

УДК 330.3

## **SOCIO-ECONOMIC ASPECTS OF SUSTAINABLE DEVELOPMENT IN BULGARIA**

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The paper examines socio-economic aspects of sustainable development and new trends in this area in the process of European integration of Bulgaria. The main objective of sustainable development is the improvement of quality of life and well-being for present and future generations. Has Bulgaria made progress towards achieving this objective in the process of European integration? What impact does the current crisis have on the socio-economic sustainable development of the country?

The study is based on the analysis of European Union (EU) set of sustainable development indicators, which provide a snapshot of socio-economic development: changes in real GDP per capita and labour productivity, Research and Development (R&D) expenditure, investment, regional disparities in economic activity as well as employment and unemployment. The paper accounts for data and discusses trends in the indicators within Bulgaria and the EU in the period from 2000 to 2012 based on data from the National Statistical Institute of Bulgaria and Eurostat.

The analytical part makes it possible to assess Bulgaria's progress towards sustainability in the socio-economic area: current challenges, comparative performance and future recommendation for improvement.

*Key words:* socio-economic development, sustainable development, sustainable development indicators, Bulgaria.

### **1. Introduction**

Bulgaria and the other new members of the EU, which joined after 2004, are distinguished by their specific integration model defined by transition process from a centrally planned to market economy. In comparison with the economies of the main partners in the integration process, the Bulgarian economy is not large in scale, and the income per capita is low.

During the first years of its EU membership Bulgaria faces a number of challenges such as embracing the principles of participation in the European integration community, rapidly aging population, shrinking labour force and economic crisis. However, until the beginning of the global economic crisis, Bulgaria had one of the highest growth rates in the EU. The Bulgarian economy attracted significant amount of foreign investments and unemployment rate fell from 19.5 % in 2001 to 5.8 % just before the crisis began in 2008.

The reform of the economy and stabilization allowed Bulgaria to enter a period of stable economic growth since 2000. There has been a process of income catching up. The specifics of the catching-up process are determined by the nature of external environment, economic globalization and financial integration.

## 2. Real GDP per capita

In the 1990s, Bulgaria made a transition to market economy. This transition caused an economic downturn, followed by a period of higher growth in the end of the 1990s. The upward phase of the transformation cycle was characterized by stable and high growth of gross domestic product (GDP) and macroeconomic stability. The prospects and the following EU membership have a strong influence on Bulgaria's positive economic development. From 2001 to 2010 real GDP increased. The highest rate of GDP growth was in 2004, 6.8 %. In 2008 the growth is still high, 6.2 %. The impact of the global economic crisis is significant and as a result of it Bulgaria fell into recession in 2009, GDP fell by 5.5 %.

The economic recovery was slow from 2010 to 2012 due to difficulties in the global economy and the process of reducing the internal indebtedness. Although in 2011 the growth rate is 1.7 %, it slowed down again in 2012 to 0.8 %.

The process of approaching EU income level in Bulgaria takes place since 2000. The key socio-economic development indicator – real GDP per capita – shows a positive development in the period, although the economic crisis and the followed recession led to its decline. The level of GDP per capita in Bulgaria (table 1) increased from 28 % of EU average (in 2000) to 47 % (in 2012), scoring higher growth rates than the older union members.

Between 2000 and 2008 real GDP per capita increased at an average rate of 6.7 % per year (table 1). The high real GDP growth per capita is sustainable thanks to the notable growth in labor productivity. Under the influence of the economic crisis in 2009, real GDP per capita decreased by – 5 %. The growth rate was positive again in 2010–2012, with a slow of 1.4 % in 2012.

The higher growth rates compared to EU average allow Bulgaria to partly erase the difference in income level. In 2001, for example, the difference between the highest level of GDP per capita in the Netherlands (the country is on the second place in this indicator after Luxemburg) and the level in Bulgaria is 104 points. In 2012 the difference was 84 points (131 in Austria and 43 in Bulgaria). Until Bulgaria joined the EU in 2007, the income in the country compared to the EU countries increased from 26.5 % of the EU average in 1997 to 38 % in 2006.

The global economic and financial crisis affects the growth rates, hence the convergence in income and living standards. Despite the achievements in income convergence with the EU in 2012, Bulgaria was the country with the lowest level of GDP per capita among all EU member states.

