Analysis of the Situation and Factors for Development of SMEs in Bulgaria: 2011-2012

Economic Recovery and Competitiveness

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noema

Sofia, 2012
Foreword

The present analysis is an update of the publication “Analysis of the Situation and Factors for Development of SMEs in Bulgaria (SMEs in the Crisis Context)” made last year. The analysis for 2011-2012 has been elaborated for the purposes and needs of the Bulgarian Small and Medium Enterprises Promotion Agency (BSMEPA).

BSMEPA is responsible for the implementation of national policies in the area of small and medium-size enterprises. It participates in the elaboration and execution of the measures set in the annual programmes for the implementation of the National Small and Medium-size Development Promotion Strategy.

The situation in the SME sector has been reviewed basically for the period 2009-2012. The standard statistical indicators of the sector, published by the NSI, have been complemented by a national representative sociological survey of the SMEs conducted in March 2012. For the purposes of the analysis, data from other sources, as well as statistics and reports concerning the SMEs in the EU, have also been used.

The update includes hot topics, which are of considerable importance for the economic recovery and sustainability of the SME sector. The time period covered by the analysis coincides with the recovery of the world and European economies from the financial and economic crisis. Therefore, the economic recovery of Bulgarian SMEs today, and their competitiveness stand in the main focus of the document. The analysis also contains one new topic related to the issue of sustainability of the SME sector, more specifically the issue of family business inheritance.

Among the main questions whose answers the analysis seeks to find are: “What happens with the SME sector today?“, “Which are the enterprises that manage to recover from the crisis?“, “Which are the factors for development and competitiveness that are of the greatest importance to the successful economic performance of the Bulgarian SMEs today?“, etc.

The answers to those questions could facilitate the process of formulation of adequate policies to stimulate the SME sector in the medium and long run.
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<tr>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>BNB</td>
<td>Bulgarian National Bank</td>
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<tr>
<td>BSMEPA</td>
<td>Bulgarian Small and Medium Enterprises Promotion Agency</td>
</tr>
<tr>
<td>BSP</td>
<td>Business Strategies and Planning</td>
</tr>
<tr>
<td>EC</td>
<td>European Commission</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign Direct Investments</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
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<td>HR</td>
<td>Human Resources</td>
</tr>
<tr>
<td>IAF</td>
<td>Index Access to Finance</td>
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<td>IBP</td>
<td>Index Good Practices</td>
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<td>ICT</td>
<td>Information and Communication Technologies</td>
</tr>
<tr>
<td>INT</td>
<td>Index Internationalisation</td>
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<td>IP</td>
<td>Intellectual Property</td>
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<td>IRD</td>
<td>Index Innovation Activity</td>
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<td>IS</td>
<td>Information Systems</td>
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<td>ITM</td>
<td>Index Trademarks and Patents</td>
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<tr>
<td>LSE</td>
<td>Large-Size Enterprise</td>
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<tr>
<td>NSI</td>
<td>National statistical institute</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium-size Enterprises</td>
</tr>
<tr>
<td>TFA</td>
<td>Tangible Fixed Assets</td>
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<td>WIPO</td>
<td>World Intellectual Property Organization</td>
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Summary

Main points reviewed in the analysis are, as follows: macroeconomic environment, current status of the SME sector and its demographic sustainability, current status of its factors for development, as well as the economic recovery of enterprises and their competitiveness.

Analysis of the external macroeconomic environment in which the Bulgarian SMEs operate shows that recovery of the world economy from recession continues also in 2011. Despite that, no recovery of the labour markets is observed and unemployment remains high. In the last quarter of 2011, a decline of Euro area’s GDP is observed and a soft repetition of the recession starts being talked about. The financial sector condition turns out to be of utmost importance to the European economy and the SMEs in particular.

Internal macroeconomic environment in 2011 is more favorable compared to the previous year. Bulgarian economy continues growing and the rate of GDP growth accelerates to 1.7%. External demand plays the main positive role to this end. By economic sectors, only industry registers growth in 2011 - by 6.6%, while agriculture and services score declines - respectively by 1.1% and 0.1%. Current account marks a considerable improvement and in 2011 its balance is already positive: 1.9% of GDP. However, in 2011 a weakened inflow of foreign direct investments is observed, similarly to the previous year - net foreign direct investments in the country are EUR 1.2-1.3 bn.

At the end of 2011, inflation rate in Bulgaria reaches 2.8%, and the annual average inflation amounts at 4.2%. Similarly to the situation in world markets, in Bulgaria, economic growth is not supplemented by an increase in employment. In 2011, employment contracts on average by 103 thousand persons (3.4%) vs. 2010. Annual average unemployment rise by about 24 thousand persons (7%), and the unemployment rate reaches 11.2%.

Dynamics of the exports and imports in 2010 and 2011 shows an increase in the foreign trade turnover of the country. For the last two years, exports grow nominally by 33% and 30%, and imports - respectively by 14% and 21.3%. The largest contribution to the growth rate of exports by
commodity groups is observed for products for processing, as well as for machinery and equipment.

In 2011, banking system of Bulgaria remains stable, well capitalized and possessing a high degree of liquidity. The increase of credit is weak - by BGN 2.3 bn. At the same time, bank deposits rise by BGN 5.9 bn.

Banking institutions start 2011 with 11.9% share of expositions past due over 90 days (the reported value stand for the end of December 2010). After the hope of recovery of the domestic market, respectively of the labour market turned out ill-founded, this is logically reflected in a continued tendency for increase of bad loans. Both the financial difficulties of companies resulting from weak consumption and the increased number of unemployed persons who felt a decline in their disposable incomes have a negative impact. The decreased ability of households and companies to meet their obligations to banks leads to an increase of the amounts past due to 14.9% at the end of December 2011. In spite of that, the banks continue managing successfully their credit risks, supplying on time adequate provisions. The latter is corroborated by the generation of positive financial results and the maintenance of a high level of stability of the system.

Statistical indicators of the SME sector show that in 2010 the non-financial enterprises in the Bulgarian economies total to 353 588, and the number of SMEs is 352 844. In the same year, decreases in the number of enterprises are reported in all planning regions, with the exception of the South-West region. The average number of employed persons in an enterprise decreases compared to the previous years. In 2010, the average number of employed person in the SME sector amounts at 4.3 persons, the most affected by the crisis being the enterprises in industry - the share of employment in the industrial sector lowers to 35%, and that in services goes up to 65%. Employment in the SMEs declines by 6.5%, and that in large enterprises - by 2.1%. In 2009, the net startup rate in the sector is 9.8%. Projections for 2010 indicate a decrease in the startup rate as well as an increase in the rate of closing down SMEs.

In 2010, SMEs’ turnover remains at a level close to the one in the previous year, while the large enterprises are characterized by a considerable growth with respect to that indicator. The realized revenues from activity in the SMEs amount at BGN 136 112 mn, and a decrease of 1.4% with respect to the previous year is registered.

Newly created valued added by SMEs declines by 4.5%. In the services sector, growth is observed (2.2%), while industry is characterized by a decline of 13.9%. Labor productivity in the SME sector scores a nominal growth rate of 1.9%. In real terms, the indicator decreases by 1%. SMEs are characterized with a decline of 2.8% of investments in tangible fixed assets.

At the beginning of 2012, more than a half of all entrepreneurs among Bulgarian SMEs are 46 or more years old. Young entrepreneurs (up to 29 years) represent about 5% of the sector, while the elderly ones (above 60 years) - almost 15%. One third of the Bulgarian SMEs are family firms (33%).
Almost 70% of the Bulgarian family firms are still being managed by their founders.

The analysis focuses on selected key factors for sustainable development and competitiveness, as follows:

- Access to financing;
- Innovations;
- Intellectual property;
- Internationalization;
- Good practices.

For each of those factors, indexes have been constructed and calculated. These indexes provide an overview of the investigated processes and tracking of their dynamics in the last two years, they present an opportunity to compare the status of the individual SME groups, as well as to assess the linkages between the factors for development and competitiveness and the economic performance of the enterprises in the sector.

In 2011, the most utilized source of financing among Bulgarian SMEs are the funds of the owner (62%). At the beginning of 2012, the access to financing is severely restricted for 69% of the enterprises. Over a half of the SMEs are afraid of bankruptcy (54%). 86% of the SMEs do not have sufficient financial resources to finance the necessary investments.

The most frequently encountered innovative activity in the Bulgarian SMEs is related to amendments in the business processes targeted at optimization and cost cutting (38%). The least penetrated innovative activity is related to carrying out mutual initiatives in the area of education between the individual enterprise and the academic institutions (9%). In 57% of the SMEs low innovation activity is observed, and in 8% of them it is relatively high.

The share of those that register trademarks (in Bulgaria and/or abroad) is 13%, and SMEs that register patents are 7%. The prevailing share of Bulgarian SMEs (73%) has a low level of patent activity. 18% of the entrepreneurs think that they have sufficient financial resources for such registrations.

Foreign trade in the SME sector in 2011 increases compared to the 2010 levels. Exporters among Bulgarian SMEs are 11%, and importers - 19%. At a comparatively low level remains the share of SMEs, which take part in exhibitions or fairs (12%). 78% of the enterprises have low degrees of internationalization of activities. Almost 11% of the SMEs take part in cluster activities.
The share of SMEs using ICT in their activities increases: 45% of the enterprises have webpages, 61% have managers’ electronic signatures, options for online purchases have 32%, and management information systems have 11-15%. In 2011, 36% of the SMEs have internal company trainings, and 13% have external specialized trainings. 55% of the entrepreneurs have short-term business plans, and 23% of them - medium-term ones. A developed marketing strategy is possessed by 30% of the firms in the SME sector. Good practices are widely implemented in 12% of the enterprises, and one fifth of them apply such to a low scale.

A major conclusion from the analysis of the current state of development factors is that the Bulgarian SMEs are not yet sufficiently competitive (especially the smaller ones) with respect to: access to financing; innovativeness; internationalization; and the implementation of good practices.

As a continuation of the Analysis of the Situation in the SME sector of 2011, econometric modeling of the relationships between the factors for development and the economic performance of the enterprises has been made in the present document in order to identify the significant drivers in the sector for the time being. During the previous year, this analysis was focused on the reactions of the enterprises and their ability to cope with the economic crisis based on the reviewed factors for economic development. This year, the analysis focuses on the factors for development and the economic recovery of the SME sector. The identified econometric relationships clearly show that in 2011-2012 the economic recovery boost significantly the factors for competitiveness.

Access to financing still remains a key factor for the overall economic performance of the SMEs. Innovative activity is a leading factor determining the regular debt repayment and the increase of preservation of remuneration levels. The registered trademarks and patents are of crucial importance to the maintenance of increase of market shares, profits and sales. Human capital in the firm also has a positive effect on maintaining or increasing the market shares and sales.

Two main groups of SMEs are clearly distinguished:

- Enterprises with a low level of competitiveness, which are not able to overcome the economic crisis;
- SMEs with a relatively higher degree of competitiveness, which realize growth in the period of economic recovery.

That is why, in the short and long term sustainability of the SME sector depends on the successful development with respect to access to financing, innovativeness, intellectual property, internationalization and the implementation of good practices; economic policies should be directed precisely in this direction.
Stylized facts

- Recovery of the world economy from recession continues in 2011, too, but in the last quarter of 2011 a GDP decline is observed in the Euro area.

- In 2011, growth rate of Bulgaria’s GDP accelerates to 1.7%. At the end of the year, inflation rate reaches 2.8%, and the annual average one stand at 4.2%. Unemployment rate reaches 11.2%.

- In 2010, the number of non-financial enterprises in the Bulgarian economy amounts at 353 588, and that of SMEs — at 352 844.

- In 2010, the SME employment decreases by 6.5%.

- In 2010, the realized revenues from activities amount at 136 112 mn (a decline of 1.4% vs. the previous year). Value added created by the SME register a decrease of 4.5%.

- In 2010, labor productivity in the SME sector records a nominal growth of 1.9%. In real terms, the indicator decreases by 1%.

- SMEs are characterized by a decline of investments in tangible fixed assets of 2.8% in 2010.

- In the beginning of 2012, competitiveness of the Bulgarian SMEs continue being low.

- Access to financing is severely limited for 69% of them.

- In 57% of the SMEs, a low innovation activity is observed.

- 73% of the SMEs show a low activity in respect to intellectual property.

- 78% of the SMEs have a low degree of internationalization.

- Good practices are widely applied in 12% of SMEs.

- In 2011-2012, the role of factors for competitiveness for economic recovery of the individual SME increases considerably.
Introduction

SMEs and the role of the current update

SMEs¹ are the backbone of the European and the Bulgarian economy. They are a major source of growth and job creation. Moreover, the SMEs are the most sensitive economic units to changes in the business environment. They bear the greater part of excessive bureaucracy, while at the same time they are more active in taking advantage of the initiatives to relieve the administrative regulation. They are the ones which bore the biggest disadvantages of the economic crisis, and also they are the ones which can bring the economy back to the economic growth path.

Aims and purposes

Main goal of the analysis is to study the current state of the SME sector, the potential to develop activities of the enterprises, as well as to estimate the effects of the SME competitiveness factors on their business performance in times of economic recovery.

This goal is achieved through:

1. An analysis of the domestic and the external macroeconomic environment, in which the Bulgarian SMEs operate.

2. An analysis of the status and the development of the SME sector in the last years, as well as an analysis of the sustainability of the sector with respect to its demographic development.

3. An analysis of the main factors for development and competitiveness of SMEs (access to financing, innovations, intellectual property, internationalization, and good practices).

4. An assessment of the effects of the factors for competitiveness of the sector on its economic performance, a SWOT analysis of the Bulgarian SMEs, as well an analysis of economic policies, which could stimulate their development.
Scope and methodology

Situation in the sector is reviewed mainly for the period 2009-2012. The standard statistical indicators of the sector as published by the NSI have been complemented with a nationally representative empirical survey of the SME carried out in March 2012. For the purposes of the analysis, data from other sources, as well as statistics and reports related to the SMEs in the EU, have also been used.

The update of last year’s analysis itself tries to avoid repeating matter on topics related to processes developing over the medium and long run, and in which (almost) no major changes have occurred. Instead, new topics of key importance to the economic recovery and sustainability of the SME sector have been added. The period covered by the analysis coincides with the recovery of world and European economies from the financial and economic crisis. Therefore, economic recovery of the Bulgarian SMEs and their competitiveness are the main focus of the document. Besides this special topic, the update adds a new one (new both to last year’s analysis and to the country) related to the issue of sustainability of the SME sector, and more specifically family business inheritance.

Structure

The analysis consists of an executive summary, an introduction, four main parts and appendices. The main points reviewed are macroeconomic environment, current state of the SME sector and its demographic sustainability, present status of the factors for development, as well as economic recovery and competitiveness of enterprises.

The first part includes a macroeconomic review of the domestic and external environments, in which the Bulgarian SMEs operate.

The second part includes an analysis of some key statistical indicators of the SMEs and findings of the survey carried out. An analysis of the sustainability of the sector has been made.

The third part is devoted to the factors for competitiveness of the SMEs. A working definition is proposed for each of the factors. The situation in times of crisis and economic recovery is analysed. The obtained results on each of the indexes measuring the factors for development are presented.

The fourth part is devoted to the relationship between competitiveness and economic recovery. Findings from the estimated econometric models are presented. A SWOT analysis of the SME sector is made. A review of the modern approaches in policy formulation targeted at the development of the SME sector is included.
Macroeconomic Environment

Recovery of the world economy

In 2011, recovery of the world economy from recession continued, although from the very beginning of the year some indications of economic growth slowdown explained by analysts with the normal cyclicality of inventories are observed. At the same time, however, recovery turns out to be matched by a lack of tangible recovery of the labour markets, and unemployment remains high.

The earthquake and the followed tsunami in Japan are one of the strongly negative factors leading to unfavourable influences throughout the year. The Japanese economy (the third-ranking economy in the world after those of the USA and China) is not the only one affected by the natural disaster since through the channels of foreign-trade relationships it turns out to be a main supplier to other economies, e.g. it is of key importance to US industrial production. The negative effects are complemented by the generally bad weather conditions for agricultural production, as well as by the rising prices of key raw materials in the international markets. The debt crisis in the Euro area and the sluggish decision-making process are also reflected in weakened consumer and producer confidence. In the last quarter of 2011, the above-described effects find expression in a decline of the gross domestic product (GDP) of the Euro area, and talks of a mild repetition of the recession are started.

Condition of the financial sector, in which the processes of balance sheet healing continue, appears of utmost importance for the European economy in 2012. Those processes are expected to lead to additional restraints to financing options, and the credit growth will be put under serious downward pressure. Despite restructuring of Greek debt is carried out, still no claims can be made that the problems arising from the debt crisis in the Euro are solved. Condition of the problematic economies such as Portugal and Spain will continue determining the risks related to the direction of EU’s economic development.
The Bulgarian Economy in 2011

Gross domestic product

During the past year, Bulgaria’s GDP continues increasing after it scores 0.2% growth for the previous 2010. The growth rate of GDP accelerates to 1.7%, and external demand plays a major positive role in this respect. The export of goods and services rise in real terms by 12.8%, and practically it is the only demand component which contributed positively to the overall economic growth. Investment continues falling - by 1.6%, and for fixed capital investment the decline is considerably larger - by 9.7%. The cumulative decline of investment from the beginning of recession in 2009 reaches 40.3%, and thus their dynamics emerge as a major risk with respect to not only the short-term, but also to the medium-term and long-term economic growth of the country. Consumption contracts by 0.3%, practically remaining at the level reached in 2009, when a decrease of 7.4% is registered. The high unemployment and the lack of sustainable growth of incomes are the factors explaining stagnating consumption.

By economic sectors, only industry marks growth in 2011 - by 6.6%, while agriculture and services register declines - respectively by 1.1% and 0.1%. The growth of industry is determined by the good exports performance following the favorable external demand and the orders from abroad to Bulgarian enterprises. At the same time, the weak domestic demand which show no signs of recovery continue being a holdback to growth prospects; this also explains the already-mentioned slender investment activity.

Figure 1. GDP (real growth, %)

The growth rate of Bulgaria’s GDP accelerates to 1.7% in 2011.

By economic sectors, only industry marks growth - by 6.6%, while agriculture and services register declines - respectively by 1.1% and 0.1%.

Source: NSI.
Inflation

The stabilization of price dynamics in the oil and food markets internationally lead to a moderation of the inflationary rate in the country from the middle of 2011 (Figure 2). Until that time, the price level is advancing at relatively high rates. At the end of the year, the inflation rate stand at 2.8%, and the annual average inflation amounts at 4.2%.

To the moderate dynamics of prices in 2011 contributes also the weaknesses observed in the main components of domestic demand (consumption and investment), as well as the unfavourable condition of the labour market, due to which the high unemployment rate imply no influences leading to an upward pressure on wages. The low inflation rate, although to a small extent, also plays the role of a balancing factor which keeps relatively unchanged the purchasing power of incomes in times of economic difficulties.

Labour market

Similarly to the situation in the world markets, in Bulgaria, economic growth is not backed by an increase of employment, respectively a decline in unemployment. The economic crisis of 2009 and the continuing unenviable condition of the domestic market of the country lead to a considerable change in the propensity of employers to hire labor, which is related to their strife to minimize their costs under the present serious constraints with respect to income generation.

In 2011, employment shrink on average by about 103 thousand persons (3.4%) vs. the values recorded in 2010 (Figure 3). The annual average unemployment increases by about 24 thousand persons (7%), and the unemployment rate reaches 11.2%.

The ageing population, the low birth rate and the problems of educational system present significant prerequisites for the deterioration of the prospects before the Bulgarian economy in the medium and long term, as both the quantity and the quality of the labor force a key factor of economic growth.
Figure 2. Inflation (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Inflation, % (end of period)</th>
<th>Inflation, % (average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>10,1%</td>
<td>10,2%</td>
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<tr>
<td>2006</td>
<td>9,0%</td>
<td>11,2%</td>
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<tr>
<td>2007</td>
<td>6,9%</td>
<td>6,8%</td>
</tr>
<tr>
<td>2008</td>
<td>5,6%</td>
<td>6,8%</td>
</tr>
<tr>
<td>2009</td>
<td>5,6%</td>
<td>6,8%</td>
</tr>
<tr>
<td>2010</td>
<td>10,2%</td>
<td>11,2%</td>
</tr>
<tr>
<td>2011</td>
<td>11,6%</td>
<td>11,2%</td>
</tr>
</tbody>
</table>

Source: NSI.

Figure 3. Employment and unemployment

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment (thousands)</th>
<th>Unemployment rate, % (right scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2700</td>
<td>-11,6%</td>
</tr>
<tr>
<td>2006</td>
<td>2800</td>
<td>-17,6%</td>
</tr>
<tr>
<td>2007</td>
<td>2900</td>
<td>-23,6%</td>
</tr>
<tr>
<td>2008</td>
<td>3000</td>
<td>-23,1%</td>
</tr>
<tr>
<td>2009</td>
<td>3100</td>
<td>-12%</td>
</tr>
<tr>
<td>2010</td>
<td>3200</td>
<td>-1,0%</td>
</tr>
<tr>
<td>2011</td>
<td>3300</td>
<td>0,94%</td>
</tr>
</tbody>
</table>

Source: NSI.

Figure 4. Balance of Payments

<table>
<thead>
<tr>
<th>Year</th>
<th>Balance of Payments, million euro</th>
<th>% of GDP (right scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>-9 000</td>
<td>-11,6%</td>
</tr>
<tr>
<td>2006</td>
<td>-8 000</td>
<td>-17,6%</td>
</tr>
<tr>
<td>2007</td>
<td>-7 000</td>
<td>-25,2%</td>
</tr>
<tr>
<td>2008</td>
<td>-6 000</td>
<td>-23,1%</td>
</tr>
<tr>
<td>2009</td>
<td>-5 000</td>
<td>-10%</td>
</tr>
<tr>
<td>2010</td>
<td>-4 000</td>
<td>-1,0%</td>
</tr>
<tr>
<td>2011</td>
<td>-3 000</td>
<td>0,94%</td>
</tr>
</tbody>
</table>

Source: BNB.
Balance of payments

The strong exports performance in 2011, coupled with a moderate import increase, lead to a considerable improvement in the current account of the balance of payments. After the record-high deficit amounting at 25.2% of GDP in 2007 and 23.1% of GDP in 2008, the current account shows an extremely fast improvement. After its deficit shrink to 8.9% and 1.3% in 2009 and 2010, in 2011 its balance is already positive: 1.9% of GDP. Improvement of the current account is a direct consequence of the discontinued investment inflows in the country which are the main engine of growth of its deficit during the economic boom in 2006-2008 (Figure 4).

Improvement of the current account however takes place simultaneously with the deterioration of the financial account where a net outflow of EUR 1.4 bn is recorded. This negative balance is primarily caused by banks which used their high level of liquidity to decrease the foreign liabilities in their balances. Generally it can be claimed that developments of the current and the financial account during the last several years mirror each other - when one of them improves, the other one deteriorates, and vice versa.

A considerable influence for the slowdown in the economic development of the country originates from the weakened inflow of foreign direct investment. For 2010 and 2011, net foreign direct investment in the country is in the range EUR 1.2-1.3 bn, quite far from the values observed before the crisis (Figure 5).

Fiscal sector

Budget consolidation process which started in 2010 continues also in 2011. According to preliminary data, the budget deficit reaches 2.1% of GDP last year, which represents a better performance compared to the set budget target for a deficit of 2.5% of GDP (Figure 6).

The achievement of a budget deficit lower than 3% (according to the Maastricht criteria) is a positive fact from which the country could benefit if it starts an application procedure to include the Bulgarian lev in the so-called Exchange Rate Mechanism II. Also, the low budget deficit and its gradual decrease thereafter would be an additional factor strengthening the confidence in the monetary regime adopted in the country since 1997.

The attained results could however turn out unsustainable in the medium and long term if no measures are taken to decrease the dependence of budget revenues on the dynamics of some key exogenous factors such as the price of oil.

The latter implies additional measures to guarantee and boost tax compliance, while at the same time it requires the implementation of economic policies enhancing the opportunities for business growth, and therefore of the revenue base.
A considerable influence for the slowdown in the country’s economic development originates from the weakened inflow of foreign direct investment.
Banking system

In 2011, the banking system in Bulgaria remains stable, well capitalized and possessing a high degree of liquidity.

Bank assets reach BGN 76.8 bn, and compared to the end of 2010 they increase by BGN 3.1 bn (4.2%). With regard to the ranking by bank assets size, in 2011 some changes of positions are observed. They originate, on the one hand, from the weakened positions of some foreign-owned banks, and at the same time the strengthening of locally-owned banks. An indicative example in this respect is the so-called First group of banks (the five largest by asset size banks). Eurobank EFG (popular as Postbank) drop out of the group, and it is replaced by First Investment Bank.

Credit growth during that year is weak. The loans to non-financial enterprises increase in nominal terms by BGN 2.3 bn, and in percentage terms - by 6.4%, the latter rate very similar to the nominal growth rate of GDP. It can be considered low as it does not have the potential to generate a high rate of investment growth in the country. The loans to households register a small decline – by BGN 65.5 mn in nominal and 0.4% in percentage terms. The weak lending activity in this segment is a direct reflection of the high unemployment, the low incomes and the worsened prospects before their growth, which lead to a conservative and precautionary behavior implying risk aversion and at the same time some acceleration in the ahead-of-the-schedule repayment of liabilities. The relatively feeble total loan growth (4.1% vs. 2010) reflects also the tightened lending conditions of the banks after the start of the economic crisis in the country in 2009.

At the same time, the bank deposits increase by BGN 5.9 bn (12.5%). The greater part of this growth is due to households whose savings in bank deposits rise by BGN 3.9 bn (13.8%). The increase of deposit mass affects positively the banking system by guaranteeing a high level of liquidity in times of worsened terms of borrowing from abroad, including from the parent banks of local subsidiaries of foreign banking groups.

The saving rate of citizens and companies lead to some excess liquidity which manifest itself through extremely low levels of inter-bank lending rates (the LEONIA index hover around the value of 0.2% throughout the whole year, while considerably higher values of interest rates are observed in inter-bank markets in Europe). The second important aspect of high liquidity is the repayment of a considerable amount of foreign liabilities on behalf of banks. In 2011, they reduce on a net basis their foreign liabilities by EUR 1.2 bn (15.4%).
In the beginning of 2011, the banking system starts with 11.9% share of classified exposure past due more than 90 days (the value reported for the end of December 2010). After the hope of recovery of the domestic market, respectively of the labor market turned out ill-founded, this is logically reflected in a continued tendency for increase of bad loans. Both the financial difficulties of companies resulting from weak consumption and the increased number of unemployed persons who felt a decline in their disposable incomes have a negative impact.

