

*The Natural Experiment Approach  
in Analysis of War Crowds vs. Agoral  
Gathering Impact on Macroeconomic Changes*

## ABSTRACT

In this study natural experiment approach will be employed in an analysis of two social forces: war crowds vs. agoral gatherings and their impact on macroeconomic changes. The paper presents empirical and historical evidence that the European countries which reached their state independence as a result of agoral gatherings (Poland, Hungary, Czech Republic, Slovakia, Bulgaria, East Germany, Romania, Lithuania, Latvia, Estonia, and Albania) obtained much higher indicators both in GDP and in GDP per capita in the decade 2009–2018 than the countries involved in the Yugoslavian war crowds (Croatia, Bosnia & Hercegovina, Serbia, North Macedonia, Kosovo, and Slovenia). For the purposes of our analysis, EUROSTAT data was used as containing macroeconomic indicators of the entire populations of the European countries, which are of interest to us in a distant perspective, at least eight years from the events that are the subject of our comparative analyses, as the primary independent variable. The results of a comparative analysis of these two indicators are presented and an attempt to interpret them is made from the point of view of behavioral economics. This interpretation takes into account the theories of crowd psychology and the theory of agoral gathering processes, as well as the psychosocial and economic importance of coupon privatization in the economic activation

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of citizens in the countries undergoing systemic transformation after the collapse of their totalitarian systems.

*KEYWORDS: natural experiment; war crowds; crowd psychology; agoral gatherings psychology; economic behaviors; macroeconomic impact.*

## 1. INTRODUCTION

If at the start of the 1980s a representative of the social sciences had dared to pose the thesis that in several years, fundamental macrostructural changes would dismantle not only the Berlin Wall but lead to the collapse of the totalitarian system in Europe, their ideas would have been viewed as political science fiction at best. Yet the events of the last decades of the twentieth century caused these changes to become a political, social and economic fact. They led to deep political transformations (the fall of the totalitarian communist system in Central and Eastern Europe, the political collapse of the USSR, the foundation of new independent states, and the unification of the German states) and socio-economic transformations (the construction of the foundations of the market economy, privatization of national enterprises, privatization of national and local publicly-owned dwellings, transformation of collective forms of property to private property, transformation from perpetual usufruct to freehold rights).

Moreover, these deep macrostructural and macrosystem transformations took place with no blood spilled, with the exception of the Balkan Peninsula in Yugoslavia, where war crowd behavior took place that fits classical interpretations as described by LeBon (2020 [1895]), Sighele (1918 [1891]) and J. Ortega y Gasset (1929) and later also by Moscovici's (1985). Biela and Tobacyk (1987) and Biela (1989) proposed the concept of the agoral gathering as an alternative to existing models of crowd psychology (e.g., Stott et al., 2018; Hopkins et al., 2019). Biela (1989) stated that agoral

gatherings differ significantly from other behavioral phenomena traditionally related to crowd behavior. The agoral gathering (from the Greek *agora*) denotes a psychosocial phenomenon that is defined by seven characteristics: (1) participants' motivation is driven by higher values; (2) participants have non-violent intentions; (3) participation is voluntary; (4) gatherings have an open nature; (5) participation is on a mass scale; (6) participants have an experience of unity and a simultaneous awareness of the social importance of the event; and (7) gatherings have positive consequences, both at the individual and the social level. Taken together, these characteristics are considered the constituent of an agoral gathering. This conceptual framework is particularly useful to explain the psychosocial phenomena accompanying the peaceful mass gatherings taking place in Poland (Biela, 1989, 2007, 2013, 2020; Prężyna, 1996; Kida, 2013; Wołóńcej, 2013), Lithuania, Latvia and Estonia (Gaidys and Tureikyte, 1996), Czechia/Slovakia (Ferjenčík, 1996, 2013; Naništova, 2013), Hungary and Bulgaria (Dimitrova, 1995), and in Israel (Zysberg, 2018).

## 2. HISTORICAL EVIDENCE AND THE METHODOLOGICAL STATEMENTS FOR NATURAL EXPERIMENT ANALYSIS

Let us state at the very beginning that the socio-political and psychological processes connected with the fall of totalitarianism in the post-communist countries of Central and Eastern Europe took place parallel in time to the events on the Balkan Peninsula in the countries of former Yugoslavia.

### **Agoral gathering states**

Macro-systemic changes in Central and Eastern Europe in countries described as people's democracies took place according to two quite distinct scenarios. The first consisted of peaceful strikes and marches, while the second actually led to armed conflicts

and civil wars. In Central Europe the peaceful strikes began in Poland in more than 150 state enterprises in the Lublin region. These strikes lasted from 8 to 24 July 1980 and ended with the signing of strikers' agreements with representatives of regional state authorities. The Lublin strikes are interpreted as agoral gatherings (Biela, 2020). During the following month, the wave of peaceful strikes first covered the Baltic coast and from there the whole of Poland, forming the over 10 million-strong Solidarity civic movement, which led to democratic elections for political and constitutional change.

