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## **A view on certain conditions for economic growth in Bulgaria (2008–2013)**

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### **1. Introduction**

The stable and dynamic growth of the volume of GDP is the basis of every economy. Despite the many critics in this respect as well as the formation of a wave of disapproval towards the strive for constantly increasing rates of production, economic growth still remains the major criterion of the degree of development of every economy. This is also explained by the fact that, as a result of growth, there is an increase in the possibilities for more complete satisfaction of the demand of the population by increasing the amount and raising the quality of goods and services offered; new job openings are created, the population is provided with employment while real incomes increase; there is an improvement of labor conditions; there are prerequisites for an improvement of the standard of living; the technical and technological upgrade of production is stimulated; the realization of a number of social and ecological programs becomes possible, while health care and the fight against poverty are improved; conditions are created for the development of the human factor; the international prestige of the country increases, etc. (Shismanova 2013; pp. 17–18).

The realization of this aim suggests the existence of particular conditions. Among the key resources which secure a long-term increase of total production and the rise of the economic capacity of a particular country, we can point out (Shismanova 2013; p. 32):

- quantity and quality of natural resources,
- the amount of labor resources,
- the volume and structure of capital,
- the entrepreneurial capacity of the society,

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- the technology and organization of production,
- the role of knowledge.

The resource capacity of the world's countries differs, as is different the effectiveness of the use of production factors. This has a direct impact on the potential possibilities of separate economies to generate growth.

As part of the world area, Bulgaria's economy also aims to achieve a stable and long-term increase of production. Having recently adopted market economy development, our country has readjusted its economic system and formed new prerequisites for growth. These changes, on the one hand, are an objective result of the structural imbalances inherited from the central-governed economy, while, on the other hand, they are the result of the information and technology revolution realized on a world scale as well as the increasing role of knowledge in the contemporary economy. All of this forms a new and different structure of Bulgaria's economy, whose development is determined by both traditional and numerous contemporary factors.

The aim of this article is to analyze the conditions for growth in Bulgaria's economy over the last five years by interpreting the role of the major determinants. The accent of the research falls on their usual impact on economic growth; but as the selected period coincides with the world financial crisis, this will inevitably find reflection in the realized analysis. Because of the limit on volume, the article researches only those conditions which contribute to the development of production to the greatest extent, and, at the same time, most precisely represent the capacity of Bulgaria's society.

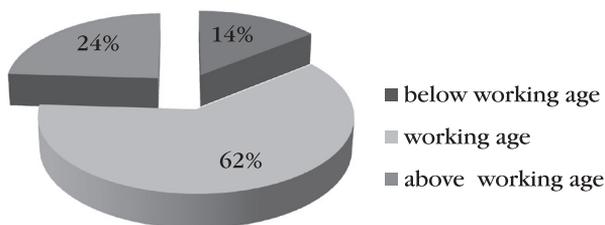
The article presents the topic in several sections: section 2 views the quantity and quality characteristics of labor resources and their contribution to the increase in volume of production; section 3 discusses the role of capital accumulation as a factor of growth; section 4 analyzes the impact of knowledge on the economic development of the country; section 5 summarizes the results of the analysis and formulates the main conclusions for the state and perspectives of Bulgaria's economy.

## **2. Demographic conditions for economic growth**

Over the past few years, the demographic picture of Bulgaria has not been very favorable. For the last quarter-century the population has decreased at a fast rate. According to data of the last census (2011), Bulgaria's population stands at 7,364,570, which is more than 560,000 fewer compared to the data of the census in 2001 – an average annual rate of decrease of 0.7% (Prebroyavane 2011).

Those changes are mainly due to the negative dynamics of the demographic processes and partly due to increased external migration. Since the beginning of the new millennium, the death rate in Bulgaria is double that of its birth rate. This determines the negative values of the coefficient of natural population growth (around  $-5\%$ ). In the original text it is not per cent, it is per thousand. The mechanical growth, represented as the difference between the settled and emigrated citizens, is also negative. Although there has been a trend towards improvement recently, it still remains high due to the increasing number of people leaving their homeland.

The decrease in Bulgaria's population increases the process of demographic aging. While people below the age of work comprised  $16.2\%$  of the whole population in 2001, that number dropped to  $14.3\%$  in 2011. At the same time, the relative ratio of people at or above working age has remained nearly the same:  $24-24.5\%$  (Fig. 1).