The decreased ability of households and companies to meet their obligations to banks leads to an increase of the amounts past due to 14.9% at the end of December 2011. In spite of that, the banks continue managing successfully their credit risks, supplying on time adequate provisions. The latter is corroborated by the generation of positive financial results and the maintenance of a high level of stability of the system.

Having in mind the condition of the external environment and the domestic market in Bulgaria, in the short term neither a significant change in the behavior of depositors and lenders, nor in the availability of opportunities to realize more substantial volumes of investments are likely. The conduct of adequate policies to stimulate businesses, in particular start-ups, is in this sense a key factor to change the described status quo.
Key points

- Recovery of the world economy from recession continued in 2011, however, there was no observed recovery of labor markets and unemployment remained high.

- In the last quarter of 2011, a drop in the GDP of the euro area was observed causing assumptions about a repeat of the recession.

- Of particular importance for the European economy in 2012 seems to be stability of the financial sector.

- In 2011, Bulgaria’s GDP continued to rise after marked 0.2 percent growth rate in 2010, GDP growth accelerated to 1.7% as a major positive role played on external demand.

- Amongst the economic activities, industry was the only one which grew in 2011 (by 6.6%), while agriculture and services declined - by 1.1% and 0.1% respectively.

- The current account registered a strong improvement - in 2011 it already had a positive balance (1.9% of GDP).

- In 2011, there was again a weak inflow of investment flows as in the previous year - net direct investments in the country were 1.3 billion euros.

- At the end of 2011, inflation reached 2.8% and the average annual inflation stood at 4.2%.

- Similar to developments in the world economy, economic growth in Bulgaria was not accompanied by employment growth. Employment in 2011 shrank by around 103 thousand people (3.4%); compared to 2010, average annual unemployment rate increased by about 24 thousand people (7%), and the unemployment rate reached 11.2%.

- In 2011, the banking system in Bulgaria remained stable, well capitalized and with high liquidity. Loans increased slightly - by 2.3 billion BGN. At the same time bank deposits increased by 5.9 billion BGN.
SMEs Performance

Statistics of enterprises and business demography

Number, structure and average size of enterprise

In 2010, there were 353 588 enterprises\(^1\) in the non-financial sector of Bulgarian economy and their number slightly decreased on a year ago. Over the last decade, enterprises have followed an upward trend, reaching 13.6% in 2009, while in 2010 they fell by 0.9%. Current developments reflected economic activity slowdown manifested in lower demand, which in turns influenced negatively on the number of newly established and already existing enterprises.

Development of enterprises by size class in Bulgarian economy was considerably more volatile than the EU-27 level on average. Bulgarian enterprises followed one-year lag time reaction to the changes in the external environment. In 2010, the SME sector in EU-27 reported an improvement over the previous year, while in Bulgaria the development of enterprises followed a downward trend.

Structure of enterprises in 2010 remained relatively constant. SMEs accounted for 99.8% of non-financial enterprises and only 0.2% of them were large scaled. Within the SMEs population, the share of micro enterprises increased to 92.1%, while small and medium-sized ones decreased to 6.5% and 1.3% respectively (Table 1).

In 2010, SMEs accounted for 352 588 enterprises.

---

Table 1. Structure and development of enterprises, non-financial business economy, by size class, Bulgaria and EU 27 (estimate), 2010

<table>
<thead>
<tr>
<th></th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>SMEs</th>
<th>Large</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bulgaria</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share</td>
<td>92.1%</td>
<td>6.5%</td>
<td>1.2%</td>
<td>99.8%</td>
<td>0.2%</td>
<td>100%</td>
</tr>
<tr>
<td>Growth rate</td>
<td>-0.2%</td>
<td>-8.4%</td>
<td>-8.4%</td>
<td>-0.9%</td>
<td>-2.0%</td>
<td>-0.9%</td>
</tr>
<tr>
<td><strong>EU 27</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share</td>
<td>92.1%</td>
<td>6.6%</td>
<td>1.1%</td>
<td>99.8%</td>
<td>0.2%</td>
<td>100%</td>
</tr>
<tr>
<td>Growth rate</td>
<td>0.1%</td>
<td>-1.0%</td>
<td>-1.1%</td>
<td>0.0%</td>
<td>-0.9%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Source: NSI (Statistics of Enterprises).

1 Within the non-financial business economy the total number of enterprises was 366 929. The analysis excludes the agriculture sector in order to be comparable with EU-27.
In 2010 SMEs decreased by 0.9% and reached 352,588 enterprises. Micro enterprises slightly declined by 0.2%, unlike the previous year when they grew by 15.3%. The drop in small and medium-sized enterprises deepened to 8.4% in both groups. The number of large enterprises decreased as well by 2%, but not so pronounced as in 2009 (Figure 7).

In 2010 average firm size followed a downward trend as well. It amounted to 5.7 persons, 4.3 per in SMEs and 677.6 in large scaled enterprises. Decline in the number of occupied persons per enterprise was observed in all groups. In micro enterprises there were 1.9 employees on average, in small - 19.7 and in medium - 96.9. Current developments indicated an ongoing adjustment process. In the SME sector, it was carried out through employment reduction and it holds true also for micro enterprises. In small, medium and large enterprises both the number of enterprises and employment decreased (Table 2).

Structure of enterprises by economic activity

Development of enterprises by economic activity indicated that in 2010 industry was the most affected by the crisis, while the number of enterprises in services remained unchanged on a year ago. Within the SMEs the enterprises in industrial sector reported a decline of 6.4% and in services they increased by 0.2%. On the other hand, large-sized enterprises evidenced signs of recovery. LSEs in industry continued to decline, however at a slower rate of 7.4% compared to 2009. Those in services reported a significant growth of 10%.

In 2010 the share of enterprises in industry declined, while those in services increased. Within the SMEs industrial sector comprises 15.7% and services - 84.3%. In large-sized enterprises the share of industry is higher than those of services - 58.5% vs. 41.5%. Development by economic activity showed that SMEs followed a downward trend in construction (9.2%), manufacturing (5.7%), mining and quarrying (1.8%), hotels and restaurants (1.9%) and trade (1.1%). On the positive side were electricity and water supply, and almost the entire service sector.

Figure 7. Development of enterprises, non-financial business economy, by size class, Bulgaria, 2009-2010 (% change, y/y)
The latter was in a bigger extent influenced by the development of micro enterprises, while small and medium-sized enterprises reported a decrease in almost all economic activities (Table 3).

Table 2. Number of enterprises and occupied persons per enterprise, non-financial business economy, by size class, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Enterprises</th>
<th>Number</th>
<th>Share</th>
<th>Number</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>325 566</td>
<td>92.1%</td>
<td>22 834</td>
<td>6.5%</td>
</tr>
<tr>
<td>Small</td>
<td>4 444</td>
<td>1.2%</td>
<td>352 844</td>
<td>99.8%</td>
</tr>
<tr>
<td>Medium</td>
<td>744</td>
<td>0.2%</td>
<td>504 163</td>
<td>25.2%</td>
</tr>
<tr>
<td>SMEs</td>
<td>353 588</td>
<td>100%</td>
<td>2 004 341</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment</th>
<th>Number</th>
<th>Share</th>
<th>Number</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>620 743</td>
<td>31.0%</td>
<td>449 005</td>
<td>22.4%</td>
</tr>
<tr>
<td>Small</td>
<td>430 430</td>
<td>21.4%</td>
<td>1 500 178</td>
<td>74.8%</td>
</tr>
<tr>
<td>Medium</td>
<td>403</td>
<td>0.1%</td>
<td>22 834</td>
<td>0.2%</td>
</tr>
<tr>
<td>SMEs</td>
<td>744</td>
<td>100%</td>
<td>504 163</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupied persons per enterprise</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>1.9</td>
</tr>
<tr>
<td>Small</td>
<td>19.7</td>
</tr>
<tr>
<td>Medium</td>
<td>96</td>
</tr>
<tr>
<td>SMEs</td>
<td>4.3</td>
</tr>
<tr>
<td>Large</td>
<td>677</td>
</tr>
<tr>
<td>Total</td>
<td>5.7</td>
</tr>
</tbody>
</table>

Source: NSI (Statistics of Enterprises), Own Calculations.

Table 3. Number, structure and development of enterprises in SMEs and LSEs, non-financial business economy, by economic activity, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Economic activity (NACE, BG 2008)</th>
<th>Number</th>
<th>Structure</th>
<th>Growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SMEs</td>
<td>LSEs</td>
<td>Total</td>
</tr>
<tr>
<td>TOTAL</td>
<td>366 177</td>
<td>752</td>
<td>366 929</td>
</tr>
<tr>
<td>Agriculture</td>
<td>13 333</td>
<td>8</td>
<td>13 341</td>
</tr>
<tr>
<td>TOTAL excl. agriculture</td>
<td>352 844</td>
<td>435</td>
<td>353 588</td>
</tr>
<tr>
<td>Industry</td>
<td>55 347</td>
<td>435</td>
<td>55 782</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>385</td>
<td>18</td>
<td>403</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>30 885</td>
<td>294</td>
<td>31 179</td>
</tr>
<tr>
<td>Electricity</td>
<td>1 387</td>
<td>20</td>
<td>1 407</td>
</tr>
<tr>
<td>Water supply</td>
<td>667</td>
<td>45</td>
<td>712</td>
</tr>
<tr>
<td>Construction</td>
<td>22 023</td>
<td>58</td>
<td>22 081</td>
</tr>
<tr>
<td>Services</td>
<td>297 497</td>
<td>309</td>
<td>297 806</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>143 391</td>
<td>72</td>
<td>143 463</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>19 330</td>
<td>45</td>
<td>19 375</td>
</tr>
<tr>
<td>Transport and storage</td>
<td>26 565</td>
<td>24</td>
<td>26 589</td>
</tr>
<tr>
<td>Information and communication</td>
<td>8 338</td>
<td>31</td>
<td>8 369</td>
</tr>
<tr>
<td>Real estate</td>
<td>20 672</td>
<td>20</td>
<td>20 692</td>
</tr>
<tr>
<td>Business, scientific and technical activities</td>
<td>36 709</td>
<td>7</td>
<td>36 716</td>
</tr>
<tr>
<td>Administrative and support service</td>
<td>8 286</td>
<td>62</td>
<td>8 348</td>
</tr>
<tr>
<td>Other</td>
<td>34 206</td>
<td>68</td>
<td>34 274</td>
</tr>
</tbody>
</table>

Source: NSI (Statistics of Enterprises), Own Calculations.
In 2010, within the SMEs, the average firm size in services remained unchanged (3.3 persons) as compared to the previous year. This sector with the largest number of enterprises is typical small scaled one in terms of the number of occupied persons per enterprise. In industry, the average firm size decreased from 10.1 persons in 2009 to 9.5 persons in 2010 as a result of economic activity slowdown in mining and quarrying and construction. The indicator there decreased to 13.9 and 6.7 persons being 16.6 and 7.9 in the previous year respectively (Table 4).

The biggest contribution to the decrease in the number of enterprises in 2010 made construction, manufacturing, hotels and restaurants and trade (Figure 8). Development by size class showed a leading contribution of micro enterprises, and in some activities and of small ones. Although in some activities the number of enterprises increased, their contribution to the overall dynamics was negligible.

Table 4. Occupied persons per enterprise, non-financial business economy, by size class and economic activity, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Economic activity (NACE.BG 2008)</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>SMEs</th>
<th>Large</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>1.9</td>
<td>19.7</td>
<td>96.9</td>
<td>4.3</td>
<td>677.6</td>
<td>5.7</td>
</tr>
<tr>
<td>Industry</td>
<td>2.4</td>
<td>21.1</td>
<td>99.6</td>
<td>9.5</td>
<td>608.4</td>
<td>14.1</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>2.1</td>
<td>22.2</td>
<td>107.5</td>
<td>13.9</td>
<td>1079.2</td>
<td>61.5</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>2.6</td>
<td>21.6</td>
<td>101.0</td>
<td>11.5</td>
<td>569.9</td>
<td>16.7</td>
</tr>
<tr>
<td>Electricity</td>
<td>1.0</td>
<td>19.3</td>
<td>101.9</td>
<td>3.6</td>
<td>1458.3</td>
<td>24.2</td>
</tr>
<tr>
<td>Water supply</td>
<td>2.4</td>
<td>21.7</td>
<td>103.0</td>
<td>16.8</td>
<td>498.2</td>
<td>47.2</td>
</tr>
<tr>
<td>Construction</td>
<td>2.1</td>
<td>20.2</td>
<td>94.2</td>
<td>6.7</td>
<td>450.1</td>
<td>7.9</td>
</tr>
<tr>
<td>Services</td>
<td>1.8</td>
<td>18.8</td>
<td>93.6</td>
<td>3.3</td>
<td>775.1</td>
<td>4.1</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>1.9</td>
<td>18.6</td>
<td>89.1</td>
<td>3.2</td>
<td>671.3</td>
<td>3.5</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>2.0</td>
<td>18.5</td>
<td>104.2</td>
<td>4.1</td>
<td>1576.5</td>
<td>7.8</td>
</tr>
<tr>
<td>Transport and storage</td>
<td>2.3</td>
<td>18.4</td>
<td>87.1</td>
<td>4.4</td>
<td>483.9</td>
<td>4.8</td>
</tr>
<tr>
<td>Information and communication</td>
<td>1.9</td>
<td>20.3</td>
<td>99.5</td>
<td>5.1</td>
<td>775.3</td>
<td>7.9</td>
</tr>
<tr>
<td>Real estate</td>
<td>1.1</td>
<td>18.6</td>
<td>79.9</td>
<td>1.7</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Business, scientific and technical activities</td>
<td>1.6</td>
<td>17.8</td>
<td>89.0</td>
<td>2.3</td>
<td>402.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Administrative and support service</td>
<td>1.8</td>
<td>21.3</td>
<td>102.6</td>
<td>6.1</td>
<td>597.7</td>
<td>10.5</td>
</tr>
<tr>
<td>Other</td>
<td>1.8</td>
<td>19.7</td>
<td>98.0</td>
<td>3.3</td>
<td>657.6</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Source: NSI (STATISTICS OF ENTERPRISES), OWN CALCULATIONS.
Structure of enterprises by statistical region

In 2010 all statistical regions reported a decrease in the number of enterprises, with the exception of South-West region - the largest one in terms of operating companies (Table 5). Enterprises there increased by 0.7% and reached 135.1 thousand or 36.8% of non-financial business economy. Recent positive trend was influenced by the SMEs developments.

Figure 8. Economic activities with leading contributions to the negative development of enterprises, estimated contributions by economic activity and size class (p.p), Bulgaria, 2010

Table 5. Number, structure and development of enterprises in SMEs and LSEs, non-financial business economy, by statistical region, Bulgaria, 2010
In 2010, SMEs in South-West region increased by 0.7% and their number amounted to 134.8 thousand. The biggest contribution made micro enterprises, which continued to grow by 1.5%, although at a slower rate as compared to the previous year (26.9%). Small and medium-sized enterprises followed a downward trend with a rate of decrease of 7.5% and 8.2% respectively. LSEs in South-West, where their number is largest decreased by 0.6% and reached 325.

South Central region comprises of 65.7 thousand enterprises - twice less than South-West one. SMEs there decreased by 0.5% to 65.5 thousand, however their share remained at the level of 2009 (17.9%). Small enterprises decreased by 7.6% and contributed the most to the negative development. Medium-sized enterprises also dropped by 8% and only micro ones reported a slightly increase of 0.2%. LSEs grew by 1.7% and their number reached 120.

In 2010, South- and North-East regions followed a similar development. SMEs there reported a decline of 0.8 and 0.6% respectively ant their number were 52.1 and 50.4 thousand, which corresponded to a share of 14.2% и 13.8%. Small and medium-sized enterprises influenced on the negative development of enterprises. They decreased by 8.5% and 9.1% respectively in the South-East region and by 7.7% and 7.4% in the North-East. The number of micro enterprises remained at 2009 level in both regions. LSEs decelerated their rate of decrease to 2.3% and 4.4% respectively and their number reached 85 and 87.

Figure 9. Statistical regions with leading contributions to the negative development of enterprises, estimated contributions by economic region and size class (p.p.), Bulgaria, 2010

<table>
<thead>
<tr>
<th>Economic Region</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>LSEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>South West</td>
<td>-0.1%</td>
<td>-0.6%</td>
<td>1.4%</td>
<td></td>
</tr>
<tr>
<td>North Central</td>
<td>-0.1%</td>
<td>-0.6%</td>
<td>-1.0%</td>
<td></td>
</tr>
<tr>
<td>North West</td>
<td>-0.1%</td>
<td>-0.7%</td>
<td>-1.1%</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: NSI (STATISTICS OF ENTERPRISES), OWN CALCULATIONS.
SMEs in North-West and North Central regions decreased by 2% and 1.7% respectively to 28.6 and 34.8 thousand, which corresponds to a share of 7.8% и 9.5%. All groups of enterprises there declined. The biggest contribution made micro enterprises, which reported a decrease of 1.2% in both regions. The negative dynamics of small enterprises (10.6% and 7.5%) in North-West and North Central regions influenced significantly on the overall development as well. Medium-sized enterprises there dropped by 7.2% and 8% respectively. LSEs decreased by 12.5% and 1.1%, reaching 49 and 86.

Positive development of enterprises reported only South-West region, where their number is the largest. The latter was a result of increase in micro enterprises. North-West and North Central regions made the biggest contribution to the negative dynamics of enterprise with a leading influence of micro enterprises. Small enterprises contributed as well (Figure 9).

Business demography

In 2009 the number of new enterprises increased by 17.2% on a year earlier. 57.7 thousand enterprises were established, corresponding to 17.6% of the total enterprise population (birth rate\(^1\)). The number of persons employed there amounted to 115.7 thousand, indicating that start-ups were characterized by very low average firm size (2 persons). At the same time 25.7 thousand enterprises ceased to exit (27.3% lower than 2008), corresponding to a death rate\(^2\) of 7.9% of the stock of enterprises. There were 47.4 thousand persons and it means that the average number of persons employed in death enterprise was 1.8. Recent birth and death rate developments led to an increase in net enterprise birth to 9.8%.

| Table 6. | Enterprise birth and death rate, Bulgaria, 2006-2011 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                | 2006            | 2007            | 2008            | 2009            | 2010*           | 2011*           |
| **Enterprise birth (number and share of active population)** |                |                |                |                |                |                |
| Number          | 40 555          | 55 488          | 49 287          | 57 741          | 47 012          | 54 876          |
| Share           | 17.5%           | 22.2%           | 18.2%           | 17.6%           | 12.8%           | 14.9%           |
| **Enterprise death (number and share of active population)** |                |                |                |                |                |                |
| Number          | 35 602          | 36 191          | 35 466          | 25 772          | 35 906          | 35 431          |
| Share           | 15.4%           | 14.5%           | 13.1%           | 7.9%            | 9.8%            | 9.7%            |
| **Enterprise net birth** |                |                |                |                |                |                |
| Share           | 2.1%            | 7.7%            | 5.1%            | 9.8%            | 3.0%            | 5.2%            |

**Source:** NSI (SBS), *Forecast (NOEMA).*

---

1 Birth rate is calculated as a ratio between the number of newly established and active enterprises in 2009.

2 Death rate is calculated as a ratio between the number of death and active enterprises in 2009.
The structure of entry and exit enterprises differed by economic activity. Manufacturing reported the lowest birth rate (11.4%). The value of the indicator in trade, transport and construction amounted to 16.6%, 17.1% and 17.5%, lagging behind the average level in the economy. The highest entry rate was observed in electricity (52.1%) and real estate (24.7%). In the rest of economic activities the value of indicator also exceeds the average level.

The structure of the newborn and the closed enterprises by size class in 2009 indicated for a leading contribution of the micro-enterprises (Figure 10). In firms with 1 to 9 employees net birth rate was about 6.7%, while it is 2.6% for the those with more than 10 employees. Recent development was determined by the higher birth rate of micro enterprises in all economic activities. The highest net birth rate reported electricity, water supply and information activities, and the lowest - mining and quarrying.

In 2009 the biggest contribution on survival rate of enterprises was attributed to economic activities, which reported the highest net birth rates (Table 7). The number of newly established enterprises in 2008, which have survived in 2009, was 41.4 thousand, corresponding to a survival rate of 84%. The highest survival rates registered electricity, water supply and information and communication activities.

Business demography expectations in 2010 and 2011 are related to decrease in birth rate and increase in death rate. Negative expectations are quite in line with the rest of SMEs performance indicators. In 2010 both enterprises and employed numbers followed a downward trend, which in turns will influence negatively on the number of newly established and already existing enterprises. Development of enterprises by size class in 2010 evidenced that the number of micro enterprises remains unchanged, while those of small and medium-sized ones significantly decreased. From this point of view one may expect lower birth rate. On the other hand since 2009 profits followed a downward trend, which directly affects higher death rate. Latest labour market developments will influence negatively on SMEs business demography as well. In 2011 employed numbers overall in the economy continued to decrease by a rate of 4.2% and unemployment rate reached 11.2%.

1 According to Eurostat methodology there are two definitions for business activity in Business demography and Statistics of enterprises Surveys. Therefore, business demography data related to entry and exit rates by size class differ from statistics of enterprises data, which are related to the total number of enterprises. For more details: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/EN/bd_esms.htm.

2 Survival rate is calculated as a ratio between the number of newly established enterprises in 2008, which have survived in 2009 (numerator) and the number of active enterprises in 2009 (denominator).
Figure 10. Birth, death and net-birth rates by size class, Bulgaria, 2009

Table 7. Survival rate, by economic activity, Bulgaria, 2009

<table>
<thead>
<tr>
<th>Economic activity (NACE.BG 2008)</th>
<th>Survival rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>84.0%</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>83.3%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>86.3%</td>
</tr>
<tr>
<td>Electricity</td>
<td>92.8%</td>
</tr>
<tr>
<td>Water supply</td>
<td>90.9%</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>84.1%</td>
</tr>
<tr>
<td>Construction</td>
<td>83.7%</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>78.3%</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>85.0%</td>
</tr>
<tr>
<td>Transport and storage</td>
<td>89.3%</td>
</tr>
<tr>
<td>Information and communication</td>
<td>76.7%</td>
</tr>
<tr>
<td>Real estate</td>
<td>88.9%</td>
</tr>
<tr>
<td>Business, scientific and technical activities</td>
<td>86.2%</td>
</tr>
</tbody>
</table>

Source: Eurostat, own calculations.

Source: NSI (SBS), own calculations.

SMEs Performance
Figure 11. District distribution of SME number by selected activities in “Manufacturing”, 2009-2010 *


Table 8. Top 10 districts by number of enterprises (% of all enterprises)

<table>
<thead>
<tr>
<th>District</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOFIA</td>
<td>20%</td>
</tr>
<tr>
<td>PLOVDIV</td>
<td>12%</td>
</tr>
<tr>
<td>Varna</td>
<td>7%</td>
</tr>
<tr>
<td>Blagoevgrad</td>
<td>6%</td>
</tr>
<tr>
<td>Burgas</td>
<td>5%</td>
</tr>
<tr>
<td>Haskovo</td>
<td>5%</td>
</tr>
<tr>
<td>Stara Zagora</td>
<td>4%</td>
</tr>
<tr>
<td>Pazardik</td>
<td>4%</td>
</tr>
<tr>
<td>Ruse</td>
<td>4%</td>
</tr>
<tr>
<td>Gabrovo</td>
<td>3%</td>
</tr>
</tbody>
</table>
Employment in the SME sector

Number, structure and development of employment

In 2010 employed numbers in SMEs decreased by 6.5% and those in large enterprises - by 2.1% (Table 9). SMEs provided 74.8% of total employment in the non-financial enterprises in the economy, corresponding to 1.5 million jobs, which was 104.2 thousand lower than a year earlier. The share of SMEs in terms of employment followed a downward trend and evidenced delayed respond of the sector to the negative impact of the crises. Large scaled enterprises were the first to be affected by the crises, and the number of employed people there started to decrease since 2009.

Employment decline in Bulgarian economy is considerably more volatile than EU 27 level on average. Employed numbers in the country followed one-year lag time reaction to the changes in the external environment. In 2010, the SME sector in EU-27 reported an improvement over the previous year, while in Bulgaria the development of employed followed a downward trend.

Employed numbers decreased in all groups of enterprises. The biggest contributions made small and medium-sized enterprises, which reported a decline of 9.2% and 8.9% respectively in 2010. The number of persons employed there slowed down to 449 and 430.4 thousand respectively, corresponding to a share of 22.4% and 21.5% of total employment. Micro enterprises reported a decrease in employment of 2.6%, lagging behind the average rate in the SME sector. Their share in total employment increased to 31%, and provided 620.7 thousand jobs.

In 2010, the decline in employment in large enterprises slowed down to 2.1%, which corresponded to a reduction of 11 thousand jobs in absolute terms. Recent developments indicated that the negative impact of economic environment on the activity of large companies has begun to recede. LSEs covered 504.2 thousand jobs and their share in total employment rose to 25.2%.

Table 9. Number, structure and development of employment, non-financial business economy, by size class, Bulgaria and EU 27 (estimate), 2010

<table>
<thead>
<tr>
<th></th>
<th>Bulgaria</th>
<th>EU 27</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Micro</td>
<td>Small</td>
</tr>
<tr>
<td>Number</td>
<td>620 743</td>
<td>449 005</td>
</tr>
<tr>
<td>Share</td>
<td>31.0%</td>
<td>22.4%</td>
</tr>
<tr>
<td>Growth rate</td>
<td>-2.6%</td>
<td>-9.2%</td>
</tr>
<tr>
<td>EU 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share</td>
<td>29.8%</td>
<td>20.4%</td>
</tr>
<tr>
<td>Growth rate</td>
<td>-0.8%</td>
<td>-1.0%</td>
</tr>
</tbody>
</table>

**Source:** NSI (Statistics of Enterprises), Own Calculations.

In 2010 the number of employed in SMEs decreased by 6.5%, while in LSEs by 2%.
Structure of employment by economic activity

Employment development by economic activity indicated that the negative impact of the crises reflected primarily the industrial sector. In 2010 it was more pronounced in the SMEs than in LSEs. Within the SMEs, the number of employed persons in industry continued to accelerate its rate of decline, reaching 12.8% being 8.7% in 2009. Unlike the previous year in 2010 the SMEs in service sector was also affected negatively and the number of people employed there decreased by 1.7%. Large-scaled enterprises in industry continued to decrease employed numbers, however at slower rate of 5.3%, being 12.6% on a year ago. On the other hand, LSEs in the service sector felt some liveliness on a year earlier and the number of employed grew by 3.2% in line with the increasing number of enterprises in the sector.