The wave of agoral assemblies soon moved beyond Poland and included such countries as: Hungary, Czech Republic, Slovakia, Bulgaria, East Germany, Romania, Lithuania, Latvia, Estonia), and Albania.<sup>2</sup> The order of the countries listed follows the chronological order of agoral gatherings occurring there (between 1898 and 1991), which were followed by the collapse of their totalitarian systems and attainment of full sovereignty. We will refer to the above-mentioned countries in our analysis as *the agoral gathering states* as they started their full sovereignty as a consequence of agoral gatherings in each of them.

### **Former Yugoslavian countries**

After the death of Josip Broz Tito, the founder and president of Yugoslavia (4 May 1980), the countries of the former Yugoslavia began to declare their sovereignty independently of each other. However, these countries did not continue the strategy of solidarity and the peaceful path of agoral gatherings as did the countries of Central and Eastern Europe, but instead conducted a 10-year civil war consolidating their sovereignty over the neighboring countries with which the Yugoslav Wars were fought from 1991 (10-day war in Slovenia) until 2001 (cessation of armed struggle in

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<sup>2</sup> The countries indicated above are listed in chronological order of the appearance of agoral gatherings in them.

Macedonia).<sup>3</sup> The countries which were involved in the Yugoslavian war crowds are: Croatia, Bosnia & Hercegovina, Serbia, North Macedonia, Kosovo, and Slovenia. In none of these countries were there any attempts at peaceful agoral gatherings along the lines of the agoral countries (Hungary, Romania, Bulgaria, Albania) neighboring them between 1980 and 1999; instead, they began to seek enemies (more or less imaginary) among their neighbors – citizens of the former Yugoslavia – because of their ethnic or religious differences (Biçaniç, 2001; Cohen & Dragovic-Soso, 2007; Fink, 2010; Demolli, 2013; Jha, 2014). The countries of the former Yugoslavia that gained their complete sovereignty by participating in the Yugoslav civil war (the Yugoslav Wars) will be referred to in our analyses as *the war crowds countries*.

### **Research problem**

The research problem of this study is expressed in the following question: Did the peaceful agoral gatherings make significantly more efficient positive impact on macroeconomic changes than the war crowds of the Yugoslavian Wars did after the fall of totalitarian system in post-communist countries in Europe in the decade of 2009–2018?

### **Natural experiment approach**

In order to answer this question, an analysis of economic behavior is conducted within a systemic framework of some indicators of the macroeconomics of the state, where the scheme of analysis will be the framework of a natural experiment (Smith, 1989, 2004; Rosenzweig & Wolpin, 2000; Biela, 2012). A natural experiment is an empirical study in which the control of the experimental variables under investigation is not artificially manipulated by the researchers, but instead is allowed to be influenced by nature

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<sup>3</sup> In Kosovo, the fighting actually continued until 17 Feb. 2008, when the independence of this country was unilaterally declared.

or factors beyond the researchers' control. Natural experiments are already widely used in various areas of economic analysis. For example, Ziebarth (2013) identifies financial markets and the macroeconomic consequences of bank failures made in that time from a natural experiment in Mississippi during the Great Depression. Eicher and Schreiber (2010), in turn, document the long-term impact of structural policies on economic performance – based on data from a natural experiment. Fuchs-Schundeln together with Hassan (2015) also explored the issue of employing natural experiments in analyzing macroeconomics phenomena. In a more recent analysis based on a natural experiment, Kumar and Liang (2019) report findings that have important policy implications for the stimulative effect of easier home equity access on GDP growth. We continue with this kind of analysis in our paper.

Cantoni and Yuchtman (2020) indicate that historical natural experiments bridge contemporary economics and economic history. This is precisely the situation we deal with here, in an analysis of macro-systemic transformation over the last two decades of the 20th century, in which the post-communist countries in Europe liberated themselves from totalitarian systems. Thus, in this situation, the only way to control and measure experimental variables is by analyzing historical facts and variables established in the recent past. This is the kind of analysis, according to the principles of natural experimentation, that we will carry out in Parts 3 and 4 of our article.

### **Dependent variables**

The dependent variables (explained variables) in this analysis are the economic behaviors of citizens of a state whose dimensions are synthetically expressed at the macroeconomic level in the form of quantified indicators:

(a) the indicators of GDP in the decade of 2009–2018, and the Decade Growth of Economic Potentiality (DGE<sub>P</sub>) (%), for the European countries that reached their full state independence as

an outcome of (1) agoral gathering processes, or as an outcome of (2) the Yugoslav Wars;

(b) the indicators of GDP per capita in the decade of 2009–2018, and the percentage increase in GDP per capita in this decade for the European countries that reached their full state independence as an outcome of (1) agoral gathering processes or as an outcome of (2) the Yugoslav Wars.

The first two indicators (constituting group (a)) concern the global economic potentiality and its growth dynamics of the analyzed country, while the other two (group (b)) indicate the economic and civilizational perspective of the use of this potentiality by an individual statistical citizen of that country.