**Figure 1.** Population of below, at, and above working age in Bulgaria (2011)

Source: Statisticheski godishnik za saotvetnite godini

The discussed changes form a negative trend of reproduction of the population of working age, thereby weakening the structure of labor resources. The coefficient of demographic substitute in 2011 is 70, which shows that for every 100 people outside the group of working age, there are only 70 young people entering the age of work. Compare this to 2001 when this coefficient was 124. This change means that, on the one hand, the country has fewer and fewer labor resources whose personal and professional qualities have yet to be built in accordance to the new demands of the economy, while, on the other hand, with a significant number of people who already have a formed model of economic behavior and are more difficult to change. At that, for most of them, this model of behavior was built in the years of totalitarian regime and is governed by principles and norms that nowadays do not correspond to the contemporary characteristics and demands of the national economy.

As a whole, the presented demographic picture depicts unfavorable perspectives concerning the quantitative increase of labor resources in Bulgaria. Their shortage and the necessity for further development in accordance with the requirements of modern technologies demand qualitative improvement as well as the effective usage of available employees. In this respect, we can see the issues of education in the foreground, which will be discussed in section 4 of this article.

As a whole, the demographic characteristics of labor resources in Bulgaria up to now do not favor economic growth.

### **3. The role of capital for achieving growth**

The other resource that is also important for the achievement of stable growth rates is capital (Adamov 2013). Its volume and structure, to a large extent, determine the productivity of labor and the achievement of high economic efficiency.

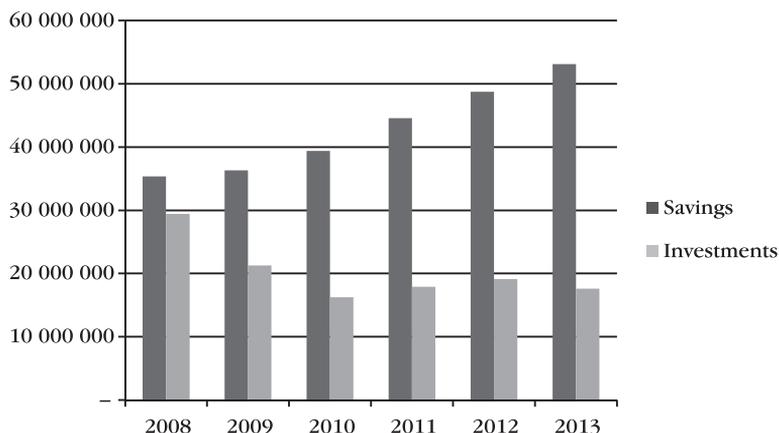
Saving lies in the basis of capital accumulation is saving. Basically, the higher norm and mass of saving transformed through the monetary market into investment loans for the business sector creates opportunities for increasing productivity and achieving economic growth. This dependency, however, is not always available, as in the case of Bulgaria. The role of capital for the development of Bulgaria's economy represents the dynamics of saving and investment.

Before we present the particular trends in this respect, we must clarify that, in Bulgaria, the problem of transforming savings into investments is not only due to the world financial crisis. For more than two decades, a number of other circumstances have limited the opportunities for fast technical and technological development of Bulgaria's production and thus, for achieving high rates of growth through the capital factor. In the researched period, the world economic crisis only adds to the reasons and increases the acts of discrepancy between the two macroeconomic variables presented.

For the period between 2008 and 2013, the volume of saving in the country marks a high increase (of 50.2% or nearly BGN18 billion) and has reached the record sum of BGN53 billion (Fig. 2). The average annual funds saved represented through the deposits of non-financial organizations, non-commercial organizations and households have increased by 8.5% and, as recently as the last year, have amounted to more than BGN4 billion.

Unfortunately, the reported growth is neither due to the increase of the incomes of the population nor to the decrease of unemployment or improvement of macroeconomic environment (*Za spestyavaniyata po vreme na kriza ili koga shte zapochnem otново da harchim*). On the basis of the increased saving of funds, we can see the insecurity of companies and citizens, whose, origin can be

traced to Bulgaria’s complicated political situation at the end of 2012/beginning of 2013 as well as the world crisis processes. This has become the reason for the decline of economic activity in the country and the drop of real incomes of the population – as a result, economic agents restrain from consumption. Led by this preventive motive, they show a “defense reaction” and increase the deposits of funds in the bank system.



