

Achieving the objectives of EU Cohesion Policy – the case of intra-regional disparities in Bulgaria

Dimitar Hadjinikolov¹

Abstract: *This paper provides an analysis of intra-regional disparities in Bulgaria for the EU post-accession period. Bulgaria joined the EU together with Romania on 1 January 2007. In accordance with the EU legislation, six NACE 2 planning regions have been established – three in the southern part and three in the northern part of the country. All of them meet the requirements for receiving EU funding under the Cohesion Policy rules. The expectation was that EU funds would create a more favourable environment for pursuing an active and efficient Regional policy in Bulgaria. One of the goals of such a Regional policy should be the reduction of intra-regional disparities, particularly between the regions in the northern and in the southern part of the country. In order to determine whether this objective of the Regional policy has been achieved, changes in Mean Absolute Deviation (MAD) and in the Coefficient of Variation (CV) have been estimated. According to the findings in the paper, intra-regional differences in Bulgaria did not decline in the post-accession period, on the contrary they have in general increased. This is partly due to the concentration of EU funds in the more developed southern part of the country, especially in the capital Sofia. The concentration of funds can be illustrated by the development of the highway network in the southern part of Bulgaria. Intra-regional disparities have resulted in depopulation of the lagging regions.*

Keywords: Bulgaria, European Union, Cohesion policy, Regional policy, Intra-regional disparities

JEL: F15, F36, R12

Introduction

Bulgaria joined the EU on 1 January 2007. The time passed since is already enough to draw some conclusions about the efficiency of the EU policies and programs concerning different aspects of Bulgaria's economic development. In the period between 2007 and 2019 Bulgaria has received significant EU funding mostly from the European Regional Development Fund and the EU Cohesion Fund. During the Multiannual Financial Framework (MFF) 2007-2013 six operational programs were in operation in the country, with a total budget of 7.7 billion euro (see table below).

Table 1. MFF 2007 – 2013 Operational programs in Bulgaria (million €)*

| Operational Program | Budget |
|----------------------|---------|
| Transport | 1 911.3 |
| Environment | 1 641.7 |
| Regional Development | 1 601.3 |

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| | |
|---|----------------|
| Human Resources Development | 1 213.9 |
| Development of the Competitiveness of the Bulgarian Economy | 1 162.2 |
| Administrative Capacity | 197.2 |
| TOTAL | 7 727.4 |

* - without EU agricultural payments and rural areas development payments

Source: Ministry of Finance of the Republic of Bulgaria

The importance of the EU financial support for the Bulgarian economy is well described in a communication from 2017 of the Directorate-General for Regional and Urban Policy by the European Commission. According to this document, in 2007-2013 Bulgaria received net financial contribution from European Regional Development Fund and Cohesion Fund of about EUR 5.4 billion, which was equivalent to over 2% of Bulgaria's GDP and has created a growth of about 4% of national GDP².

Significant importance for the development of the Bulgarian economy has also the next Multiannual Financial Framework 2014-2020. During this period eight national Operational Programs were in use (not including the EU payments for the agriculture and rural development, maritime and fishery support). The budget of the above-mentioned programs is given in the table below.

Table 2. MFF 2014 – 2020 Operational programs in Bulgaria (Million €)*

| | Budget |
|--|---------------|
| Transport and Transport Infrastructure | 1887.6 |
| Environment | 1770.4 |
| Regions in Growth | 1543.2 |
| Innovation and Competitiveness | 1321.3 |
| Human Resources Development | 1092.2 |
| Science and Education for Smart Growth | 650.0 |
| Good Governance | 334.2 |
| SMI Initiative | 102.0 |
| TOTAL | 8700,9 |

* - without EU agricultural payments and rural areas development payments

Source: Ministry of Finance of the Republic of Bulgaria

The main objective of the EU structural and cohesion funds is to achieve a better cohesion in the EU, in all its three content dimensions: economic cohesion, social cohesion, and territorial cohesion³. But the EU cohesion process should also be analysed in three others, “spatial”, dimensions. One of them is, of course, the inter-

² A. Monfret, *Bulgaria and Romania celebrate 10 years in the EU*, European Commission, DG for Regional and Urban Policy, Brussels, 2017, p. 9.