Why was the decade of 2009–2018 chosen for comparative analyses of macro-systemic changes, after the collapse of the totalitarian system in the so-called Soviet Bloc countries in Europe? The main reason for choosing this particular decade was to eliminate many of the contaminating factors that emerged in the period just after the end of the Yugoslav Wars. Hence, eight years since the end of the main hostilities in the countries of the former Yugoslavia was considered the necessary time to exclude these factors from the psychological-economic analyses.

### **The independent variables**

The main independent (explanatory) variable in our experiment is the strategy that the analyzed country chose to achieve its full sovereignty. This variable takes in this experiment the two values: (1) belonging either to countries that achieved their full sovereignty through peaceful agoral gatherings, called the agoral gathering countries; or (2) belonging to the war countries which reached their full sovereignty through the psychology of domestic war crowds.

Although these countries differ in each of these two groups in a number of characteristics, what distinguishes these groups is mainly the choice of either a peace-solidarity strategy or a war-

confrontation strategy to obtain full sovereignty for the countries belonging to these groups. In this way, the planned method of analysis based on the schema of a natural experiment will allow us to answer in a more systematic way the question: What are the macroeconomic effects, both for the state and its individual citizen, of choosing one or the other strategy of achieving full sovereignty by the countries of Central and Eastern Europe, after the fall of their totalitarian communist systems?

The second independent variable controlled in our natural experiment is the Coupon Privatization Programme in countries in the process of systemic transformation after the fall of communism. We ask this: To what extent is the implementation of this programme a factor of positive contamination on the economic impact in the countries that carried it out?

### 3. COMPARATIVE ANALYSIS OF THE AGORAL GATHERING STATES VS. WAR CROWDS STATES IN TERMS OF GDP INDICATORS

It is hypothesized that the macroeconomic indicators of the European states with a history of agoral gatherings (Biela, 2013, 2020), i.e. Albania, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia – indicate more promising results in terms of their economic activity, as compared with states which experienced the Yugoslav Wars, i.e. Croatia, Bosnia & Hercegovina, Serbia, North Macedonia and Slovenia. Let us consider an example of such analysis based on the GDP Eurostat data,<sup>4</sup> which aimed to account for the economic growth over the ten year period 2009–2018 for the above-mentioned two groups of European countries, i.e. (1) those countries that reached their

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<sup>4</sup> See the Eurostat GDP data updated on 30 Aug. 2019. Availability of data and material: open access Eurostat data was used (<https://ec.europa.eu/eurostat/web/products-datasets/-/tec00001>).



state independence as an outcome of agoral gatherings; and (2) the countries which gained their full sovereignty after the Yugoslav wars. A comparative analysis of both the absolute growth of GDP indicators of the above states in the decade 2009–2018 was carried out as well as the percentage indicator of the Decade Growth of the Economic Potential (DGEP)<sup>5</sup> of the aforementioned particular states, which is presented in Table 1.

Table 1. The indicators of GDP and the Decade Growth of Economic Potentiality (DGEP) (%) for the European countries that reached their full state independence as a result of (1) agoral gathering processes (\*) or (2) the Yugoslav Wars.

| States and year of EU accession  | GDP in 2009 (millions euro) | GDP in 2018 (millions euro) | DGEP in 2009–2018 |
|----------------------------------|-----------------------------|-----------------------------|-------------------|
| 1. Czechia* 2004                 | 148,682.0                   | 207,772.4                   | 28.43%            |
| 2. Estonia* 2004                 | 14,145.9                    | 25,656.9                    | 44.86%            |
| 3. Hungary* 2004                 | 94,262.5                    | 131,935.1                   | 28.55%            |
| 4. Latvia* 2004                  | 18,749.3                    | 23,523.7                    | 20.29%            |
| 5. Lithuania* 2004               | 26,934.8                    | 45,113.8                    | 40.29%            |
| 6. Poland* 2004                  | 317,082.9                   | 496,461.8                   | 36.13%            |
| 7. Slovakia* 2004                | 64,023.1                    | 90,201.8                    | 29.02%            |
| 8. Bulgaria* 2007                | 37,317.7                    | 55,182.2                    | 32.37%            |
| 9. Romania* 2007                 | 125,213.9                   | 202,883.6                   | 38.28%            |
| 10. Albania*                     | 8,662.2                     | 12,745.5                    | 32.11%            |
| 11. Slovenia 2004                | 36,254.3                    | 45,754.8                    | 20.76%            |
| 12. Croatia 2013                 | 45,145.4                    | 51,467.8                    | 12.28%            |
| 13. Bosnia & Hercegovina         | 12,679.3                    | 16,759.3                    | 24.34%            |
| 14. Serbia                       | 32,486.2                    | 42,782.2                    | 24.06%            |
| 15. North Macedonia              | 6,766.5                     | 10,734.7                    | 36.96%            |
| 16. Kosovo (under UN protection) | 4,069.6                     | n. a.                       | n. a.             |
| 17. Montenegro                   | 3,000.0                     | 4,700.0                     | 36.17%            |

<sup>5</sup> The accounted value of the DGEP indicator for the decade 2009–2018 is as follows:  $DGEP = \frac{GDP(2018) - GDP(2009)}{GDP(2018)} \times 100$ .