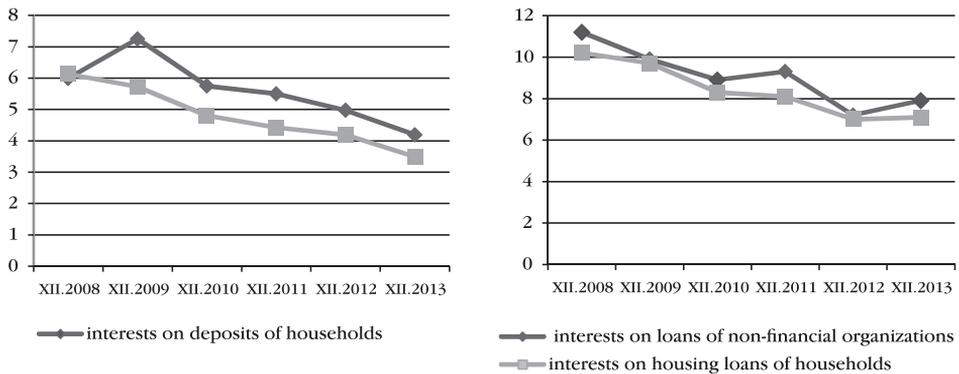
**Figure 2.** Dynamics of savings and investments in Bulgaria

Source: Balgarska narodna banka and Natsionalen statisticheski institut

The logical result of the increase in the volume of savings is the drop of its price – the interest rate. This is true for both deposits made by companies and those made by households (Fig. 3). According to the principles of market economy, the decrease of the price of deposits should limit their number and the volume of savings in general. Such a trend, however, is observed only with small deposits (up to BGN1,000), while as a whole, the total amount of saved funds continues to increase. This only confirms the conclusion about the high degree of insecurity of the economic situation and the desire of economic agents to be insured against unnecessary financial risks.

Analogous trends are also reported about the interests on business loans and loans for households. In both cases, the values decrease by 3 percentage points and reach 7–8% by the end of 2013 (Fig. 3). Similar changes in the amount of interest should motivate the economic agents to take out loans in order to invest in the economy. Unfortunately, in this respect, we can also sense the negative impact of the unstable macroeconomic environment. The lost markets, decreased incomes, low consumer activity, political crises, corruption, bureaucracy, clumsy legal system,

complicated organization and low efficiency in the spending of EU funds are all among the reasons that determine the pessimistic expectations of the economic agents. This finds expression in low demand for loans by the population and a limited number of business projects, which does not stimulate the development of production. Thus, throughout the discussed period, we witness a paradoxical situation – availability of high savings which are not transformed into investments and do not contribute to the increase of economic growth.



**Figure 3.** Interest rates on loans and deposits of households and non-financial organizations in Bulgaria

Source: Balgarska narodna banka

In this respect, the markers are the data about the volume of investments in Bulgaria’s economy measured through the expenses for acquiring long-term tangible assets. For the period of 2008–2013, they decrease by over BGN10 billion, as the greatest slump is reported in 2010, when the negative effects of the world crisis were the most tangible for our country. After that we observe a tentative increase of investments, but as a whole, it is hesitant – bearing in mind the impact of the remaining reasons (Fig. 2).

The presented data reveals the inefficient use of internal sources of accumulation in Bulgaria. The caution of the economic agents regarding their financial decisions and their consumer behavior “opens widely the gap” between savings and investments. The stable increase in savings not only fails to fuel an increase of capital investment and production, but it also shows a continuous postponement of current consumption which has an additional slowing effect on the GDP growth.

Additionally, the insufficient capital accumulation cannot be compensated by attracting foreign investments. The unfavorable investment conditions in the country and the complicated international situation are the reasons for the unstable

trends in this respect. After the drastic decrease of direct investments in Bulgaria at the beginning of the economic crisis (by around 60% in 2009 and by an additional 50% in 2010), over the following years (excluding 2011), their volume continues to drop, albeit at slower rates (Internet use in households and by individuals in 2012). Practically, this means that the period of 2008–2013 was characterized by a business environment that was unattractive for foreign investments. This limited the possibilities for accumulating capital in Bulgaria, and along with them the transfer of modern technologies that should have increased the general factor productivity in the national economy.

Bearing in mind what has been said so far, we can point out that the conditions for economic growth in Bulgaria, based on capital, are unfavorable. National saving increases, but it does not find application in the real economy. The inflow of foreign investments after the great slump starts to stabilize, but at a much lower level compared to the beginning of the period. On the basis of this, we can claim that, as of the current moment, the accumulation of capital in our country does not form conditions for the adequate upgrade of available equipment and cannot guarantee an increase of the production capital of the country.

