union. EU funds allow reallocation economically stronger partner for the development of weaker states and bring them closer to the developed

European countries. The funds are used primarily to ensure increased performance of countries in various fields of sustainable economic growth, living standards and reducing regional disparities. The essential feature of EU funds help the weaker partner, thus profiting subsequently developed EU as a whole. The EU gives small companies the possibilities of financing in various forms such as grants, loans, financing of the particular projects, guarantees, and other forms. At present, Slovakia is in the 2014–2020 period, for which the European Union approved Slovakia support from European Structural and Investment Funds through 9 national and regional programs of nearly EUR 15.32 billion. With a national contribution of EUR 4.72 billion, the SR has a total budget of EUR 20 billion to be invested in different areas from job creation and growth through promoting sustainable transport to protecting the environment and investing in research and innovation. Nevertheless, in drawing of the euro-funds, the Slovak Republic is on the lash of the EU member states.

5. The Employment and Social Innovation Program provides microfinance of up to EUR 25 000 for entrepreneurs, especially those who are furthest from the labor market, and for micro-enterprises. It also covers social business and provides investment up to EUR 500 000 for social enterprises with an annual turnover and annual balance not exceeding EUR 30 million.

From the perspective of SMEs's approach to funding from public resources, the support in the means of EU grants (32.05%) prevailed in 2015, whereby their paid amount increased annually by as much as EUR 103,61 m. what represents an increase by 73.4%. This was caused mainly due to the increased spending of resources within OP CaEG. The second most profound cause was the loans from the resources of the SR (21.34%), followed by loans with the support of the EU (18.91%). In recent years, both these forms have followed an upward trend, while in the case of loans with the support of the EU there was an annual increase by as much as 88.24% (due to the start-up of JEREMIE initiative). A profound annual increase was recorded also in supporting programmes within the common agricultural policy by as much as 100.97%.

Based on a year-on-year comparison of the summary volume of financial resources used by SMEs from the public financial facilities it can be concluded that there was an increase in spending resources in 2015 by 39.05% to the value of EUR 763.70 million.

The total volume of state aid granted in the Slovak Republic in 2015

represents the sum of EUR 440.65 million. EUR 207.01 million was provided from national sources and EUR 233.64 million from the EU funds.

Innovation activities of SMEs

Before we look at the innovation activities of SMEs, we will show the position of the SR in international rankings on innovation. The most recent edition of the European Innovation Scoreboard was published on 14 July 2016, revealing the following results:

Denmark, Finland, Germany, the Netherlands, and Sweden are Innovation Leaders with innovation performance well above that of the EU average. Austria, Belgium, France, Ireland, Luxembourg, Slovenia, and the UK are Strong Innovators with innovation performance above or close to that of the EU average. The performance of Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia, and Spain is below that of the EU average. These countries are Moderate Innovators. Bulgaria and Romania are Modest Innovators with innovation performance well below that of the EU average.

The Regional Innovation Scoreboard 2016 revealed that Europe's most innovative regions are located in the most innovative countries, although regional innovative hubs exist in moderate innovator countries: Piemonte and Friuli-Venezia Giulia in Italy, País Vasco in Spain and Bratislavský kraj in Slovakia.

Innovations arise mainly in the business sector.

By the ability of businesses to innovate we can understand not only products innovation but also all other activities associated with production and sales. Innovation means not only technological but also non-technological innovation. However, SMEs must overcome many obstacles in the implementation of innovative processes so they are often prevented from realizing their innovative ideas. Therefore, bigger attention and support from the state is needed in innovation area, particularly in small and medium-sized enterprises.

According to the last survey of the SO SR for the years 2010 – 2012 Slovak Republic was still lagging in the business innovation behind the European average and for most member states of the EU. In the reporting period the share of innovating businesses in Slovakia was 34% of all businesses, while the average level in the European Union stood at 48.9%. Compared to the previous period 2008-2010, when the share of innovative enterprises in Slovakia was 35.6%, the situation has become

worse.

