A composite indicator for economic integration maturity: the case of Western Balkan countries

Viktória ENDRŐDI-KOVÁCS*, Oleg TANKOVSKY**

Abstract

Montenegro and Serbia are on track to join the EU, followed by other Western Balkan countries. The purpose of this study is to demonstrate these countries’ economic integration maturity. The analysis covers the period between 2006 and 2019. The main questions concern the evolution of Western Balkan countries during the last 15 years, the results that have already been achieved, and the weakest points of their potential accession. The paper suggests that, although these countries are about to fulfil the economic criteria, they are not fully prepared to join the EU from an economic perspective as they face significant challenges in terms of integration maturity. To endorse this suggestion, the paper forms a new composite indicator to provide a comprehensive understanding of the recent development of these countries’ functioning market economy, competitiveness, macroeconomic stability, convergence, and financing ability. Results can contribute to the integration theory and enlargement decision-making.

Keywords: economic integration maturity, Western Balkans, composite indicator creation

Introduction

Brussels started to pay more attention to the Western Balkans after the outbreak of the Yugoslav war, when a conflict unfolded in its immediate neighbourhood (Radeljić, 2020). At its Thessaloniki Summit in 2003, the European Council declared that “The EU reiterates its unequivocal support to the European perspective of the Western Balkan countries. The future of the Balkans is within the European Union” (European Council, 2003, p. 2). By offering membership, the main

*Viktória ENDRŐDI-KOVÁCS is assistant professor at Corvinus University of Budapest, Hungary; e-mail: viktoria.kovacs3@uni-corvinus.hu. ORCID: 0000-0003-3083-3700 (Corresponding author)

**Oleg TANKOVSKY is PhD student at Corvinus University of Budapest, Budapest, Hungary; e-mail: oleg.tankovsky@uni-corvinus.hu.
goal of the EU is to foster permanent peace, freedom and economic prosperity in the region, thereby achieving stability in its neighbourhood.

Since then, a prolonged accession process can be observed. Croatians joined the EU in 2013. Serbia and Montenegro have the best opportunity to follow them. The rest of the Western Balkan countries are at different stages within the integration process: North Macedonia and Albania are official candidate countries, but the accession negotiations have not started yet; Bosnia and Herzegovina and Kosovo are potential candidate countries (European Commission, 2021a). The accession process of these countries is slower than in the previous accession rounds. There are several reasons for this: the 2008-2009 crisis and the euro crisis that followed; the negative experiences from the previous accession rounds; enlargement fatigue; differing points of view regarding the European Union’s future. In addition, even though the official date of the Serbian and Montenegrin accession is 2025, the EU is rather cautious in communicating that date. This is only partly due to the pandemic; there are still challenges to face and efforts to be made by these countries to fulfil the accession requirements, mainly in the area of the rule of law, the freedom of expression and media, and the fight against corruption and organised crime (European Commission, 2021b).

An examination of the EU’s enlargement strategy and related statements reveal that the economic criteria for accession have become more complex in the last two decades. At the Zagreb Summit in 2000, when the European Union first mentioned the “prospect of accession” (European Council, 2000, p. 2), the only economic (Copenhagen) criterion was the achievement of a functioning market economy. Since then, additional expectations have emerged from the side of the European Union, relative to 1. the increase of competitiveness by decreasing high unemployment, particularly youth unemployment, and by creating business opportunities and a favourable business environment not just for local businesses; 2. the implementation of necessary structural reforms to handle structural weaknesses such as inefficient and rigid markets, transparency of the privatization process, low productivity and limited access to finance, role of grey economy, 3. economic integration within the Union by improving connectivity, trade relations, investments and innovation to achieve smart growth (European Commission, 2018). At the 2020 Zagreb Summit, these were still important aspects in the light of Covid-19 (European Council, 2020). In the current situation marked by the impact of the pandemic, these countries’ economic development and convergence with the EU remain important to achieve long-term post-pandemic recovery, as it was emphasised in the 2021 enlargement package (European Commission, 2021b).