The dispersion in GDP per capita across the country's regions is quite remarkable. There is a trend of increasing of horizontal or spatial differences in income levels per capita. From 2000 to 2010 disparities in GDP per capita between regions in Bulgaria increased significantly from 27.3 % to 47.6 %. The economic catch-up in Bulgaria and other Eastern European countries has led to an increase in the regional disparities, while they were reduced at EU level. Compared to other EU members the dispersion of regional GDP is highest in Bulgaria, indicating the need for targeted policies to reduce the regional disparities and create jobs and growth in the regions.

Table 1

## GDP per capita, 2000–2012

|  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
| GDP per capita in PPS (EU <sub>28</sub> = 100)                                   | 28   | 30   | 32   | 34   | 35   | 37   | 38   | 40   | 44   | 44   | 44   | 46   | 47   |
| Real GDP per capita, growth rate (Percentage change on previous year)            | 6,2  | 7,5  | 5,2  | 6,4  | 7,3  | 6,9  | 6,8  | 7,0  | 6,7  | -5,0 | 1,1  | 4,4  | 1,4  |
| Real GDP per capita EUR per inhabitant   | 2200 | 2300 | 2500 | 2600 | 2800 | 3000 | 3200 | 3400 | 3700 | 3500 | 3500 | 3700 | 3700 |
| I. Dispersion of regional GDP per capita ( % of the national GDP per inhabitant) | 27,3 | 28,8 | 30,1 | 30,2 | 30,9 | 32,9 | 38,0 | 42,7 | 44,4 | 46,7 | 47,6 | ...  | ...  |

Source: Eurostat

### 3. Economic development

Investment spending is typically a cyclical component of GDP. During the specific period, this study focuses on the investment growth as a share of GDP is determined by business investment. On average for the period from 2000 to 2012 the share of investment in GDP is 23.2 % (table 2). Between 2000 and 2008 this share grew steadily: from 15.8 % in 2000 to 33.6 % in 2008. The effect of the crisis on investment is visible in 2009 and 2010. Since 2009 there is a decrease in the share of investment in GDP, which is primarily due to a decline in business investment spending (from 28.0 % in 2008 to 18.1 % in 2012). In 2012 total investment as a share of GDP was 21.4 %. Investments in the private sector in the same period reached 18.1 %, while the share of public investment in GDP was 3.3 %.

Table 2

## Investment by institutional sectors, 2000–2012 (% of GDP)

|                    | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Total investment   | 15,8 | 18,3 | 18,3 | 19,0 | 20,4 | 25,7 | 27,6 | 28,6 | 33,6 | 28,8 | 22,8 | 21,5 | 21,4 |
| Private investment | 12,2 | 14,9 | 15,2 | 16,1 | 17,2 | 22,3 | 23,6 | 23,4 | 28,0 | 23,9 | 18,2 | 18,1 | 18,1 |
| Public             | 3,6  | 3,4  | 3,1  | 2,9  | 3,2  | 3,4  | 4,0  | 5,2  | 5,6  | 4,9  | 4,6  | 3,4  | 3,3  |

|                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| sector investment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

Source: [http://www.nsi.bg/SDI/SDI%201.2\\_bg.pdf](http://www.nsi.bg/SDI/SDI%201.2_bg.pdf)

Investments are essential for the increase of the labour productivity. During the research period, there is a positive process of convergence of labour productivity per hour worked towards the EU-27 average. Labour productivity per hour worked in Bulgaria increased from 33 % to 44.1 % of the EU-27 average between 2001 and 2012 (table 3). Despite the ongoing process of convergence Bulgaria remains the country with the lowest productivity in the EU. The data indicate a faster growth rate of the indicator compared to the EU-27 average. Maintaining a positive differential in the growth of labor productivity compared to the average for the EU-27 creates a good basis for maintaining the competitiveness of the Bulgarian economy in the long term period.

Table 3

Labor productivity and Total R&amp;D expenditure, 2000–2012

|   | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Labor productivity growth rate per hour worked <i>previous year</i> = 100 | 10,3 | 4,1  | 4,5  | 3,1  | 2,6  | 4,0  | 3,3  | 3,1  | 3,3  | -2,8 | 5,4  | 5,5  | 5,5  |
| Labor productivity per hour worked Index (EU27 = 100)                     | ...  | 33,0 | 34,6 | 35,5 | 35,1 | 36,2 | 36,7 | 37,8 | 39,1 | 39,7 | 40,7 | 42,9 | 44,1 |
| Total R&D expenditure (% of GDP)  | 0,51 | 0,46 | 0,48 | 0,48 | 0,49 | 0,46 | 0,46 | 0,45 | 0,47 | 0,53 | 0,53 | 0,67 | 0,64 |

Source: Eurostat and National Statistical Institute.