In 2010, the share of employment in the industrial sector decreased, while services increased (Table 10). Within the SMEs industry comprised 34.9% and services 65.1% of total employment. In large-scaled enterprises, the share of industry was higher than those of services - 52.5% vs. 47.5%. SMEs followed a decline in employment in almost all economic activities with a leading contribution of construction (23%), manufacturing (8.4%) and trade (3.5%). The activities reported an increase in employment were electricity (6%), water supply (6.6%), and other services (7.2%).

Table 10. Number, structure and development of employment in SMEs and LSEs, non-financial business economy, by size class and economic activity, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Economic activity (NACE.BG 2008)</th>
<th>Number</th>
<th>Structure</th>
<th>Growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SMEs</td>
<td>LSEs</td>
<td>Total</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1 572 160</td>
<td>509 139</td>
<td>2 081 299</td>
</tr>
<tr>
<td>Agriculture</td>
<td>71 982</td>
<td>4 976</td>
<td>76 958</td>
</tr>
<tr>
<td><strong>TOTAL excl. agriculture</strong></td>
<td>1 500 178</td>
<td>504 163</td>
<td>2 004 341</td>
</tr>
<tr>
<td>Industry</td>
<td>523 537</td>
<td>264 651</td>
<td>788 188</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>5 363</td>
<td>19 425</td>
<td>24 788</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>354 307</td>
<td>167 536</td>
<td>521 843</td>
</tr>
<tr>
<td>Electricity</td>
<td>4 926</td>
<td>34 092</td>
<td>38 018</td>
</tr>
<tr>
<td>Water supply</td>
<td>11 175</td>
<td>33 594</td>
<td>44 769</td>
</tr>
<tr>
<td>Construction</td>
<td>147 766</td>
<td>26 105</td>
<td>173 871</td>
</tr>
<tr>
<td>Services</td>
<td>976 641</td>
<td>239 512</td>
<td>1 216 153</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>458 212</td>
<td>48 330</td>
<td>506 542</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>79 757</td>
<td>150 701</td>
<td>229 437</td>
</tr>
<tr>
<td>Transport and storage</td>
<td>115 732</td>
<td>127 346</td>
<td>243 078</td>
</tr>
<tr>
<td>Information and communication</td>
<td>42 408</td>
<td>66 442</td>
<td>108 850</td>
</tr>
<tr>
<td>Real estate</td>
<td>34 116</td>
<td>34 116</td>
<td>68 232</td>
</tr>
<tr>
<td>Business, scientific and technical activities</td>
<td>84 407</td>
<td>87 222</td>
<td>171 629</td>
</tr>
<tr>
<td>Administrative and support service</td>
<td>50 479</td>
<td>87 535</td>
<td>137 014</td>
</tr>
<tr>
<td>Other</td>
<td>111 530</td>
<td>44 719</td>
<td>156 249</td>
</tr>
</tbody>
</table>
Within the LSEs, construction and manufacturing contributed the most to the negative dynamics of employment as well. The number of employed persons there decreased by 28.6% and 2% respectively. Among the services sector activities, LSEs reported a decrease only in hotels and restaurants (4.7%).

The global crisis affected negatively employment in all groups of enterprises to varying degrees. Micro enterprises were at least affected, following the low share of industry in total employment (16.9% or 11 thousands). From this point of view, the decline in employed numbers in manufacturing (7.2%) and construction (14%) did not contribute significantly to employment dynamics in micro enterprises. In service sector, which provides 516 thousand jobs (83.1% of total employment in micro enterprises), the biggest decrease in employment reported trade (2.6%) and hotels and restaurants (2.3%). The negative dynamics of employment in micro enterprises in trade contributed the most to the downward trend of employment in SMEs. The number of employed there accounted to 260 thousands, which corresponded to 56.7% of employment in trade within the SMEs and 51.3% within the non-financial business economy.

The negative impact of the crises on employment was most pronounced in small and medium-sized enterprises (Figure 12). Almost all economic activities were characterized by a decline in employment with exception of electricity, administrative activities and other services.

Figure 12. Development of employment in micro, small- and medium-sized enterprises, non-financial business economy, Bulgaria, 2009-2010
In small-sized enterprises, the share of employed in industry accounted to 39.9%, which corresponded to 179 thousands, while service sector provided 270 thousand jobs or 60.1%. The number of employed in Manufacturing followed a downward trend with a rate of decrease of 11.3%. The small enterprises had a leading contribution to the negative employment dynamics in manufacturing. It holds true for transport and real estate activities, where the decline in employment amounted to 5.9% and 8% respectively. In construction and trade, which were hit by the crisis as well, the number of jobs slowed down by 25.3% and 4.6% and the contribution of small enterprises, although not leading was essential.

In medium-sized enterprises, the share of industry comprised 55.7% of total employment (239.9 thousand), while those of services accounted for 44.3% (191 thousand). The biggest contribution to the negative dynamics of employment in the medium-sized enterprises made construction with a rate of decrease of 26.4%. The number of employed in manufacturing and transport declined by 6.6% and 9.5% respectively and influenced significantly as well. Employment in mining and quarrying also followed a downward trend, slowing down by 26.6%.

The biggest contribution to the negative dynamics in employment in 2010 made construction (Figure 13). Development by size class showed a leading contribution of small- and medium-sized enterprises. It holds true in manufacturing as well. Micro enterprises influenced on the negative employment trends in trade. LSEs made a negative contribution to employment only in hotels and restaurants.

Figure 13. Economic activities with leading contributions to the negative development of employment, estimated contributions by economic activity and size class (p.p), Bulgaria, 2010
Structure of employment by statistical region

In 2010, it was observed a decline in the number of employees in all statistical regions (Table 11). South-West region, where the most enterprises operated, covered a highest share of total employment in non-financial enterprises in the economy - 40.8% or 849.7 thousands, 69.9% of which (593.6 thousands) was due to SMEs. In the examined period the drop of employment in this region amounted to 4.8%, in SMEs it was 5.7%. The main contributors to this negative development were medium-sized (8.7%) and small enterprises (8.6%). The decrease was observed also in micro enterprises (0.7%), but their influence was rather limited. This region could be characterized as a region with the highest level of employment in the larger enterprises. In 2010 the later also registered drop of 2.8% and their number composed 256.1 thousands employees or 30.1% of employment in the region.

In North-West region, the significant slowdown was observed (7.6%). Its share in total employment composed 7.4% or 154.7 thousand persons, 80.5% of which were employed in SMEs. In the SMEs the decline of employees was mainly due to 6.9% decrease of the small and medium-sized enterprises. In the large firms decline was also large (10.2%) and in 2010 their number was 30.2 thousand persons (19.5% of all employees in the region).

The same development has been observed also in the North Central, North-East and South Central regions. This decline in the employment had even higher values, but thanks to their lower share their influence on the total employment was more limited. In 2010 the number of employees has gone down by 5.2%, 6.4% and 5% in all non-financial enterprises, but in the SMEs their decline was 6.3%, 6.9 and 5.5%. The most important contribution to observed development had small and medium-sized enterprises.

In 2010, the number of employed in all statistical regions follow a downward trend.

In 2010, only the larger enterprises in South-East region report employment growth.

Table 11. Number, structure and development of employment in SMEs and LSEs, non-financial business economy, by statistical region, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Statistical region (NUTS 2)</th>
<th>Number</th>
<th>Structure</th>
<th>Growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SMEs</td>
<td>LSEs</td>
<td>Total</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1 572 160</td>
<td>509 139</td>
<td>2 081 299</td>
</tr>
<tr>
<td>North-West</td>
<td>124 582</td>
<td>30 170</td>
<td>154 752</td>
</tr>
<tr>
<td>North Central</td>
<td>161 894</td>
<td>39 618</td>
<td>201 512</td>
</tr>
<tr>
<td>North-East</td>
<td>194 085</td>
<td>49 643</td>
<td>243 728</td>
</tr>
<tr>
<td>South-East</td>
<td>209 060</td>
<td>67 615</td>
<td>276 675</td>
</tr>
<tr>
<td>South-West</td>
<td>593 646</td>
<td>256 072</td>
<td>849 718</td>
</tr>
<tr>
<td>South Central</td>
<td>288 893</td>
<td>66 021</td>
<td>354 914</td>
</tr>
</tbody>
</table>

Source: NSI (Statistics of Enterprises), own calculations.
Employment in micro firms has also gone down with a slower pace. Employed in large-sized enterprises in the North Central, North-East and South Central followed a decelerating rate of decrease of 0.7%, 4.5% and 3.1% respectively.

South-East region made the lowest contribution to the negative employment growth the country. In 2010 employed numbers there shrunk by 3.3%, while within the SMEs - by 6.6%. Employment development by size class was similar to the rest of the regions. The main contributions made small and medium-sized enterprises (8.4% and 10% respectively), followed by micro ones (3.2%). In a contrast to the rest of the regions, large-scaled enterprises in South-East reported employment increase of 8.4%. Employed numbers in LSEs amounted to 67.6 thousand or 24.4% of total in the region.

All statistical regions registered employment decline with the biggest contribution made by North-West region. Employment trends by size class showed a leading contribution of small and medium-sized enterprises. In 2010 only the large-sized firms in South-East region has reported growth in employment (Figure 14).

![Figure 14](image-url). Statistical regions with leading contributions to the negative development of employment, estimated contributions by economic region and size class (p.p.), Bulgaria, 2010

<table>
<thead>
<tr>
<th>Region</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>LSEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>South East</td>
<td>-2,1%</td>
<td>-2,0%</td>
<td>-1,0%</td>
<td>1,9%</td>
</tr>
<tr>
<td>North East</td>
<td>-0,9%</td>
<td>-2,1%</td>
<td>-2,3%</td>
<td>-1,1%</td>
</tr>
<tr>
<td>South Central</td>
<td>-0,6%</td>
<td>-1,5%</td>
<td>-2,1%</td>
<td>-0,8%</td>
</tr>
<tr>
<td>South West</td>
<td>-0,8%</td>
<td>-1,9%</td>
<td>-1,9%</td>
<td>-0,2%</td>
</tr>
</tbody>
</table>

SOURCE: NSI (STATISTICS OF ENTERPRISES), OWN CALCULATIONS.
Production, investments and foreign trade

Revenues and expenditure of enterprises

In 2010, revenues of the SMEs registered a decline of 1.4% (Table 12). Revenues were BGN 136 112 million that was 1 930 million lower figure than previous years. In a comparison in large-sized enterprises it was observed a significant growth of 9.4%. The SMEs sector generated 67.8% total revenues but its share has gone down compared to 2009 (70%). In micro and small enterprises it has been observed a decline of the revenues amounted to 2.8%. As a consequence their share in 2010 was 22.6% and 22.3% respectively, which corresponded to around BGN 45 388 and 44 692 million. In the observed groups of enterprises the decline in the revenues was reported for the first time in 2009 that resulted in a lower number of firms and employees in the current period. In medium-sized enterprises revenues has gone up by 1.5% to BGN 46 032 million and their share was close to the previous years - 22.9%

Expenditure of the SMEs declined with lower pace (0.4%) comparing to revenues that was a consequence of certain slowdown of adjustment in the sector to lower economic activity in the country. In 2010 the later amounted to BGN 133 372 million (68.1% of total expenditure) or BGN 522.8 million lower than the previous year. This trend was similar in small and micro enterprises. The decrease in expenditure in this group of enterprises was 2% and 0.8% respectively. That was a deceleration comparing to revenues. The medium-sized enterprises are more adaptive to changes in economic environment. They can optimize their activities in the way that helps them to record growth of revenues despite the lower number of enterprises and lower employment. Expenditure in medium enterprises was also higher by 1.7% on annual basis, but the pace of adjustment was similar to those of revenues - 1.5%.

Table 12. Size, structure and development of revenues and expenditure, non-financial business economy, by size class and statistical region, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>SMEs</th>
<th>Large</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BGN million</td>
<td>45 388</td>
<td>44 692</td>
<td>46 032</td>
<td>136 113</td>
<td>64 728</td>
<td>200 841</td>
</tr>
<tr>
<td>Share</td>
<td>22.6%</td>
<td>22.3%</td>
<td>22.9%</td>
<td>67.8%</td>
<td>32.2%</td>
<td>100%</td>
</tr>
<tr>
<td>Growth rate</td>
<td>-2.8%</td>
<td>-2.8%</td>
<td>1.5%</td>
<td>-1.4%</td>
<td>9.4%</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditure</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>SMEs</th>
<th>Large</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BGN million</td>
<td>45 534</td>
<td>43 401</td>
<td>44 437</td>
<td>133 372</td>
<td>62 427</td>
<td>195 799</td>
</tr>
<tr>
<td>Share</td>
<td>23.3%</td>
<td>22.2%</td>
<td>22.6%</td>
<td>68.1%</td>
<td>31.9%</td>
<td>100%</td>
</tr>
<tr>
<td>Growth rate</td>
<td>-0.8%</td>
<td>-2.0%</td>
<td>1.7%</td>
<td>-0.4%</td>
<td>6.9%</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

SOURCE: NSI (STATISTICS OF ENTERPRISES), OWN CALCULATIONS.
Large-scaled enterprises succeed in adjustment process in terms of expenditure and revenues development as well. Following two digits rate of decline in 2009 in both revenues and expenditure, revival in LSEs activity has been observed in line with economic recovery in 2010. The latter corresponded to significant growth of revenues and lower rate of decrease in the number of enterprises and employed. Expenditure increased by 6.9%, lagging behind the revenues growth (9.4%). They amounted to BGN 64 728 million and their share in total expenditure was 31.9%.

The lower revenues in the SMEs sector in 2010 resulted from unfavorable development of the industry. In 2010 the revenues declined by 8.1% and their share decreased was 29.8%. In services sector it was observed a growth of revenues by 3.2% and its share composed 70.2%. The SMEs by economic activities can be characterized with a decline in revenues in construction (27.6%), mining and quarrying (7.7%) and in the most activities in the services sector. Increase in revenues has been reported in wholesale and retail trade (5.3%), hotels and restaurants (7.9%), electricity (14.6%) and water supply (35%).

In large-sized enterprises, the share of industry was 62.4%, while that of services was 37.6%. Revenues in LSEs increased in both industry and services sectors by 12.1% and 5.9% respectively. Manufacturing made the biggest contribution to recent positive developments, stepping up by 22.1%. LSEs in all activities reported an increase in revenues with exception of construction and transport. The latter registered a decline of 21.8% and 7.8% respectively.

Expenditure of the SMEs declined with a slower pace (0.4%) than those of revenue that is a sign of certain deceleration of adjustment of the sector to lower economic activity.

Figure 15. Development of revenues and expenditure in SMEs, non-financial business economy, by economic sector, Bulgaria, 2010

Source: NSI (Statistics of Enterprises), Own Calculations.
Within the SMEs sector, there were activities with revenues lower than expenditure (real estate activities, information and communication, mining and quarrying and transportation and storage). From this point of view it could be seen that sector of SMEs is adapting with the slower pace to changes in demand in comparison to large-sized enterprises.

The negative influence of the crisis was the most pronounced in the medium-sized enterprises in terms of process of adjustment. In 2010 in this group of enterprises there were many activities in which expenditure were higher than revenues. This trend was clear in the real estate activities, information and communication, construction, transport, mining and quarrying and electricity. Small enterprises also had some activities with a similar development, but they are a lower number (trade, business activities, manufacturing and construction).

The structure of the revenues and expenditure by statistical region showed a leading share of the SMEs in all of them (Table 13). South-East region traditionally was characterized with higher economic activity. In 2010 the revenues growth in the region was 0.2%, mainly due to large-sized enterprises (8.2%). SMEs reported a decline of 3.6% in revenues, following the lower activity the micro and small firms (7.6% and 6.2% respectively). SMEs were on a positive side in the rest of regions. LSEs recorded a decrease of revenues only in North-West region.

In the most statistical regions, within the SMEs sector, revenues growth outpaced or at least was comparable to those of expenditure. Exceptions were South West and South East regions due to the dynamics of micro enterprises there, which reacted to the changes in the business environment slower. Similar developments occurred in micro enterprises in North East and in medium-sized enterprises in North Central region.

Table 13. Development of revenues and expenditure in SMEs and LSEs, non-financial business economy, by statistical region, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Statistical region (NUTS 2)</th>
<th>Revenues growth</th>
<th>Expenditure growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SMEs</td>
<td>LSEs</td>
</tr>
<tr>
<td>TOTAL</td>
<td>-0.9%</td>
<td>9.4%</td>
</tr>
<tr>
<td>North-West</td>
<td>1.7%</td>
<td>-10.4%</td>
</tr>
<tr>
<td>North Central</td>
<td>3.4%</td>
<td>15.6%</td>
</tr>
<tr>
<td>North-East</td>
<td>3.9%</td>
<td>9.1%</td>
</tr>
<tr>
<td>South-East</td>
<td>1.2%</td>
<td>16.8%</td>
</tr>
<tr>
<td>South-West</td>
<td>-3.6%</td>
<td>8.2%</td>
</tr>
<tr>
<td>South Central</td>
<td>0.5%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

SOURCE: NSI (STATISTICS OF ENTERPRISES), OWN CALCULATIONS.
Turnover, value added and labor productivity

In 2010, turnover of SMEs was close to the 2009 level, while large-sized enterprises registered serious growth (Table 14). In the period under observation turnover of all non-financial enterprises in the economy was BGN 183 237 million of 2.2% higher than 2009. The share of SMEs declined to 67.3% or BGN 123 227 million or by 0.4%. The main contribution had micro and small enterprises; they registered a drop respectively of 1.8 and 1.7%. In comparison medium-sized enterprises registered 2.2% increase in turnover. In the SMEs the even distribution of the each group of enterprises was observed. The share in turnover of micro enterprises (21.4%) and small enterprises (22.5%) declined, while medium-sized enterprises kept their share of 23.3% constant. The large-sized enterprises recorded higher growth of turnover of 8% that increased their share to 32.7% of all/total enterprises or BGN 60 010 million.

Services had the great contribution on turnover growth in the economy. Similar development was observed also in the SMEs where the growth of turnover in services was higher by 3.2%, while industry registered a decline of 8.1%. As of economic activities point of view in SMEs higher contribution had wholesale and retail trade, transport and storage, registered respectively 5.2% and 8.9% growth. Hotels and restaurants, as well as manufacturing could be characterized with positive dynamics, but their influence was limited. The negative contribution had construction where decline of turnover was 29.4%, as well as professional, scientific and technical activities, information and communicational activities and real estate. In mining and quarrying activities decrease of 3.7% was observed, but its share the contribution was negligible.

Table 14. Turnover, gross value added and labour productivity, non-financial business economy, by size class, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Level</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>SMEs</th>
<th>Large</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover (BGN thousand)</td>
<td>39 191 766</td>
<td>41 301 873</td>
<td>42 733 352</td>
<td>123 226 991</td>
<td>60 009 659</td>
<td>183 236 650</td>
</tr>
<tr>
<td>Gross value added (BGN thousand)</td>
<td>5 334 901</td>
<td>6 440 081</td>
<td>7 693 730</td>
<td>19 468 712</td>
<td>12 906 855</td>
<td>32 375 567</td>
</tr>
<tr>
<td>Labor productivity (BGN thousand)</td>
<td>9.2</td>
<td>14.1</td>
<td>18.3</td>
<td>13.4</td>
<td>27.4</td>
<td>16.8</td>
</tr>
<tr>
<td>Share</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover</td>
<td>21.4%</td>
<td>22.5%</td>
<td>23.2%</td>
<td>67.3%</td>
<td>32.7%</td>
<td>100%</td>
</tr>
<tr>
<td>Gross value added</td>
<td>16.5%</td>
<td>19.9%</td>
<td>23.7%</td>
<td>60.1%</td>
<td>39.9%</td>
<td>100%</td>
</tr>
</tbody>
</table>

SOURCE: NSI (STATISTICS OF ENTERPRISES), OWN CALCULATIONS.
In the large-sized enterprises, positive dynamics of turnover was due to industry (10.5%) likewise the services also had positive growth - 3.8%. Almost all economic activities were characterized with growth where the main contribution was of manufacturing (19.9%), and mining and quarrying (24%) and wholesale and retail trade (3.9%). Only construction registered a decline in turnover of 27.6%.

Dynamics of gross value added in the SMEs and large-sized enterprises was similar to that of turnover. In 2010 the new value added in SMEs decreased by 4.5%, while in services was growing by 2.2%, in industry sector the decline was 13.9%, following the previous year’s trend. The main negative contributor by economic activities was decline in the construction (38.4%) and mining and quarrying - 26.7%. Decrease was also observed in part of activities in services - administrative activities (2.4%), transport (1.6%) and information and communication (1.1%). The main contributor to the growth of value added in 2010 made whole sale and retail trade (6.2%) and hotels and restaurants (3.3%). In the industry the growth was recorded in electricity (27.9%) and water supply (13%).

The large-sized enterprises were characterized with growth in value added (6.7%) with the main contribution of the industry. The growth in it composed to 7.8%, mainly due to manufacturing (14.8%) and mining and quarrying (43.3%). In services also was observed growth of 5%, mainly due to the transport growth of 25%. The negative contribution had construction (44.6%), trade (14.4%) and hotels and restaurants (15.1%).

### Table 15. Real labour productivity growth (% change, y/y), non financial business economy, by size class and economic activity, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Economic activity (NACE.BG 2008)</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>SMEs</th>
<th>Large</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>-3.4%</td>
<td>-1.4%</td>
<td>3.2%</td>
<td>-1.0%</td>
<td>7.5%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Industry excl. construction</td>
<td>28.5%</td>
<td>-11.8%</td>
<td>8.5%</td>
<td>3.9%</td>
<td>15.4%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Construction</td>
<td>-54.9%</td>
<td>-4.7%</td>
<td>-11.7%</td>
<td>-19.5%</td>
<td>-19.1%</td>
<td>-20.1%</td>
</tr>
<tr>
<td>Trade, hotels and restaurants, transport</td>
<td>16.5%</td>
<td>11.1%</td>
<td>12.2%</td>
<td>12.7%</td>
<td>11.9%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Information and communication</td>
<td>-6.3%</td>
<td>10.3%</td>
<td>5.6%</td>
<td>3.0%</td>
<td>-11.1%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>Real estate</td>
<td>-21.3%</td>
<td>39.3%</td>
<td>3.1%</td>
<td>-4.9%</td>
<td>-4.9%</td>
<td>-4.9%</td>
</tr>
<tr>
<td>Business, scientific and administrative activities</td>
<td>-5.4%</td>
<td>-11.0%</td>
<td>6.6%</td>
<td>-4.9%</td>
<td>-2.4%</td>
<td>-5.4%</td>
</tr>
</tbody>
</table>

**SOURCE:** NSI (STATISTICS OF ENTERPRISES), OWN CALCULATIONS.
In 2010, the SMEs succeeded in adjusting their labor costs in terms of decline in gross value added and nominal labor productivity\(^1\) growth went to 1.9% in nominal terms (Table 15). In real terms productivity\(^2\) declined by 1%, which was substantial improvement, compared to previous year decline of 15.5%. The growth of productivity in tradable sector was 3.9% in real terms. In services positive dynamics was recorded in trade, transport and hotels and restaurants where the average growth was 12.7% and information and communication - 3%. The decline in real terms in labor productivity was recorded in construction (19.5%), real estate (4.9%) and professional and science activities (4.9%).

Positive correlation between labor productivity and the size of enterprise observed in previous years continued in 2010. The higher real negative growth of productivity recorded micro enterprises (3.4%) and small firms (3.2%). In medium-sized enterprises, characterized with higher pace of adjustment, the recorded growth was 3.2%. Similar development was observed in tradable sector, while in the services sector all groups of enterprises were characterized with real growth of labor productivity.

In large-sized enterprises, productivity formed a higher growth of 10.6% in nominal and 7.5% in real terms. The main contribution had tradable sector where the real productivity growth was 15.4%. Services also had an upside dynamics in transport. Similar to the SMEs the main contributor of negative growth had construction 19.1%, but the large-sized enterprises also registered decline in wholesale and retail trade and information and communication.

**Tangible fixed assets (TFA)**

In 2010, SMEs recorded a diminution of 2.8% of investments in material assets. Invested money amounted to BGN 63720 million that was 62% of total investment of non-financial enterprises in the economy (Table 16). The observed development was mainly due to higher negative growth of FA in small enterprises. As a result their share in investments went down by 13.9% to BGN 14 294 million. In the medium-sized enterprises investments had also went down at slower pace (0.7%) where their share stayed constant to previous year at 17.5% or BGN 17 927 million. In the SMEs only micro enterprises recorded growth of 0.4% in investments and their share in FA was 30.7% or BGN 31 499 million.

### Table 16. Size, structure and development of TFA, non-financial business economy, by size class, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Tangible fixed assets (TFA)</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>SMEs</th>
<th>Large</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BGN million</td>
<td>31 498</td>
<td>14 294</td>
<td>17 927</td>
<td>63 720</td>
<td>38 986</td>
<td>102 706</td>
</tr>
<tr>
<td>Share</td>
<td>30.7%</td>
<td>13.9%</td>
<td>17.4%</td>
<td>62.0%</td>
<td>38.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Growth rate</td>
<td>0.4%</td>
<td>-11.2%</td>
<td>-0.7%</td>
<td>-2.8%</td>
<td>1.9%</td>
<td>-1.0%</td>
</tr>
</tbody>
</table>

SOURCE: NSI (STATISTICS OF ENTERPRISES), OWN CALCULATIONS.

1 Labor productivity is a ratio of gross value added and number of employees according to the Structural Business Statistics.

2 The value added deflator is used according to National Accounts.

In 2010, the SMEs recorded a decrease of 2.8% of investments in fixed assets.

The SMEs had a leading role for investments in services sector.
Investments in large-sized enterprises grew by 1.9% compared to 2009 and their value was BGN 38 986 million, whereas their share grew to 38%.

SMEs had leading position in service sector investments (Figure 16). In 2010 investments in this sector were 0.5% lower than previous years and they kept their share of 75.3%. The most of activities in services were characterized with investment activity decline. Investments in trade amounted to BGN 10.1 million, which corresponded to a rate of decrease of 2.4%. It was due to decline of the indicator in the small and micro enterprises by respectively 7.8% and 3%. Similar development was observed in hotels and restaurants, where investments slowed down by 10.8%. Here the negative contribution of small and micro enterprises was 13.7 and 28.5%. The activities under review composed around 30% of investments in services sector and had the main contribution to decline in the sector.

The only activities with investments have grown were real estate (2.8%) and transport (2.4%). The main contribution to this development had the micro enterprises with growth of 2.9% and 9.4%. In these activities their share was respectively 83.3% and 22.2%, which determined their high contribution.
In industry the share of SMEs was 47.6%, which corresponded to BGN 23,354 million investments in FA. The latter recorded a decline of 2.2% due to lower activity in construction and manufacturing. In construction the decline of investments was 13.6% as all groups of enterprise contributed to the negative development. In manufacturing investments went down by 3.3% with the main contribution of the small enterprises (11.7%). Within the industry positive contribution to investment growth made electricity and water supply - 15.7% and 15.3% respectively.