³ In article 3 of the Treaty on European Union is written that the EU shall “promote economic, social and territorial cohesion, and solidarity among Member States”. See: European Union, *Consolidated Version of the Treaty on European Union*, Official Journal of the European Union, Brussels, 26.10.2012, C326/17.

national level or the dimension of cohesion – among the 27 EU Member States. On this level of cohesion, a lot had been achieved in the last decades. With regard to Bulgaria the achievements of the country in the EU Cohesion process can be seen in the table below.

**Table 3. Bulgaria's achievements in the EU cohesion process
(national result as % of EU average)**

| Indicator | 2007 | 2018 |
|---|-------|-------|
| GDP per capita (€ in PPS) | 41.0 | 51.0 |
| People at risk of poverty or social exclusion (%) | 247.8 | 150.5 |
| Total length of motorways (km) per 1000 km ² territory | 24.5 | 42.6 |

Source: Calculated by the author based on data from Eurostat and from the National Statistical Institute of the Republic of Bulgaria

At the same time, we have also to analyse another important level or dimension of the cohesion process in the EU, namely the regional one⁴, and to distinguish between two variants of regional cohesion: cohesion among the 283 EU NUTS 2 regions, and intra-regional cohesion in each of the 27 EU Member States. In the spirit of the Preamble on the Functioning of the European Union Treaty both variants of socio-economic regional differences should be decreased. The aim of this article is to check whether this goal of the EU Cohesion policy is implemented regarding the intra-regional cohesion process in Bulgaria.

Discussion

All authors agree that regions and regional policy play an important role in European integration. There is also unanimity regarding the role of EU Regional policy for the process of Europeanisation of the regions in the EU. However, differences appear regarding the content of “Europeanisation” and regarding the success of the Europeanisation of the EU regions especially of the regions in the so-called CEEC⁵.

Bache, Andreou, Atanasova, Tomic and other authors point out that the most important feature of Europeanization of the regions in CEEC is the adoption of the following European principles: regionalization (multi-level governance); partnership in two directions - among regions (horizontal approach); between regions and the central government (vertical approach); and programming such as linking the funding to the achievements of certain objectives⁶. For other researchers (Schmidt) Europeanisation

⁴ In the Preamble of the Treaty on the Functioning of the European Union is written that the EU shall ensure the harmonious development by “reducing the differences existing between the various regions and the backwardness of the less favoured regions”, European Union, *Consolidated Version of the Treaty on the Functioning of the European Union, Journal of the European Union*, Brussels, 26.10.2012. C326/49.

⁵ Central and Eastern European Countries in the European Union: Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia.

⁶ Bache, I., Andreou, G., Atanasova, G., Tomsic, D., “Europeanization and multi-level governance in south-east Europe: the domestic impact of EU cohesion policy and pre-accession aid” in *Journal of European Public Policy*, Vol. 18: 1, 2011, p. 126.

reflects the core of the development of the EU towards deeper integration (federalization) which goes hand in hand with a greater decentralization⁷.

Scherpereel⁸ and Plešivčák⁹ are of the opinion that Europeanisation in the new Member States, or at least in the Visegrad Four, is a success story. Other scholars (Ferry, McMaster) consider Europeanisation as quite a long and difficult process and even make the suggestion that “no clear and unambiguous process of Europeanisation is apparent” concerning the regions in the CEEC¹⁰. The low achievements in these regions are due to “traditional concentration of power of the unitary structures”¹¹. In 2019, the European Commission also described the cohesion process in the regions as a long-term process that would take decades to develop¹². The topic of a more efficient spatial orientation of resources also raises a discussion. The traditional opinion is that in the first stage of the cohesion process in the European Union in the so called catching-up stage, a concentration of resources in the best developed regions is not only possible but also desirable. In later stages of the cohesion process a transfer of growth is expected to appear from the best developed regions to the lagging behind regions in some kind of spatial aggregation or economic entropy (Williams)¹³. Spatially uneven development is seen as some price to be paid for productivity maximisation and an accelerated economic growth (Iammarino, Rodriques-Pose, Storper, etc.)¹⁴. In the CEEC this classical approach to the Regional policy is described sometimes as “growth pole approach”¹⁵.