The aim of this paper is to evaluate the performance of the Western Balkan countries with regard to the economic criteria, and the development they have achieved in these areas between 2006 and 2019. The examined countries are Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, and Serbia. We excluded Kosovo, as some European countries do not recognise its independence. Our main hypothesis
is that due to slow progress and deficiencies in their economic performance, these countries are not ready to join the European Union. After an overview of the relevant academic literature, we verify this hypothesis through the introduction of a composite indicator based on the indices that cover most of the economic criteria recently suggested by the European Commission, and by utilizing Tibor Palánkai’s economic integration maturity theory. After the collection and standardisation of data by using principal component analysis, a correlation matrix is created, which helps to define the specific factors and dimensions of the newly created composite indicator. After these calculations, we introduce results that help us appreciate whether and to what extent these countries are ready to join the EU from an economic perspective. The results can contribute to enlargement decision-making and suggest that the EU should focus on deepening, i.e. solving its existing problems instead of further enlargement. This is even more important in the present situation marked by the pandemic, when countries’ economic performance and convergence usually deteriorates.

1. Literature review

Economic cooperation is the form of international collaboration aimed to exchange industrial, financial, commercial, and technological resources which will result in economic development and gain for every participating actor (Snidal, 1991). In the case of a customs union or a free trade area, the possible sources of economic gain are based on more efficient and higher-quality production, as well as improved international bargaining position due to the larger size, which results in better terms of trade, intensified internal competition, and technological advances due to the spill-over effect. The importance of economic cooperation and the efficiency of regional integrations cannot be questioned anymore, as during the last 30 years it has become inevitable to participate in them. Economic integrations provide a framework to reach these goals. Economic integrations always entail political dimensions, as these forms of cooperation are mostly created for political reasons but, irrespective of these motives, the economic outputs are always significant. According to Viner (2014), political will is a significant factor in customs unions and integrations. It is important to note that, when an integration reaches the level of economic union and operates with a common market, additional sources of economic gain, such as labour mobility, coordination of fiscal and monetary policies, and better income distribution (El-Agraa, 1989) can be listed, which further highlights the importance of economic cooperation and regional integrations. Regional economic integrations appear to be second-best situations, and agreements can always be reached based on compromise (Jovanović, 2007). Their case could also show a similar result, as protecting some strategic industries will be inevitable, and deepening the overall economic cooperation with the EU will be a major necessity for significant economic growth.
The following subchapters briefly introduce the EU’s accession criteria, how these changed with successive enlargement rounds, and why it would be advisable to implement the theory of integration maturity.

1.1. Accession criteria

Every integration has its own criteria for accepting new members. The European Economic Community introduced its first accession criteria by the Treaty of Rome, which stated that the candidate country should be European and democratic (Baldwin and Wyplosz, 2004). As the enlargement and deepening of the integration went ahead, candidates’ integration preparedness became more and more relevant. The European Communities formulated concrete accession criteria in 1991 in connection with the transition to an economic and monetary union (Palánkai, 2014). Following the Maastricht criteria for the introduction of a common currency (euro), new conditions were created in connection with a future Eastern enlargement in 1993, the so-called Copenhagen criteria, which stipulated a political criterion, an economic criterion and an administrative and institutional one.

The accession criteria became more complex for Western Balkan countries. When the Western Balkan countries could realise the prospect of accession for the first time, they needed to demonstrate institutional stability guaranteeing democracy, the rule of law, human rights, and respect for and protection of minorities; a functioning market economy and the capacity to cope with competition and market forces; and the incorporation of the acquis communautaire in their legal systems (European Commission, 2021c). Nevertheless, based on the lessons of previous accession rounds in 2004 and 2007, it became obvious that the Copenhagen criteria do not adequately reflect the readiness of a candidate country to enter the Union. If we examine the European Commission’s enlargement reports and statements since the last accession rounds, we can observe that now it uses a more complex analytical framework than the one provided by the Copenhagen criteria and uses more economic indicators to point out the weakest elements of the economic situation of these countries. These are: high unemployment rate, especially among youth, unfavourable business environment (high corruption), low spending on research and development, low productivity, and the necessity to improve infrastructure (European Commission, 2021a). As a consequence of the lessons learned from the accession of Central and Eastern European countries, the EU also puts more emphasis on the rule of law and fundamental rights in the negotiation process (Dudley, 2020).

In its reports and communications, the European Commission (see e.g. European Commission, 2020a; 2020b) mainly focuses on how these countries fulfil the political criteria and less on their economic development and competitiveness. It seems that the political aspects are more important than the economic ones. This is underlined by the fact that Member States’ governments and intergovernmental
institutions also play a significant role in the decision-making process (Alesina and Perotti, 2004). However, if the European Union’s main goal is to deepen the economic and monetary union and enhance trade and investments with these countries, it must also focus on the economic criteria by implementing a more complex approach. In a crisis, like the current pandemic situation, the economic aspects become more important.