In the large-sized enterprises, positive dynamics of investments was due to services where the growth was 14.7% or BGN 13,265 million. The main contribution made hotels and restaurants (25.3%) followed by trade. Investments in FA were respectively BGN 5,840 and 2,719 million.

Within the industry, the large-sized enterprises were also characterized with investments decline of 3.1%. This development was mainly due to electricity (4.6%) and construction (26.4%). LSEs in manufacturing sector, with traditionally the largest share of FA (54.8% or BGN 11,777 million), evidenced a decrease of 0.9%.

The structure of TFA by economic activities for non-financial enterprises in the economy showed that a higher size of investments in manufacturing (20.9%), electricity (16.6%), real estate (16.3%) trade (12.5%). From reviewed activities a leading contribution made real estate (100%) and wholesale and retail trade (78.9%), while in manufacturing the contribution was equal to those of large-sized enterprises respectively 45.2% to 54.8%. Construction also had a large share in investments, 90.5% of which were due to SMEs. In hotels and restaurants the large-sized enterprises had a dominant role, while the share of SMEs was 36.5%. LSEs made a leading contribution in mining and quarrying, electricity and information and communication, where the size of investments was traditionally lower.

Table 17. Development of tangible fixed assets (TFA) in SMEs and LSEs, non-financial business economy, by statistical region, Bulgaria, 2010

<table>
<thead>
<tr>
<th>Statistical region (NUTS 2)</th>
<th>SMEs</th>
<th>LSEs</th>
<th>Total</th>
<th>LSEs</th>
<th>SMEs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>-2.1%</td>
<td>2.0%</td>
<td>-0.7%</td>
</tr>
<tr>
<td>North-West</td>
<td>5.1%</td>
<td>3.6%</td>
<td>4.6%</td>
<td>-3.1%</td>
<td>1.3%</td>
<td>-1.2%</td>
</tr>
<tr>
<td>North Central</td>
<td>7.4%</td>
<td>5.2%</td>
<td>6.8%</td>
<td>-1.0%</td>
<td>-2.7%</td>
<td>-1.4%</td>
</tr>
<tr>
<td>North-East</td>
<td>11.5%</td>
<td>8.8%</td>
<td>10.7%</td>
<td>-4.0%</td>
<td>-3.1%</td>
<td>2.0%</td>
</tr>
<tr>
<td>South-East</td>
<td>12.1%</td>
<td>16.1%</td>
<td>13.3%</td>
<td>0.1%</td>
<td>5.0%</td>
<td>1.7%</td>
</tr>
<tr>
<td>South-West</td>
<td>50.6%</td>
<td>57.6%</td>
<td>52.8%</td>
<td>-4.9%</td>
<td>2.3%</td>
<td>-2.0%</td>
</tr>
<tr>
<td>South Central</td>
<td>13.2%</td>
<td>8.8%</td>
<td>11.9%</td>
<td>-0.2%</td>
<td>3.1%</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

SOURCE: NSI (STATISTICS OF ENTERPRISES), OWN CALCULATIONS.
Structure of FA by statistical regions gave a key contribution of the SMEs in all of them. The larger share in FA investments total for all non-financial enterprises had South-West region - BGN 56 149 million, 58.2% of which was the contribution of SMEs. In them the key role had micro enterprises (30.7%), followed by medium-sized (15.8%) and small - 11.8%. The value of FA was significantly lower in South-East and North-East region - BGN 14 959 million and 12 725 million, where the share of SMEs were 66.8% and 73%.

In South Central region, the level of FA was BGN 11 141 million, 69.4% of which are due to SMEs, with the highest share of micro enterprises (28.8%), where the share of small and medium-sized enterprises was even - 20.2 and 20.3%. In the North Central and North-West region investments in FA were too low - BGN 5.73 and 5.69 million. In North Central region SMEs had a highest share of total investments (75.9%), 26.9% in medium-sized, 25.2% in small and 23.8% in micro enterprises. The lowest share of SMEs investments was observed in North-West region 55.6% where the contribution of different enterprises group was similar.

Foreign Trade

Dynamics of export and import in 2010 and 2011 recorded an improvement of foreign trade balance of the country (Figure 17). Export of goods and services of the economy were characterized by substantial growth, mainly due to recovery of our main trade partners. The latter was the main source/engine of growth, where its dynamics accelerated also the import of goods and services, mainly through its dependence to export-oriented activities. In past two years export has grown in nominal terms respectively by 33% and 30%, while import to some 14% and 21.2%.

Figure 17. Development of trade balance, Bulgaria, 2007-2011
The geographic structure of our foreign trade reconfirmed its strong European direction. In export of Bulgarian goods and services the leading position had EU-27 countries, where in 2011 the indicator has grown to 62.5% from 60.9% in previous year. The Balkan Countries were also characterized with high, but decreasing share (15.3% in 2010 and 14% in 2011). Asian markets had a third place in our export, its share recorded 7.5%, which was 1.7p.p. lower than 2010. The import of goods and services by economic areas could be characterized with a similar structure. In 2011 the share of EU countries, that are our traditional importers, was 59.2% and it has grown by 0.7% to 2010 level. The differences were observed in terms of higher share of Asian countries that are characterized with a growth of 24.3%, while Balkan trade partners a certain decline to 7.2% was observed.

All countries were characterized with a positive contribution in 2011 to our foreign trade balance. In export the higher was the contribution of European and Balkan countries, where the indicators has grown to 33.6% and 18.9% on annual basis. The big influence to this dynamic of export had EU-27 countries and Asian trade partners with a growth of 22.8% and 33.7%.

The structure of export was characterized with a certain change and decline in a share of important trade partners such as Greece. In EU-27 market the first places in our exports in 2011 had for Germany (11.9%); Romania (9.6%); Italy (8.5); Greece (7%); Belgium (5.1%) and France (4.2%). Third countries that had a higher share in our export were Turkey, Macedonia, China and CIS countries with a share of 8.5%, 2.2%, 1.4 and 5.9% respectively. Among countries that increased their share were Germany; Romania and Belgium, they recorded high nominal growth of 45.5%; 36.4% and 76.1% respectively. The other countries with a key role for Bulgarian export were characterized with a constant structure in our export. The only one exclusion Greece where it was observed significantly low growth rate of export (15.2%) compared to other Euro countries.

Figure 18. Geographic structure of import and export, Bulgaria, 2010-2011
Within the third countries group Serbia, which is traditionally important trade partner reported a decrease in exports. The latter dropped by 13.6% and its share decline to 2.3% compared to 3.5% in 2010.

All groups of goods\(^1\) had a positive contribution to export growth with a leading role of unprocessed (raw) materials and Machinery and equipment (Figure 18). In 2010 and 2011, goods structure of export was characterized with significant changes, mainly due to higher demand from our trade partners. In 2011 their growth was 28.9% and 31.2% in nominal terms and 15.2% and 23.3% in real terms. Substantial real growth reported exports in Raw materials (23.9%) and Chemicals (21.4%).

The positive development in our export in 2011 was mainly due to real trade growth that was accompanied with prices growth. Only in export of electrical resources the prices had a leading role.

Key role of Raw materials to positive dynamics of Bulgarian export had a higher demand from EU countries and third countries (Figure 20). In EU-27 market the higher share had Germany, Romania and Belgium, and also China. In the second groups of goods (Machinery and equipment) highest export growth had the export to Germany, France and Romania. In/to raw materials growth contribution had Belgium and France and also China and Macedonia. The export of energy resources to non-EU countries had a contribution, as higher was the growth to our export to Turkey and Macedonia.

The drop of exports share of Bulgarian goods to Greece, that is one of most important trade partners, was determined by continuing process of significant decline or negative demand growth to all groups of goods that was firstly observed in 2009. The lower share of Serbia in our trade balance was a result from decline in Energy goods and Raw materials.

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\(1\) SITC.
Table 18.  Export prices, nominal and real volumes of exports by groups of goods (SITC), Bulgaria, 2011

<table>
<thead>
<tr>
<th>Exports (SITC)</th>
<th>Nominal growth</th>
<th>Exports price</th>
<th>Real growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>30.0</td>
<td>111.8</td>
<td>16.3</td>
</tr>
<tr>
<td>Food products, beverages and tobacco</td>
<td>16.3</td>
<td>106.8</td>
<td>8.9</td>
</tr>
<tr>
<td>Food and animals</td>
<td>16.1</td>
<td>108.5</td>
<td>7.0</td>
</tr>
<tr>
<td>Alcoholic and non-alcoholic beverages and tobacco</td>
<td>17.2</td>
<td>98.7</td>
<td>18.8</td>
</tr>
<tr>
<td>Raw materials</td>
<td>49.2</td>
<td>120.4</td>
<td>23.9</td>
</tr>
<tr>
<td>Unprocessed (raw) materials, inedible</td>
<td>49.5</td>
<td>120.5</td>
<td>24.1</td>
</tr>
<tr>
<td>Fats, oils and waxes of animal or vegetable origin</td>
<td>45.0</td>
<td>119.3</td>
<td>21.5</td>
</tr>
<tr>
<td>Energy resources</td>
<td>31.9</td>
<td>119.0</td>
<td>10.8</td>
</tr>
<tr>
<td>Mineral fuels, oils and derivatives</td>
<td>31.9</td>
<td>119.0</td>
<td>10.8</td>
</tr>
<tr>
<td>Chemicals and chemical products</td>
<td>28.8</td>
<td>106.1</td>
<td>21.4</td>
</tr>
<tr>
<td>Chemicals and chemical products</td>
<td>28.8</td>
<td>106.1</td>
<td>21.4</td>
</tr>
<tr>
<td>Other manufacturing goods</td>
<td>28.9</td>
<td>111.9</td>
<td>15.2</td>
</tr>
<tr>
<td>Products classified by type of material</td>
<td>39.5</td>
<td>114.7</td>
<td>21.7</td>
</tr>
<tr>
<td>Miscellaneous manufactured products</td>
<td>13.7</td>
<td>107.1</td>
<td>6.1</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>31.2</td>
<td>106.4</td>
<td>23.3</td>
</tr>
</tbody>
</table>

Source: NSI (FOREIGN TRADE), OWN CALCULATIONS.

Figure 20.  Estimated contributions by groups of goods and main partner countries, Bulgaria (p.p.), 2011

Source: EUROSTAT, OWN CALCULATIONS.
Sustainability of the SME sector

Age structure of the entrepreneurs

More than a half of the entrepreneurs amongst the Bulgarian SMEs are at least at the age of 46. The largest share in their age structure belongs to the group of 40-49 year old entrepreneurs (35%), followed by that of 50-59 year old (24%). Just over one fifth of the entrepreneurs are aged between 30 and 39 years. Young entrepreneurs (under 29 years of age) represent approximately 5% across the sector, while old ones (over age 60) - nearly 15% (Figure 21).

The present age structure is indicative of a strong presence in the sector of older and, accordingly, a low prevalence of younger entrepreneurs. This structure signals possible risks for the sustainability of the sector: in the short term (5 years) 15% of the SMEs will need to solve problems related to retiring of their managers, and in the medium and long term (15 years) over 38% of businesses (or two out of five companies) will encounter these problems. These trends in the SME sector are related to population demographic trends (which also have their regional dimensions). Although many SMEs are likely to successfully solve problems with transmission of business in the hands of younger entrepreneurs, it is unclear what proportion of the companies will be forced to cease business.

Figure 21. Age structure of SMEs entrepreneurs (%)
Succession in Family SMEs

**Family businesses in the Bulgarian SMEs**

2012 SME Survey shows that one third of the Bulgarian SMEs are family businesses (33%). From them, nearly 43% are in the field of services, nearly 38% - in that of trade, 15% are in manufacturing and 4% - in construction. The share of family businesses run by entrepreneurs aged 50 or above is 41%.

Bulgarian family firms are relatively active in terms of internationalization, participation in clusters and the use of ICT. One-tenth of family firms have made imports last year (10%). Almost as many have achieved exports (9%). Family businesses are equally involved in clusters in the field of their economic activity (10%). Electronic signature of their managers have 43% of the SMEs, company website - 25%, online payments - 23% and almost as many have the opportunity for online sales (22%).

Last year, nearly a quarter of family firms have invested in human resources training (24%) and nearly one third - in the purchase of new machines and/or equipment (31%). More than half of family SMEs (55%) assess their access to finance last year as insufficient, but only 16% of family firms have overdue payments. Being afraid of bankruptcy are 58% of the entrepreneurs in family firms, and a little more than 58% confirm that in case of bankruptcy they would not go again into business.

**Succession in the family businesses**

Succession in family business involves the transfer of management control and ownership to the next generation of owners/managers. The interest of researchers, government agencies, consultants, owners and managers to the issue of succession in family firms is related to the fact that few of these firms survive to the second or third generation\(^1\). Difficulties associated with inheritance of family businesses may cause business failure. Therefore, a special training of the whole family and company is needed in order to achieve successful transfer of ownership and management control to the next generation.

According to a study of EC, approximately 450 thousand companies with about 2 million employees in all European countries transfer their family business to a successor each year. The study estimates a risk of losing around 150 thousand companies with 600 thousand jobs each year during this transfer process, mainly due to inefficiency. The smallest businesses are most vulnerable to the failure of this transfer. Other factors for this vulnerability are legal status (sole proprietors are most vulnerable), age of the company (companies under 3 years old are more vulnerable), as well as financial situation (high indebtedness is related to higher vulnerability).
Succession is seen as a process rather than a single action and requires careful planning of all managerial, financial, legal and tax aspects. Planning process of inheritance is one of the key factors determining the survival of family biznes\textsuperscript{1}. The process of inheritance includes various steps and activities that are strongly influenced by the external environment of the organization: its characteristics (size, degree of formalization, structure, strategy, culture, etc.) as well as family and social environment\textsuperscript{2}.

The process starts by development of a shared vision for the future of family business. Next are the following activities: drafting and adoption of guidelines and rules for the nomination of potential heirs; their training; determination of development criteria and procedure for selection of a successor; and identification of the roles of managers and members of the family in this preparatory process\textsuperscript{3}. Communicating the adopted rules and guidelines is critical to the success of inheritance, and their intime adaptation to the changes in the environment, business and family.

An important step in the process of inheritance is the upbringing and development of potential successors. Training and development of potential successors should be selected after a thorough analysis of the capabilities of the heirs in terms of requirements to be a successor of the company. Family businesses can use and combine various approaches to develop potential successors including training, specialization, work experience in the organization or other organizations, acquiring higher education and others. Progress and development of any potential successor should be continually assessed in order to identify successful candidates and to optimize their training.

The choice of successor is a key point in the process of inheritance. It should be based on pre-determined clear criteria. Businesses should seek consistency between the characteristics and desires of the heir and business requirements. The choice of a successor must be accompanied with a choice of a future management team for business. The process of inheritance ends with the transfer of management control and ownership of the chosen successor, the transfer of ownership of shares of other family members, the clarification of the future role of the previous owner/manager and the development of a strategy and action plan for the family firm.

\textsuperscript{1} Lansberg (1988)  
\textsuperscript{2} Le Breton-Miller et al. (2004)  
\textsuperscript{3} Le Breton-Miller et al. (2004)  
\textsuperscript{4} Le Breton-Miller et al. (2004)
Succession planning in the Bulgarian family firms

Almost 70% of the studied family firms are managed by their founder. In 12% of the family businesses succession has already occurred. More than 8.5% of the owner-managers plan to transfer ownership and management control to a successor in the short run (next 1-2 years), while about 11% of the owner-managers plan to transfer the business to a successor in the medium run (next 3-5 years). Almost 12% of the owner-managers plan succession to occur in the next 6-10 years. More than 61% of the owner-managers do not plan to transfer the business to a successor in the next 10 years.

Most of the studied family firms do not plan important aspects of the succession process. Although more than 30% of the family firms report that they plan a business transfer to occur within the next 10 years, only 17% have developed a succession plan. In a previous study of succession planning in a small convenient sample, Yordanova reports that approximately half of the companies have succession plan. Almost 30% of the companies have developed a list of potential successors, which is consistent with previous research (Yordanova, 2009). Although small proportion of sample companies has developed a succession plan, more than 42% have made explicit efforts to prepare potential successors for their future role in the business.

Some of the reasons for the weakness of succession planning in Bulgarian family firms are the following:

- owners and managers are not aware of the importance of the succession planning for the survival and continuity of the family business;
- owners and managers do not possess enough knowledge and skills for managing succession process effectively;
- lack of an official definition of family firm and public policies and measures for supporting family firms;
- lack of consulting services in the field of family business management and succession;
- education and training in the field of family business management is rarely provided by Bulgarian educational institutions (Yordanova, 2009).
**Training and development of potential successors**

Bulgarian family firms use a variety of approaches for training and development of potential successors. Over half of businesses rely on the experience acquired in the company to facilitate the development of potential successors. Nearly 48% of businesses have provided support for the higher education of their potential successors, and over 41 percent have supported various training of potential successors. Acquisition of professional expertise of potential successors is a fact in only 30.4% of firms. The acquisition of expertise in other organizations is practiced by 26.1% of the businesses.

Almost 77% of the Bulgarian family firms perform activities related to training and development of potential successors without first analyzing the capabilities of potential successors in terms of requirements to be the successor of the company. The lack of such an analysis reduces the effectiveness of activities related to training and development of potential successors and may hinder the process of inheritance.

Figure 22. Planning of succession in Bulgarian firms

Almost 77% of the Bulgarian family firms perform activities related to training and development of potential successors without first analyzing their capabilities.
Characteristics of the potential successor of family businesses

Demographic factors like age and sex are identified as important characteristics of the potential heirs of a considerable part of Bulgarian family firms. Perhaps age and sex are treated as indirect indicators of the readiness of potential successors to take over management of the company. However, about 33% of the Bulgarian family firms believe that age is not important characteristic of a potential successor. Over 27% determined by age as important as it is unimportant feature. Gender potential successor is not significant feature for 62% of the Bulgarian family firms, and 24% of companies said that it is as important as they are minor characteristics.

Blood relation with the controlling family has been identified as an important feature of potential successors - significant part of the Bulgarian family firms point this factor out (72%). Blood relationship of the heir to the controlling family will help to sustain the impact of family on business. Only 15% of companies declared that blood relationship is not an important feature of potential successors, while 13% say it is as important as they are minor characteristics.

The majority of Bulgarian family firms consider both competence and good relationships with key stakeholders of the family business (the current owner, family members and employees) as important characteristics of potential successors. Feature professional and managerial experience in the company or outside it is listed as important by most Bulgarian family firms (86%). Only 7% of companies believe that this feature is not important. The remaining 7% assess it neither unimportant nor important.

Figure 23. Training and educating of potential successors in Bulgarian family firms

Source: SME Survey, 2012, NOEMA.
Education is seen as an important feature of the potential heirs of many firms (68%). It is neither unimportant nor important characteristics for 20% of family firms, but 12% of family businesses consider it unimportant feature. Over 80% of the Bulgarian family firms believe it is important that potential successors have the skills to collaborate with other family members. Only 4% believe that this feature is not important.

Personal relationships of potential successors to the current owner is an important feature for 74% of the Bulgarian family firms. 14% of companies evaluate this feature as much as important as it is important. Only 12% of companies say that it is not important to them. About 78% of the Bulgarian family firms is an important potential heirs to earn respect from the staff of the family business. 17% of companies consider this as a feature as important as it is unimportant, and 5% of companies assess it as unimportant.

**Figure 24.** Level of importance of different characteristics of potential successors in Bulgarian family firms

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Unimportant</th>
<th>Neither Important nor Unimportant</th>
<th>Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>33%</td>
<td>27%</td>
<td>40%</td>
</tr>
<tr>
<td>GENDER</td>
<td>62%</td>
<td>24%</td>
<td>14%</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>12%</td>
<td>20%</td>
<td>68%</td>
</tr>
<tr>
<td>Professional and Manageral Experience Acquired in or Out of the Firm</td>
<td>7%</td>
<td>7%</td>
<td>87%</td>
</tr>
<tr>
<td>BLOOD RELATION</td>
<td>15%</td>
<td>13%</td>
<td>72%</td>
</tr>
<tr>
<td>Ability of Work in Team with Other Members of the Family</td>
<td>4%</td>
<td>14%</td>
<td>82%</td>
</tr>
<tr>
<td>Personal Relations with the Current Owner</td>
<td>12%</td>
<td>14%</td>
<td>74%</td>
</tr>
<tr>
<td>Respect from the Side of Employees</td>
<td>5%</td>
<td>17%</td>
<td>77%</td>
</tr>
</tbody>
</table>

*Source: SMEs Survey, 2012, NOEMA.*
Key points

- In 2010, the number of non-financial enterprises in the Bulgarian economy is estimated at 353,588. Of these, 352,844 are SMEs.
- In 2010, the average number of employees in a given SME is 4.3 persons.
- In 2010, the most affected by the economic crises are the SMEs in the industry.
- In 2009, the net startup rate of SMEs is 9.8%.
- In 2010, the employment in the SMEs decreases by 6.5% and that in the LSEs - by 2.1%.
- In 2010, the revenues of the SMEs amount to 136 112 mln BGN - which is 1.4% less than the previous year.
- In 2010, the value added in the SME sector decreases by 4.5% on annual basis. Although there is a growth of this indicator in the services (2.2%), the manufacturing SMEs are characterized by a drop of value added by 13.9%.
- In 2010, labor productivity in the SMEs indicates nominal growth by 1.9% on annual basis. However, in real terms, the labor productivity diminishes by 1%.
- In 2010, SMEs are decreasing their investments in TFAs by 2.8% on annual basis.
- In 2010 and 2011 the exports are increasing in nominal terms by 33% u 30% respectively for each year, and the imports - by 14% u 21.3%. The greatest contribution to the growth of exports belongs to exporting of products for processing as well as trading machinery and equipment.
- More than half of the entrepreneurs in the Bulgarian SMEs are at least at the age of 46 or more. The younger entrepreneurs (up to 29 years old) represent approximately 5% of the SMEs, while the elder ones (over 60 years old) - almost 15%.
- One third of the Bulgarian SMEs are family businesses (33%).
- Over 70% of the Bulgarian family SMEs are run by their founders.
Access to finance

Defining a company with an easier access to finance

Successful starting or expanding a business requires availability of funds. In contrast to large enterprises, which are usually preferred by banking institutions, SMEs are experiencing some difficulty in finding funding. Funding for SMEs is risky for investors. An economy needs more investors and banks willing to take that risk, because access to finance is essential for competitiveness and growth of SMEs. In the present economic situation which is described by a decrease in the credit to the real economy, SMEs face more difficulties in getting financing.

Sources of funding may be many and various - from microcredit, traditional banking instruments, government funding and international support programs for SMEs, means of the owner, his family and friends. Easy access to these resources is crucial for sustainable development of the sector in times of economic boom as well as during post crisis period aimed at economic recovery.

For purposes of the present analysis we assume the following working definition of a business with an easy access to finance:

Such an enterprise, which has free access and (can) use a wide range of financial means from the following three main sources:

1. Banking, investment and other financial institutions;
2. State budget programs, EU funds, international organizations programs, other foreign aid;
3. Means of the owner of the enterprise, his family and his friends.

1 Generally, banks are for people with money. Microcredit serves those who cannot be served by traditional banking due to absence of any collateral (the unbankables). It allows millions of people worldwide to launch and implement entrepreneurial ideas. (Gert van Maanen, 2004).

2 Therefore the European Commission presented a strategy for improving access to finance for SMEs through the EU Action Plan (MEMO/11/879), including increased financial support from the EU budget and the EIB, as well as a proposal for uniform rules across EU funds to raise capital (venture capital funds).
Access to finance: EU and Bulgaria

According to the 2011 survey of the EC on the access to finance of SMEs in the EU, this access is determined as second in importance among the difficulties faced by SMEs in the EU (after finding clients). This problem is confirmed by one in seven of the interviewed managers, and is most pronounced for SMEs from Greece, Slovenia and Estonia1.

In the last six months of 2011, European SMEs have most often used external funding - in 56% of the cases (more than double compared with 2009). The most widely used external source of funding in 2011 was an overdraft (40%), lease/rent/factoring (36%), commercial loans (32%) and bank credits (30%). Only 7% of SMEs have resorted to equity financing. Less than a fifth (19%) of European SMEs have looked for a bank credit during the last 6 months of 2011 (compared to 26% in 2009). About two thirds of European SMEs who have sought external funding received one. Generally larger and older firms have a greater chance to obtain required external financing. The younger and smaller businesses are refused financing more frequently - nearly a quarter of the SMEs at age between 2 and 5 years were rejected such, compared to only 9% of firms over 10 years2.

The 2012 SMEs Survey conducted for the purposes of the present analysis shows that in 2011 the most common sources of funding among the Bulgarian SMEs have been the means of the owner (62% vs. 42% in 2010), loans from friends and relatives (24% vs. 17% in 2010) and bank credits (15% investment credit and 20% for working capital while in 2010, these shares were 14% each).

Nearly 45% of the Bulgarian entrepreneurs believe that their access to financing is insufficient, while about half of them think that it is sufficient. Over half of them (54%) are afraid of failure. Overdue payments at the beginning of 2011 had 24% of SMEs. Among the firms with overdue payments 69% are micro, and 19% - small enterprises.

86% of SMEs do not have sufficient financial resources to finance any investment. Nearly 38% of SMEs made a purchase of machinery or equipment in 2011 (90% of medium and 30% of micro enterprises), and about 28% invested in training of human resources (80% of medium and 20% of micro and small enterprises). The level of investment in the sector is almost the same as in 2010.


2 EC, 2011: 7
Factors for Development

Financial instruments of the EU funds are used by 6% of the SMEs, although 26% of them claim to have information on programs and funds that support entrepreneurship. Funding from government programs or other local and foreign programs has covered 3% of SMEs (which is comparable to 2010 outcome - 4%). According to a study of BIA\(^1\), the majority of businesses (80%) indicates that serious procedures requiring large volumes of documentation in the application and reporting on European projects are the most significant problem hampering the effective utilization of funds. The results showed that among the problems facing the absorption of EU funds are: late payments on projects (70%) and the need to provide financial resources for the project (30%).

Index Access to Finance and Bulgarian SMEs in 2011

The analysis of the access to finance through an index allows to look from above on the SMEs financing. We analyze the available financial resources that support SMEs activities by size of enterprise, sector, district planning and factors that determine it. (For more information about the methodology see the annex).