A number of findings and conclusions by different scholars however reject this approach of concentrating resources in the most developed regions of the EU. It is believed that investing in more backward regions could also be highly profitable. The European Commission, for example, points out in one of its papers that public investments for cohesion in some less developed regions has shown in the last years a higher return on investments on growth than the European average, which in fact contradicts the claim of developed regions, to be the locomotive of economic growth¹⁶. Functioning of market forces in the past few decades in Europe has not automatically led to decline in regional disparities at the EU level and at national level, which is also not in line with the traditional theory of the automatic nature of catching-up

⁷ See: Schmidt, V. *Europe's "soft-core" future of differentiated integration*, *Social Europe: politics, economy, employment & labour*, <https://www.socialeurope.eu/europes-soft-core-future-of-differentiated-integration>

⁸ Scherpereel, J., “EU Cohesion Policy and the Europeanization of Central and East European Regions” in *Regional and Federal Studies*, Vol. 20, 1, 2010, p. 49.

⁹ Plešivčák, M., “How Successful are Member States when Following EU Cohesion Policy Priorities? Focus on the Visegrad Four Countries” in *Geografický Časopis/Geographical Journal*, Vol. 72, 2020, 1, 64.

¹⁰ Ferry, M., McMaster, I., “Cohesion Policy and the Evolution of Regional Policy in Central and Eastern Europe” in *Europe-Asia Studies*, Vol. 65, No. 8, 2013, 1523.

¹¹ Schmidt, V., *Europe's "soft-core" future of differentiated integration*, *Social Europe: politics, economy, employment & labour*, <https://www.socialeurope.eu/europes-soft-core-future-of-differentiated-integration>

¹² European Commission, *Study on National Policy and Cohesion*, EC Directorate-General Urban and regional Policy, Brussels, 2019, p. 58.

¹³ Williamson, J.G. (1965), “Regional Inequality and the Process of National Development: a Description of the Patterns” in *Economic Development and Cultural Change*, 13(4), 1965, pp. 3-45.

¹⁴ Iammarino, S., Rodriques-Pose, A., Storper, M., “Regional inequality in Europe: evidence, theory and policy implications” in *Papers in Journal of Economic Geography*, 19, 2019, p. 283.

¹⁵ Bachtler, J., McMaster, I., *Implementing Structural Funds in the New Member States: Ten Policy Challenges*, EPRC, University of Strathclyde, 2005, p. 5.

¹⁶ European Commission, *Study on National Policy and Cohesion*, EC Directorate-General Urban and regional Policy, Brussels, 2019, 23.

development¹⁷. In fact, regional disparities have been on the rise in the last decade in many EU countries, with a sharp increase in disparities in the period of the economic crisis in 2007–2009 and with a moderate increase in the first years after the crisis¹⁸.

We can say that there are two trends in the cohesion process in the EU. On the one hand, there is a trend toward stronger convergence at the national level (inter Member State level), with the coefficient of variation in GDP per capita declining by 30 percent between 2000 and 2016. However, at the NUTS-2 level there is a convergence trend seen only from 2000 to 2008. After 2008, the trend is reversed, and by 2016 regional inequality fell back to the level last reached in 2005¹⁹. A significant recentralization of decision-making and financial resources is taking place²⁰, which do not correspond to one of the most important principles of Europeanisation, namely the principle of decentralization of the decision-making process (subsidiarity principle). The problem of increasing spatial centralization in the distribution of funds is again in the centre of the debate regarding the adoption and implementation of the new 2021-2027 EU Multiannual Financial Framework²¹. The “trade-off” between the aim of achieving more aggregate national economic growth and the need to reduce interregional inequalities remains. This makes the choice between the use in the Cohesion policy of Sectoral Operational Programs (SOPs) or Regional Operational Programs (ROPs) more and more difficult²². Some authors already say that the traditional model, “which relied on the concentration of development in large urban centres” is not meeting the requirements of sustainable development²³.