Research focusing on the economic preparedness of candidate countries with a quantitative approach is scarce (Schimmelfennig et al., 2015; Siljak and Nagy, 2018). Schimmelfennig et al. (2015) pointed out that EU countries that could develop their competitiveness before their accession could more successfully face the increased competitiveness than those that tried to do this after the accession. These pre-prepared countries could integrate better into transnational value chains. Siljak and Nagy (2018) examined beta and sigma convergence in the region between 2004 and 2013. They have found that Western Balkan countries converge towards the 28 EU Member States, but that the 2008-2009 crisis had a negative impact on per capita GDP growth and slowed down the convergence process. Economic openness is proved to be the most important factor in their model in both pre- and post-crisis period while (high) unemployment rate was a determining factor only between 2003 and 2008. Krstevska (2018) came to the same conclusion by examining real convergence with macroeconomic indicators. These papers focus on each aspect of integration preparedness.

The present paper intends to fill the gaps in research by developing a complex approach and indicator to measure the Western Balkan countries’ economic readiness to join the European Union. To achieve this, the paper applies the theory of integration maturity.

1.2. Integration maturity

The integration maturity theory gives a more complex approach to determine whether a country is mature enough to access an integration (Palánkai, 2006) compared to the Copenhagen/Maastricht criteria or other theories.

The integration maturity is an ability to maximise benefits from the integration and to minimise its costs and drawbacks. It can be measured by the balance of costs and benefits. If membership is a positive sum game, overall, the country can gain/profit from it; the country is mature to enter integration (Palánkai, 2014, p. 378).

Accession criteria define the minimum membership criteria while integration maturity goes far beyond that as it examines the general criteria for a successful and efficient integration, which can be measured both before and after the accession (Palánkai, 2006). Tibor Palánkai distinguished four aspects of integration maturity:
economic, political, institutional, and social. The theory was created for measuring Central and Eastern European countries’ readiness to join the European Union; however, it can be adapted to the characteristics of Western Balkan countries by putting more emphasis on competitiveness and convergence. This paper focuses on the economic dimension since it is the most objective and quantifiable one (Endrődi-Kovács, 2014).

The economic integration maturity can be defined by the following basic criteria: functioning market economy, competitiveness, macroeconomic stability, convergence, and financing ability (Palánkai, 2010). Functioning market economy is one of the Copenhagen criteria. It assumes the existence of free movement of market participants and prices determined by market conditions. Competitiveness also appears among the accession criteria; it expresses the candidates’ ability to cope with the competitive pressures of EU markets and their businesses’ ability to compete against other European enterprises. In a broader approach it means that countries also compete against their social, economic, and institutional systems. The role of macroeconomic stability appreciated since the 2008-2009 crisis, and it is crucial to get the benefits from the integration itself. Convergence is necessary to catch-up and avoid the negative consequences of joining an integration. It is well known that, compared to developed countries, less developed countries can be negatively affected by joining an integration form. If competition sharpens, most producers lose markets, which might result in a severe deterioration in the current account and balance of payments of underdeveloped countries. This can cause serious problems in terms of employment, budget, and economic growth. In addition, a more developed state can adjust to the changed competitive conditions, mobilise its capital resources, and convert to more modern technologies. Financing ability implies the availability of domestic capital resources, the ability of an economy to produce the resources for its own development, and the way a country operates on capital markets; so, it shows the ability of a particular country to absorb capital, both in terms of external investments of private capital (e.g., foreign direct investments) and the intake of budgetary transfers (Palánkai, 2014; Tankovsky and Endrődi-Kovács, 2021). The above five criteria show whether countries are prepared to join the EU from an economic perspective and in a complex way.

2. Research method

The paper elaborates a composite indicator by considering the accession criteria and theoretical background of economic integration maturity.

The aim of the paper is to have a deeper understanding of the ongoing integration process of the Western Balkan countries. Since it cannot be fully characterised by a single variable, we decided to create a composite indicator that compresses the relevant indices, which determines integration maturity. The statistical method that we used is based on the Handbook on Constructing Composite
Indicators published by the OECD (2008). The creation of a composite indicator makes it possible to compare and scale countries easier while retaining a deep and complex overall picture. In most cases, it is easier to work with one single variable than to identify comparable trends between several different indicators (OECD, 2008). Based on the above-mentioned aspects, the newly created indicator is going to conclude each part of Palánkai’s factors. The specific factors and variables that have been used can be seen in Table 1.