#### **4. Knowledge and economic growth**

Over the last few decades the building of a new type of economy has turned knowledge into a major product and factor of growth. The capacity of the country in this respect is presented on the basis of that developed by the World Bank Methodology for Assessment of Knowledge (Knowledge Assessment Methodology). It contains a system of markers which report the achievements of various countries in the following areas – education and training, innovation system, information and communication infrastructure.

In the first area, the emphasis falls on the participation of the population in the educational system (Образование в Република България 2013; p. 98). Statistically, it is measured through the so called coefficient of recording\*. For the period between the 2000/2001 to 2012/2013 school years, we observed a positive trend towards increasing the range of children and youths in Bulgaria's educational system.

In primary education (children at the age of 7–10 years, ISCED-1\*\*) this coefficient is slightly above 95%. Analogous is the state in lower secondary education,

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\* The coefficient is calculated as a percentage of the number of those who study in a particular age group towards the number of population in the same age group.

\*\* The international standard classification of education that is in compliance with the adopted (in November 2011) by the member states of UNESCO revised International standard classification of education.

where the participation of 11–14 year olds (ISCED-2A) is within 81–82%. The most significant, at the positive change, is reported for those studying at the upper secondary education (people between the ages of 15–18 years, ISCED-3A, 3C) – from 64.7% to 82.1%. Insignificant remains the ratio of people enrolled in post-secondary education (19–20 year olds, ISCED-4C) – within 0.3–0.8%, which, however, can explain the increased participation of those youths in higher education.

All of those changes show that at the micro level, people in Bulgaria more and more clearly realize the objective necessity of increasing their educational level as a factor of adapting to the new economic environment. At the macro level, this means that increasing the quality of human capital in our country will bring more employment opportunities, lower levels of unemployment, GDP growth and raising the standard of living.

At the same time, we observe negative processes of premature departure from the educational system (*Obrazovaniето — prichina i reshenie za problema s mladezhkata bezrabotitsa v Balgariya i ES*). In 2011/2012, the number of those who left was 18,500 students, which is 2.4% of those who study. Unfortunately, this ratio is consistent for the whole period from 2000/2001 up to the present and is characteristic of all levels up to higher education. The most frequent reason for this is family problems related primarily to low incomes (or the lack thereof), which render households unable to provide for the students and force the youths to leave school early and seek employment. The second most frequent reason for leaving school prematurely is the external migration of the population, while the third is a lack of willingness to continue education.

The discussed trends are a logical consequence of the economic repercussions in Bulgaria caused by the continuing structural changes in its economy, and recently by the crisis development of the world's economy. If, however, the pointed out trends of students leaving school prematurely continue, the positive effect of increased participation in the educational process reported above will decrease and have a negative impact on the formation of labor resources.

Regarding the innovation potential of the economy, according to the classification of the European Innovation Scoreboard (EIS) (European Innovation Scoreboard 2014), Bulgaria has preserved its status as a modest innovator, along with Romania and Latvia. After a significant improvement of the innovation characteristics through 2010 the impact of the crisis and the problems in Bulgaria quickly transform this positive trend. As of 2013, our country registers the highest slump in its innovation activity, occupying last place among the countries of the EU.

The particular reasons for this, according to the experts in the report “Innovations.bg 2013” (*Inovatsii.bg 2013*), can be sought in several directions. This is due to the drastic decrease of state expenditures for scientific and technological development; the low innovation activity of businesses (*Izsledvane na*

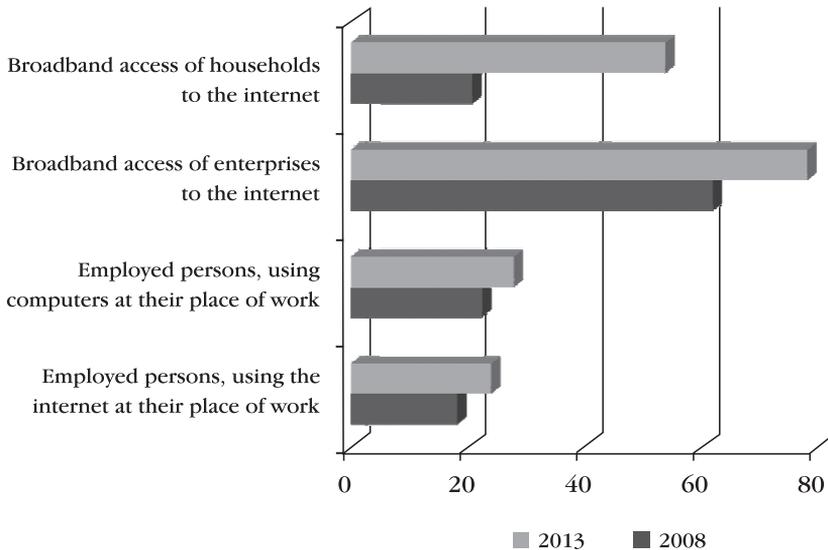
predpriemachestvoto i perspektivite za razvitie na inovatsiite v MSP (2012–2013)); the inability to extract a maximum effect of successfully realized innovation projects; the insufficient effectiveness and efficiency of the spent funds for scientific and research activity (Science, technology and innovation in Europe, 2013 edition; p. 30); the significant contradiction among the country's leading scientific fields and preferred educational areas; the fragmentation, non-transparency, and lack of vision in the development of national policy in the field of science, technologies and innovations in education.