Discussion on the mission and on the objectives of the EU Cohesion Policy has become increasingly important especially in the new Member States²⁴. In general, most of the CEEC favours centralization of resources. Almost 90% of all development programs and other EU financial instruments are designed at the national level, while only 3% are designed at regional level²⁵. One of the explanations for this concentration of decision making mostly in the capitals of CEEC is the lack of administrative capacity in the regions. According to some authors, the administrative capacity determines to a high degree the absorption of EU funds and it is certainly much easier to find the necessary people in the capitals of CEEC²⁶.

However, there are also gradations in concentration. For example, Poland gradually relaxed its centralized administrative system in the 2007-2013 MFF while in

¹⁷ Iammarino, S., Rodriques-Pose, A., Storper, M., p. 21.

¹⁸ European Commission, p. 20.

¹⁹ Farole T., S. Goga, and M. Ionescu-Heroiu, *Rethinking Lagging Regions – Using Cohesion Policy to deliver on the potential of Europ’s regions*, World Bank Report on the European Union, World Bank Group, 2018, p. 36.

²⁰ See: Ahmad, E., Bordignon, M., Brosio, G., “Multi-level Finance and the Euro Crisis: Causes and Effects” in *Studies in Fiscal Federalism and State-Local Finance series*. Edward Elgar Publishing: Cheltenham, 2016.

²¹ Farole T., S. Goga, and M. Ionescu-Heroiu, p. 62.

²² See: Davies, S., Gross, I, *The Challenges of Designing Cohesion Policy Strategies*, paper presented at the Benchmarking Regional Policy in Europe Conference, Riga, 24-26 April, 2005.

²³ Czaplewski, M., Klóska, R., “Regional policy as a factor in shaping regional development in Poland” in *South East European Journal of Economics and Business*, Vol. 15 (1), Warsaw, 2020, p. 102.

²⁴ See: Crescenzi, R., Giua, M., “One of many Cohesion Policies of the European Union? On the differential economic impacts of Cohesion Policy across member states” in *Regional Studies*, VOL. 54, NO. 1, 2019, 10–20.

²⁵ European Commission, p. 134.

²⁶ Țigănașu, R., Încălțărău, C., Carmen, G., “Administrative Capacity, Structural Funds Absorption and Development. Evidence from Central and Eastern European Countries” in *Romanian Journal of European Affairs*, Vol. 18, No. 1, June 2018.

Hungary the government adopted during the same period and later a more centralized approach concerning the EU Cohesion Policy measures²⁷. In Poland, territorial contracts have been signed between national and regional governments and place-based dialog in the Cohesion policy was laid down in law²⁸. Perhaps due to that, Poland is the most successful of the Visegrad countries in the implementation of the EU Cohesion policy social priorities²⁹. On the other hand, the EU support for Hungary, much the same as in some other CEEC, has increased intra-regional disparities³⁰.

Bulgaria, like Romania, joined the European Union in 2007 without having any specific experience in implementing the EU Cohesion policy. All pre-accession financial instruments such as PHARE or SAPARD, were managed directly by the delegation of the European Commission in Sofia and Bucharest³¹. Nevertheless, a process of Europeanisation also started in both countries during their preparation to join the EU, especially by adoption of national regional policy legislation³². Later in Bulgaria was adopted a National Concept for Spatial Development 2013–2025 aiming to promote a polycentric spatial model of the country and to reduce the existing “extreme monocentricity”, with the capital Sofia as the only important centre of economic development³³. Bulgarian authors are of the opinion that despite some efforts made by the government, intra-regional disparities in Bulgaria remain quite a serious problem³⁴. The same conclusion can be seen for the period 2010–2016 in the Interim report on the implementation of the National Strategy for Regional Development of Bulgaria published by the Ministry of Regional Development and Public Works³⁵.

Methodology

For the present analysis it is appropriate to use the NUTS Level 2 regions in Bulgaria. Firstly, because statistical data is mostly available on this spatial level, secondly, because it makes possible comparisons among regions in different Member States and thirdly, because the EU Cohesion policy is mostly implemented at this spatial level. At the same time, it should be borne in mind that these six NUTS Level 2 regions are not functioning as independent territorial and administrative units. In Bulgaria, local self-government is carried out mainly within the municipalities. They are 265 municipalities, which are quite different. The largest municipality, the capital Sofia, has a population of 1.3 million people, and the smallest municipality, Treklyano, has a

²⁷ Bachtler, J., Berkowitz, P., Hardy, S., Muravska, T., *EU Cohesion Policy, Reassessing performance and direction*, Routledge, Abingdon, 2017, pp. 233-235.