For the period of 2000–2012 labor productivity per hour worked in Bulgaria increased on an average to 3.9 %. During the crisis of 2009 the growth rate is negative. Between 2010 and 2012, the process of optimization of the employment of the labor force had a positive effect and the productivity increased by more than 5 % annually supporting the economic growth. In 2012 the real growth of the indicator was 5.5 % compared to the previous year, thus continuing the growing trend.

In the present conditions of shrinking population and labour force, the process of maintaining labour productivity is crucial for future economic growth, as well as for income convergence toward the EU average. This determines the need for policies that support productivity as well as improve business environment, infrastructure and innovation.

Research, development and innovation are key to sustainable growth. Research and development (R&D) intensity (measured by share of R&D spending as a percentage of GDP) is one of the key indicators to measure EU's progress in reaching the targets of Europe 2020 strategy for smart, sustainable and inclusive growth. The national target for Bulgaria, according to the national strategy, is R&D expenditure to reach 1.50 % of GDP.

R&D expenditure has a significant contribution for the transition towards knowledge society, for increasing labor productivity and stimulating economic growth. The share of R&D spending as a percentage of GDP in Bulgaria grew from 0.51 % in 2000 to 0.64 % in 2012 making no significant progress towards achieving the national target of 1.5 % of GDP by 2020 (table 3). This value remains below the EU-28 average of 2.6 % in 2012.

Public investment in improving the quality and infrastructure of research as well as funding and encouraging research and development in the business sector are some crucial steps that need to be taken in order to bring Bulgarian closer to the national target.

#### **4. Employment and unemployment**

A high level of employment is important for achieving sustainable development objectives such as a high standard of living, the quality of life and social inclusion. Bulgaria faces serious economic challenge of drastic demographic changes, rapidly aging population and shrinking of labour force. The decreased in labour force creates challenges for the sustainability of Bulgaria's social model, economic growth and public finances due to the fact that fewer employees should provide for a growing number of people, depending on the social system.

The current situation on the labor market is a challenge for sustainability due to low level of employment and high level of unemployment. The dynamics of employment and unemployment follow the fluctuation of the economic activity. The economic crisis had a negative influence on the labor market. It interrupted the employment growth trend observed between 2001 and 2008. During that period the employment among 20 to 64 year olds increased from 54.8 % to 70.7 % (table 4).

The level of employment has been decreasing since 2009. In 2012 the ratio reached 63.0 %, which is 7.7 percentage points less than in 2008. The employment rate in Bulgaria in 2012 is low compared to the average for the EU-28 for the same period, 68.4. Compared to other EU countries the employment rate is much lower than the national target – 76 %, according to the National Europe 2020 indicators [2, p. 32].

Table 4

## Employment and Dispersion of regional employment rates, 2000–2012

|   | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Total employment rate, (% of age group 20-64)                   | 55.3 | 54.8 | 55.8 | 58.0 | 60.1 | 61.9 | 65.1 | 68.4 | 70.7 | 68.8 | 65.4 | 62.9 | 63.0 |
| Total employment rate by gender, (% of age group 20-64) Males   | 60.2 | 58.3 | 59.4 | 62.2 | 64.4 | 66.8 | 69.9 | 73.4 | 76.1 | 73.8 | 69.1 | 66.0 | 65.8 |
| Total employment rate by gender, (% of age group 20-64) Females | 50.7 | 51.5 | 52.3 | 54.0 | 56.0 | 57.1 | 60.4 | 63.5 | 65.4 | 64.0 | 61.7 | 59.8 | 60.2 |
| Dispersion of regional employment rates, by gender - Total      | 9.5  | 7.3  | 6.8  | 6.3  | 6.6  | 7.2  | 7.3  | 7.1  | 7.2  | 8.1  | 8.7  | 7.6  | 7.3  |
| Dispersion of regional employment rates, by gender - Males      | 9.1  | 6.6  | 6.7  | 5.6  | 5.7  | 7.5  | 6.5  | 6.0  | 6.3  | 6.9  | 7.7  | 6.8  | 7.3  |
| Dispersion of regional employment rates, by gender - Females    | 10.6 | 8.7  | 7.4  | 7.7  | 8.0  | 7.7  | 8.8  | 9.0  | 8.9  | 9.8  | 10.1 | 8.9  | 7.7  |

Source: Eurostat and National Statistical Institute.