Table 1. The methodological framework of the composite indicator

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
<th>Data source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functioning market economy</td>
<td>Indices of BTI reports, Corruption Perception Index</td>
<td>Bertelsmann Stiftung, Transparency International</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>Global Competitiveness Index, Labour force participation rate (LFP)</td>
<td>World Economic Forum, International Labour Organization</td>
</tr>
<tr>
<td>Macroeconomic stability</td>
<td>GDP growth, Inflation (consumer prices), Unemployment rate, Current account balance</td>
<td>World Bank WDI</td>
</tr>
<tr>
<td>Convergence</td>
<td>HDI, Government debt to GDP, Internet users, GDP per capita (at PPP), General government net lending/borrowing</td>
<td>World Bank WDI, IMF WEO</td>
</tr>
<tr>
<td>Financing ability</td>
<td>IFDI (% of GDP), Bank nonperforming loans to total gross loans (%), Use of IMF credit (% of GNI)</td>
<td>World Bank WDI</td>
</tr>
</tbody>
</table>

Source: Authors’ representation

The variables were chosen based on the literature and data availability. The timeframe was chosen based on data availability to get a balanced dataset, so the analysed timeframe is between 2006 and 2019.

According to the OECD (2008) manual, the construction of a statistically stable and reliable indicator can be achieved in 10 steps (see Figure 1).

This composite indicator is appropriate to show the overall economic integration maturity of these countries to join the EU based on five economic criteria and 16 indices. There is room for debate on the choice of variables; however, the variables have been chosen based on the literature, from reliable sources, and proportionately for each criterion.
The novelty of this methodology is that it measures the candidate countries’ economic readiness and maturity to join the EU. Its drawback is that it only measures the economic aspects of accession and does so in a quantitative way. We intend to compensate for this by comparing our results with the findings of the European Commissions at the end, but this drawback cannot be fully handled within the framework of this study. In the future, we are planning to construct a similar composite indicator for the political and institutional aspects. The main reason we have chosen the economic aspect is because, to us, it seems obvious that economic aspects can be measured in the most objective way. Another reason is that the role of economic aspects has been recognised to an increasing extent in recent years, and reasons other than political are now considered when a country intends to join the EU.

3. Analysis

In what follows, based on the steps of creating a composite indicator, each variable’s contribution will be introduced in detail with our findings.

3.1. Selection of variables

The purpose of this step is to support the above-mentioned theoretical definition. This process is greatly influenced by the availability and quality of data, so it is worth discussing the strengths and weaknesses of the selected sub-indicators. Let us start by examining the aspect of functioning market economy. The first variable is the Bertelsmann Stiftung’s Transformation Index, which we chose because it analyses and evaluates how developing countries and countries in transition are steering social change toward democracy and market economy. The index uses 17 aspects for the evaluation of 129 countries. The BTI aggregates the results of transformation processes and political management into two indices: the...
Status Index and the Governance Index. The Status Index, with its two analytic dimensions of political and economic transformation, identifies where each of the 129 countries stand on their path toward democracy under the rule of law and a social market economy. We have used the Status Index in our calculations. The second variable was the Corruption Perception Index created by Transparency International. CPI currently ranks 180 countries on a scale from 100 (very clean) to 0 (highly corrupt) and considers 16 different surveys and assessments from 12 different institutions. In our case, these results have been rescheduled to a 0-10 scale.

In the case of competitiveness, the EU only provides different guidelines and patterns rather than a concrete or specific methodology. For instance, a country seeking full membership needs to implement the competition law of the EU and fulfil all its criteria. However, there are several economic research institutes that publish case studies with a detailed competitiveness report. In this work, WEF (World Economic Forum, The Global Competitiveness Report) studies are presented to examine the competitiveness of the Western Balkan countries in parallel with the Labour Force Participation rate.

Macroeconomic stability is usually measured with 3 indicators: GDP growth, unemployment rate, and inflation. These indicators represent the main indexes of an economy and, if the analysed period is picked correctly, the chosen development path shall be bright and clear. Apart from these three indicators, the balance of payments has also been analysed with the assistance of current account balance data, as the financial foundations of the participating countries are not that stable.

Convergence is another important aspect of the research. Through convergence data, it is possible to measure the level of development of an economy. Trade among different economies can lead to asymmetric interdependencies in the mid and long terms, which, most of the time, creates a negative impact in underdeveloped countries, so it is highly important to include convergence in the analysis of the Western Balkan countries. According to László Práger (2004), a relatively objective view of the convergence of a country’s economy can be measured by analysing the main macro-economic indicators (GDP, GDP per capita), the level of access of the society to information technologies (internet users), and the social indicators (life expectancy, number of hospitals). In our case, some of these indicators have been exchanged for others due to lack of data availability, therefore, the following variables were used in this part of the assessment: GDP per capita (PPP), percentage of population with high-speed internet access, HDI, government debt to GDP, general government net lending/borrowing.