²⁸ See: Zauca, J., Komornicki, T. (2017) ‘The place-based approach in development policy. A comparative analysis of Polish and EU space’ in *EU Cohesion Policy: Reassessing performance and direction*, Routledge, London, pp. 297- 310.

²⁹ Plešivčák, 60.

³⁰ See: Medve-Balint, G., Funds for the wealthy and the politically loyal? How EU Funds may contribute to increasing regional disparities in East Central Europe, IN: *EU Cohesion Policy: Reassessing performance and direction*, Routledge, London, 2017, pp. 220-240.

³¹ Surubaru, N.-C., “Revisiting the role of domestic politics: politicization and European Cohesion Policy performance in Central and Eastern Europe” in *East European Politics*, 33:1, 2017, p. 113.

³² Yuill, D., Quiogue, N.-C., *Spatial targeting under EU and National Regional Policies*, European Policies Research Centre Second International Conference, Conference Discussion Paper № 5, Riga 24-26 April 2005, 17.

³³ Ministry of Regional Development and Public Works (2018) *Mezhদিনen doklad za izpalnenie na Natsionalnata strategiya za regionalno razvitiie na Republika Bulgariya za perioda 2012-2022 g.* [Interim report on the implementation of the National Strategy for Regional Development of the Republic of Bulgaria for the period 2012-2022], p. 15.

³⁴ Dokova, S., *Regionalna ikonomika [Regional Economy]*, UNSS, Sofia, 2015, 58; Totev, S., “Regional Disparities in Bulgaria and EU countries” in *Trakia Journal of Sciences*, Vol. 15, Suppl. 1, 1-5, 2017.

³⁵ Ministry of Regional Development and Public Works, p. 18 and 28.

population of only 629 inhabitants.

According to the decision of the European Commission, all six NUTS Level 2 regions in Bulgaria are eligible for funding from the EU Cohesion policy instruments³⁶. These regions are indicated in the following table.

Table 4. Main characteristics of the NACE Level 2 regions in Bulgaria

| Region | Area (in km ²) | Population (number, 31.12.2019) | Population density (inhabitants per km ²) | Districts included |
|------------------|----------------------------|---------------------------------|---|---|
| Northwestern | 19,070 | 728,157 | 38.18 | Lovech, Montana, Pleven, Vidin, Vratsa |
| North-Central | 14,974 | 773,450 | 51.65 | Gabrovo, Razgrad, Rousse, Silistra, Veliko Tarnovo |
| Northeastern | 14,487 | 924,870 | 63.84 | Dobrich, Shoumen, Targovishte, Varna |
| Southeastern | 19,798 | 1,024,115 | 51.73 | Burgas, Sliven, Stara Zagora, Yambol |
| Southwestern | 20,306 | 2,094,260 | 103.14 | Blagoevgrad, Sofia, Sofia (capital), Kiustendil, Pernik |
| South-Central | 22,365 | 1,406,630 | 62.89 | Haskovo, Kardzhaly, Pazardzhik, Plovdiv, Smolyan |
| Total (Bulgaria) | 111,001 | 6,951,482 | 62.63 | |

Source: Calculated by the author based on data from the National Statistical Institute of the Republic of Bulgaria

In measuring the intra-regional disparities, it is important to take into consideration all three dimensions of cohesion in the EU, namely economic cohesion, social cohesion and territorial cohesion. Regarding the economic cohesion the indicator GDP per capita could be used. This indicator best represents the degree of economic development in a given area. For measuring social cohesion as a criterion could be used the Severe material deprivation rate indicator³⁷. According to this indicator, Bulgaria strongly differs from the EU averages and the dynamics in the regions is very important

³⁶ See: European commission, COMMISSION IMPLEMENTING DECISION of 18 February 2014 setting out the list of regions eligible for funding from the European Regional Development Fund and the European Social Fund and of Member States eligible for funding from the Cohesion Fund for the period 2014-2020, Official Journal of the European Union, 20.2.2014, L 50/24.