The gap between male and female employment is reducing. Between 2008 and 2012 the employment rate fell by 10.3 percentage points for men and 5.2 percentage points for women.

Between 2000 and 2008 female employment is increasing steadily, however, since 2008 it starts declining. In 2012 the rate of employment among women is 60.2, which is 2.1 percentage points lower than the average for the EU-28. This difference is

greater for male employment, namely 8.7 percentage points lower than the EU-28 average. The employment rate among young women at the age of 15 to 24 years old and older women between 55 to 59 years is low and has the potential to increase.

In 2012 compared to 2008 the largest reduction in employment is seen among the population in the age group 25–34 and 35–44 years old. Higher education is a prerequisite to better employment opportunities. The employment rate among people holding a university degree is the highest. The employment rates by education levels for those aged 25–64 years are significantly different, respectively 81.8% for people with higher education, 69.1% for people with secondary education and 37.4% for primary and lower education [3].

The dispersion of regional employment decreased between 2000 and 2003 before to increasing significantly from 6.3 % in 2003 to 8.7 % in 2010 (table 4). Over the past two years a decrease in disparities can be observed, in 2012 the indicator value is 7.3 %. The Southwest region of Bulgaria, where the capital is located, is the only region out of the six with employment rate above the national average (65.1 % in 2012). In all other regions, the employment rate is below the national average, the lowest indicator value is in the Northwest region – 53.6 % [3]. The snapshot of the regional employment dynamics shows the unstable trends in the current development and necessary actions aimed at reducing regional disparities in employment and unemployment.

Table 5

## Unemployment, 2000–2012 (%)

|   | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Total unemployment rate, (%)                          | 16.4 | 19.5 | 18.2 | 13.7 | 12.1 | 10.1 | 9.0  | 6.9  | 5.6  | 6.8  | 10.3 | 11.3 | 12.3 |
| Unemployment rate, by gender - Male                   | 16.7 | 20.2 | 18.8 | 14.0 | 12.5 | 10.3 | 8.6  | 6.5  | 5.5  | 6.9  | 10.8 | 12.3 | 13.5 |
| Unemployment rate, by gender - Female                 | 16.2 | 18.6 | 17.4 | 13.4 | 11.6 | 10.0 | 9.4  | 7.4  | 5.8  | 6.7  | 9.6  | 10.1 | 10.8 |
| Unemployment rate, by age group - Less than 25 years  | 33.7 | 38.3 | 35.2 | 26.6 | 24.3 | 21.0 | 18.3 | 14.1 | 11.9 | 15.1 | 21.8 | 25.0 | 28.1 |
| Unemployment rate, by age group - From 25 to 74 years | 14.5 | 17.2 | 16.2 | 12.4 | 10.8 | 9.0  | 8.1  | 6.2  | 5.0  | 6.1  | 9.3  | 10.1 | 11.0 |

Source: Eurostat

The unemployment rate is among the key sustainability indicators as unemployment directly affects poverty and social exclusion. Since 2001 when the

unemployment rate in Bulgaria reached its peak of 19.6 %, it has been constantly decreasing to 5.6 % in 2008 (table 5). Over the following years the unemployment rate increases again as a result of the economic crisis. In 2012 it reached its highest value for the last nine years – 12.3 %. This level is higher than the average for EU–28, which is 10.7 %.

The increased unemployment in the recent years affects more men than women – the unemployment rate for men increased from 5.5 % in 2008 to 13.5 % in 2012, and for women – respectively from 5.8 to 10.8 %.

After a decline in the period before the economic crisis and the lowest level of 12.7 % in 2008, the youth unemployment rate (15–24 years) increased to 28.1 % in 2012. This rate is above EU average over the same period – 22.8 %. According to a research made by the World Bank, the youth in Bulgaria are more disengaged from employment and education than in any other EU-27 country [4, p. 16].