In early 2012, access to finance, measured by the index is very difficult for 69% of companies (93% in the previous year). 23% have difficult access (only 6% in 2010), 6% - neither difficult nor easy (compared to 1% before) and a small proportion of SMEs (up to 2%) indicates presence of easier access to financing. Observed improvement in the access to finance is due to increased number of SMEs benefiting from bank credits as well as utilization of in-house cash and unincorporated sources of funding (means of the owner, loans from relatives, etc.).

Fluctuations in the value of the index in the planning areas are small in 2012 (just like in early 2011). This time, however, the index showed some improvement in access to finance in all areas. The greatest increase of the index observed in the North East region.

The greatest difficulties in getting financing are faced by micro enterprises, in which the average index value is two times lower than that of the medium-sized firms (a similar trend was observed the previous year).

Again enterprises in manufacturing and construction have relatively easier access to financing, which is higher than the average for the economy. SMEs in the services have difficulties in getting financing.

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\(^1\) Burdensome procedures and large volume of documents are the main obstacles to effective absorption of EU funds, BIA News: 12.7.2011.
Table 19. Share of SMEs using financial instruments in 2011 (by size of enterprises)

<table>
<thead>
<tr>
<th>Financial instrument</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>SME</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINANCIAL RESOURCES OF THE COMPANY OWNER/S</td>
<td>62%</td>
<td>62%</td>
<td>64%</td>
<td>62%</td>
</tr>
<tr>
<td>LOAN FROM FRIENDS AND FAMILY</td>
<td>27%</td>
<td>21%</td>
<td>11%</td>
<td>24%</td>
</tr>
<tr>
<td>WORKING CAPITAL LOAN</td>
<td>15%</td>
<td>38%</td>
<td>31%</td>
<td>20%</td>
</tr>
<tr>
<td>OVERDRAFT OF CURRENT ACCOUNT</td>
<td>16%</td>
<td>26%</td>
<td>31%</td>
<td>19%</td>
</tr>
<tr>
<td>CREDIT CARD</td>
<td>15%</td>
<td>23%</td>
<td>36%</td>
<td>19%</td>
</tr>
<tr>
<td>FINANCIAL LEASING (FOR PURCHASE OF EQUIPMENT, CAR, AND OTHER)</td>
<td>12%</td>
<td>31%</td>
<td>44%</td>
<td>18%</td>
</tr>
<tr>
<td>INVESTMENT BANK CREDIT</td>
<td>9%</td>
<td>23%</td>
<td>42%</td>
<td>15%</td>
</tr>
<tr>
<td>FINANCING FROM EUROPEAN FUNDS</td>
<td>3%</td>
<td>5%</td>
<td>25%</td>
<td>6%</td>
</tr>
<tr>
<td>CREDIT WITH SPECIAL PURPOSE</td>
<td>5%</td>
<td>10%</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>FINANCING FROM BULGARIAN OR OTHER GOVERNMENT PROGRAMME</td>
<td>1%</td>
<td>0%</td>
<td>14%</td>
<td>3%</td>
</tr>
<tr>
<td>RISK CAPITAL</td>
<td>0%</td>
<td>3%</td>
<td>8%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: 2012 SME Survey, NOEMA, Own Calculations.

Figure 25. Index Access to Finance: Distribution of SMEs by level of easiness of access to finance

Source: 2012 SME Survey, NOEMA, Own Calculations.
Figure 26.  **Index Access to Finance: average value by statistical regions (index points)**

![Bar chart showing index access to finance by statistical regions.](chart1.png)

Note: Index values between 0 - 20 indicate very difficult access to finance.

Source: 2012 SME Survey, NOEMA, Own Calculations.

Figure 27.  **Index Access to Finance: average values by size of enterprises (index points)**

![Bar chart showing index access to finance by enterprise size.](chart2.png)

Note: Index values between 0-20 indicate very difficult access to finance, and between 21-40 indicate difficult access.

Source: 2012 SME Survey, NOEMA, Own Calculations.
Determinants of the access to finance

Unlike 2010 in which the only one significant determinant of the access to finance was the size of the company, in 2011 there are two other factors, which have an impact on the level of access to finance: the gender of the entrepreneur as well as the application of good practices in the enterprise. Likewise SMEs in EU, in Bulgaria, bigger companies has easier access to finance. During 2011 characterized by a restraint in credit by financial institutions, it appears that male entrepreneurs have relatively easier access to finance than women. In addition, a crucial role in improving access to finance over the last year have ICT and human resources practices, as well as application of business strategies and development plans.¹

Figure 28. Index Access to Finance: average values by field of economic activity (index points)

Note: Index values between 0-20 indicate for very difficult access to finance, and between 21-40 indicate difficult access.

SOURCE: 2012 SMEs SURVEY, NOEMA, OWN CALCULATIONS.

¹ These results are based on estimated regression models, explaining the impact of various determinants. Listed factors are significant at level p<0.05. Specifications of econometric equations as well as estimation output of regression models are included in the annex.
### Innovation activity

#### Defining innovative enterprise

“*In the economy where the only certainty is uncertainty, the only reliable source for continuous competitive advantage is knowledge.*”

It is well recognized that in the modern economy based on knowledge characterized by rapid pace of change and increasing complexity and uncertainty, the ability of firms to adapt to the external environment and remain competitive is closely related to their capacity to innovate.

Both growth and survival of SMEs depend on an increasing extent on the ability of SMEs to constantly innovate. Prerequisites for any innovation are either creating a new knowledge, or combining existing components of knowledge into a new “entrepreneurial” approach.

Innovations depend on a number of internal company factors, on the external environment, as well as on the knowledge and skills of the entrepreneur.

The importance of internal factors is emphasized most strongly in the concept of company resources (resource based view - RBV), whereby the company has a competitive advantage in the presence of unique and hard to imitate resources. Particularly important are intangible resources, including knowledge and skills, organizational practices, reputation and organizational culture. According to some authors intangible resources have more significant influence on the success of the company compared to tangible. Other economists have introduced the term “core competencies” for description of key strategic capabilities which are collective learning in the organization how to coordinate various production skills and integrate the new trends in technological developments.

An essential element of the environment are the conditions of the sector in which company operates detected best by Porter (market power of customers and suppliers, the threat of new competitors, threat of substitution of a product and competition). Under these conditions the key to achieving benefits is applying strategies to differentiate a product as well as achieving more efficient cost structure.

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Another important element of the external environment is the national innovative environment systems. This element tries to cover all important factors influencing the creation, application and diffusion of economically useful knowledge. These three main processes occur in a complex matrix of interactions between different actors (firms, universities and other research units, educational organizations, financial and public support structures, etc.) and also in various economic, social, institutional, political and geographical contexts.

It cannot be expected that companies will organize in the same way their innovations, as far as it depends on many factors. Among the most important, however, is also the managerial approach (entrepreneur and human resources involved in innovation activities as well as development of innovation infrastructure in the enterprise), the outcome of development and implementation of new ideas, company size and technological intensity of the sector of activity.

Here we introduce the following working definition for innovative enterprise:

Innovative SME is such, which:

- Employs in the long-term skilled labour on a specialized R&D job position for the purposes of its innovative activity, or uses professional services in the short or medium term provided by scientific and academic organizations or other businesses for the purposes of its innovative activity;
- Establishes and maintains innovative infrastructure within the enterprise;
- Develop new product ideas and implement these ideas in the production.

Innovations and Bulgarian SMEs

According to NSI data, the share of innovative enterprises in Bulgaria increased for all size groups from 2006-2008. Percentage of innovative small enterprises increased from 17% to 20.3%, that of medium firms increased from 26.4% to 32%, and that of large companies rose from 52.7% to 59.2%. Businesses in the field of industry are more innovative than those in the field of services accounting for shares of 23.8% and 14.5% respectively in 2006, and 29.2% and 16.3% respectively in 2008.

In 2011, the mostly distributed innovation activity in Bulgarian SMEs is related to changes in the business processes, with the aim to optimize them and cut costs.
Least popular innovative activity is related to the implementation of joint projects in education between business and academia - just about 9% of SMEs have participated in such projects during the last year. In this case, likewise in all innovative activities, we observe a strong influence of the size of the enterprise. In medium-sized enterprises, innovation activity is much higher than that in micro and small businesses.

Table 20. Share of enterprises implementing innovation activities in 2011 by size of enterprise

| 活动                          | 微型 | 小型企业 | 中型企业 | 大型企
|------------------------------|-----|---------|---------|------
| 实现重大变革以降低运营成本 | 31% | 35%     | 67%     | 38%  |
| 图书馆使用专业文献         | 30% | 35%     | 47%     | 32%  |
| 员工接受专业培训           | 23% | 39%     | 42%     | 28%  |
| 改良现有产品                | 21% | 33%     | 61%     | 27%  |
| 新产品上市                 | 12% | 20%     | 44%     | 17%  |
| 企业有足够的资金资源进行创新活动 | 14% | 10%     | 22%     | 14%  |
| 员工拥有研究与开发的职务    | 10% | 15%     | 36%     | 14%  |
| 研发新产品                  | 10% | 5%      | 31%     | 12%  |
| 利用大学研发成果在新产品和服务中 | 9%  | 7%      | 22%     | 10%  |
| 公司研发部比例             | 9%  | 5%      | 22%     | 10%  |
| 合作与教育机构               | 7%  | 3%      | 28%     | 9%   |

来源：2012年SME调查，NOEMA， Own Calculations.
Index Innovation Activity and Bulgarian SMEs

The index reports innovation activities of enterprises during the last and the last five years. It is calculated for each company included in the 2012 SMEs Survey, and then index values are summarized by firm’s size, field of activity and region. (For more information on the methodology and values of the index see the annex).

In 57% of the SMEs we observe low, in 25% - rather low, in 10% of the SMEs - moderate, in 6% - rather high and in only 2% of the businesses - high level of innovation activity. Overall, there is a trend for increasing the level of innovation activity in 2011 compared to 2010. However, the innovation activity of Bulgarian enterprises is still very low.

Innovation activity in the medium-sized companies is nearly three times higher than that in small firms.

The most innovative companies are in the fields of manufacturing and construction, and the least innovative - in these of trade and services.

There is a steady trend that three planning regions have higher innovation activity than the national average - Northeastern, Southeastern and Southwestern region. The lowest activity is observed in Northwestern and South Central region.

Figure 29. Index Innovation Activity: distribution of SMEs by level of innovation activity

Source: 2012 SMEs Survey, NOEMA, Own Calculations.
Figure 30. **Index Innovation Activity: average values by statistical regions** (index points)

- **South-West**: 13, 14
- **South Central**: 7, 9
- **South-East**: 15, 15
- **North-East**: 30
- **North Central**: 11, 11
- **North-West**: 6, 6

Note: Index values between 0-20 indicate low level of innovation activity, up to 40 - show rather low innovation activity.

Source: 2012 SME Survey, NOEMA, Own Calculations.

Figure 31. **Index Innovation Activity: average values by size of enterprise** (index points)

- **Micro enterprise**: 11, 17
- **Small enterprise**: 21, 21
- **Medium-sized enterprise**: 36, 42

Note: Index values between 0-20 indicate low level of innovation activity, up to 40 - show rather low innovation activity, up to 60 - moderated innovation activity.

Source: 2012 SME Survey, NOEMA, Own Calculations.
Determinants of innovation activity

The first major factor that determines the level of innovation activity of Bulgarian SMEs is the size of the enterprise. Larger businesses are significantly more innovative and perform much more innovation than smaller companies.

Based on econometric modeling, other factors that currently have a statistically significant impact on innovation activity in enterprises are identified. Key determinants are, as follows: patent activity, internationalization and implementation of good practices. The higher patent activity, the more internationalized the firm, or the higher the degree of implementation of good practices (in human resources, ICT and business planning), the higher the innovation activity in the SME.

Figure 32. Index Innovation Activity: average values by field of activity (index points)

Note: Index values between 0-20 indicate low level of Innovation activity, up to 40 - show rather low Innovation activity.

Source: 2012 SMEs survey, NOEMA, own calculations.

1 These results are based on estimated regression models, explaining the impact of various determinants. Listed factors are significant at level p<0.05. Specifications of econometric equations as well as estimation output of regression models are included in the annex.
Intellectual property

Defining active enterprise in respect to intellectual property

In the knowledge based economy sources of competitive advantage are shifting increasingly to the assets of knowledge, which requires a change in strategy. According to Porter, this is the transition from trying to be "better" than rivals to trying to be "different" in order to be able to provide unique value. Creating this value requires firms to have unique abilities. This moves the focus of the strategy from the operational efficiency to the development and deployment of key competences. These competences are based on the company's unique technical knowledge and operational practices, processes and methods. Thus, changes in the new economy have increased the strategic role of intellectual property (IP) including its role for SMEs. However, IP plays a role in such a degree that is part of the key competences of the firm. Both private companies and public organizations such as universities, colleges and research institutes are increasingly discovering the importance of intellectual property and the need for its protection.

Compared with large firms, SMEs are using less IP, and multinational companies are using IP more often than national. Restraining by SMEs for not using IP can be explained by the financial burdens on patent registering and litigation. The typical cost of patenting, including costs of legal services is about 2500 euro.

World Intellectual Property Organization (WIPO) has established a special website - a guide for SMEs on managing IP. IP-related needs of SMEs are diverse - from technical information on patents to managing IP or means of protection of this property.

Data from a study by the University of Dublin on 600 SMEs from the EU, which have received a patent in Europe or the U.S. for the period 1994-1997 (as the conclusions are valid even today), shows the following:

- Two-thirds of surveyed companies had experienced attempts by others to copy their patented invention, but only 20% of them actively used the courts to defend its patent;

- About 49% of them fear the costs of judicial protection of patents is "very important" or "substantial" impact on their intentions to invest;

In the knowledge based economy, sources of competitive advantage are shifting increasingly to the assets of knowledge. Hence, the increased strategic role of intellectual property.
- The current patent system works poorly for SMEs, especially in the U.S., where big companies use their resources to intimidate SMEs;

- Currently patenting in SMEs is not cost-effective means of protection of IP;

- Only in rare cases, the fines for violations of IP are reimbursed in practice;

- Maybe a forced arbitration settled by experts is an alternative to the excessive costs of patent litigation.

Here, the following working definition of an enterprise active in respect to intellectual property:

A company, which:

- Has registered trademarks and/or patents in Bulgaria or abroad;
- Has sufficient financing to provide for this activity;
- Has intentions and specific plans to register intellectual property;
- Has information on (possibilities of) registering trademarks and/or patents in Bulgaria or abroad.

Intellectual property and Bulgarian SMEs

In 2010 10% of the SMEs had registered trademark in the country and 6% abroad. In 2011, the proportion of registered trademarks (at home and/or abroad) is 13%. Patents related activities do not lead to a change in these registrations as in the beginning of 2012 they are approximately the same level as previous year - 7%.

We observe a clear polarization in terms of registered intellectual property depending on the size of the enterprise - 42% of the medium-sized enterprises have registered a trademark while it is only 9% of the micro firms. The situation in registered patents indicates of a similar trend - 14% of the medium-sized enterprises have such while only 3% of the small businesses have patents.

Similar to global trends (which show that SMEs address significant financial problems in registering intellectual property unlike the large companies), Bulgarian SMEs did not have sufficient financial resources for this activity. In 2010, only 7% of them had sufficient funds to register a trademark, and 5% - a patent. In 2011, we observe some improvement in this indicator - 18% believe they have sufficient financial resources for such registration.
Index Trademarks and Patents

The index allows for a summary of all activities related to intellectual property and applied by SMEs and contains the following two equal components (for more information on the methodology and values of the index see Annexes):

- Presence of registered trademarks and/or patents in Bulgaria or abroad;
- Presence of sufficient financial resources to register intellectual property.

Figure 33. Intellectual property and SMEs

Source: 2012 SMEs Survey, NOEMA, Own Calculations.
The observed improvement in the index is due to the general improvement of the institutional environment in this area, market pressures caused by economic crisis, and some simplification of the index methodology to some of its components (in 2011, detailed breakdown showed no business activity in many of the items; in order to focus on actual activities involved in the daily business of Bulgarian SMEs, in 2012, these items have been aggregated into few).

The majority of Bulgarian SMEs (73%) have low levels of patent activity. Rather low activity in respect to intellectual property have 16% of enterprises, 9% - rather high, and 2% - high level of activity.

The improvement of the institutional environment in this sphere is translated in the alignment of activity levels in terms of intellectual property in the micro, small and medium enterprises (47-49 index points).

Like the previous year, the fields of trade and production are most developed in terms of this activity while in 2011 a trend is observed for relevant advance of SMEs in the field of manufacturing.

South Central region is a leader in the development intellectual property in the SME sector.

Figure 34. Index Trademarks and Patents: distribution of SMEs by level of activity

![Graph showing distribution of SMEs by level of patent activity]

SOURCE: 2012 SMEs Survey, NOEMA, own calculations.
Figure 35. Index Trademarks and Patents: average values by statistical regions (index points)

Notes: 1. Index values in the interval 0-20 show low level of activity, up to 40 indicate for rather low level of activity, up to 60 - moderate, and up to 80 - rather high level of activity.

2. The figure includes only those enterprises, for which the index value is greater than zero.

SOURCE: 2012 SME Survey, NOEMA, Own Calculations.

Figure 36. Index Trademarks and Patents: average values by size of enterprises (index points)

Notes: 1. Index values in the interval 0-20 show low level of activity, up to 40 indicate for rather low level of activity, up to 60 - moderate, and up to 80 - rather high level of activity.

2. The figure includes only those enterprises, for which the index value is greater than zero.

SOURCE: 2012 SME Survey, NOEMA, Own Calculations.
Determinants of the activity in respect to intellectual property

On the basis of econometric modeling, factors with significant statistical influence on the patent activity are identified. The following factors are reported¹:

- The size of the enterprise: as a whole the bigger the company, the higher the patent activity.

- Level of innovation activity: patent activity is directly related to innovation activity of enterprises. With the growth of innovation in enterprises, there is also an increase in the level of their activity in respect to intellectual property.

- Level of implementation of good practice: patent activity is directly related to the implementation of good practices (in the field of human resources, ICT and business strategies and planning). By increasing application of good practices, occurs increase in the firm’s level of activity in respect to intellectual property.

Figure 37. Index Trademarks and Patents: average values by field of activity (index points)

Notes: 1. Index values in the interval 0–20 show low level of activity, up to 40 indicate for rather low level of activity, up to 60 – moderate, and up to 80 – rather high level of activity.

2. The figure includes only those enterprises, for which the index value is greater than zero.

SOURCE: 2012 SME Survey, NOEMA. OWN CALCULATIONS.

¹ These results are based on estimated regression models, explaining the impact of various determinants. Listed factors are significant at level $p<0.05$. Specifications of econometric equations as well as estimation output of regression models are included in the annex.
Internationalisation

Defining internationalized enterprise

The reasons for the globalization of small businesses are almost the same that cause expansion and large firms. Initially, research on the SME sector have focused on barriers to internationalization. Later, studies revealed that thanks to new technologies and policies of deregulation, the importance of these barriers has decreased. Today, studies are aimed at identifying ways and means for successful internationalization of SMEs.

There have always been early internationalized firms (such which have internationalized their activities in the first years after their founding), including small businesses. However, the share of international trade generated by such companies has increased substantially over the recent years, which provokes a deeper study. Several studies highlight the growing number and importance of "born global" firms. Moreover, companies today are born either "global" or "local", calling into question the relevance of traditional theories of gradual internationalization of firms. Based on empirical study of small firms in Norway and France, it is clear that over half of exporting firms created after 1992 may be classified as "born global". This indicates that they are no longer an exception but the majority of newly established companies.

Internationalization of enterprises usually is referred to as the process of exit and their increasing involvement in international markets. Until recently, internationalization was mainly connected with importing and exporting businesses. Today, internationalization is seen as much more complex set of activities - along with traditional import and export, it includes partnerships with foreign companies, attracting foreign investment or creation of foreign missions, participation in international networks and clusters and others.

In a study of the European Commission on internationalization of European SMEs 2010, internationalization itself is understood not only as export activities, but includes all activities that put SMEs in significant business relationships with foreign partner: export, import, FDI, international sub-suppliers and international technical assistance.

Here, we introduce the following definition of internationalized enterprise:

An entity that carries out some or all of the following activities:

1 Acs et al., 2001.
2 Bloodgood et al., 1996.
4 Moen, 2002: 156.
6 Welch and Luostarinen, 1988.
7 EC 2004.
8 EC, 2010: 5.
- Participates in specialized international events to promote its own production and/or to find (new) suppliers;
- Imports raw materials, products;
- Exports its own products/services;
- Hires foreign experts in the management team;
- Attracts foreign participation in its capital.

Internationalisation of SMEs in EU and Bulgaria

A survey of the EC shows that a significant number of European SMEs are engaged in international activities, but few are internationalized beyond the single European market\(^1\). The two most common forms of internationalization are exports and imports: 25% of EU SMEs are exporting, of which about 50% are exporting beyond the internal market (13% of all SMEs); 29% of SMEs are importers, again 50% are importing from non-domestic markets (14%). In addition, 7% of European SMEs are involved in technological cooperation with foreign partner, 7% are subcontractors of foreign partner, 7% have foreign suppliers, and 2% are active in FDI.

There is a link between the level of internationalization and company size - the larger the company the more likely to internationalize as it relates to each aspect of internationalization. Active in exports are 24% of micro enterprises, 38% of small and 53% of medium-sized, while imports in these percentages are 28%, 39% and 55%, respectively\(^1\). SMEs from smaller countries are more internationalized, but the proximity of businesses to national borders has no significant effect on the level of internationalization. Countries such as Estonia, Denmark, Sweden, Czech Republic and Slovenia have a much larger share of exporting SMEs compared to EU average (25%). At the same time, larger in population and territory, countries like Germany, France, Great Britain have much lower average share of exporters among SMEs. From the 26 economic activities analyzed in that study, most internationalized sectors are trade, manufacturing, transport and communications.

Exporters among Bulgarian SMEs are relatively few - 11%. The only indicator in which slightly exceeded the EU average share of exporters among medium-sized enterprises (58%). The share of exporting micro enterprises is 10% and small - 15%.
Importers represent 19% of the SME sector in Bulgaria. The share of medium-sized enterprises which import is the same as the share of those which export (58%). In the case of imports, we observe a stronger presence of micro and small enterprises with shares 17% and 22% respectively, compared to exports.

Foreign trade in the SME sector in 2011 has experienced growth year on annual basis. The proportion of exporting enterprises has increased more than twice than that in 2010. The share of importing SMEs increased by 7% on annual basis.

The share of SMEs participating in exhibitions and fairs remains relatively low in 2011 (12%) as it decreased significantly from the previous year (18%). Nearly a quarter of the entrepreneurs say they have information about international markets and contacts with potential partners.

SME participation in cluster activities affect a small share of enterprises in 2011 - 10.6%, but still there is a significant growth in comparison with previous year (4%). In respect to firm’s size, 10% of micro, 15% of small and 19% of medium-sized enterprises are involved in such activities.

Figure 38. Internationalisation of Bulgarian SMEs (by size of enterprises and SME sector as a whole)

| Source: 2012 SME Survey, NOEMA, Own Calculations. |
Index Internationalisation

The index reflects all activities related to the internationalization of businesses over the last year and is calculated for each surveyed enterprise. Then, calculations are summarized by company size, main field of activity and statistical region. (For more information on the methodology and values of the index see the annex).

In 2011, 78% of the enterprises have a low level of internationalization of business (95% in 2010); 5% have rather low level; 11% have moderate, 2% - rather high and 4% - a high level of internationalization. Increasing values of the index corresponds to the observed macroeconomic trends during 2011 for improvement in export position of the country.

Mostly internationalized are medium-sized enterprises and the size of the company still is a determinant of the degree of internationalization. In 2011, enterprises in manufacturing are with the highest level of internationalization. Amongst the statistical regions, in 2011, the Northeastern region is a leader in this respect.

Determinants of internationalisation

Determinants which currently have a statistically significant impact on the degree of internationalization of enterprises are as follows: company size, level of innovation activity and implementation of good practice (the degree of internationalization increases with innovation activity of SMEs, and greater use of best practices).

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>Trade</th>
<th>Production</th>
<th>Services</th>
<th>Construction</th>
<th>SME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average share of imports value realized by internet orders from total imports of the company</td>
<td>3.0%</td>
<td>1.0%</td>
<td>0.3%</td>
<td>0.2%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Average share of exports value realized by internet orders from total exports of the company</td>
<td>0.4%</td>
<td>0.2%</td>
<td>0.3%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Average share of exports value from the company turnover</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.0%</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

SOURCE: 2012 SME Survey, NOEMA, Own Calculations.
Figure 39. **Index Internationalisation: distribution of SMEs by level of internationalisation**

![Bar chart showing distribution of SMEs by level of internationalisation](chart39)

**Source:** 2012 SMEs Survey, NOEMA, Own Calculations.

Figure 40. **Index Internationalisation: average value by statistical regions (index points)**

![Bar chart showing average index values by statistical regions](chart40)

Notes: 1. Index values in the interval 0-20 show low level of activity, up to 40 indicate for rather low level of activity, up to 60 - moderate, and up to 80 - rather high level of internationalisation.

2. The figure includes only those enterprises, for which the index value is greater than zero.

**Source:** 2012 SMEs Survey, NOEMA, Own Calculations.
Figure 41. Index Internationalisation: average value by size of enterprise (index points)

Notes: 1. Index values in the interval 0-20 show low level of activity, up to 40 indicate for rather low level of activity, up to 60 - moderate, and up to 80 - rather high level of internationalisation.

2. The figure includes only those enterprises, for which the index value is greater than zero.

Source: 2012 SME Survey, NOEMA, Own Calculations.

Figure 42. Index Internationalisation: average value by field of activity (index points)

Notes: 1. Index values in the interval 0-20 show low level of activity, up to 40 indicate for rather low level of activity, up to 60 - moderate, and up to 80 - rather high level of internationalisation.

2. The figure includes only those enterprises, for which the index value is greater than zero.

Source: 2012 SME Survey, NOEMA, Own Calculations.
Good practices: ICT, human resources and business strategies and planning

The role of information and new ICT

The world today is in the era of information society (IS), which is not just a subject of theoretical discussions, but a field of active investments in various sectors. The development of e-government, e-business, e-banking, e-demand and e-supply of goods, services and jobs require new skills, including those of the entrepreneurs themselves. Shumpeter\(^1\) conceptualized the entrepreneur as a major agent of economic change, primarily because it is an innovator in terms of products, markets, raw materials, production methods and organization. In contrast, other economists\(^2\) emphasize the role of the entrepreneur in finding and processing information. For them, the entrepreneur is not necessarily a source of change, but rather appropriate response to change. This view of entrepreneurship seems to correspond better to the new global economy in which the changes arise primarily from the external environment in which access to necessary information (about products, markets, technologies, etc.) and capacity for its treatment are key factors for success. If markets were perfect and all relevant information available, there would be no need of entrepreneurs. In the real market environment, access to information is as important as market access. New requirements towards entrepreneurs dictate that they are able to understand the situation and manage companies at global level\(^3\).