The presented problems, however, must not underrate the achievements of the country regarding the increase of registered trademarks (by 77.4%) and the industrial design (by 56.4%). Also not to be overlooked are the increase of expenditures for scientific, research, and development activity (SRDA) in the business sector, the export of science consuming services, the number of completed doctorates, etc. (European Innovation Scoreboard 2014). Those changes carry a positive charge, but must be accepted with moderate optimism, as they are realized at a very low exit base.

In close cooperation with the innovation system, we can note the information and communication technologies (ICT), through which ready knowledge is collected, processed, stored, and distributed. This is an area which has developed quickly in Bulgaria and strives to achieve average European levels, while in particular directions, it is positioned better than a number of European countries (Natsionalen statisticheski institut).

Such an achievement of the country is the coverage of broadband access to the Internet, which lies in the basis of the application of ICT. For the period between 2008 and 2013, the number of Bulgarian households with such an access increased by over 2.5 times, and throughout the past year, represented 53.6% of all households in the country (Fig. 4). The Internet is most frequently used for the search of information (56.3% of the population at the age of 16–74 years for 2013), for sending electronic mails with attachments (41.7%), for making phone calls (34.7%), posting messages, etc.

A key significance for using the possibilities of ICT is the possessed by the population knowledge and skills in this field. As we can see in the data presented above, the mass Internet skills are of lower level of complexity (Strategicheska ramka na politikata v oblastta na IKT; pp. 8–9). Analogous is the situation regarding the computer skills of the population. The main activities are related to copying and pasting files/folders (41.3% of the population at the age of 16–74 years for 2013), copying and inserting information within a particular document (35.1%), backing up (26.5%), transferring files between a computer and another device (25.6%), etc. Less frequent, but having positive rates, are the skills for connecting/installing new devices, creating electronic presentations, creating computer programs, etc.



**Figure 4.** Using ICT in households and companies

Sources: Natsionalen statisticheski institut

Similar positive trends are observed in Bulgarian companies (Fig. 4). More and more, they bet on the application of ICT for increasing their competitiveness and imposing themselves on the market (Internet use in households and by individuals in 2012). For the discussed period, the share of the companies with access to the Internet through a broadband fixed connection increased from 61.8% to 77.9%. Logically, the share of employed people using a computer with an Internet connection at their work-place increased, too – as of 2013, they are respectively 27.8% and 23.9% of all those who work in companies with more than 10 employees. The major directions in which ICTs are applied in companies aim at interaction with public institutions, for education and training, access of the employees to services related to human resources, etc.

What also increased are the expenses of companies for ICT, as for the period between 2009–2011, they increased by 30.2% and reached over BGN2.5 billion. Most of these expenses in 2009 were directed to IT and telecommunication goods (54.5%), while in 2011, the emphasis was shifted to the expenses for IT services (50.7) (Internet use in households and by individuals in 2012).

As a whole, the ICT sector in Bulgaria has strengthened its positions as a competitive and innovative unit of the national economy, which contributes to its dynamics, and in this way, forms conditions for stable economic growth.

## 5. Conclusion

The discussed trends of some of the most significant conditions for growth in Bulgaria impose the conclusion that our country has the capacity in this respect, but does not manage to use it adequately and turn it into increasing benefits for the economy. The problem is in the low effectiveness of the use of available resources. Our country does not have numerous human resources, but rather has the capacity to increase their quality through education and professional training and to increase their usability in the real economy. The large amount of savings is in the basis of growth, but only if it is included in the economic turnover and cooperates for the increase of productivity and consumption. The ICT sector is the most perspective element of the national economic system, but it is not capable of compensating the numerous negative trends in the remaining directions and preparing the conditions for growth all by itself. Therefore, we need complex actions and engagement of the whole society, supported by managerial will, competence, and willingness to change.

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