Finally, the financing ability is a specifically important aspect in the case of the Western Balkans. These countries have already been receiving funds from the EU for development goals and the accountability of the governments has been questioned many times during the last 15 years. Therefore, the level of inward foreign direct investment is a good measure for understanding the trust of external businesses in the region. On the other hand, the amount of non-performing loans
alongside and with the use of IMF credits has been included in the analyses, as most of these countries do not only rely on EU funds but also on long term loans from the IMF.

3.2. Results of the multivariate analysis

It is also necessary to examine the co-movement of indicators, as this is how we can interpret the suitability of the complex indicator and manage future methodological possibilities. After performing the correlation analysis, five different factors have been created to reach the most comprehensive result (see Table 2).

The disadvantage of a complex indicator is that it often only shows the big picture, while relatively minor problems can be observed on a more detailed level of analysis. Therefore, we will highlight metrics and basic aspects that show extreme results or high significance for our research.

Table 2. Factor loadings and weighting

<table>
<thead>
<tr>
<th>Indicators</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
<th>Factor selection</th>
<th>Factor weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corruption Perception Index</td>
<td>0.73</td>
<td>0.323</td>
<td>-0.079</td>
<td>-0.412</td>
<td>0.118</td>
<td>F1</td>
<td>0.455</td>
</tr>
<tr>
<td>Global Competitiveness (WEF)</td>
<td>0.779</td>
<td>-0.189</td>
<td>-0.24</td>
<td>-0.281</td>
<td>0.076</td>
<td>F1</td>
<td>0.455</td>
</tr>
<tr>
<td>Human Development Index</td>
<td>0.914</td>
<td>-0.181</td>
<td>0.024</td>
<td>-0.128</td>
<td>-0.241</td>
<td>F1</td>
<td>0.455</td>
</tr>
<tr>
<td>Government debt to GPD</td>
<td>0.688</td>
<td>-0.004</td>
<td>0.367</td>
<td>0.462</td>
<td>-0.26</td>
<td>F1</td>
<td>0.455</td>
</tr>
<tr>
<td>Internet users</td>
<td>0.751</td>
<td>0.499</td>
<td>-0.263</td>
<td>0.054</td>
<td>-0.051</td>
<td>F1</td>
<td>0.455</td>
</tr>
<tr>
<td>GDP per capita PPP</td>
<td>0.85</td>
<td>0.089</td>
<td>-0.29</td>
<td>-0.145</td>
<td>-0.049</td>
<td>F1</td>
<td>0.455</td>
</tr>
<tr>
<td>Inflation</td>
<td>-0.266</td>
<td>-0.537</td>
<td>0.277</td>
<td>-0.085</td>
<td>0.36</td>
<td>F2</td>
<td>0.243</td>
</tr>
<tr>
<td>Current account balance</td>
<td>-0.022</td>
<td>0.883</td>
<td>-0.03</td>
<td>0.23</td>
<td>0.228</td>
<td>F2</td>
<td>0.243</td>
</tr>
<tr>
<td>IFDI</td>
<td>0.191</td>
<td>-0.821</td>
<td>0.028</td>
<td>-0.248</td>
<td>-0.184</td>
<td>F2</td>
<td>0.243</td>
</tr>
<tr>
<td>IMF credit</td>
<td>-0.123</td>
<td>-0.508</td>
<td>0.446</td>
<td>-0.285</td>
<td>-0.175</td>
<td>F2</td>
<td>0.243</td>
</tr>
<tr>
<td>Nonperforming loans</td>
<td>0.177</td>
<td>-0.179</td>
<td>0.775</td>
<td>0.02</td>
<td>-0.078</td>
<td>F3</td>
<td>0.164</td>
</tr>
<tr>
<td>Government net lend/ borrow</td>
<td>-0.298</td>
<td>-0.128</td>
<td>-0.645</td>
<td>-0.043</td>
<td>-0.292</td>
<td>F3</td>
<td>0.164</td>
</tr>
<tr>
<td>GDP growth</td>
<td>-0.184</td>
<td>-0.426</td>
<td>-0.579</td>
<td>0.344</td>
<td>0.04</td>
<td>F3</td>
<td>0.164</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>-0.55</td>
<td>0.326</td>
<td>-0.144</td>
<td>-0.53</td>
<td>0.322</td>
<td>F4</td>
<td>0.078</td>
</tr>
<tr>
<td>LFP rate</td>
<td>0.418</td>
<td>-0.027</td>
<td>-0.054</td>
<td>0.604</td>
<td>0.537</td>
<td>F4</td>
<td>0.078</td>
</tr>
<tr>
<td>Transformation Index (BTI)</td>
<td>0.49</td>
<td>-0.341</td>
<td>0.09</td>
<td>-0.206</td>
<td>0.683</td>
<td>F5</td>
<td>0.056</td>
</tr>
</tbody>
</table>