The people with lower education are affected to the greatest extent by higher unemployment. In 2012, the unemployment rates for people with primary or lower education, aged 25–64, reached 27.0 %, while the rate among people with secondary or higher education is considerably lower – respectively 10.2 % and 5.6 % [3]. Long-term unemployment among the economically active population is among the highest in EU – 56.2 %. These emerging trends in the labor market show that labor market policies will be more successful with a focus on young people, women and older people. More and better opportunities for education and qualifications are an important factor for successful integration into the labor market, increasing the efficiency of employment programs and integration of vulnerable groups.

## 5. Conclusion

The impact of the current financial and economic crisis on the researched processes is significant, yet some major trends in the socio-economic field stand out. The trends were identified by analyzing relevant indicators.

There is a progress according to the main indicator – real GDP per capita – despite the strong impact of the economic crisis and the declining number of population in Bulgaria. After more than a decade of strong economic growth and job creation there is a positive development in the process of catching up with EU average income. Growth is driven by higher productivity, which increases at high rates, yet due to its low general level the income per capita remains EU's lowest. Significant regional disparities in income levels increase in the process of catching up.

Productivity growth is a key factor not only for the convergence process, but in the context of a rapidly aging population, which limits the prospects for growth in the future. At present, the economy is growing at a slow pace and the level of investment is low and is not increasing due to the crisis.

R&D spending as a share of GDP remains low, yet the integration process of the country has a positive impact due to the access to EU structural funds.

Between 2000 and 2008 the rate of employment of people in the age of 20 and 64 increased, reaching a peak of 70.7 % in 2008, which is slightly more than EU average. The recession followed by the fall in GDP in 2009 resulted in a significant loss of



vacancies and high unemployment. The positive rates of GDP growth in the recent years did not lower the unemployment; employment reaches 63 %, thus making national Europe 2020 target seem unattainable.

Since 2008 there has been a progress in closing the gender employment gap. The long-term unemployment rate, which is important for sustainable development, remains high and indicates structural problems in the labor market. In the context of the objectives of inclusive growth, young women and those over 55 as well as youth groups should be focused on.

The identified challenges to Bulgaria's sustainable development require a strong focus on sustainable development public policies, instruments and mechanisms for their implementation.

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*Стаття надійшла до редколегії 1.11.2013.*

*Прийнята до друку 20.11.2013*

## СОЦІАЛЬНО-ЕКОНОМІЧНІ АСПЕКТИ СТАЛОГО РОЗВИТКУ В БОЛГАРІЇ

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Розглянуто соціально-економічні аспекти сталого розвитку і нових тенденцій в галузі дослідження в Болгарії. Основними цілями сталого розвитку є поліпшення якості життя та добробуту нинішнього і майбутніх поколінь. Як Болгарія домоглася прогресу в досягненні цих цілей у процесі європейської інтеграції і як нинішня криза впливає на стійкість соціально-економічного розвитку країни?

Дослідження засноване на наборі показників сталого розвитку Європейського Союзу та Болгарії. Виявлені тенденції в галузі соціально-економічного розвитку – динаміка реального ВВП на душу населення і продуктивності праці, витрат на дослідження і розробки, інвестиції, регіональні відмінності в економічній активності, зайнятості та рівень безробіття. Ця аналітична частина дозволяє оцінити прогрес Болгарії відносно забезпечення стійкості у соціально-економічній сфері.

*Ключові слова:* соціально-економічний розвиток, сталий розвиток, індикатори сталого розвитку, Болгарія.

**СОЦИАЛЬНО-ЭКОНОМИЧЕСКИЕ АСПЕКТЫ УСТОЙЧИВОГО РАЗВИТИЯ  
В БОЛГАРИИ**

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Рассмотрены социально-экономические аспекты устойчивого развития и новых тенденций в области исследования в Болгарии. Основными целями устойчивого развития улучшения качества жизни и благосостояния нынешнего и будущих поколений. Как Болгария добилась прогресса в достижении этих целей в процессе европейской интеграции и как нынешний кризис влияет на устойчивость социально-экономического развития страны?

Исследование основано на наборе показателей устойчивого развития Европейского Союза и Болгарии. Выявленные тенденции в области социально-экономического развития – динамика реального ВВП на душу населения и производительности труда, расходов на исследования и разработки, инвестиции, региональные различия в экономической активности, занятости и уровень безработицы. Эта аналитическая часть позволяет оценить прогресс Болгарии в деле обеспечения устойчивости в социально-экономической сфере.

*Ключевые слова:* социально-экономическое развитие, устойчивое развитие, индикаторы устойчивого развития, Болгария.