These analyses relate to the decade beginning eight years after the end of civil wars between the countries of the former Yugoslavia,<sup>6</sup> when the economies of these countries had already entered a more stable track. From Table 1 we learn that the European countries which reached their state independence as an outcome of agoral gatherings (see the countries 1–10 with \*) attained a relatively high increase in GDP: for Poland in 2018 it reached € 496,561.8 million; in the Czech Republic and Romania GDP crossed the level of € 200,000 million; and for Hungary, it reached € 131,935.1 million. The Balkan countries involved in the Yugoslav Wars attained relatively lower GDP growth indicators in 2018 than the countries where the agoral gatherings took place. This indicator for Croatia reached € 51,467.8 million; for Slovenia – € 45,754.8 million; for Serbia – € 42,782.2 million; for Bosnia & Hercegovina – € 16,759.3 million; for North Macedonia – € 10,734.7 million, and for Montenegro – € 4,700 million.

Does the Decade Growth of Economic Potentiality (measured in %) differentiate the European countries that reached their full state independence as an outcome of: (1) agoral gathering processes, or (2) the Yugoslav Wars? The DGEP indicators for the decade 2009–2018 show the dynamics of growth of economic potential of the analyzed European countries. The average value of these indicators in the agoral gathering countries is 33.03% (the numbers of these states in Table 1 are 1–10), while in the war countries (the appropriate numbers of these states in Table 1 are 11–17) it is 23.68%. The difference between the average values of those indicators is significant and could be univocally interpreted in terms of factors which determine actualization of economic

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<sup>6</sup> The Yugoslav Wars were a series of separate but related ethnic conflicts, wars of independence, and insurgencies fought in the former Yugoslavia from 1991 to 2001, which led to the breakup of the Yugoslav state. Its constituent republics declared independence, despite unresolved tensions between ethnic minorities in the new countries, thus fueling the wars.

potentiality in the decade considered of the compared groups of countries. The environment and climate of war appears to be a strong negative factor impacting the rate of economic growth. Moreover, from the history of the Yugoslav Wars, we learn that the longer war took place in a country, the weaker macroeconomic indicators were for this country. We can conclude the truth of this statement when comparing the DGEP of North Macedonia (36.96%), which was spared the inter-ethnic violence that raged elsewhere in the Balkans following the break-up of Yugoslavia in the early 1990s, but came close to a civil war a decade after its independence, and Slovenia (20.76%), where the Yugoslav War took place only ten days, while this indicator in Croatia was evidently lower (12.28%), as the war crisis lasted there as long as five years.

#### 4. COMPARATIVE ANALYSIS OF REAL GDP PER CAPITA IN THE DECADE OF 2009–2018

The indicator GDP per capita is calculated as the ratio of real GDP to the average population for a specific year. GDP as such measures the value of total final output of goods and services produced by an economy of the state within a certain period of time. This includes all goods and services that have markets and products which are produced by governmental agencies and non-profit institutions. Moreover, there is consensus that the GDP indicator is a measure of economic activity and is also used as a proxy for development in a country's material living standards, i.e. economic welfare. We stress that this indicator is of limited reliability as GDP neither includes most of unpaid household work nor takes account of negative effects of economic activity, like environmental degradation or war conflicts.

Taking such limitations into account, a comparative analysis of GDP per capita indicators for the European countries which we have already discussed for the decade 2009–2018 was carried out,

based on data from Table 1. The results of the comparative analysis for these countries regarding their GDP per capita indicators are presented in Table 2. The first column presents the two groups of states, each of them in alphabetic order. The first group consist of the states which reached their state sovereignty and a collapse of totalitarian system of their countries as an outcome of agoral gathering processes (see the countries 1–10). The second groups are the countries where these goals were reached by war crowds of 1991–2001 (see the countries 11–17).

Table 2. GDP indicators per capita in decade of 2009–2018, for European countries that gained full independence as a result of (1) agoral gathering processes (\*) or (2) the Yugoslav Wars.<sup>7</sup>