*Source: Authors’ representation*
3.3. Normalisation of data

This step is taken to make the data comparable and to eliminate the problem of different measurement units. Their aggregation is only possible if we bring them to a common unit of measurement. Therefore, the next step was to standardise the values of the variables. This process converts the values of indicators into simple numbers, where the standardised value shows the standard deviation of the value of the variable from the sample average. Formula for calculating the standardised value:

\[ z = \frac{x - \mu}{\sigma} \] (1)

where \( z \) is the standardised value, \( x \) is the normal value of the variable, \( \mu \) is the average of the variable, \( \sigma \) is the standard deviation of the variable.

If the standardised value is negative, the value of the variable is lower than the average, if it is positive, it is higher. As a result of this step, the composite indicator becomes unitless and can thus be freely aggregated (OECD, 2008, p. 27).

3.4. Weighting and aggregation

This step further contributes to the reliability of the composite indicator. After grouping the indicators, it should also be noted that, due to the weighting technique, the aggregate weights of groups are different. In this case, a linear or geometric technique can be used (OECD, 2008, p. 31). As a result of the correlation of sub-indicators, the weight of each new group was determined by factor analysis (OECD, 2008, p. 32) which, in turn, was determined by the sum of the squares of variance of the variables within the group. Table 3 shows the squared cosines of the variables. Weighting was defined based on these results; this can be seen in Table 2. In the process of the creation of a composite indicator, it is worth naming each of the factors (Gitelman et al., 2010, p. 1216); in the following section we elaborate on the reasoning behind our naming process.

Table 3 shows that in the first group, CPI, WEF, HDI, Government debt to GDP, internet users, and GDP per capita have the strongest contribution. This correlates with the previously defined groups based on Palánkai’s theory. Based on these findings, the first group can be named “Convergence”, and this is going to represent the most significant part of our composite indicator (45.5%). There was one major deviation from the results. Unemployment rate has been added to the fourth group instead of the first one. As we can see, the contribution of this variable to the first factor was 0.302, and to the fourth factor was 0.281. There was no significant difference between the numbers, but it is more logical to pair unemployment rate with labour force participation. The second group includes inflation, current account balance, foreign direct investment, and the use of IMF credits. We named this group “Financing Ability”. Next to GDP growth, government
net lending/borrowing, and the rate of nonperforming loans have been selected to be included in the third group, which basically represents “Macroeconomic Stability”. Finally, the fifth group contains only the transformation index by the Bertelsmann Stiftung. This variable showed such different results and no significant correlation with the other variables that we had to create a separate group for it. In comparison with Palánkai’s specification, this fifth group can be considered as “Functioning Market Economy”. Its final contribution to the composite indicator is 5.6% as it represented the least amount of co-movements.

Table 3. Squared cosines of the variables (values in bold correspond for each variable to the factor for which the squared cosine is the largest)