The world economy is increasingly becoming a complex set of business networks based on new ICT. Companies, economic sectors and regions that fail to participate in these networks are at risk of difficult survival and even extinction. Electronic business is no longer a matter of choice but a must for any enterprise that wants to attend international markets. The main ICT infrastructure in the form of simple computer networks and Internet access have become essential goods for many companies from all sectors. These technologies are used so often that they are now indispensable for carrying out production and business. In contrast, advanced information infrastructures and services are crucial for the future of the economy that goes beyond these systems and technologies - they provide the opportunity for new models of managing commercial relationships. While large companies are well placed to adopt and develop these models, the smaller ones are forced to follow the trends or they risk to be pushed out of the market. Although ICT continues to be an effective way to reduce costs, they increasingly began to be perceived as a tool for innovation and increase revenue by providing new services and ways of working.

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1 Schumpeter, 1934.
In the economic theory and practice, the implementation of information systems is essential for the economic growth as a whole, and in particular for SMEs, because of the important role played by SMEs in most economies in the world. Meanwhile, SMEs differ significantly from large companies, which affects their practices for the former for deployment of IS. These differences relate to the lack of (or less sophisticated) management information system; common concentration task of collecting information in one or two employees, fewer resources to search for information, quality and quantity of information available from the external environment. Therefore, theories and practices developed for large organizations may not be suitable for smaller companies. By definition, small firms have little resources to adapt to ICT, operate in niches where the benefits of new technologies may not be obvious, and face higher risks in the implementation of ICT. Many SMEs still have major problems associated with computer technology - poor preparation for operations, failure in attempts to link technology with the receipt of value added, etc. That can repel managers to adopt new IS and ICT.

Current research focuses primarily on variables influencing the use of ICT and their positive effects on firm performance. Some of them concentrate on driving factors of environment, structural characteristics of firms and quality of human capital. Other studies reveal positive and significant relationship between workers' skills and utilization of various ICT and indicate for a nexus (albeit weak) between the adoption of ICT and some strategy to increase quality.

Human resources, and business strategies and planning

One of the leading ways to achieve sustainable competitive advantage is the development of organizational learning and knowledge management in SMEs. Organizational learning can be defined as a process or practice of creating, acquiring, storing, sharing and application of knowledge wherever it is, in order to achieve a better performance.

"An organization learns if any of its units acquire knowledge that is potentially useful for the organization."

Many publications show the increasing role of knowledge management as a source of competitive advantage for the firm. There is a positive relationship between organizational learning and performance of companies. These results are consistent with the concept of company resources, according to which intangible resources (leadership, focus on consumers, HR management) have a significant impact on the final results. It was also shown that organizational learning leads to continuous improvements. Several studies reveal that the dimensions of a direct impact on firm performance are empowerment, shared vision, customer orientation, HR management.

1 Ramdani, Kawalek, 2007: 49.
2 Riemenschneider et al., 2003.
4 McEvilyet et al., 2000.
5 Grant, 1996.
6 Scarbrough et al., 1999: 80.
7 Huber, 1991: 89.
8 Choi et al., 2008.
9 Spicer and Sadler-Smith, 2006.
10 Powell, 1995
11 Mitki et al., 1997.
12 Curkovic et al., 2000.
HR management, in particular staff training, differs significantly in larger firms compared to SMEs. Reasons for this are “market forces” and “ignorance”\(^1\). Market forces relate to various factors that determine supply and demand for training. SMEs offer to a lesser extent staff training, because they believe that costs will be higher than expected return to training. In addition, these firms have fewer resources and less time for staff training. Ignorance means lack of awareness by the owner/manager of the importance of training to develop skills or opportunities for inclusion in training programs. Another barrier to learning in small firms is common negative attitude of the owners/managers about their training and focus on short-term goals and benefits\(^2\). Most often, these entrepreneurs are engaged in everyday activities of the company and looking for easy and quick solutions to their problems (especially in times of economic crisis and recovery).

The reluctance of SMEs to invest in training of staff is fueled by fear that trained and highly skilled employees may leave in search of higher wages. Therefore, they prefer to find employees in the labor market with the needed skills rather than investing in training. Furthermore, if the company competes on the basis of low labor costs and innovate, the owners will not see much benefit from increasing the skills and qualifications\(^3\).

Sometimes the employees themselves can be a barrier to learning in companies, as far as SMEs do not offer opportunities for career growth, nor there is relationship between higher qualifications and level of remuneration. In some cases, entrepreneurs can not define well the needs of the necessary competencies for the company and therefore do not see the benefit of training\(^4\).

Defining enterprises implementing good practices

In practice, the application of ICT, training of human resources, and use of marketing strategies and business plans are three different kind of activities. However, the implementation of each one of them is closely connected with the others. Therefore, implementation of good practices can be described by these three types of activities simultaneously.

For purposes of this analysis, we assume the following definition of an enterprise implementing good practices:

Enterprise, which:

- Uses modern ICT (management information systems and Internet technologies);

- Implements formal or informal strategy for human resource development and provides training for its employees;

- Develops and implements marketing strategies and business plans in the short, medium and long term.

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1 Westhead and Storey, 1997: 63.  
2 Matlay, 1999  
3 Hendry et al., 1995.  
4 Johnson, 2002.
Good practices and Bulgarian SMEs

2012 SMEs Survey indicates that application of ICT covers increasingly large share of Bulgarian SMEs: 45% of businesses have a website (versus 37% in early 2011); 61% have a digital signature of managers; opportunity for online orders is introduced by 32% of them. The share of SMEs applying information management systems has also increased - from 6% to 11-15% (depending on the type of information system). However, the proportion of turnover generated through Internet is still too low - an average for the SME sector it amounts to approximately only 2%.

Staff training is not well adopted in the daily business of most SMEs, but is relatively widely practiced. In 2011, 36% of the companies organized internal company training (almost the same share from the previous year) and 13% - external specialized training in the enterprise (17% in 2010).

More than half of the SMEs have short-term business plans (55%) but slightly less than a quarter (23%) have medium term ones. Developed marketing strategy have 30% of companies in the SME sector.

Index Good Practices

The index allows for a summary of all applicable practices of SMEs in ICT, HR and BSP. In 2011, we observe some increase in the index values from the previous year: 12% of companies widely implement good practices (at high and rather high level), 22% - moderately, 44% - in rather low level, and one fifth (21%) implement good practices at low level. Implementation of good practices is significantly more prevalent among medium-sized enterprises. Leading statistical region in this respect is the Northeastern. There are no significant differences in terms of implementation of good practices in the different fields of activities.
Table 22. Good practices, implemented by SMEs in 2011 by size of enterprise

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>Micro</th>
<th>Small</th>
<th>Medium</th>
<th>SME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of enterprises with own CORPORAT WEB SITE</td>
<td>38%</td>
<td>46%</td>
<td>86%</td>
<td>45%</td>
</tr>
<tr>
<td>Share of enterprises with an OPTION FOR ORDERING AND SALES VIA INTERNET</td>
<td>31%</td>
<td>24%</td>
<td>47%</td>
<td>32%</td>
</tr>
<tr>
<td>Share of enterprises with ELECTRONIC SIGNATURES OF MANAGER/S</td>
<td>54%</td>
<td>66%</td>
<td>94%</td>
<td>61%</td>
</tr>
<tr>
<td>Average share of turnover generated via internet</td>
<td>1.3%</td>
<td>4.3%</td>
<td>19.3%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Share of enterprises with information management system: CMS</td>
<td>10%</td>
<td>0%</td>
<td>31%</td>
<td>11%</td>
</tr>
<tr>
<td>Share of enterprises with information management system: SCM</td>
<td>11%</td>
<td>7%</td>
<td>33%</td>
<td>13%</td>
</tr>
<tr>
<td>Share of enterprises with information management system: ERP</td>
<td>9%</td>
<td>10%</td>
<td>44%</td>
<td>13%</td>
</tr>
<tr>
<td>Share of enterprises with other kind of information management system</td>
<td>10%</td>
<td>26%</td>
<td>33%</td>
<td>15%</td>
</tr>
<tr>
<td>Share of enterprises that provided their employees with INTERNAL COMPANY TRAININGS</td>
<td>31%</td>
<td>44%</td>
<td>58%</td>
<td>36%</td>
</tr>
<tr>
<td>Share of enterprises that provided their employees with SPECIALIZED TRAINING IN MANAGEMENT AND SALES</td>
<td>10%</td>
<td>12%</td>
<td>36%</td>
<td>13%</td>
</tr>
<tr>
<td>Share of enterprises that provided their employees with EXTERIOR SPECILIZED TRAININGS</td>
<td>17%</td>
<td>17%</td>
<td>36%</td>
<td>19%</td>
</tr>
<tr>
<td>Share of enterprises that provided their employees-training in IT APPLICATIONS USE</td>
<td>10%</td>
<td>26%</td>
<td>33%</td>
<td>15%</td>
</tr>
<tr>
<td>Share of enterprises which have A SHORT TERM PLAN OF ACTION</td>
<td>10%</td>
<td>12%</td>
<td>36%</td>
<td>13%</td>
</tr>
<tr>
<td>Share of enterprises which have A MID-TERM PLAN OF ACTION</td>
<td>17%</td>
<td>17%</td>
<td>36%</td>
<td>19%</td>
</tr>
<tr>
<td>Share of enterprises which have A MARKETING STRATEGY</td>
<td>25%</td>
<td>37%</td>
<td>53%</td>
<td>30%</td>
</tr>
<tr>
<td>Share of enterprises which have BROADENED THEIR PRODUCT PORTFOLIO in the past year</td>
<td>14%</td>
<td>20%</td>
<td>44%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Source: 2012 SMEs Survey, NOEMA, Own Calculations.

Figure 43. Index Good Practices: distribution of SMEs by level of implementation of good practices

Source: 2012 SMEs Survey, NOEMA, Own Calculations.
**Figure 44.** Index Good Practices: average values by statistical region (index points)

<table>
<thead>
<tr>
<th>Region</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>South-West</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>South Central</td>
<td>18</td>
<td>31</td>
</tr>
<tr>
<td>South-East</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>North-East</td>
<td>28</td>
<td>40</td>
</tr>
<tr>
<td>North Central</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>North-West</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

Note: Index values in the interval 0-20 show low level of activity, up to 40 indicate rather low level of activity, up to 60 moderate, and up to 80 rather high level of implementation of good practices.

Source: 2012 SME Survey, NOEMA, Own Calculations.

**Figure 45.** Index Good Practices: average values by size of enterprise (index points)

<table>
<thead>
<tr>
<th>Size of Enterprise</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro enterprise</td>
<td>23</td>
<td>32</td>
</tr>
<tr>
<td>Small enterprise</td>
<td>33</td>
<td>37</td>
</tr>
<tr>
<td>Medium-sized enterprise</td>
<td>49</td>
<td>53</td>
</tr>
</tbody>
</table>

Note: Index values in the interval 0-20 show low level of activity, up to 40 indicate rather low level of activity, up to 60 moderate, and up to 80 rather high level of implementation of good practices.

Source: 2012 SME Survey, NOEMA, Own Calculations.
Determinants of good practices

One of the key factors for the implementation of good practices is size of the enterprise. Based on econometric modeling other determinants which currently have a statistically significant impact on the implementation of good practices in Bulgarian SMEs are identified. These determinants are as follows ¹:

- The characteristics of the entrepreneur - younger and more educated entrepreneurs generally apply more good practices; gender of the entrepreneur (women entrepreneurs apply to a greater extent good practices);

- Level of competitiveness in respect to other factors for development: access to finance (better access is associated with implementation of more practices), innovation activity (higher innovation activity leads to greater use of good practices), activity in respect to intellectual property (it also contributes to the higher implementation of these practices).

Figure 46. Index Good Practices: average values by field of activity (index points)

Note: Index values in the interval 0-20 show low level of activity, up to 40 indicate for rather low level of activity, up to 60 - moderate, and up to 80 - rather high level of implementation of good practices.

SOURCE: 2012 SME Survey, NOEMA, Own Calculations.

¹ These results are based on estimated regression models, explaining the impact of various determinants. Listed factors are significant at level P<0.05. Specifications of econometric equations as well as estimation output of regression models are included in the annex.
Key points

- **In 2011, the most common source of SME financing is means of the owner (62%).** Access to finance is very difficult for 69% of enterprises; 86% of SMEs do not have sufficient financial resources to finance investment.

- **The most common innovation activity among SMEs is associated with changes in business processes in order to optimize production (38%); the least common is implementation of joint initiatives in education with academic institutions (9%).** In 57% of SMEs innovation activity is low, while in 8% it is relatively high.

- **In 2011, the proportion of SMEs with registered trademarks is 13% and that with patents - 7%.** 74% of SMEs have low level of activity in respect to intellectual property.

- **There is a revival in foreign trade of SMEs compared to 2010. SME exporters are 11% in the sector, and importers - 19%.** 12% of SMEs have participated in exhibitions or fairs. Nearly 11% of SMEs are involved in cluster activities. However, 78% of SMEs have a low degree of internationalization.

- **In 2011, 45% of businesses have a website, 61% have digital signature of managers, an opportunity for online orders - 32%, information management systems are introduced by 11-15%.** 36% of SMEs had internal corporate training and 13% - external specialized training. Developed marketing strategy are used by 30%. Good practices are widely applied by 12% of the enterprises.

- **Still Bulgarian SMEs are not competitive (especially smaller ones) in terms of access to finance, innovation, intellectual property, internationalization and implementation of best practices.**
Economic Recovery and Competitiveness

Competitiveness and SMEs business performance

For the purposes of the research, competitiveness of enterprises is seen as the potential to achieve high performance, based on creative approach to the human, capital and natural resources. The situation in the SME sector and its ability to overcome the economic crisis are examined through the prism of five key factors for sustainable development and competitiveness - access to finance, innovation activity, intellectual property, internationalization and applying good practices.

Following the Analysis of the situation of the SME sector in 2011, an econometric modeling of the relations between the factors of developing and the economic performance of the enterprises is made in this document (in order to identify significant driving forces in the sector at present). Summarizing the results, obtained from the evaluation of these models is shown below (Figure 47).

In 2012, this analysis was focused on the responses of the enterprises and their ability to handle the economic crisis, based on the reviewed factors of development and economic recovery of the SME sector.

In 2012 (just like in 2011) there is a high correlation between the reviewed five factors of development and competitiveness - improving one of these factors in a certain enterprise is followed by improvement of another, and then to the improvement of all other factors and the overall competitiveness.

Unlike the previous year, in 2012 we find some improvement in the values of indexes describing the factors of development on one hand, and on the other - we observe some improvement in the macroeconomic environment and in the SME sector. Also, entrepreneurs have adapted to market changes, caused by the economic crisis. Therefore, in terms of recovery, each factor of the development and competitiveness finds its role in the economic achievements of the sector.
In 2012 and in the beginning of 2011 (the period of economic crisis) - the leading factors for the survival of the business in the short term were liquidity (access to finance) and the available human capital, gained in the previous years (that increased the efficiency and effectiveness of business processes). Unlike then, in the beginning of 2012, we see an increase in the influence of all the factors on the economic performance of the SME.

Estimated relationships, which illustrate the role of the reviewed factors of development and competitiveness, are as follows (Figure 47):

In 2012, access to finance remains a key factor for economic performance of enterprises: it affects the regular payment of debt, the employment in enterprises (no redundancies are experienced if financing is provided), the increasing or maintaining wage levels, the increasing or maintaining market share, and the increasing or maintaining profits. Access to finance also affects the implementation of good practices.
In the period of economic recovery, innovation activity has emerged as a key determinant of regular payment of the obligations of companies and increasing or maintaining wage levels. Also, innovation in enterprises is crucial for their development in terms of their external position, registration of patents and trademarks, as well as implementation of good practices in their businesses.

Registered trademarks and patents appear to be crucial for maintaining or increasing market share, profits and sales. This factor for development is directly related the implementation of good practices.

Internationalisation as a whole does not directly affect the economic performance of enterprises. This is largely due to the fact that the economic crisis was global (rather than internal for the country) and affected both export-oriented SMEs, and those focused on domestic markets. Regarding the correlations between this factor for development and the others, we may say that internationalization is crucial for the innovation of enterprises and application of good practices.

Unlike the period of economic crisis, when the most important factor for survival was the implementation of good practices, in the period of economic recovery good practices generally have an indirect effect on indicators of economic performance. However, human capital (training of human resources of the company) has a direct positive effect on maintaining or increasing market share and sales. Good practice, however, are the basis for development of all other factors, including access to finance (which is generally independent of the level of competitiveness in terms of internationalization, innovation and intellectual property). An interesting observation is that the export position of the company is crucial for the development of human resources (export-oriented SMEs are training employees in a greater extent than others).

Main conclusion in the beginning of 2011 was that the economic crisis has affected all SMEs, regardless of whether they work on internal or external market, and whether they are innovative or not. However, even then, there was a tendency for sustainable development of businesses which are more competitive in respect to access to finance and implementation of good practices. Businesses with better access to finance and wider application of good practices suffered fewer negative effects of the crisis.
In 2012, economic recovery has led to increasing the role of factors for competitiveness of the SMEs for their economic performance. Each of the five factors for development considered here is essential for SMEs growth.

Two main groups of SMEs could be distinguished:

- The first group includes non-competitive enterprises, which fail to overcome the negative effects from the economic crisis and continue to face difficulties such as reduced sales and profits, redundancies, wage decrease and delayed debt payments.

- The second group includes rather competitive enterprises, which managed to overcome the obstacles which occurred during the crises, and some of them even succeeded to move to their firms’ growth path during the economic recovery.

In the short and long term the sustainability of SMEs depends on the successful development in terms of access to finance, innovation, intellectual property, internationalization and implementation of best practices.

The above analysis clearly shows that Bulgarian SMEs are not sufficiently competitive (especially smaller firms) to overcome the negative effects of economic crisis. Therefore, the rapid development of their competitiveness is the basis for sustainable development of the sector and.

**Economic Recovery: SWOT analysis**

**Weaknesses**

The main weaknesses of the Bulgarian SMEs are: their innovation and patent activities, internationalization level and restricted access to financing. In comparison with the registered in 2010 weak sides, however, part of these weaknesses demonstrated greater or smaller improvements. For instance, the share of enterprises with low innovation activity (measured by the respective index) decreased from 80% to 57%, while the share of those with rather low activity increased from 11% to 25%. At the same time the number of enterprises with an average level of innovation, those with a high and the highest innovation level doubled (respectively from 5% to 10%; from 3% to 6%; and from 0% to 2%). For the research period almost all of innovation activities marked an increase. The share of SMEs with sufficient means to finance innovations augmented from 10% to 14%; the share of those with an own R&D unit enlarged form 3% to 10%; the share of SMEs using the results of scientists and scientific institutions increased from 4% to 10%, etc.
As in the previous year, innovation activity of the medium sized enterprises was two and half time greater than of the microenterprises. The most innovative were enterprises from the sectors of construction and manufacturing, while the least innovative - those from commerce and services. The main factors stimulating the innovativeness were more developed patent work, more active internationalization, and larger application of good management practices.

Innovations are at the bottom of trademarks and patent activities. In 2011 a total of 13% of SMEs had a registered trademarks in the country or abroad, while in 2010 these shares were respectively 10% for the country and 6% for abroad. The share of registered patent in the country or abroad (7%) remained almost unchanged from the same period. If in 2010 only 7% of SMEs stated that they have enough financial means to register trademark and 5% - to register patent, in 2011 a total of 18% shared that they have such means for registering intellectual property.

The degree of activity in respect to the intellectual property, measured by the respective index showed a decreasing share of SMEs with the lowest activity (from 94% in 2010 to 73% in 2011), at the expense of an increased share of those with low activity (from 4% to 16%), rather high activity (from 0% to 9%), and those with a highest degree of activity (up to 2%). More developed activities related to the intellectual property were inherent to SMEs from manufacturing, and less developed accounted those from construction. The intellectual property activity, measured by the respective index, did not differ significantly among different size groups (the index took values from 47 to 49). This activity, however, demonstrated a direct positive relation with the SMEs innovation level.

The SMEs internationalization also marked an improvement – a total of 11% of SMEs accounted an export in 2011 as being only 5% in 2010, and 19% have realized an import in 2011 in comparison to 12% in 2010. The number of companies - exporters continued to be smaller than the number of companies - importers, but the differences decreased. Although the share of the internationalized Bulgarian SMEs increased, it remained lower than the EU-27 average (25% of the European SMEs were exporters, and 29% - importers). The degree of the Bulgarian SMEs internationalization, measured by the respective index, also indicated a decrease of the companies with low level (from 95% in 2010 to 78% in 2011), and an increase of other categories:

The main weaknesses of the Bulgarian SMEs are insufficient innovation and patent activities, low level of internationalization, and restricted access to financing.
those with rather low activity (from 3% to 5%); with an average level (from 2% to 11%); with rather high and the highest activity level (respectively up to 2% and 4%). Compatible with this are the national statistics data about the export augmentation in real prices of goods and services with 12.8% in 2011, as the export was almost the only factor to stimulate the country economic growth.

As in a 2010, the biggest internationalization capacity demonstrated the medium sized enterprises. These enterprises had about two times greater average value of the share of export in total production and in total turnover (0.20% against 0.10% average for all SMEs), as well as higher average value of export and import, accomplished through the internet order as a share of total export and import (0.40% against 0.30% an average for the export and 3% against 2% an average for the import of all SMEs). The average index scores of internationalization increased for all SMEs size groups (from 20 to 33 for microenterprises; from 20 to 46 for small; and from 46 to 57 fro medium sized), as well as for all SMEs sectors.

Similar to other EU-27 SMEs, the most used financial sources for Bulgarian SMEs in 2011 were owner’s means (62% against 42% in 2010), loans from relatives and friends (24% against 17% in 2010), and bank credits (15% for investment and 20% for working capital; these share in the previous year were respectively 14%). The restricted access to finance explained why 86% of the researched SMEs have no sufficient resources for investments. It is not by chance that the level of investment in the SMEs sector was the same as in the previous year. More active in purchasing new machines and investments in the staff training were medium sized enterprises, followed by the small ones. If in 2010 in total 13% of the investigated SMEs achieved the market share increase, in 2011 this percentage dropped to 7%. In spite that the share of SMEs with the highest difficult access to financing, measured by the respective index, decreased from 93% in 2010 to 69% in 2011, while the share of those with a difficult access increased (from 6% in 2010 to 23% in 2011). The share of SMEs with an unchanged situation in respect to the access to finance increased also a little bit (from 1% to 6%), as well as a share of those with an alleviated access to financing (up to 2%).

The financial instruments of the EU funds were used barely from 6% of the Bulgarian SMEs, although 26% of managers stated that they had information about the entrepreneurship supporting funds and programmes. The financing form government and other local and foreign programmes covered only 3% of SMEs (which is compatible with their share in 2010 - 4%). The main obstacles to the euro funds absorption remained the heavy procedures, which required a great amount of documentation for the application and for the accounting of the euro projects (for 80% of the interviewed SMEs); delay payments for projects (70%), and the necessity to assure a non negligible financial resource for projects (about 30%)\(^1\).
From the SMEs self evaluation followed that a number of their weaknesses, which were registered in 2010, marked some improvements in respect to degree of innovativeness, intellectual property management, access to financing, and degree of internationalization. As a whole, however, the level of registering proper trademarks and brands, patents, and other intellectual property remained relatively low in comparison the EU-27 average. The other characteristics, although improved, were still evaluated as weak - such as access to financing, networking, cooperation, participation in clusters (about 11%), and innovation implementation. Essentially these factors are leading for the creation of sustainable competitive advantages in the present global economy.

Strengths

The main strengths of the Bulgarian SMEs are: their flexibility, contribution to the employment, increased focus on staff training, ICT adoption, and application of good management practices.

The SMEs flexibility is particularly important for their survival in the conditions of crisis, the evidences of which gave the dynamic of newly created and closed enterprises in 2009. Micro-enterprises had a significantly higher coefficient of creation (6.7%), while for enterprises with more than 10 employees this coefficient decreased to 2.6%. The higher coefficient of creation of microenterprises is inherent to all economic sectors with the leading role of electricity production and distribution, water supply, creation and distribution of information, and construction. It is worthy to note that almost all economic activities, which contributed mostly to the rising dynamics of the number of newly established enterprises, were characterized by the highest coefficient of survival. The expectations for the 2010 business demography, however, are related to the decreasing of coefficient of birth and the increasing of the coefficient of close down of enterprises.

At the beginning of the crises the SMEs contributed still to employment growth in Bulgaria. In 2009 the number of employed in these enterprises grew with 22 thousands people in comparison to 2008, while the number of employees in the big enterprises decreased with 45 thousands people for the same periods. Even more, in 2009 only microenterprises increased their share in employment (11%), and all the other size groups of enterprises lost jobs. In 2010, however, all size groups of enterprises accounted for a decrease in employees, and the drop was most significant in small (9.2%) and medium sized enterprises (8.9%), and consequently their share in employment decreased. In microenterprises the employment also dropped out (2.6%), but with significantly less degree, and as a result their share in employment augmented to 31%. The effects of crisis on the employment diminishing were the strongest in the industrial sector, and particularly in the construction, where the microenterprises were less presented, and consequently less affected.
Already in 2009 it was registered that the majority of SMEs have taken serious steps to the improvements of their profitability and effectiveness. These actions found expressions in the increased requirements to the employees’ performance, better accountability of receipts and liabilities, and stricter control on products and deliveries. Probably because of that in 2010 all size groups of enterprises registered a drop of their employees.

To the strengths of the Bulgarian SMEs refer also increased staff training. In 2011 about 36% of companies have assured internal trainings on basic activities for their employees (being 37% in 2010), external trainings on management and sales (13%), trainings in the enterprise’s specialization field (19%), and on the use of the ICT applications (9%). For comparison in 2010 the external trainings were accomplished by 17% of SMEs. The staff training in the firms leads to the increased employees’ qualification in the conditions of the quick social and technological changes, which in turn contributes to the higher labour productivity and innovativeness. It is not accidentally that about 84% of the surveyed SMEs evaluated as a sufficiently good the level of qualification of their employees and workers. In addition, if in 2010 a total of 14% of SMEs managed to enlarge their products portfolio; in 2011 this share is already 18%.