| Countries listed alphabetically and year of EU accession | Currency of source data | GDP per capita in 2009 | GDP per capita in 2018 | Value of GDP per capita increase in 2009–2018 | Percentage increase in GDP per capita in 2009–2018 |
|--|-------------------------|------------------------|------------------------|---|--|
| 1. Albania*  | USD                     | 4,130                  | 5,299                  | 1,169   | 22.06%   |
| 2. Bulgaria* 2007  | EUR                     | 4,990                  | 6,550                  | 1,660   | 25.34%   |
| 3. Czechia* 2004   | EUR                     | 14,690                 | 17,980                 | 2,290   | 12.74%   |
| 4. Estonia* 2004   | EUR                     | 10,830                 | 15,070                 | 4,240   | 28.14%   |
| 5. Hungary* 2004   | EUR                     | 9,820                  | 12,899                 | 2,980   | 28.28%   |
| 6. Latvia* 2004  | EUR                     | 8,730                  | 12,189                 | 3,450   | 28.37%   |
| 7. Lithuania* 2004                                       | EUR                     | 8,720                  | 13,390                 | 4,670   | 34.88%   |
| 8. Poland* 2004  | EUR                     | 9,070                  | 12,420                 | 3,350   | 26.97%   |
| 9. Romania* 2007   | EUR                     | 6,410                  | 8,700                  | 2,290   | 26.32%   |
| 10. Slovakia* 2004                                       | EUR                     | 11,890                 | 15,520                 | 3,430   | 22.10%   |
| 11. Bosnia & Herzegovina                                 | USD                     | 4,635                  | 6,236                  | 1,601   | 25.67%   |

<sup>7</sup> The source of data for the indicators expressed in euro (EUR) are taken from Eurostat: [https://ec.europa.eu/eurostat/cache/metadata/en/sdg\\_08\\_10\\_esmsip2.htm#freq\\_timeliness1592487933645](https://ec.europa.eu/eurostat/cache/metadata/en/sdg_08_10_esmsip2.htm#freq_timeliness1592487933645). The indicators for Bosnia & Herzegovina and for Kosovo are from the World Bank: [tradingeconomics.com](http://tradingeconomics.com); and for Albania, from [stalista.com](http://stalista.com).

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|------------------------|-----|--------|--------|-------|--------|
| 12. Croatia 2013       | EUR | 10,630 | 11,990 | 1,360 | 11.34% |
| 13. Kosovo             | USD | 3,286  | 4,276  | 990   | 23.15% |
| 14. Montenegro         | EUR | 4,920  | 6,230  | 1,310 | 21.04% |
| 15. North<br>Macedonia | EUR | 3 350  | 4,020  | 1 670 | 41.54% |
| 16. Serbia             | EUR | 4 280  | 5,200  | 920   | 17.69% |
| 17. Slovenia 2004      | EUR | 17 750 | 20,200 | 2 450 | 12.13% |

Table 2 shows the dynamics of economic development of the analyzed countries in terms of increasing the welfare of their inhabitants. Data of individual columns concerning GDP per capita indicators in this table point to their great differentiation within the two separate groups of countries. This proves that the source of their variability comes from the multiplicity of factors influencing this variance. In the third column, among the ten so called agoral gathering countries, we can see a quite large difference in terms of GDP per capita in 2009 (the starting year of our decade analysis) between the two states of the highest discrepancy. In Albania<sup>8</sup> this indicator reached € 3,525 in 2009, while for Czechia it was € 14,690. This spectrum includes all other countries from the so-called Soviet bloc that became EU members in 2004 (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia), in 2007 (Bulgaria), and in 2013 year (Romania). Currently, Albania has the status of awaiting EU membership.

It can be seen that admission to the EU (see the years of admission of individual countries to the EU in the first column) is conditioned by a notation of a relatively high GDP per capita. At the same time, the functioning of the member states in the economic structures of the EU has contributed to its increase.

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<sup>8</sup> In this comparative analysis we use the value of GDP per capita for Albania, Bosnia & Hercegovina and Kosovo, where a transfer of American dollars into the euro currency was made according to the exchange rate as of 18 Oct. 2020.

These regularities may be seen, thanks to a comparative analysis of the relevant indicators in the columns of Table 2, including the particular countries in 2009 and 2018, i.e. in the whole analyzed decade.

What are the other outcomes of this analysis? At the very beginning of our decade analysis the main regularity is that there are constant interim increases in GDP per capita for each analyzed country. However, three groups of countries with different increments of these indicators can be clearly noticed. The first can be called the leader group that consists of the Czech Republic and Slovakia. For these countries, the GDP per capita indicators are by far the highest, with the respective values: € 14,690 and € 11,890, and their average difference in growth over the decade is  $M = € 2,860$ . This indicator can be called *a decade growth of material well-being (DGMW per capita)*. In the second group we find such countries with comparative levels of GDP per capita indicators as: Estonia, with the decade growth from € 10,830 to 15,070; Hungary – from € 9,820 to 12,800; Poland – from € 9,070 to 12,420; Latvia – from € 8,730 to 12,180; and Lithuania – from € 8,730 to 13,390. Their average DGMW per capita is  $M = € 3,780$ . The third group are countries with relatively lower GDP in capita indicators within the independent states with a history of agral gatherings. Those are: Romania, with the decade increase of GDP per capita from € 6,410 to 8,700; and Bulgaria – with the decade growth of GDP per capita from € 4,990 to 6,550.

Let us now analyze comparatively the third, fourth and fifth columns of Table 2 for the group of countries which achieved complete sovereignty and independence from totalitarian systems (countries 11–17) in the crowds of the Yugoslav Wars.