³⁷ The material deprivation rate is an indicator in EU-SILC that expresses the inability to afford some items considered by most people to be desirable or even necessary to lead an adequate life. The indicator distinguishes between individuals who cannot afford a certain good or service, and those who do not have this good or service for another reason, e.g. because they do not want or do not need it. Severe material deprivation rate is defined as the enforced inability to pay for at least four of the deprivation items. See: <https://ec.europa.eu/eurostat/web/products-datasets/product?code=tespm030>

for overcoming the backwardness in the social sphere. Finally, for measuring the achievements in territorial cohesion could be used the indicator “Length of motorways per 1000 sq. km territory”. For Bulgaria, the development of a network of modern roads means real integration into the European Union's single market. This is the reason why a significant part of the cohesion funds is used for the construction of the network of motorways in Bulgaria³⁸.

Regarding the method of estimating the dynamic of changes in intra-regional disparities as the most appropriate method seems the use of the Mean Absolute Deviation (MAD) and the Coefficient of Variation (CV). The formulas are given below:

$$MAD = \frac{1}{n} \sum_{i=1}^n [x_i - \mu]$$

$$CV = \frac{MAD}{\mu} \times 100$$

Where,

x , represents the observations in this case the data from the Bulgarian regions;

μ , represents the mean;

n , represents the number of observations, in this case it is 6.

Finally, it should be useful to find out which correlation exists between intra-regional disparities in the three chosen indicators: GDP per capita, share of people at risk of poverty or social exclusion and motorways (km) per 1000 km² territory. The correlation is calculated according to the formula:

$$Correl (X, Y) = \frac{\sum(x - \bar{x})(y - \bar{y})}{\sqrt{\sum(x - \bar{x})^2 \sum(y - \bar{y})^2}}$$

Where

\bar{x} and \bar{y} are arithmetic means

Most of the data for the present survey are taken from the regional statistics of Eurostat, as well as from the National Statistical Institute of the Republic of Bulgaria in Sofia. Since in Bulgaria statistics is mostly given at municipal or district level it was necessary in some cases to calculate regional values based on the available district or municipal data. The affiliation of the 28 Bulgarian districts to the six planning regions is given in Table 4.

Findings

The findings for the indicator GDP per capita (nominal) by using the MAD and CV methods of analysis are given in table 5 and in the following charts 1 and 2.

Table 5. Intra-regional disparities in Bulgaria by GDP per capita (2007-2018)

| Indicator /Time | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| MAD | 1776 | 2096 | 2178 | 2311 | 2515 | 2511 | 2494 | 2513 | 2804 | 3002 | 3249 | 3531 |
| CV | 41.47 | 42.35 | 43.48 | 45.09 | 44.92 | 43.77 | 43.37 | 42.47 | 44.21 | 44.17 | 44.10 | 44.38 |

Source: Calculated by the author based on data from the National Statistical Institute of the Republic of Bulgaria

³⁸ About 1/4 of the cohesion funds under the multiannual financial frameworks 2007-2013 and 2014-2020 are intended for the transport infrastructure of Bulgaria (see Table No. 2 and 3).

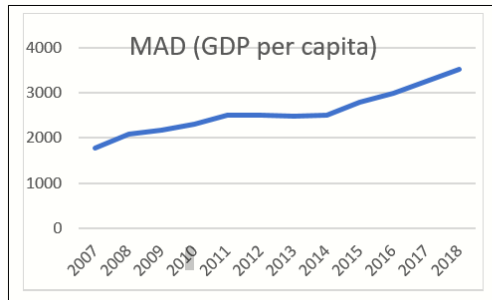


Chart 1

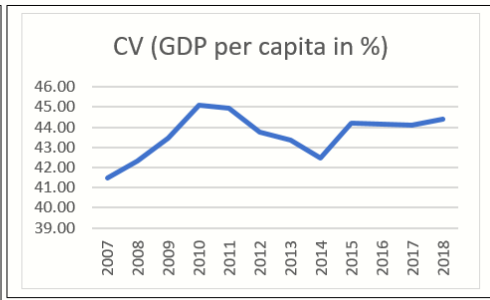


Chart 2

With respect to the second indicator, representing achievements in the social cohesion at regional level, results of analysis are shown in table 6, charts 3 and 4.