The share of SMEs with their own website also augmented from 37% in 2010 to 45% in 2011; the share of those with managers’ electronic signing from 27% to 61% respectively, as well as the share of enterprises with the opportunities for online orders and sales from 17% to 32%. If in 2010 less than 6% of SMEs declared that they apply information management systems, in 2011 already 11% had CRM, 13% - SCM, 13% - ERP, and 15% - other type of automated system. Still the share of the turnover, generated by the internet orders was more significant only in the medium (19%) and small enterprises (4%).

In 2011 in total 17% of SMEs declared they have developed and launched new product in market (against 13% in 2010); 27% of SMEs significantly improved already existing product (against 16% in 2010); and 12% elaborated new product to be launch soon on the market (against 9% in 2010). The share of SMEs in 2011, which realized significant changes in the business processes in order to optimize the activities and reduce cost, was 38%; 30% of SMEs had an elaborated marketing strategy, and 22% of them have undertook marketing researches in the last year.
As a whole in 2011 the Bulgarian SMEs accounted for a better index in the application of good management practices. The share of enterprises with a low degree of application of these practices (measured by the respective index) decreased from 45% in 2010 to 21%; the share of those with a rather low degree remained almost the same (45% and 46% respectively); more than two times increased the share of SMEs with an average degree of application (from 9% to 22%); more than four times increased the share of those with a high degree of use of such practices (from 2% to 9%); and the enterprises with the highest value on this index arrived at 3%.

Similar to other competitiveness practices, the application of good management practices was more developed in the medium sized enterprises (53 index points against 49 in 2010), followed by small (37 index points against 33 in 2010), and microenterprises (32 index points against 23 in 2010). The differences among different size groups in function of the economic sectors were not great – the index value for SMEs in manufacturing and construction was 38, while this values for services and trade was 34.

It is evident from the analysis that the strengths of the Bulgarian SMEs relied on their flexibility, which was expressed in the positive dynamics of the SMEs birth rate in 2009. In spite that all size groups accounted a decrease of the employment, this drop is significantly smaller among microenterprises. To the strong sides of the Bulgarian SMEs referred also the availability of qualified personnel, which was closely related with the increased role of the firm’s employees training, more active adoption of the ICT, larger short and long term planning, and greater use of marketing activities. These good management practices and particularly the activities related to the increased quality of human resources turned to be of key significance for the SMEs survival in the crisis circumstances.

Threats

The basic identified threats to the Bulgarian SMEs were: postponed investments plans, difficult access to finance, high inter-firms’ indebtedness, weak sector’s sustainability in medium and long term in respect to the family business succession, and relatively low level of entrepreneurship among youth.

As it was established in the previous SMEs survey from 2011, the crisis in the crediting had long term negative effects on the propensity of both enterprises to invest and households to consume. The danger of recession did not pass over, even the opposite - it seems that many EU countries are in a long-term recession. The unemployment increased in a number of EU countries, including Bulgaria, which leads to the loss of professional skills and qualification.
At the beginning of 2012, about 45% of the Bulgarian entrepreneurs considered their access to financing insufficient, and more than half of them expressed fear of bankupts (54% against 43% at the beginning of 2011). This fear was inherent to a greater degree to entrepreneurs aged 31-40 years (64%); those with high education (67%); members of director boards (83%); among microenterprises (58%); and mainly from the construction sector (71%).

Overdue payments at the beginning of 2012 had 24% of SMEs, among which prevailed microenterprises (69%), followed by small ones (19%).

The average registered age of all investigated entrepreneurs/managers of SMEs in 2012 was 46 years, and it was without changes with the average age in 2011. The entrepreneurs group of aged up to 29 covered barely 5%, the group of aged 30-39 years was 22%, the group of aged 40-49 years - 35%, entrepreneurs aged 50-59 were 24%, and the group of 60 and more - about 15%. At the same tome one third of the SMEs belonged to the family business.

These numbers gives reasons for some troubles, related to the SMEs sector sustainability in terms of the business succession processes. The importance of these issues comes from the fact that small part of the family companies survive until the second or third generation. The present data showed that almost 70% of the Bulgarian family firms were still managed by their founders; about 12% already passed the succession; 8,6% planned to pass the management to the successor in the near future (next 1-2 years); and 11% planned to do the same in medium terms (3-5 years). In spite that the majority of the Bulgarian family firms did not plan important activities, related the property and management transfer to the next generation. Less than 17% of the family firms prepared a plan for management transfer to the successor, and a list with potential successors were elaborated only 29.7% of them.

These results are at the base for the identified threats to the demographic development of the SMEs sector:

- In the short term, there is a threat in front of the sustainable SME sector’s development since 21% of entrepreneurs fear a bankrupt in the present economic conditions, and have no intentions to start a new business if it happens.

- In the medium and long run, 27% of all Bulgarian SMEs are threatened by suspending activities, due to lack of strategic decisions for the business continuation after founders of family firms retire.

- Other 40% of the SMEs are managed by entrepreneurs aged 50 years or more, which signals for potential problems of their sustainability in the forthcoming 15 years.
Opportunities

As in 2011, the opportunities for the Bulgarian SMEs sector development in 2012 are related mostly to the economic recovery and the appropriate enterprises’ development in respect to the development of factors for their sustainable competitiveness.

As an opportunity for the positive development of the Bulgarian SMEs stands out the great share of entrepreneurs with the university education (about 68%), while around one third (32%) have a high school education. People with university education are two times more among entrepreneurs in comparison to the country average. More than half of the interviewed entrepreneurs used continuously internet (55.6%), one fourth - every day, about 7% - two-three times weekly, and an insignificant share of them resorted to the internet rarely. The average number of years in the business among interviewed was 15.6 years, which evidenced for a significant professionalization of their activities.

Although 54% of the firms expressed a fear of bankrupt, the encouraging fact was that 63% had an intention to re-start a business again. Among these entrepreneurs the women were presented a little bit better (66% against 60% for males); entrepreneurs aged up to 30 (83%) and 31-40 (76%); mainly with university education; making continuous use of the internet (72%). Similar to the 2011 data, at the beginning of 2012 the attitude towards second chance increased with the decrease of the age – more than 75% of entrepreneurs aged up to 40 could re-start business in a case of failure against 52% of those aged between 51 and 60 years and more than 61 years.

In total 16% of the SMEs were exporters, 23% - importers, and the majority of them were simultaneously importers and exporters - 65% of importers were also exporters, and 85% of non exporters were also non importers. These data confirmed the prevailing orientation of a great part of SMEs towards local market. At the same time, however, namely the export (where the medium sized enterprises have a greater share) emerged as leading factor for the economic recovery. It means that in the medium term these enterprises have better perspectives.

Economic recovery and investments

The development of factors for the SMEs competitiveness is related to the investment processes in the SMEs sector. The decreasing flow of FDI, shrink bank credits, as well as the loss of foreign and internal markets as a result of the crisis restricted significantly the opportunities of enterprises to invest in their business.

The figure 48 presents the positioning of the indicators for the economic performance and the accomplished investments in the Bulgarian SMEs sector in 2011. The triangle reveals the proportions between companies accounting a decrease of indicators and those accounting for the increase
of these indicators. Two zones are outlined: one zone of increase, in which enterprises with an increase on a given indicator exceed significantly the other with a decrease on the same indicator; and a zone of decrease, in which enterprises with a decrease on a given indicator exceed significantly the other with an increase on the same indicator. Clearly is defined the indicator, which accounted for the greatest increase in this proportion - the losses. All other indicators demonstrated a more or less decrease.

Both the investments and indicators for the economic performance showed that a greater part of SMEs did not make investments, neither achieved positive business results. The outlined zone shows some connections between investments and enterprises economic performance, which signals for some necessary measure to help the investments in the SMEs sector.

Figure 48. Indicators for the SMEs economic performance in 2011 and investments

SOURCE: 2012 SME SURVEY, NOEMA, OWN CALCULATIONS.
Policies to foster SMEs competitiveness

Opportunities to stimulate SMEs development through economic policies

The present study registered as main weaknesses of the Bulgarian SMEs their low innovation, patent activity, and internationalization. As strong sides of the Bulgarian SMEs were outlined their flexibility, contribution to the employment, increased focus on staff training, ICT adoption, and application of good management practices (strategy planning and marketing). The registered threats to the Bulgarian SMEs were related to postponed investments plans, difficult access to finance, high inter-firms’ indebtedness, weak sector’s sustainability in medium and long term in respect to the family business succession, and relatively low level of entrepreneurshipships among youth. As in 2011, the opportunities for the Bulgarian SMEs sector development in 2012 are related mainly with the economic recovery and the more active enterprises’ behaviour, particularly in respect to the export. These opportunities are backed up by some sector’s characteristics like the high share of entrepreneurs with a university education, active use of the ICT and the internet, great part of entrepreneurs with positive attitude towards a “second chance”, particularly among women and younger entrepreneurs.

In the observed SMEs sector development it is worthy to note the relatively higher sustainability of the microenterprises in terms of their number and contribution to the employment, combined, however, with better performance of small and medium sized enterprises in terms of innovations, intellectual property management, access to finance, internationalization, and final results. This situation raises new questions to the policy of stimulating the SMEs development. On the one side, this policy should take into account the SMEs fulfilment in respect to employment, and on the other side, their performance in respect to innovation and internationalization. Some enterprises could be supported in order to preserve or increase the employment, while the help accent for the other could be better directed to increasing their competitiveness.

The usual list of programmes in support to the small business contains the following items:

- Financing (including loans, guarantees, co-financing, etc.);
- Creating premises for business (business incubators, centres for technology transfer, etc.);
- Advices and mentorship to small business;
- Business education (most often the business plan establishment);
- Marketing education, including for export;
- Development of managers/management skills;
- Supporting innovations and R&D in SMEs;
- Business start-up;
- Making popular entrepreneurship;
- Special policies devoted to separate target groups (particular sectors, exporters, etc.).

**Challenges to the economic policies in support to the SMEs development**

Profound evaluations of these and similar programmes, however, showed a low efficiency and effectiveness\(^1\). All government recognized the importance of the SMEs sector, and they would like to help its development, but most of the utilized instruments did not succeed to reach the goals, or had an insignificant effects\(^2\).

The reasons of the governmental policies to support SMEs lie in the concepts of “market failures”, which reveal some market shortcomings as: barriers to enter/exit; unloyal competition; monopoly; imperfect information; external effects; cultural particularities, etc. Very often these policies are based on common assumptions (because it is cheaper) about so called „good practices”, taken, however. From other context, as well as on data received from research in particular sectors and countries. The experience shows that in order to be effective these assumptions should be verified regularly by empirical analyses, and good practices should be contextualized. In this light it is logical that the programmes in support to the SMEs should address the identified by the present research weaknesses and threats, as well as to contribute to the enlargement of the uncover opportunities and strengthen their strong sides.

**Policies stimulating the Bulgarian SMEs development**

**Improvement of the institutional environment**

As well as at the beginning of the economic reforms during the transition period, in order the SMEs sector to develop better, today also it is necessary to improve the normative and institutional environment in two directions: strengthening the institutions and increasing the business responsibility\(^3\).

Strengthening the institutions means not increasing the bureaucracy, but creating a stable and predictable normative order and high culture of administrative services. On behalf of the firms it is required more correct accountability and smaller share of the informal economy.

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1 Huggins and Williams, 2007; Greene et al., 2008; Bridge, 2010.
3 Владимиров и др., 2002.
Strengthening of the SMEs sector sustainability

Investment in the entrepreneurship education

The SMEs development towards the adoption of modern organizational models and practices is a slow process, which requires learning and overcoming the inherited stereotypes of doing business. The expected management changes presuppose the new types of entrepreneurs with new attitudes and skills, capable to work not in isolation, but in international business networks. The research on the entrepreneurial values in Bulgaria showed that the highest contribution to the entrepreneur’s success had factors such as training, development, challenges, cooperation, physical conditions, and social assurance\(^1\). The successful entrepreneurs demonstrated better business preparedness, more definitive innovation behaviour, and higher readiness for business risks taking.

This suggests the necessity of increasing the quality for entrepreneurship education and creating a new business culture in both private and public sector. This means also that the expenditures for education in entrepreneurship and management can be regarded not simply as educational costs, but as investments for the economic development. Otherwise where from the new entrepreneurs and managers, capable to cope with the knowledge economy, are expected to come? It is unrealistic to count for this on the socialized in the 90s businessmen.

One can assume that the outlined in the present research weaknesses and threats for SMEs development are due to the smaller Bulgarian entrepreneurship experience in the single market. We can consider, however, that these weaknesses are due to the lack of good strategies for integrating the entrepreneurship education. It is not accidentally that one of the most wide spread recommendations in the main national and European documents is for enlargement and improvement of the quality of entrepreneurship education. At the same time the EC report from 2008 on the entrepreneurship education in universities revealed that until now this education was not fully integrated in curricula. The data showed that the majority of such courses were offered in the faculties of economics and business. According to the EC experts, however, the business faculties may be not the most appropriate places for entrepreneurship education, as innovative idea more probably are formulated in the natural sciences and technical faculties, as well as in the faculties of arts and letter.

Experts confirm that the entrepreneurship education should not be mixed with the education in economics and management, as its goal is to stimulate creativity, innovativeness, and aspiration to self-employment\(^1\). The general conclusion from this EC 2008 survey is that there is a shortage of entrepreneurship education in non-business and non-economic faculties in the whole Europe; there is lack of teachers in entrepreneurship in both high and university education; this is due to some degree to the lack of motivation among teachers to engage similar education with students\(^2\). This situation refers fully to the Bulgarian colleges and universities, and its

\(^1\) Davidkov, 2010: 467.
overcoming is related to the creation of entrepreneurship centres in colleges and universities, which started since 2006, but which needs to be accelerated.

**Support to the family business**

In order to overpass the low sustainability of the SMEs sector in respect to the family business succession, the State and professional associations are expected to organize information campaigns in this issue and ways to resolve it. As the SMEs do not dispose usually with sufficient means to invest in the high quality education of potential successors, the stakeholders can help by providing help to raining the potential successors of small businesses - foreign languages courses, executive trainings, MBA programmes, marketing education, etc.

**Improving the access to finance**

Providing alternative sources for the SMEs financing is a key to stabilize the SMEs sector in the continuous crisis. In this connection very encouraging is the EC strategy to improve the SMEs access to finance through the increasing of financial support from the EC and EIB budgets, as well as through the proposition for new regulations of the venture capital funds. Under the logo „European Venture Capital Fund” these funds could attract capitals without being embarrassing by the complex requirements of different country members. It is expected that the new rules will alleviate the capital attraction for the benefit namely of start up companies, for which the access to finance is most difficult.

The financial instruments for the improvement of the Bulgarian SMEs access to finance are five funds: for start up; risk fund; fund for growth; mezzanine fund; and guarantee fund. Through these funds and the combination of public support and private investments, the holding fund “Jeremie Bulgaria” will contribute to provide more opportunities for the SMEs financing at the amount of 562 mio Euro until 2015 and for a longer period.

**Support for innovation and patent activities**

Bulgarian SMEs could increase their competitiveness and integrate better in the European and world markets if they succeed to re-orient their activities from widely practiced in the word low value added productions to some niches, occupied on the base of specific competitive advantages and innovative products with high value added. The increased international competition requires that companies direct to the products and services, which could not be produced at lower price by newly industrialized countries, which have unquestionable advantages in labour intensive productions.

In order to accelerate the innovations in the SMEs sector, it is necessary to accelerate investments in R&D. The promising sigh for this is the project of new Law for innovations and the institutionalization of the Bulgarian fund.
for innovations. It is expected that this fund will assure the complementarity among different sources for financing the SMEs innovations. As the innovations are devoted to the creation of new and own products, its support should be intertwined by the support to patent activity (financial, expert, etc.).

The SMEs sector technological modernization requires respective organizational changes, which should lead to the higher level of flexibility. This modernization includes also greater resort to the partial and part time employment, which was regulated for the first time in Bulgaria only in 2011.

**Stimulating SMEs internationalization**

The SMEs opening to the new markets is an important factor for their competitive development. At the same time a small number of Bulgarian SMEs were internationalized and had the opportunity to be international. That is why the State and professional association could stimulate this process by providing some financial, expert and other kind of support for SMEs in order to:

- find new markets;
- elaborate marketing strategies to enter foreign markets;
- train entrepreneurs in the business negotiations, international trade, etc.;
- organize business delegations for specialized trade forums, etc.

**Supporting good management practices**

If some of the Bulgarian SMEs, strengths are related to more intensive staff training, ICT and e-business application adoption, and larger application of good management practices, obviously these processes should be support. It means providing significant alleviations for the new ICT amortization, support for the firm’s staff training, offering of qualified courses on marketing strategies, etc.

To arrive at the higher competitiveness, however, Bulgarian entrepreneurs should elaborate new strategies as well. Such strategy could be more intensive inclusion in the value chain of more advance (European) companies, which already have positions in the respective markets. Minimal condition for the realization of this strategy is to arrive at the compliance with the international quality standards. The other strategy could be concluding strategic alliances (or participation in clusters) with some of these companies in order to get access to their technological advantages. That is why supporting the processes of the quality standards adoption and the formation of clusters in the SMEs sector could help significantly the elaboration of such strategies.
Parallel to this, there is a need to help the increasing quality of entrepreneurs’ skills. The respective agencies and associations could provide support in offering specialized executive courses for SMEs managers. There is a need of more intensive use of the ICT for both the optimization of internal processes and for the inclusion of the e-commerce. From social point of view it is connected with the increase of the share of digital literal population and the enlargement of the internet access. These directions should become in integral part of the government policies for stimulating the SMEs development.

The improvement of the information environment supposes measures for strengthening the information exchange among firms, government institutions, professional associations, etc.; enrichment of the professional associations websites with information on the issues of the respective sector; opening the offices for consultancy and information services.

**System bounding (connections) of measures**

The Bulgarian SMEs sector and its sustainability were analyzed through the prism five main factors for sustainable competitiveness. The observed high interrelations among these factors showed that the system bounded measures are needed to increase the sector’s competitiveness. For instance the alleviated access to finance should be combined with measures stimulating the application of good management practices, innovations, intellectual property management, and increasing the level of internationalization.

The system approach suggests that maybe it is more efficient and effective to support a smaller number of enterprises (those, which demonstrated potential for development in term of human capital, intellectual property, innovations, and internationalization), but in systematic way, which could bring synergy effects of these policies. In other words it means more integral support for smaller number of enterprises with demonstrated competitive potential.

To reach this goal, however, it is necessary that the respective agencies apply system and unified methodology to identified different groups of SMEs (through empirical research, surveys, proper data base, improved statistics, etc.), which demonstrate potential for development of some or all factors of sustainable competitiveness. Only this way the government could proved timely, adequate and right support to those SMEs, which are capable to bring a sustainable growth.
Key points

- In 2011-2012, the economic recovery has led to increasing the role of all factors for competitiveness of SMEs in achieving better business performance.

- Access to finance remains a key factor for the overall economic performance of SMEs.

- Innovation activity is a key determinant for SMEs’ regular payments of debt and liabilities as well as for not reducing their wage levels.

- Registered trademarks and patents are crucial for not reducing market shares, profits and sales.

- Human capital in SMEs has a direct positive effect on maintaining or increasing market shares and sales.

- Two main groups of SMEs are distinguished: non-competitive enterprises, which are still suffering decrease in business indicators, and relatively competitive SMEs which have succeeded to overcome the economic crisis.

- In the short and long term the sustainability of SME sector depends on its successful development in terms of access to finance, innovation, intellectual property, internationalization and implementation of best practices. Therefore, economic policies had to be channeled in this direction.


References


References


Josh Lerner, Yannis Pierrakis, Liam Collins and Albert Bravo Biosca, "Atlantic Drift - Venture Capital performance in the UK and the US, Research report June 2011, see section 4.1.


References


Ramdani, B., P. Kawalek. 2007. SMEs and IS innovations adoption: A review & assessment of previous research, Accidentia Revista latinoamericana de Administration, 39, 47 - 70, http: revistaacadenna.dadea.org


References


Кастелс, М. 2004. Информационната епока. Икономика. Общество. Култура. Т.1. Възходът на мрежовото общество. ЛИК, София.

Портър, М. 2004. Конкурентното предимство на нациите. София, ИК „Класика и стил”.

Портър, М. 2004. Конкурентното предимство на нациите. София, ИК „Класика и стил”.

Фондация „Приложни изследвания и комуникации” (2011). Иновации.бг. Иновационна политика и секторна конкурентоспособност.
### A1. Microeconomic indicators for the performance of SME sector


<table>
<thead>
<tr>
<th>№</th>
<th>INDICATOR</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Promotion of entrepreneurship and favorable business environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Penetration of entrepreneurship among population of the country aged over 18</td>
<td>%</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Age of entrepreneur (average)</td>
<td>години</td>
<td>46</td>
</tr>
<tr>
<td>3</td>
<td>Entrepreneurs aged up to 29</td>
<td>%</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Entrepreneurs aged over 50</td>
<td>%</td>
<td>39</td>
</tr>
<tr>
<td>5</td>
<td>Family firms</td>
<td>%</td>
<td>33</td>
</tr>
<tr>
<td>6</td>
<td>Years of entrepreneurship experience (average)</td>
<td>години</td>
<td>14</td>
</tr>
<tr>
<td>II</td>
<td>Access to finance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Use of working capital loans</td>
<td>%</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>Overdraft on current account</td>
<td>%</td>
<td>19</td>
</tr>
<tr>
<td>9</td>
<td>Use of investment credit</td>
<td>%</td>
<td>15</td>
</tr>
<tr>
<td>10</td>
<td>Use of financial lease</td>
<td>%</td>
<td>18</td>
</tr>
<tr>
<td>11</td>
<td>Credit card use</td>
<td>%</td>
<td>19</td>
</tr>
<tr>
<td>12</td>
<td>Loan from friends and family</td>
<td>%</td>
<td>24</td>
</tr>
<tr>
<td>13</td>
<td>Financing through European funds</td>
<td>%</td>
<td>6</td>
</tr>
<tr>
<td>14</td>
<td>Use of credit with a special purpose</td>
<td>%</td>
<td>6</td>
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<table>
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<tr>
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<tr>
<td>15</td>
<td>Received support by Bulgarian or other government programme</td>
<td>3</td>
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<tr>
<td>16</td>
<td>Use of risk capital</td>
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### III Innovations and technological development

<table>
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<tr>
<th></th>
<th></th>
<th>%</th>
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<tbody>
<tr>
<td>17</td>
<td>Changes in business processes with the aim to optimize and cut costs</td>
<td>38</td>
</tr>
<tr>
<td>18</td>
<td>Incidence of department for research and development</td>
<td>10</td>
</tr>
<tr>
<td>19</td>
<td>Employees whose job description includes research and development activities</td>
<td>14</td>
</tr>
<tr>
<td>20</td>
<td>Use of developments of scientific institutes and associates</td>
<td>10</td>
</tr>
<tr>
<td>21</td>
<td>Launch of a new product in the past year</td>
<td>17</td>
</tr>
<tr>
<td>22</td>
<td>Launch of improved variant of existing product in the past year</td>
<td>27</td>
</tr>
<tr>
<td>23</td>
<td>Development of new product that is expected to be launched soon</td>
<td>12</td>
</tr>
<tr>
<td>24</td>
<td>Incidence of corporate web site</td>
<td>45</td>
</tr>
<tr>
<td>25</td>
<td>Option for internet ordering and sales</td>
<td>32</td>
</tr>
<tr>
<td>26</td>
<td>Electronic signatures of company managers</td>
<td>61</td>
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### IV Internationalization

<table>
<thead>
<tr>
<th></th>
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<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>Realized imports of raw materials, material, products in the past year</td>
<td>19</td>
</tr>
<tr>
<td>28</td>
<td>Realized exports of raw materials, material, products in the past year</td>
<td>11</td>
</tr>
<tr>
<td>29</td>
<td>Participation in international fairs, conferences, other events</td>
<td>12</td>
</tr>
</tbody>
</table>

### V И不及格Intellectual property

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>%</th>
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<tbody>
<tr>
<td>30</td>
<td>Registered trade mark in Bulgarian and /or abroad</td>
<td>13</td>
</tr>
<tr>
<td>31</td>
<td>Registered patent in Bulgarian and /or abroad</td>
<td>7</td>
</tr>
</tbody>
</table>
### VI Best practices

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>32</td>
<td>Introduced automatic management system: CMS</td>
<td>%</td>
<td>22</td>
</tr>
<tr>
<td>33</td>
<td>Introduced automatic management system: SCM</td>
<td>%</td>
<td>13</td>
</tr>
<tr>
<td>34</td>
<td>Introduced automatic management system: ERP</td>
<td>%</td>
<td>13</td>
</tr>
<tr>
<td>35</td>
<td>Internal trainings for the employees conducted in the past year</td>
<td>%</td>
<td>36</td>
</tr>
<tr>
<td>36</td>
<td>Specialized trainings in management and sales conducted in the past year</td>
<td>%</td>
<td>19</td>
</tr>
<tr>
<td>37</td>
<td>Mid-term activity planning</td>
<td>%</td>
<td>19</td>
</tr>
<tr>
<td>38</td>
<td>Incidence of marketing strategy</td>
<td>%</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: 2012 SME Survey, NOEMA. Own Calculations.
### A2. Macroeconomic indicators