Comparative analysis of the GDP per capita indicators allows us to differentiate four groups of countries where the criterion is the decade extension of the values of these indicators. The first two groups are of one-element sets: (1) Slovenia, for which its decade GDP per capita growth is from € 17,750 to 20,200 and its

decade growth of material well-being is € 2,450 and (2) Croatia with the decade GDP per capita increase from € 10,630 to 11,990, where its indicator of decade growth of material well-being is € 1,360. The third group consists of three countries, for which GDP per capita data are as follows: Montenegro with the decade growth from € 4,920 to 6,230 and the decade growth of material well-being of € 1,310; Serbia with its decade GDP per capita increase from € 4,280 to 5,200 where the decade growth of material well-being is € 920; and Bosnia & Herzegovina, with its decade growth per capita from € 3,955 to 5,322 having its decade growth of material well-being of € 670. The fourth group in our analysis of the so-called Yugoslavian War countries are: North Macedonia and Kosovo, which reached relatively lower values of their GDP per capita. For North Macedonia, the decade growth was from € 3,350 to 4,020 and in this case its decade growth of material well-being was € 670, and for Kosovo the respective indicators are as follows: its decade growth of GDP per capita is from € 2,804 to 3,649, and the related decade increase of the material well-being is € 845.<sup>9</sup>

One of the main factors that determined the differentiation of GDP per capita values between the countries of the former Yugoslavia is undoubtedly the duration of the military conflict of the analyzed countries. Therefore, in our analysis Slovenia reached such relatively high GDP per capita indications because its engagement in the Yugoslavia wars took place only ten days after proclaiming the declaration of independence (Prunk, 2001).<sup>10</sup> This country was able to meet all the conditions of accession to the EU as early as 2004, along with most of the countries where agoral

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<sup>9</sup> On the occasion of these analyses, it is worth noting that the decade increase in the value of GDP per capita (Table 2, col. 5) does not correspond to the percentage of this increase (Table 2, col. 6).

<sup>10</sup> During the Yugoslavian Wars (1991–2001) the first of the military conflicts, known as the Ten-Day War, was initiated by the Yugoslav People's Army on 26 June 1991 after the secession of Slovenia from Yugoslavia on 25 June 1991.

gatherings took place. The aftermath of nine years of warfare was relatively easier for Croatia, whose indicators of improving economic well-being are evident. The country has been a member of the EU since 2013.

The indicator of economic growth of GDP per capita in the material well-being of their inhabitants of the analyzed decade was particularly sensitive to the period of military involvement of countries participating in the ethnic wars in the former Yugoslavia. For Serbia and Kosovo these indicators reached the lowest values in comparative analysis: € 920 and € 990, respectively.<sup>11</sup> This means that the effects of economic development in these countries during the analyzed decade did not increase per capita by even EUR 1,000. According to this regularity, the decade growth rates of GDP per capita are correspondingly higher in countries where the war lasted: only 8 months (North Macedonia – € 1,670); 2 years (Montenegro – € 1,310), or 3 years (Bosnia & Herzegovina – € 1,601) (see Cohen and Dragovic-Soso, 2007, p. 309).

In the context of the comparative analyses of GDP and GDP per capita indicators, an intriguing question is what made the values of these indicators similar for the Czech Republic, Slovakia and Slovenia, although there were no agoral gatherings in Slovenia as in the case of the Czech Republic and Slovakia? In these countries, the program of general enfranchisement of citizens with the property of state-owned enterprises (including banks) in the form of share capital was implemented. This program called coupon privatization took place first in Czechoslovakia in 1992 and then was continued both in the Czech Republic until 1995 and in Slovakia separately until 2002 as well. A similar program was also implemented in Slovenia in 1992–1998 (Lisowski, 2013).<sup>12</sup>

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<sup>11</sup> The length of Serbia's military involvement in the Yugoslav Wars was 5 years and of Kosovo – 4 years.

<sup>12</sup> See the doctoral dissertation dissertation in Łódź University by Lisowski (2013), supervised by Adam Biela.



The psychosocial consequence of coupon privatization in these three analyzed countries was, in the first stage, the dispersion of the share capital of the state's assets, but ultimately it had very positive macroeconomic effects for each of these countries. Thus, enfranchised individual citizens of these states became more active subjects not only of social life, but also of that part of the state's economy for which they felt responsible as shareholders in real existence. The actual effect of universal enfranchisement called coupon privatization, however, turned out to be visible only when the dispersed enfranchisement capital was reintroduced into the economy under the free capital decision of each enfranchised participant in the macrosystemic transformation program in a given country. The outcome of this individual capital decision making was the reintegration of the dispersed enfranchisement capital into joint-ventures activities, family entrepreneurial businesses or into already existing state companies as shareholders. This is how reintegrated enfranchisement capital started to strengthen the macroeconomics of states which carried out coupon privatization programs of transformation after the collapse of the totalitarian systems in their countries (Biela, 1997, 2005). That is why Slovenia, Czech Republic and Slovakia became leaders in their macroeconomic indicators analyzed in our paper.