<table>
<thead>
<tr>
<th>Variable</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTI</td>
<td>0.240</td>
<td>0.116</td>
<td>0.008</td>
<td>0.042</td>
<td>0.467</td>
</tr>
<tr>
<td>CPI</td>
<td>0.532</td>
<td>0.104</td>
<td>0.006</td>
<td>0.170</td>
<td>0.014</td>
</tr>
<tr>
<td>WEF</td>
<td>0.608</td>
<td>0.036</td>
<td>0.058</td>
<td>0.079</td>
<td>0.006</td>
</tr>
<tr>
<td>LFP rate</td>
<td>0.175</td>
<td>0.001</td>
<td>0.003</td>
<td>0.365</td>
<td>0.288</td>
</tr>
<tr>
<td>HDI</td>
<td>0.835</td>
<td>0.033</td>
<td>0.001</td>
<td>0.016</td>
<td>0.058</td>
</tr>
<tr>
<td>Gov debt to GPD</td>
<td>0.474</td>
<td>0.000</td>
<td>0.135</td>
<td>0.214</td>
<td>0.068</td>
</tr>
<tr>
<td>Internet users</td>
<td>0.563</td>
<td>0.249</td>
<td>0.069</td>
<td>0.003</td>
<td>0.003</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>0.723</td>
<td>0.008</td>
<td>0.084</td>
<td>0.021</td>
<td>0.002</td>
</tr>
<tr>
<td>Gov net lend/ borrow</td>
<td>0.089</td>
<td>0.016</td>
<td>0.417</td>
<td>0.002</td>
<td>0.085</td>
</tr>
<tr>
<td>GDP growth</td>
<td>0.034</td>
<td>0.181</td>
<td>0.336</td>
<td>0.118</td>
<td>0.002</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.071</td>
<td>0.288</td>
<td>0.077</td>
<td>0.007</td>
<td>0.130</td>
</tr>
<tr>
<td>Unemp rate</td>
<td>0.302</td>
<td>0.106</td>
<td>0.021</td>
<td>0.281</td>
<td>0.103</td>
</tr>
<tr>
<td>CA Balance</td>
<td>0.000</td>
<td>0.780</td>
<td>0.001</td>
<td>0.053</td>
<td>0.052</td>
</tr>
<tr>
<td>IFDI</td>
<td>0.036</td>
<td>0.675</td>
<td>0.001</td>
<td>0.062</td>
<td>0.034</td>
</tr>
<tr>
<td>Nonperf loans</td>
<td>0.031</td>
<td>0.032</td>
<td>0.600</td>
<td>0.000</td>
<td>0.006</td>
</tr>
<tr>
<td>IMF credit</td>
<td>0.015</td>
<td>0.258</td>
<td>0.199</td>
<td>0.081</td>
<td>0.031</td>
</tr>
</tbody>
</table>

Source: Authors’ representation

3.5. Back to the details

A composite indicator is a great starting point for an analysis as it can be used as a summary indicator. On the other hand, they can also be decomposed in a way that the contribution of sub-components and individual indicators can be identified. As a result, countries can be characterised based on one dimension, and weak points can also be highlighted. In our case, we have visualised the performance of the five Western Balkan countries on spider type charts (Figure 2). To have stable results, the time dimension was defined based on the first and last available data sets. In the cases of Montenegro and Serbia we have added one more date, the start of the accession negotiations with the EU.
Figure 2. Visualization of country performances

Source: Authors’ representation
3.6. Links to other variables

The composite indicator should also be tested in comparison to other indicators. The economic situation of a country is mostly characterised by its GDP, so it is worth analysing the correlation between this indicator and our composite indicator. The examination of the relationship between the composite indicator and GDP per capita (PPP) based on 2006 data is shown in Figure 3.

**Figure 3. Visualization of country performances**

![Figure 3](image_url)

*Source: Authors’ representation*

The correlation between the composite indicator and GDP is strong, $R^2 = 0.939$, which shows a very strong relationship between the two indicators. Looking at the 2019 data, co-movement was also observed in terms of the closeness of the relationship, which was showing a moderate result, $R^2 = 0.470$. It should be noted that composite indicators often include some of the indicators with which they are being correlated, leading to “double counting” (OECD, 2008, p. 42). Therefore, the GDP per capita dataset has been excluded during the regression analysis. All in all, there is a strong correlation between the composite indicator and the GDP data, which also holds true in different time periods. It supports that the weighting of the sub-indicators is balanced and well-defined.

3.7. Presentation and dissemination

After visualizing the composite indicator values, we can see how the situation of Western Balkan countries has changed in terms of economic integration maturity. The time frame of our analysis was from 2006 until 2019. The main reason is that 2006 was the year when Montenegro gained its independence, and, around the same time, North Macedonia was the first country in the Western Balkan region that was officially recognised as a candidate country by the EU (exact date: 17.12.2005). In the case of Montenegro and Serbia, adding the year when the official accession negotiations started was inevitable (Montenegro – 2012; Serbia – 2014). It is clear that the countries that have significantly increased their results are Montenegro and...
Serbia. It is also clear that the country that showed the poorest performance among the five countries analysed is Bosnia and Herzegovina (see Figure 4). The composite indicator clearly reflects how EU accession for these countries have become increasingly important over time. In the case of Serbia and Montenegro, we can also see the positive impact of the EU accession negotiations.