Analysing the development of innovative businesses in the Slovak Republic, we can find that the number and share of innovating businesses in Slovakia from 2001 to 2008 (except in 2003) had a rising trend. In 2010 the number of innovative businesses in comparison with the 2008 decreased again from 3 494 to 2 106 and the share of innovative businesses of all enterprises decreased from 36.1% in 2008 to 35.6% in 2010. The reduction of innovation activity was influenced by depression in the years 2008 – 2010. It affected small businesses whose number decreased the most – from 2 392 to 1 142, medium-sized businesses which number decreased fewer – from 800 to 699 and at least were hit by crisis large innovating companies which number fell from 302 to 265. In 2012 the situation has stabilized and the number of innovative businesses has increased but their share of total holdings decreased to 34%. The structure of innovating businesses in Slovakia in 2012 shows that the largest share of innovating enterprises, 62.1% was in the group of large companies what is probably related with sufficient funds which these can spend on innovation activities. 40% share of innovating companies was in medium-sized enterprises and 29.8% share was in the group of the small businesses.

Conclusions

The position of SMEs in national economy regarding the job creation, promotion of the local economy, balancing disparities in regional development, is important in the long run in Slovakia.

In 2016 they represented 99.9% of the total number of enterprises in the Slovak economy, offered job opportunities to nearly three quarters (74.1%) of the active work force in the corporate economy and participated with more than half (52.7%) in the creation of the added value.

In 2016, the downward trend in the establishment of small and medium-sized enterprises has stalled.

Compared to other EU countries, Slovakia is characterized by high entrepreneurial activity, the dominant presence of microenterprises, or the under-representation of women in the total number of entrepreneurs.

Based on the SBA's profile compiled for 2016, the European Commission assessed that the greatest strengths in the Slovak Republic were application of the principles 6 (access to finance) and 9 (environment), while the most profound weaknesses were found in

implementing principle 2 (second chance), and principle 4 (responsive administration). One of the worst assessed principles is principle 10 (internationalization). In the case of other principles, Slovakia ranked in the middle of the EU average.

Despite the profound role, which the SMEs sector plays in some economic indicators, these economic actors are often underestimated, particularly in the area of finance.

The analysis of the innovation activities of enterprises in Slovakia elaborated by SO SR shows that innovative enterprises in Slovakia are low in comparison with the other European countries. Innovation activity is directly proportional to the size.

This means that innovation activities have been realized especially in the large companies, while SMEs have to overcome many obstacles in the implementation of innovative processes and therefore they deserve more attention and assistance from the state. To increase SME innovation, we recommend:

- ✓ to raise the awareness of entrepreneurs about the importance of innovative activities for SMEs;
- ✓ systematically support regional governments and regional structures created in previous periods to support innovation;
- ✓ to apply more effective incentives to continuously increase innovation activity in the business sector;
- ✓ to implement instruments to promote closer cooperation between the private sector and academia / research, using the best examples from the EU;
- ✓ to implement the measures from the Start-up Support Concept and the Development of the Start-up Ecosystem in the Slovak Republic into practice;
- ✓ to use innovative financial instruments to support the expansion and innovation of growth potential companies;
- ✓ to create tools to systematically support the participation of Slovak companies and organizations in European and international research and innovation programs (Horizon 2020 and similar);
- ✓ to support the establishment of cluster organizations.

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**THE CONCEPT OF
RESPONSIBLE
INNOVATION AS APPLIED
TO FINANCIAL
INTERMEDIATION AND
THE BANKING SYSTEM**

Not every financial innovation can be seen as contributing to the benefit of all the parties involved in such transaction or to the benefit of the economic system in general. One of the ways to safeguard such positive effects is to assess financial innovations in the context of the Responsible Research & Innovation framework. This paper addresses the problem of responsible innovation within the context of the banking system (sector), with the aim of developing a framework for responsible innovation in the sphere of banking intermediation. The postulated exposition of the concept is formulated on the basis of the most prominent paradigms, both classical and modern, typically employed to explain the role of the banking system in national economy.