## 5. CONCLUDING REMARKS

From our analysis we can conclude that in contemporary democratic societies, attempts to create non-violent agoral gatherings should be made in order to solve social, ethnic, economic, religious or any type of problems and prevent the negative, often cruel collective crowd behavior, which potentially even extends to war conflicts. Summarizing the assessment of the Yugoslav Wars as negative, it can be said that no one has characterized any country to have been a winner in the conflicts. All sides were ultimately

to be defeated, having incurred huge losses, which is typical of the behavior of participants in a strictly competitive zero-sum game. However, the losses incurred by these participants are enormous and multidimensional. They include long-term mental and spiritual losses, social and civilizational disintegration, and serious economic regression, difficult to make up for quickly, due to the breach of the very economic base of the countries participating in those wars. Our comparative analyses have shown the evident political and macroeconomic impact of the path which led the former countries of the so-called people's democracies in Europe in the last two decades of the 20th century to overthrow the totalitarian system and gain full sovereignty as states.

A similar regularity was revealed in the comparative analysis of GDP per capita indicators, indicating the level of material prosperity of the inhabitants of the analyzed countries and their growth in both compared groups of countries. The indicator of economic growth in GDP per capita, expressing growth in the material well-being of their inhabitants of the analyzed decade, was particularly sensitive of the period of military involvement of countries participating in the ethnic wars in the former Yugoslavia. For Serbia and Kosovo (where their war engagement lasted five and four years, respectively), these indicators reached the lowest values in comparative analysis: € 920 and € 990, respectively, which means that the effects of economic development in these countries during the analyzed decade did not increase per capita by even € 1,000. Four countries (North Macedonia, Montenegro, Bosnia & Herzegovina, Croatia) involved in civil war conflicts over a much shorter period of time (from 8 months to 3 years) attained material welfare growth rates from € 1,310 to 1,670. Only one country, i.e. Slovenia, where the war took only ten days, reached the indicator of € 2,450. Our analysis of this indicator allowed us to discern a pattern and propose this formula: the longer a country's involvement in an armed conflict, the weaker

its GDP per capita indicators, and in particular its GDP per capita growth rates for the analyzed decade.

The social dialogue within a climate of deep and authentic integration and a value-based culture stressing human dignity which emanates from agoral gatherings is a powerful factor which lead towards mutual understanding, economic well-being, and the coexistence of people of different ethnic, cultural, religious, economic and political status or orientation.

## REFERENCES

- Biçaniç, I. (2001). Croatia. *Southeast European and Black Sea Studies*, 1(1), 158–173. <https://doi.org/10.1080/14683850108454628>
- Biela, Adam (1989). Agoral gathering: A new conception of collective behavior. *Journal for the Theory of Social Behavior*, 19(3), 311–336.
- Biela, A. (1996). Agoral gatherings and large scale transformation in Europe in the 80s and 90s. *Journal for Mental Changes*, 2(2), 83–100.
- Biela, A. (1997). Powszechne uwłaszczenie jako problem wielowymiarowy. *Roczniki Filozoficzne*, 45(4), 162–169.
- Biela, A. (2005). Wdrażanie uwłaszczenia przez Stowarzyszenia Uwłaszczeniowe. In A. Biela, H. Połcik, & T. Połcik (Eds.), *Batalia o uwłaszczenie w Polsce* (pp. 146–160). Kraków: Wydawnictwo “Patria”.
- Biela, A. (2007). Psychospołeczne uwarunkowania zmian makrostrukturalnych: Koncepcja zgromadzenia agoralnego. *Czasopismo Psychologiczne*, 13(2), 75–86.
- Biela, A. (2012). *Information and decision in behavioral economics*. Frankfurt am Main: Peter Lang Verlag.
- Biela, A. (2013). Agoral gatherings which have changed the political face of Central and Eastern Europe. In Biela, *Beyond crowd psychology* (pp. 19–63).
- Biela, A. (Ed.). *Beyond crowd psychology. Power of agoral gatherings*. Frankfurt am Main: Peter Lang Verlag.
- Biela, A. (2020). The beginning of agoral gatherings in Poland and their macro-systemic political and economic consequences: Events of Lublin July 1980. *Advances in Politics and Economic*, 3(4), 19–33. <https://doi.org/10.22158/ape.v3n4p19>