**Figure 4. Values of the composite indicator in 2006, 2012, 2014 and 2019**

![Composite Indicator Values](chart)

*Source: Authors’ representation*

The results clearly support our main hypothesis that, based on economic performance, Western Balkan countries cannot be considered ready for EU accession. In the cases of Albania, Bosnia and Herzegovina, and North Macedonia, aspects such as market transformation and competitiveness must be improved so that their accession can be at least considered. Montenegro and Serbia were showing relevant improvements but the level of corruption, the government debt to GDP, the low level of inward FDI, and the dependency on IMF credits underline the weak economic performance of these countries. The results presented here do correlate
with the European Commission’s reports (2018; 2020b) and statements (European Commission, 2021b; 2021c). These aspects are obviously region-specific phenomena, and the other three countries were performing even worse. The statistical analysis also corresponds to the relevant literature. On condition of further improvements, Montenegro and Serbia can access the EU in 2025, but for the other three countries, significant development remains necessary.

Conclusions

Overall, it can be stated that the analysed Western Balkan countries are not mature enough to join the European integration. It is important to note that Serbia and Montenegro have significantly improved their economic performance from 2006 to 2019, specifically since the start of their accession negotiations. In sum, the EU accession of these two countries in 2025 may be justified if the required reforms are carried out. We can observe relevant improvements in convergence and macroeconomic stability in the examined period. However, there are still serious challenges that they are facing, like the relatively low GDP per capita ratio, high unemployment rate, and unstable current account balance, which will probably worsen as a result of the pandemic. In the case of Serbia, the challenges of preserving macroeconomic stability are more relevant. The presented results are in correlation with the results of relevant literature (Endrődi-Kovács, 2014; European Commission, 2018; Siljak and Nagy, 2018).

Our results are in line with how the accession process stands at this moment; Serbia and Montenegro are almost ready to join the EU in 2025. Our results show that Albania is ready to start the accession negotiations with the EU, as the country has significantly improved his economic performance. Development in the case of North Macedonia is minor even though its indicator value is also positive. Bosnia and Herzegovina’s case presents a negative composite indicator value, which reflects the country’s need to improve its performance significantly to be ready for the negotiations from an economic point of view. It is also important to note that Bosnia and Herzegovina is the only analysed country that does not have an official candidate status; it is a potential candidate country alongside Kosovo. The results of our analyses support this approach, as Bosnia is lagging behind other Western Balkan countries.

The study successfully quantified that these countries have developed from an economic perspective, but there are still areas where further improvements are needed to exploit the benefits of integration. Based on our results, these countries should focus on the reduction of corruption and unemployment rate, increase their competitiveness, improve access to finance, increase productivity, and attract more FDI in the future to reveal the advantages of future accession. Our results are in line with the findings of the European Commission (2021b).
One of the limitations of our paper was that we mainly focused on the accession criteria supported by the European Commission. For instance, geopolitical analysis was not the subject of this paper, but it is worth mentioning that the region’s importance is increasing. Russia, as a key player on the Eastern borders of the EU, also has significant interests in the Western Balkan region. Serbia is going to play an important role in the future of the area. As the newly launched Turk Stream + South Stream Lite gas pipeline mainly goes through Serbia, their space for manoeuvring has significantly increased: integrating Serbia to the EU has become a key aspect for Brussels. In our view, relevant changes for the Western Balkans are to come in the near future, which also justifies the concern of this paper.

The main limitations of this paper and its methodology are that there is no benchmark to which the Western Balkan countries’ performance can be compared, and it only contains quantifiable aspects and indicators while ignoring aspects that cannot be quantified (e.g. improvements in media freedom or judicial independence). Nevertheless, it is an appropriate approach to examine these countries’ economic preparedness to join the EU. As for further research directions, it will be worth comparing these countries’ performance with the recently joined member states’ economic performance in order to get a comprehensive understanding on policies that can serve as role models for the countries aspiring to join the EU. It could represent a kind of benchmark or target performance, which can further highlight and contribute to a better understanding of the ongoing processes (Dočekalová and Kocmanová, 2016).

Finally, as mentioned earlier, similar composite indicators can be created for the political and institutional aspects to get a more complex picture about these countries’ integration maturity.

References


Endrődi-Kovács, V. (2014), Nyugat-Balkán Gazdasági Integrációérettsége [The Economic Integration Maturity of Western Balkans], PhD dissertation, Corvinus University of Budapest. [https://doi.org/10.14267/phd.2014027]

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