Table 6. Intra-regional disparities in Bulgaria by share (in %) of people at risk of poverty or social exclusion (2008–2018)*

| Indicator / Time | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------|------|------|------|------|------|------|------|------|------|-------|------|
| MAD | 39.8 | 38.4 | 36.4 | 36.5 | 30.5 | 34.5 | 33.9 | 31.3 | 30.0 | 33.6 | 31.7 |
| CV | 86.8 | 83.1 | 74.0 | 74.3 | 61.9 | 66.9 | 86.0 | 82.1 | 77.5 | 102.4 | 97.5 |

* No data available for 2007.

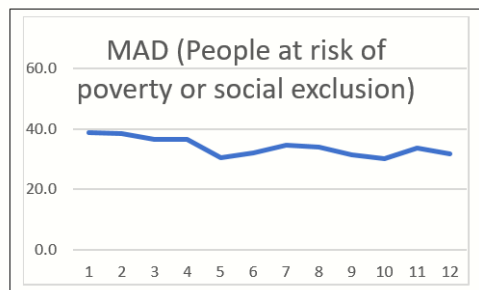


Chart 3

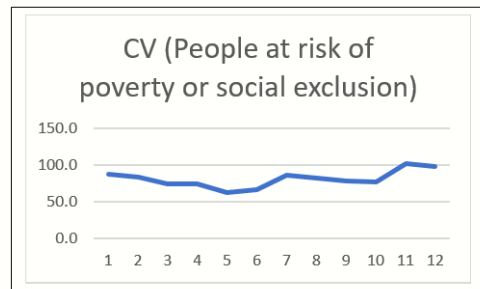


Chart 4

Source: Calculated by the author based on data from the National Statistical Institute of the Republic of Bulgaria

Construction of motorways in Bulgaria started in the early 70s of the 20th century. By 2007 a total of about 400 km were functioning and during the period 2007–2019 another 400 km were put into operation. The distribution of Bulgarian motorways is very uneven throughout the country both before 2007 and now. It can also be seen from the table and graphs below.

Table 7. Intra-regional disparities in Bulgaria by length of motorways (km) per 1000 km² territory (2007–2018)

| Indicator / Time | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| MAD | 13.7 | 13.7 | 13.7 | 14.9 | 17.8 | 20.5 | 20.9 | 27.1 | 27.1 | 27.1 | 27.1 | 28.3 |
| CV | 353 | 353 | 353 | 354 | 353 | 359 | 374 | 379 | 399 | 399 | 399 | 403 |

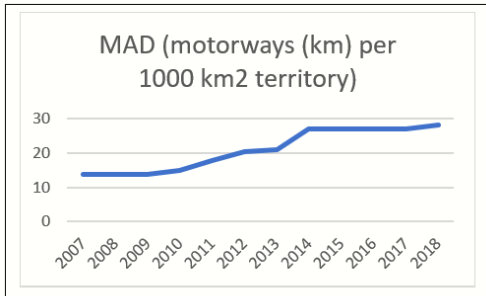


Chart 5

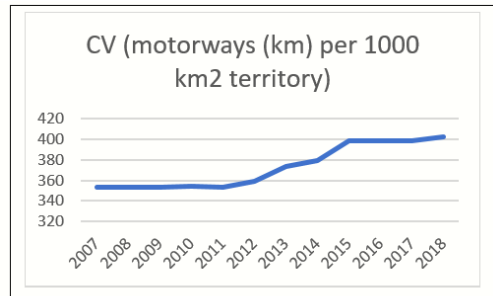


Chart 6

Regarding correlation between MAD and CV, of the three chosen indicators of intra-regional disparities findings are given in the table below.