- Biela, A., & Tobacyk, J. (1987). Self-transcendence in the agoral gathering: A case study of Pope John Paul II's 1979 visit to Poland. *Journal of Humanistic Psychology, 27*(4), 390–405.
- Cantoni, D., & Yuchtman, N. (2020). *Historical natural experiments: Bridging economics and economic history*. National Bureau of Economic Research, Working Paper 26754, Cambridge, MA. <http://www.nber.org/papers/w26754>
- Cohen, L. J., & Dragovic-Soso, J. (2007). *State collapse in South-Eastern Europe: New perspectives on Yugoslavia's disintegration*. Purdue: Purdue University Press.
- Demolli, H. (2013). Criminal judicial qualification and prosecution in the Racak case according to national and international legislation. In I. Aertsen, J. Arsovska, H.-C. Rohne, M. Valiñas, & K. Vanspauwen (Eds.), *Restoring justice after large-scale violent conflicts* (pp. 99–129). London: Routledge.
- Dimitrova, S. (1995). Time as a cultural value in Bulgaria and the strategies to conduct at a time of dynamic social changes. *Journal for Mental Changes, 1*(2), 129–133.
- Eicher, Th. S. & Schreiber, T. (2010). Structural policies and growth: Time series evidence from a natural experiment. *Journal of Development Economics, 91*(1), 169–179.
- Eurostat GDP data of the EU member-states. Updated 30 August 2019.
- Ferjenčik, J. (1996). Velvet revolution meetings in Slovakia: Socio-psychological characteristics. *Journal for Mental Changes, 2*(2), 121–127.
- Ferjenčik, J. (2013). Psychosocial analysis of the agoral gatherings that took place during the Velvet Revolution in Czechoslovakia. In Biela, *Beyond crowd psychology* (pp. 65–80).
- Fink, G. (2010). *Stress of war, conflict and disaster*. Melbourne: Academic Press.
- Fuchs-Schundeln, N., & Hassan, T. A. (2015). Natural experiments in macro-economics. *Fama-Miller Working Paper*. <https://ssrn.com/abstract=2583876>
- Gaidys, V., & Tureikyte, D. (1996). Agoral gatherings in Lithuania (An example of The Baltic Way). *Journal for Mental Changes, 2*(2), 114–119.
- Hopkins, N., Reicher, S., Stevenson, C., Pandey, K., Shankar, S., & Tewari, S. (2019). Social relations in crowds: Recognition, validation and solidarity. *European Journal of Social Psychology, 49*(6), 1283–1297.
- Jha, U. C. (2014). *Armed conflict and environmental damage*. Delhi: Vij Books India.
- Kida, G. (2013). Towards the social and cognitive model of macro transformations in Poland. In Biela, *Beyond crowd psychology* (pp. 125–142).
- Kumar, A., & Liang, Che-Yuan (2019). Credit constraints and GDP growth: Evidence from a Natural experiment. *Economic Letters, 181*(8), 190–194.
- LeBon, G. (2020 [1895]). *Psychology of crowds*. Southampton: Sparkling Books Limited.

- Lisowski, R. (2013). *The impact of general enfranchisement on the development of the knowledge economy in selected countries of Central Europe*. PhD dissertation. Faculty of Sociology and Economics, Lodz University.
- Moscovici, S. (1985). *The age of the crowd: A historical treatise on mass psychology*. Cambridge: Cambridge University Press.
- Naništová, E. (2013). Retrospective and current approaches to velvet revolution in Slovakia. In Biela, *Beyond crowd psychology* (pp. 81–123).
- Ortega y Gasset, J. (1929). *La rebelion de las masas*. Madrid: Revista de Occidente.
- Parcheva, I. (1992). *Attitudes on rights and liberties in participants in an agoral meeting, compared to nationally representative sample*. Paper presented at the Second International Conference on Mental Changes and Social Integration Perspectives, Lublin, 17–20 Nov. 1992.
- Preżyna, W. (1996). Agoral gatherings as a social phenomenon in the experiences of the 80s in Poland. *Journal for Mental Changes*, 2(2), 101–111.
- Prunk, J. 2001. *Path to Slovene State*. Ljubljana: Public Relations and Media Office, Government of the Republic of Slovenia.
- Rosenzweig, M. R., & Wolpin, K. I. (2000). Natural experiments in economics. *Journal of Economic Literature*, 38(4), 827–874.
- Sighele, S. (2018 [1891]). *The criminal crowd and other writings on mass society*. Torino: University of Torino Press.
- Smith, V. L. (1989). Theory, experiment and economics. *Journal of Economic Perspectives*, 3(1), 151–169.
- Smith, V. L. (2004). Behavioral economics research and the foundation of economics. *Journal of Socioeconomics*, 34(2), 135–150.
- Stott, C., Ball, R., Drury, J., Neville, F., Reicher, S., Boardman, A., & Choudhury, S. (2018). The evolving normative dimensions of ‘riot’: Towards an elaborated social identity explanation. *European Journal of Social Psychology*, 48(6), 725–896.
- Wołośńiej, M. (2013). The power of narratives steering collective memory: The cultural aspects of agoral gatherings. In Biela, *Beyond crowd psychology* (pp. 157–180).
- Ziebarth, N. L. (2013). Identifying the effects of bank failures from a natural experiment in Mississippi during the Great Depression. *American Economic Journal: Macroeconomics*, 5(1), 81–101.
- Zysberg, L. (2018). The people demand social justice: The social protest in Israel as an agoral gathering. *Journal for Perspectives of Economic Political and Social Integration*, 24(2), 31–45.