1. The nature, characteristics and specificity of responsible innovation in financial intermediation and the banking system

Responsible innovations in financial intermediation and the banking system (RIB) represent a distinct subset of financial innovations. Not every innovation employed in the narrow context of banking intermediation can be seen as satisfying the constituent elements of RIB-type innovation.

CONCLUSION

The decisive feature of modernity is complexity of the structure economic systems, acceleration of scientific and technological changes and perturbation of globalization the economic life of society. These processes mark the formation of the so-called “epoch of bifurcation”, in which high-quality in-depth transformations cover the economy of virtually all countries of the world, opening up new opportunities and generating unprecedented threats and risks for their further development. As instability and unpredictability of development becomes the most stable feature of the present time, the need for a deep economic and philosophical understanding of the essence, structural dynamics and mechanisms of the transformation of economic systems in the conditions of globalization is exacerbated. Of particular importance is the analysis of economic development as a nonlinear, multivariate and intrinsically contradictory process.

New urgent aspects of the study are due to the global financial-economic crisis, which has shown inconsistency of endogenous and exogenous factors of post communist transformations, exacerbation of contradictions between the global nature of modern world economic processes and the existing institutional-organizational mechanisms for their settlement. For transitional economies of a new type, functioning in the unfavorable conditions of deepening the instability of the world economic system and accelerating entry into the structures of already established economic ties, the issue of self-determination in the global environment and the creation of mechanisms for effective international integration are priority areas for scientific research and practical activities.

The problems of transformation economic systems in the conditions of globalization acquire a special scientific-theoretical and practical significance, taking into account the current realities of the development of national economies of the world.

The main feature of modern world economic development is the global interdependence, which covers and modifies its political, economic, social and environmental conditions. Globalization contributes to overall economic progress through the spread of innovations in technology and management, active exchange of goods, services and investments. At the same time, the unevenness, asynchrony and disproportional of the development of scientific-technological, production, trade, financial-investment relations in the functional as well

as in the inter-national aspects are intensified. At the same level of today's world economy, countries are concentrated – global leaders, whose key determinants of success in the third millennium are intellectualization, socialization, ecologization of production and the environment of life. At the other level of the world economy, most of the countries for which economic globalization is manifested, first of all, as qualitatively new developmental conditions that are virtually impossible to influence, but must always be taken into account. Countries that do not have time for the dynamics of a new era will not only not receive preferences from globalization, but can also become its hostages, to be on the verge of global, general civilization processes. The internationalization of economic life, interpenetration of various types of activities – scientific and technical, investment, financial and commercial, etc. – is becoming apparent, which leads to institutional changes.

The manifestations of this kind of globalization develop the traditional boundaries of economic analysis, inducing nontrivial generalizations. It is important to understand that even the inherited global problems of the development of human civilization (environmental pollution, the depletion of vital natural resources, poverty and the growing gap between countries as a life, etc.), new actors can not resolve, as could not be done by multinational corporations.

Global processes exacerbate competition, lead to changes in the redistribution of financial and investment resources, which often goes hand in hand with low and middle-income countries, causing their marginalization in the global economy. Under these conditions, an important means of competitive struggle in the modern world, as well as a form of protecting its own economies from adverse changes in the world economic situation, is the fragmentation of the world economy by forming groups and blocs of states conducting a coordinated economic policy. This is a compulsory step and a response to increasing global competition. At the same time as globalization processes, each state implements its own policies to protect national interests.

The main tendency of modern global development is the transition of the majority of countries from the raw material industry to the postindustrial information economy, which is based on the development of the intellectual resource, technology-intensive technologies and involves the achievement of a qualitatively new innovation and technological level in all spheres and branches of the economy, the

material basis of society, including productive forces of society. In a context of globalization, national economies are becoming increasingly interdependent, and the processes of integration and internationalization are intensifying.

**Transformational processes the development of
economic systems in conditions of globalization:
scientific bases, mechanisms, prospects**

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**Ekonomisko sistēmu attīstības transformācijas
procesi globalizācijas apstākļos: zinātniskie
pamati, mehānismi, perspektīvas**

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