Table 8. Coefficient of correlation between MAD and CV of indicators representing intra-regional disparities in Bulgaria based on data from Tables 5, 6 & 7

| | GDP per capita/People at risk of poverty or social exclusion | People at risk of poverty or social exclusion/Length of motorways (km) per 1000 km2 territory | GDP per capita/Length of motorways (km) per 1000 km2 territory |
|-----|--|---|--|
| MAD | -0.6950 | -0.8187 | 0.8421 |
| CV | -0.0989 | 0.5267 | 0.1308 |

Conclusions

Since 2007, the country's lag in a number of indicators from the EU average has significantly been reduced (see data in Table 3). It should not surprise us because disparities inside the EU at national level have in general declined due to different reasons, including the implementation of the EU Cohesion policy. However, the picture is quite different if we take the intra-regional disparities, especially in Bulgaria. Despite the EU membership of the country and the EU Cohesion Policy, intra-regional disparities in Bulgaria have not declined as expected, but on the contrary, they have in general increased (see Tables 5, 6 & 7). If we go into details, we can see that during the period 2007-2018 intra-regional disparities in Bulgaria significantly increased regarding the GDP per capita indicator (Table 5) and Length of motorways (km) per 1000 km2 territory indicator (Table 7). However, they remain almost at the same level regarding the share (in %) of people at risk of poverty or social exclusion indicator (Table 6). The lower correlation between the degree of intra-regional social inequality and degree of intra-regional income inequality can be explained by the transfer of money earned by young people working in more developed regions of Bulgaria to their parents living in the less developed regions.

The manner of implementation of the EU Cohesion Policy in Bulgaria obviously plays some role in increasing the intra-regional differences in the country. There is a relation between the type of spatial distribution of the EU financial resources in Bulgaria and the intra-regional disparities. During the period 2012-2018 about 60%

of the EU grants were allocated to the most developed Bulgarian regions – 40% to the Southwestern region with the capital Sofia and about 20% to the South-Central region with the second largest Bulgarian city of Plovdiv. The two economically mostly underdeveloped Bulgarian regions – the Northwestern and the North-Central regions received together only about 20% of the financial resources from the EU³⁹. A significant part of the EU resources was used for construction of motorways. Therefore, it is not surprising that the spatial distribution of newly built motorways was extremely unequal in the above-mentioned period. Only 5 km of motorways were put in operation in the period 2007-2018 in the less developed northern part of the country, while in the much more developed southern part of the country the new motorways are about 370 km. Taking into account the relatively strong correlation between the dynamics of intra-regional disparities in incomes and in motorway infrastructure (Table 7), we can conclude that one of the important reasons for deepening of economic inequality in Bulgaria during the time after Bulgaria's EU accession is the current unequal distribution of the motorway network of the country which, in fact, is a result of the improper spatial distribution of the EU financial resources.

The concentration of resources and achievements in the most developed regions of Bulgaria have also been due to the implementation of the adopted national regional policy. The government has paid more attention to the catch-up strategy at national level than to the domestic regional problems. In fact, no real efforts were undertaken to change the existing model of economic development focused exclusively on the capital Sofia and in a more moderate form on some other important cities in the southern part of the country, like Plovdiv or Burgas. The need of a more place-sensitive regional policy was realized in Bulgaria only in the last years due to the political pressure exerted by the municipalities in the neglected northern part of the country. It was only in 2019 that the Hemus motorway construction was continued⁴⁰. No European co-financing is envisaged for Hemus motorway construction, which seems quite strange taking into account that the motorway should help also to connect with a modern motorway the capitals of two EU Member States – Sofia and Bucharest.

It remains to be hoped that things will change in the new financial framework 2021-2027. Unfortunately, by mid-2020, there were little indications that this will happen. Programming documents for the next financial framework show that almost the same operational programs will be implemented during the new programming period as those already implemented during the current period, and this runs the risk of a further concentration of EU funds in the capital and in some other more developed parts of the country⁴¹.

³⁹ Ministry of Regional Development and Public Works (2018) *Mezhdinen doklad za izpalnenie na Natsionalnata strategiya za regionalno razvitiie na Republika Bulgariya za perioda 2012-2022 g.* [Interim report on the implementation of the National Strategy for Regional Development of the Republic of Bulgaria for the period 2012-2022], p. 25.

⁴⁰ Hemus motorway connects the capital Sofia with the largest city in the northern part of the country Varna. When fully built, the highway will have a length of 413 km. At present about 190 km are in operation.

⁴¹ See: Council of Ministers of the Republic of Bulgaria (2019) Decision No. 196 of 11 April 2019, http://pris.government.bg/prin/search_results.aspx.

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