#### Table 24. Macroeconomic indicators in Bulgaria, 2006-2011

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<tbody>
<tr>
<td><strong>Real sector</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP, mln. euro</td>
<td>26476</td>
<td>30772</td>
<td>35430</td>
<td>34932</td>
<td>36052</td>
<td>38483</td>
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<tr>
<td>GDP, real growth</td>
<td>6.5%</td>
<td>6.4%</td>
<td>6.2%</td>
<td>-5.5%</td>
<td>0.4%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Final consumption, real growth</td>
<td>7.5%</td>
<td>7.2%</td>
<td>2.6%</td>
<td>-7.3%</td>
<td>0.5%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Investments in fixed capital, real growth</td>
<td>13.1%</td>
<td>11.8%</td>
<td>21.9%</td>
<td>-17.6%</td>
<td>-18.3%</td>
<td>-9.7%</td>
</tr>
<tr>
<td>Exports, real growth</td>
<td>50.7%</td>
<td>6.1%</td>
<td>3.0%</td>
<td>-11.2%</td>
<td>14.7%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Imports, real growth</td>
<td>47.7%</td>
<td>9.6%</td>
<td>4.2%</td>
<td>-21.0%</td>
<td>2.4%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Inflation (end of the year)</td>
<td>6.5%</td>
<td>12.5%</td>
<td>7.8%</td>
<td>0.6%</td>
<td>4.5%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Inflation (annual average)</td>
<td>7.3%</td>
<td>8.4%</td>
<td>12.3%</td>
<td>2.8%</td>
<td>2.4%</td>
<td>4.2%</td>
</tr>
<tr>
<td><strong>Labour market</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment (annual average unemployment rate)</td>
<td>9.0%</td>
<td>6.9%</td>
<td>5.6%</td>
<td>6.8%</td>
<td>10.2%</td>
<td>11.2%</td>
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<tr>
<td><strong>External sector</strong></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td><strong>Balance of payments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Current account, mln. euro</td>
<td>-4647.5</td>
<td>-7755</td>
<td>-8182.6</td>
<td>-3116.5</td>
<td>-376.3</td>
<td>360.6</td>
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<td>Current account, percentage of GDP</td>
<td>-17.6%</td>
<td>-25.2%</td>
<td>-23.1%</td>
<td>-8.9%</td>
<td>-1.0%</td>
<td>0.9%</td>
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<tr>
<td>Trade balance, mln. euro</td>
<td>-5562.2</td>
<td>-7245.2</td>
<td>-8597.7</td>
<td>-4173.8</td>
<td>-2763.8</td>
<td>-1974.6</td>
</tr>
<tr>
<td>Trade balance, percentage of GDP</td>
<td>-21.0%</td>
<td>-23.5%</td>
<td>-24.3%</td>
<td>-11.9%</td>
<td>-7.7%</td>
<td>-5.1%</td>
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<tr>
<td>Exports, F.O.B., mln. euro</td>
<td>12012</td>
<td>13511.9</td>
<td>15204.1</td>
<td>11699.4</td>
<td>15561.1</td>
<td>20226.7</td>
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<tr>
<td>Imports, F.O.B., mln. euro</td>
<td>17574.2</td>
<td>20757.1</td>
<td>23801.8</td>
<td>18324.9</td>
<td>22201.3</td>
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<tr>
<td>Forex reserves of BNB, mln. euro</td>
<td>8926</td>
<td>11937</td>
<td>12713</td>
<td>12977</td>
<td>13349</td>
<td></td>
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<tr>
<td>Foreign direct investments, mln. euro</td>
<td>6221.5</td>
<td>9051.7</td>
<td>6727.9</td>
<td>2436.7</td>
<td>1341.4</td>
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<tr>
<td>Foreign direct investments, percentage of GDP</td>
<td>23.5%</td>
<td>29.4%</td>
<td>19.0%</td>
<td>7.0%</td>
<td>3.4%</td>
<td>3.5%</td>
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<td><strong>Fiscal sector</strong></td>
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<tr>
<td><strong>Budget</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budget deficit/surplus, mln. euro</td>
<td>893.5</td>
<td>1001.9</td>
<td>1017.4</td>
<td>-320.1</td>
<td>-1443.3</td>
<td>-809.0</td>
</tr>
<tr>
<td>Budget deficit/surplus, percentage of GDP</td>
<td>3.4%</td>
<td>3.3%</td>
<td>2.9%</td>
<td>-0.9%</td>
<td>-4.0%</td>
<td>-2.1%</td>
</tr>
<tr>
<td><strong>Government debt</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government debt, mln. euro</td>
<td>6199.9</td>
<td>5709.7</td>
<td>5465</td>
<td>5440.6</td>
<td>6022.1</td>
<td>6557.8</td>
</tr>
<tr>
<td>Government debt, percentage of GDP</td>
<td>23.4%</td>
<td>18.6%</td>
<td>15.4%</td>
<td>15.6%</td>
<td>16.7%</td>
<td>17.0%</td>
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<td><strong>Monetary report</strong></td>
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<tr>
<td>Broad money (M3), mln. euro</td>
<td>16393</td>
<td>21506</td>
<td>23406</td>
<td>24384</td>
<td>25943</td>
<td>29122</td>
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<tr>
<td>Credit to private institutions, mln. euro</td>
<td>11398</td>
<td>18656</td>
<td>24713</td>
<td>25599</td>
<td>25903</td>
<td>26755</td>
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<td><strong>Interest rates</strong></td>
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<tr>
<td>Main interest rate, end of the year</td>
<td>3.3%</td>
<td>4.6%</td>
<td>5.8%</td>
<td>0.6%</td>
<td>0.2%</td>
<td>0.2%</td>
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</tbody>
</table>

ИЗТОЧНИК: НСИ, БНБ, МИНИСТЕРСТВО НА ФИНАНСИТЕ.
A3. Scope and methodology of the statistical analyses

A3.1. Classification of economic activities

Two classifiers are used in the analysis — NACE.BG-2003 and NACE.BG-2008, as follows:

<table>
<thead>
<tr>
<th>2003</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>D</td>
<td>C</td>
</tr>
<tr>
<td>E</td>
<td>D</td>
</tr>
<tr>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>G</td>
<td>G</td>
</tr>
<tr>
<td>H</td>
<td>I</td>
</tr>
<tr>
<td>I</td>
<td>H</td>
</tr>
<tr>
<td>K</td>
<td>J</td>
</tr>
<tr>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>

- **C** Mining and quarrying
- **D** Manufacturing
- **E** Production and distribution of electrical and warming energy, gas fuels and water
- **F** Construction
- **G** Wholesale and retail trade, repair and technical servicing of automobiles, motocycles, of personal and household goods
- **H** Hotels and restaurants
- **I** Transporting, storage and communications
- **K** Real estate activities and business services
- **L** Repair of computers and personal and household goods
- **M** Accomodation and food service activities
- **N** Transporting and storage
- **O** Real estate activities
- **P** Repair of computers and personal and household goods
- **Q** Accomodation and food service activities
- **R** Transporting and storage
- **S** Accomodation and food service activities
- **T** Real estate activities
- **U** Professional, scientific and technical activities
- **V** Administrative and support service activities
- **W** Accomodation and food service activities
- **X** Transporting and storage
- **Y** Real estate activities
- **Z** Professional, scientific and technical activities
- **AA** Administrative and support service activities

In the analysis, four spheres /fields of activities are used, as follows:

- **Production** — Manufacturing - sectors B and C by NACE.BG-2008
- **Services** — sectors I to N, 95 by NACE.BG-2008
- **Construction** — sector F by NACE.BG-2008
- **Trade** — sector G by NACE.BG-2008.
### A3.2. Methodology of the survey among SMEs

<table>
<thead>
<tr>
<th>Survey character:</th>
<th>National representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target group:</td>
<td>Micro, small and medium-sized enterprises</td>
</tr>
<tr>
<td>Sample size:</td>
<td>300 enterprises</td>
</tr>
<tr>
<td>Sample design:</td>
<td>Random selection within clusters, as each cluster is defined by three criteria: region of economic planning, size of enterprise by number of employees and field of activity (production, trade, services, construction)</td>
</tr>
<tr>
<td>Weighting of data:</td>
<td>Data is weighted by field of activity</td>
</tr>
<tr>
<td>Contact method:</td>
<td>Combination between personal interview in the respondent’s office and telephone interview</td>
</tr>
<tr>
<td>Questionnaire:</td>
<td>45 questions</td>
</tr>
<tr>
<td>Interview length:</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>
A3.3. Index methodology

**Specification of indexes for SMEs competitiveness**

**Index „Access to Finance”**

The index measures the extent to which the entrepreneurs have access to finance. Easier access to finance is assumed to be such access, which enables enterprises to use financial resources from the following sources:

- Banking, investment, and other financial institutions;
- Programs funded by the state budget, European funds and other foreign support;
- Means of the owners of the enterprise, as such of family and friends.

The index contains the following financial instruments used by the companies: Investment bank loan; Bank loan for working capital; Bank loan for special purpose; Overdraft; Credit card; Financial leasing (for purchase of equipment, automobiles, etc.); Venture capital; Loan from family and friends; Means of the owner(s) of the company; EU funding; Programme funded by the state budget (of the Government, a Ministry, a State Agency, etc.) or other countries.

The index considers whether the companies have used each financial instrument in the last year. The formula used for the calculation of the index is as follows:

$$ IAF_i = \frac{\sum_n \text{FinInstrument}^n_i + \sum_m \text{Programme}^m_i + \sum_k \text{FamilyFriends}^k_i}{\max(\sum_n \text{FinInstrument}^n_i + \sum_m \text{Programme}^m_i + \sum_k \text{FamilyFriends}^k_i)} \cdot 100 $$

where:

- $IAF_i$ is the index of access to finance for entrepreneur $i$,
- $\text{FinInstrument}^n_i$ measures whether the entrepreneur $i$ uses financial instrument $n$, provided by banking, investment and other financial institutions,
- $\text{Programme}^m_i$ measures whether the entrepreneur $i$ uses funding program $m$, granted by the Government, the EU funds and third parties,
- $\text{FamilyFriends}^k_i$ measures whether the entrepreneur $i$ uses loans from source $k$, received by the owner(s) of the enterprise, family and friends.

The index takes values from 0 to 100, where: 1) Values close to 100 indicate presence of extremely easier access to finance, which allows SMEs to freely use all different sources] 2) Values close to 0 indicate presence of extremely difficult access to finance, which does not allow entrepreneurs to use no financial resources at all.

The index values are divided into the following conditional intervals:

<table>
<thead>
<tr>
<th>0 – 20</th>
<th>21 – 40</th>
<th>41 – 60</th>
<th>61 – 80</th>
<th>81 – 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very difficult access</td>
<td>Difficult access</td>
<td>Neither difficult, nor easy access</td>
<td>Easy access</td>
<td>Very easy access</td>
</tr>
</tbody>
</table>
Index “Innovation Activity”

The index measures the extent to which entrepreneurs pursue innovation. Innovation activities include (working definition):

- Establishment of innovation infrastructure in the enterprise
- Development of new products and issuing them on the market

The index contains the following two equal components:
- Availability of innovation infrastructure in the enterprise;
- Availability of development of new products.

The index is calculated based on the following types of internal firm’s activities:

The formula by which the index is calculated as follows:

$$IRD_i = \frac{\sum_{n} RDbase_i^n + \sum_{m} RDproducts_i^m}{\max \left(\sum_{n} RDbase_i^n\right) + \max \left(\sum_{m} RDproducts_i^m\right)} \cdot 100$$

where:

- $IRD_i$ is the index that measures the innovation activity of entrepreneur $i$.
- $RDbase_i^n$ indicates whether the entrepreneur $i$ does activity $n$, associated with the establishment of innovation infrastructure,
- $RDproducts_i^m$ indicates whether the entrepreneur $i$ does activity $m$, associated with the development of new products.

The index takes values from 0 to 100, where: 1) Values close to 100 indicate presence of very high innovation activity; 2) Values close to 0 indicate a lack of innovation activity.

Index values are divided into the following conditional intervals:

<table>
<thead>
<tr>
<th>0 – 20</th>
<th>21 – 40</th>
<th>41 – 60</th>
<th>61 – 80</th>
<th>81 – 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weak innovation activity</td>
<td>Rather weak innovation activity</td>
<td>Neither weak, nor advanced innovation activity</td>
<td>Rather advanced innovation activity</td>
<td>Advanced innovation activity</td>
</tr>
</tbody>
</table>
Index „Trademarks and patents” (business activities related to registering intellectual property)

The index measures the extent to which businesses have registered trademarks and patents as well as their readiness to have such.

The index contains the following three components:

- Availability of trademarks and patents at home country and abroad, and such forthcoming registrations;
- Availability of sufficient financial resources in the enterprise for registration of trademark, patent or other intellectual property;
- Level of awareness of the enterprises in respect with the value and opportunities of the brand, as well as with the possibility of registration of such in the EU.

The index formula is as follows:

\[ ITM_i = w_1 \times \text{Registrations}_i + w_2 \times \text{Financing}_i \times 100 \], where:

\[ ITM_i \] is the index, which measures the degree of patent activities in enterprise \( i \), \( \text{Registrations}_i \) is an indicator corresponding to the already made and expected registrations of trademarks and patents at home country and abroad by company \( i \), \( \text{Financing}_i \) measures the extent to which company \( i \) can finance the registration of trademarks, patents or intellectual property, \( w_1 \) is the weight of the registered intellectual property in the final index, which in this case is equal to 60% and \( w_2 \) — the weight used for the availability of funding is equal to 40%.

The index takes values from 0 to 100, where: 1) Values close to 100 indicate presence of an exceptionally high degree of registration of intellectual property, ability to finance such registration and awareness of the benefits of the brand; 2) Values close to 0 indicate both a lack of registered intellectual property rights and lack of financial means for such, but also no awareness in this area.

Index values are divided into the following conditional intervals:

<table>
<thead>
<tr>
<th>Interval</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 20</td>
<td>Low patent activity</td>
</tr>
<tr>
<td>21 – 40</td>
<td>Rather low patent activity</td>
</tr>
<tr>
<td>41 – 60</td>
<td>Neither low, nor high patent activity</td>
</tr>
<tr>
<td>61 – 80</td>
<td>Rather high patent activity</td>
</tr>
<tr>
<td>81 – 100</td>
<td>High patent activity</td>
</tr>
</tbody>
</table>
Index „Internationalisation”

The index measures the degree of internationalization of the business of the SMEs. Internationalization includes:

- Participation in specialized events for promoting own production on foreign markets;
- Realisation of import of raw materials, products and services;
- Realisation of export of own products and services.

The index formula is:

\[ ITN_i = \frac{PR_i + EX_i}{2} \times 100 \]

where:

- \( ITN_i \) is the index that measures the degree of internationalization of firm \( i \), \( PR_i \) shows the promotion activities carried and is equal to: \( PR_i = \frac{\sum PR_m^i}{\max(\sum PR_m^i)} \), \( EX_i \) measures the degree of foreign trade and is equal to:

\[ EX_i = w_1 \times \frac{\text{Im} + \text{Exp}_i}{2} + w_2 \times \frac{\text{Exp}_{\text{output}} + \text{Exp}_{\text{turnover}}}{2} \]

- \( w_1 \) and \( w_2 \) are respectively the weights (in this case assumed to be equal respectively to 40% and 60%), \( \text{Im}_i \) and \( \text{Exp}_i \) indicate the presence of relevant import and export, \( \text{Exp}_{\text{output}}_i \) is the export share of total production in enterprise \( i \), and \( \text{Exp}_{\text{turnover}}_i \) – the share of turnover that comes from exports.

The index takes values from 0 to 100, such as: 1) Values close to 100 indicate presence of an exceptionally high degree of internationalization; 2) Values close to 0 indicate absence of any internationalization of the company.

Index values are divided into the following conditional intervals:
Index „Best practices”

The index measures the degree of application of best practices by the SMEs. Application of best practices includes:

- Usage of modern ICT in the business activities
- Implementation of strategies for the development of human resources
- Development and implementation of market strategies.

The index formula is:

\[ IBP_i = \frac{ICT_i + HR_i + BS_i}{3} \times 100, \]

where \( IBP_i \) is the index, which measures the implementation of best practices in enterprise \( i \).

\( ICT_i \) measures the usage of ICTs by enterprise \( i \) and is calculated as follows:

\[ ICT_i = \frac{\sum_{n} MIS_i^n}{\max(\sum_{n} MIS_i^n)} + \frac{\sum_{m} Internet_i^m}{\max(\sum_{m} Internet_i^m)} \times 2, \]

where \( MIS_i^n \) shows the use of management information system \( n \), and \( Internet_i^m \) – use of internet technology \( m \).

\( HR_i \) measures the extent of implementation of human resources policies and is calculated as follows:

\[ HR_i = 0.4 \times Qualification_i + 0.6 \times \frac{\sum_{k} Training_i^k}{\max(\sum_{k} Training_i^k)}, \]

where \( Qualification_i \) is an indicator of the high qualification of the personnel and \( Training_i^k \) shows the involvement of staff in training \( k \).

\( BSP_i \) measures the extent to which firm \( i \) uses business strategies and planning, and is calculated as follows:

\[ BSP_i = \frac{\sum_{t} Plan_i^t + \sum_{j} MS_i^j}{2}, \]

where \( Plan_i^t \) indicates the existence of planning period \( t \), and \( MS_i^j \) indicates the presence of developed and implemented marketing strategy \( j \).

The index takes values from 0 to 100, such as: 1) Values close to 100 indicate presence of an exceptionally high degree of application of best practices; 2) Values close to 0 indicate no application of best practices in the enterprise. Index values are divided into the following conditional intervals:

<table>
<thead>
<tr>
<th>Low level of application of best practices</th>
<th>Rather low level of application of best practices</th>
<th>Neither low, nor high level of application of best practices</th>
<th>Rather high level of application of best practices</th>
<th>High level of application of best practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 20</td>
<td>21– 40</td>
<td>41 – 60</td>
<td>61 – 80</td>
<td>81 – 100</td>
</tr>
</tbody>
</table>
### Statistical analysis of the index specifications

**Table 25.** Indexes for competitiveness: Cronbach’s α, mean and standard deviation

<table>
<thead>
<tr>
<th>Index (and its components)</th>
<th>Cronbach’s α</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Access to finance</td>
<td>0.54</td>
<td>17.7</td>
<td>14.7</td>
</tr>
<tr>
<td>2 Good practices</td>
<td>0.81</td>
<td>35.2</td>
<td>19.5</td>
</tr>
<tr>
<td>ICT (if excluded)</td>
<td>0.79</td>
<td>28.7</td>
<td>24.7</td>
</tr>
<tr>
<td>HR (if excluded)</td>
<td>0.83</td>
<td>45.0</td>
<td>22.0</td>
</tr>
<tr>
<td>BSP (if excluded)</td>
<td>0.80</td>
<td>31.6</td>
<td>33.0</td>
</tr>
<tr>
<td>3 Innovation activity</td>
<td>0.61</td>
<td>20.5</td>
<td>22.8</td>
</tr>
<tr>
<td>4 Trademarks and patents</td>
<td>0.67</td>
<td>12.5</td>
<td>23.5</td>
</tr>
<tr>
<td>5 Internationalisation</td>
<td>0.57</td>
<td>14.5</td>
<td>25.7</td>
</tr>
<tr>
<td>Overall (1,2,3,4 and 5)</td>
<td>0.75</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

If excluded 1                  | 0.76         | -    | -                 |
If excluded 2                   | 0.67         | -    | -                 |
If excluded 3                   | 0.63         | -    | -                 |
If excluded 4                   | 0.71         | -    | -                 |
If excluded 5                   | 0.71         | -    | -                 |

**Source:** 2012 SME Survey, NOEMA, Own calculations.
A3.4. Quantitative analysis: regression models

**Specification of econometric models**

Regression models used are trying to explain the linear dependence of each factor for competitiveness on the rest through:

\[ \text{Index}_i^\text{factor for competitiveness} = X_i^{\beta} + Z_i^{\alpha}, \]

where \( X \) and \( Z \) are vectors of factors for competitiveness and control variables respectively, and \( \beta \) and \( \alpha \) are coefficient vectors. For example, the index for innovations is explained by the rest indexes for competitiveness and the control variables. The control variables include both characteristics of the enterprise and the entrepreneur (Table 25).

The structural models are based on the following specification. Let \( \mathbf{X} \) be the vector of all factors for sustainable competitiveness (calculated indexes):

\[ \mathbf{X} = X_1, X_2, X_3, X_4, X_5^T \]

Then the structural model defined through a system of equations is as follows:

\[ \mathbf{X} = \mathbf{AX} + \mathbf{BZ}, \]

Where \( \mathbf{A} \) and \( \mathbf{B} \) are matrices of coefficients as follows:

\[ \mathbf{A} = \alpha_{ij}, \ i = 1, \ldots, 5, \ \alpha_{ii} = 0, \ \forall i = j \]

\[ \mathbf{B} = \beta_{ij}, \ i = 1, \ldots, 5, \ j = 1, \ldots, 7 \]

And \( \mathbf{Z} = (Z_1, Z_2, Z_3, Z_4, Z_5, Z_6, Z_7)^T \) is the vector of control variables.

After empirically testing all possible combinations of interdependencies between the factors for competitiveness, three systems of equations have been identified and used further in the analysis (these three systems are presented in Table ).

The third type of models is probit and follows the specification:

\[ \text{Effect}_i^k = \alpha_0 + \alpha_i X_{i1} + \ldots + \alpha_5 X_{i5} + \beta_i Z_{i1} + \ldots + \beta_7 Z_{i7} + \epsilon_i \]

where \( \text{Effect}_i^k \) denotes the various types of economic performance as presented in Table .
# Table 26. Regression models, explaining the factors for competitiveness

| Determinants                        | Index Access to Finance | Index Innovation Activity | Index Trade Marks and Patents | Index Internationalisation | Index Good Practices | ICT practices | HR practices | BSP practices | \hline
| Characteristics of the entrepreneur |                       |                           |                               |                             |                            |              |             |              |              | \hline
| Age                                 | -                       | -                         | -                              | -                            | 0.25 ***                 | -             | -            | -0.32 ***    |              | \hline
| Educational attainment              | -                       | -                         | -                              | 3.51 ***                    | 4.15 ***                 | -             | 2.70 **     |              |              | \hline
| Gender (male=1)                     | 3.44 **                 | -                         | -                              | -4.74 ***                   | -                         | -3.10 *       | -            |              |              | \hline
| Characteristics of the firm         |                       |                           |                               |                             |                            |              |             |              |              | \hline
| Size (employees)                    | 0.06 ***                | -                         | 0.09 ***                       | 0.07 **                     | 0.09 ***                 | -             | -0.08 ***   |              |              | \hline
| Traded exports in 2011              | -                       | -                         | 31.94 ***                      | -                            | -                         | -9.75 ***     | -           |              |              | \hline
| Characteristics of competitiveness described by: | | | | | \hline
| Access to finance                   | -                       | -                         | -                              | 0.16 **                     | -                         | -0.15 **      | 0.41 ***    |              |              | \hline
| Innovation activity                 | -                       | 0.33 ***                  | 0.22 **                        | 0.38 ***                    | 0.28 ***                 | 0.22 ***      | 0.32 ***    |              |              | \hline
| Trade marks and patents             | -                       | 0.21 ***                  | -                              | 0.11 ***                    | -                         | -             | 0.18 ***    |              |              | \hline
| Internationalisation                | -                       | 0.21 ***                  | -                              | -                            | -                         | -             | 0.19 ***    |              |              | \hline
| Good practices                      | 0.20 ***                | 0.52 ***                  | 0.17 **                        | 0.13 **                     |                           |               |             |              |              | \hline
| ICT practices                       |                           |                           |                               |                              |                           |             | 0.19 ***    | 0.13 **     |              | \hline
| HR practices                        |                           |                           |                               |                              |                           |             | 0.14 ***    | 0.17 **     |              | \hline
| BSP practices                       |                           |                           |                               |                              |                           |             | 0.14 ***    | 0.10 **     |              | \hline
| Intercept                           | 7.49 ***                | -3.20 *                   | -2.87                          | -1.68                       | 18.73 ***                | -11.27 **     | 37.68 ***   | 4.48          |              | \hline
| Estimation method                   | LS1                      | LS1                       | LS1                            | LS1                         | LS1                       | LS1           | LS1         | LS1           |              | \hline
| R-squared                           | 0.14                     | 0.48                      | 0.28                           | 0.50                        | 0.49                      | 0.36           | 0.21        | 0.41          |              | \hline
| Adjusted R-squared                  | 0.13                     | 0.48                      | 0.27                           | 0.49                        | 0.48                      | 0.35           | 0.19        | 0.39          |              | \hline
| Number of observations              | 284                      | 282                       | 283                            | 284                         | 273                       | 277           | 282         | 272           |              | \hline

* p < 0.10 ** p < 0.05 *** p < 0.01

SOURCE: 2012 SME Survey, NOEMA, Own Calculations.
### Table 27. Structural models

<table>
<thead>
<tr>
<th>Characteristics of the firm</th>
<th>Determinants</th>
<th>System (structural model) 1</th>
<th>System (structural model) 2</th>
<th>System (structural model) 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Innovation activity</td>
<td>Good practices</td>
<td>Innovation activity</td>
</tr>
<tr>
<td>Size (employees)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.09 ***</td>
</tr>
<tr>
<td>Traded exports in 2011</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Characteristics of competitiveness described by:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to finance</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Innovation activity</td>
<td>0.43 ***</td>
<td>0.33 ***</td>
<td>0.22 ***</td>
<td>0.22 ***</td>
</tr>
<tr>
<td>Trade marks and patents</td>
<td>0.21 ***</td>
<td>0.11 **</td>
<td>0.21 ***</td>
<td>-</td>
</tr>
<tr>
<td>Internationalisation</td>
<td>0.21 ***</td>
<td>0.08 **</td>
<td>0.21 ***</td>
<td>-</td>
</tr>
<tr>
<td>Good practices</td>
<td>0.52 ***</td>
<td>0.52 ***</td>
<td>0.17 **</td>
<td>0.13 *</td>
</tr>
<tr>
<td>Intercept</td>
<td>-3.19</td>
<td>23.88 ***</td>
<td>-3.19</td>
<td>-2.87</td>
</tr>
</tbody>
</table>

**Explained variables (factors for competitiveness)**

<table>
<thead>
<tr>
<th>Determinants</th>
<th>System (structural model) 1</th>
<th>System (structural model) 2</th>
<th>System (structural model) 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation activity</td>
<td>WLS</td>
<td>0.48</td>
<td>0.41</td>
</tr>
<tr>
<td>Good practices</td>
<td>WLS</td>
<td>0.48</td>
<td>0.40</td>
</tr>
<tr>
<td>R-squared</td>
<td>WLS</td>
<td>0.50</td>
<td>0.28</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>WLS</td>
<td>0.42</td>
<td>0.49</td>
</tr>
<tr>
<td>Number of observations</td>
<td>WLS</td>
<td>282</td>
<td>282</td>
</tr>
</tbody>
</table>

* p < 0.10, ** p < 0.05, *** p < 0.01

**Source:** 2012 SMEs survey, NOEMA, own calculations.
Table 28. Behavioural models, explaining nexus between factors of competitiveness and business performance

<table>
<thead>
<tr>
<th>Determinants</th>
<th>1. Bad debt (presence of such=1)</th>
<th>2. Employment (no reduction=1)</th>
<th>3. Wages (no reduction=1)</th>
<th>4. Market share (no reduction=1)</th>
<th>5. Profit (no reduction=1)</th>
<th>6. Turnover (no reduction=1)</th>
<th>7. Market share (no reduction=1)</th>
<th>8. Turnover (no reduction=1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics of the firm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Големина (брой заети)</td>
<td>-</td>
<td>0.01 ***</td>
<td>0.01 **</td>
<td>0.03 ***</td>
<td>0.01 ***</td>
<td>0.01 ***</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Characteristics of competitiveness described by:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to finance</td>
<td>0.02 ***</td>
<td>-0.01 ***</td>
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¹ ML - Binary Probit (Quadratic hill climbing)

* p < 0.10  ** p < 0.05  *** p < 0.01

Source: 2012 SMES Survey, NOEMA, Own Calculations.
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This analysis was prepared on behalf of the Bulgarian Small and Medium Enterprise Promotion Agency.

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