



## ECONOMIC GROWTH IN SOUTH EASTERN EUROPE: AN INVESTIGATION FOR SIX EU CANDIDATE AND POTENTIAL CANDIDATE COUNTRIES

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**Abstract:** *The South Eastern European region (SEE) has seen major beneficial transformation in the recent years. Romania and Bulgaria in 2007 and Croatia in 2013 became members of the European Union and registered significant economic growth rates. This paper investigates some important factors that influence economic growth in 6 EU candidate and potential candidate countries (Albania, Bosnia and Herzegovina, Kosovo, Former Yugoslav Republic of Macedonia, Montenegro and Serbia) and offers to policy makers in those countries key insights for stimulating the economy. The paper proposes a dynamic growth model which will be developed using the Quasi-maximum likelihood (QML) estimation. This model is suited for this type of analysis because of the small T sample and also to cope with missingness. The results indicate that nine out of the fourteen variables were statistically significant. The number of non-resident tourists, the number of passenger cars, the number of children in pre-primary and primary-education are positive factors for economic growth. In contrast, government debt, inflation, all energy imports, railway transportation and primary production of coal and lignite are hindering development.*

**Keywords:** South Eastern Europe, Western Balkans, economic growth, QML, EU membership



## **1. INTRODUCTION**

The South Eastern Europe is a term first used in the nineteenth century by Austrian researcher Johann Georg von Hahn (1811 – 1869), consisting primarily of states situated in the Balkans. In accordance with Uvalic (2012), in this paper we consider the SEE narrow definition as including the Western Balkan states (Albania, Bosnia and Herzegovina, Croatia, Former Yugoslav Republic of Macedonia (FYROM), Montenegro, Serbia and Kosovo); in a SEE larger definition we add Bulgaria, Romania and Slovenia.

This part of Europe has seen many changes in the recent years: breakup of Yugoslavia, the hard transition to market economy and accession of Slovenia, Bulgaria, Romania and Croatia to the European Union. Undoubtedly, SEE countries that already joined the EU (especially Romania and Bulgaria) benefited a lot from the EU membership, starting a new era for them marked by learning to respect the rule of law, freedom of market economy, consolidation of democracy, fight against corruption and organized crime – all these being necessary conditions for economic development and prosperity. Later on, Croatia is considered a success story in the European integration process, not only because of political and economic reforms, but also for the regular steps it followed under the EU requirements.

Our analysis will focus on 6 EU candidate and potential candidate states: Montenegro, Former Yugoslav Republic of Macedonia, Albania, Serbia and Bosnia-Herzegovina being EU candidate countries, and Kosovo a potential candidate. As regards Bosnia, till 2016 it was too a EU potential candidate. Bosnian politicians have considered applying for EU membership on several occasions: first in 2009, and then again in 2010 and 2012. But they never went through it – untill 15 February 2016, when Bosnia finally submitted its application.

In terms of economic development, the region has seen major beneficial transformation and sustained economic growth rhythms in the last years (See Table 1). According to World Bank staff's projections, these economies will go on their growth in the years to come. The strengthening of economic recovery in the Western Balkans was largely driven by a further acceleration of annual GDP growth in Serbia, the largest economy of the region. Investment and private consumption continue to support growth in the region, while also exports seem to gain some momentum (European Commission, 2017).

**Table 1: Recovery consolidates through 2018**

<b>Real GDP growth (percent)</b>	<b>2015</b>	<b>2016<sup>f</sup></b>	<b>2017<sup>f</sup></b>	<b>2018<sup>f</sup></b>
<b>Albania</b>	2.8	3.2	3.5	3.5
<b>Bosnia and Herzegovina</b>	3.0	2.8	3.2	3.7
<b>Kosovo</b>	3.9	3.6	3.9	3.7
<b>FYROM</b>	3.7	2.0	3.3	3.7
<b>Montenegro</b>	3.2	3.2	3.6	3.0
<b>Serbia</b>	0.7	2.5	2.8	3.5
<b>SEE6</b>	2.2	2.7	3.2	3.6

f = forecast

*Sources: Data from central banks and national statistical offices, World Bank staff projections.*

However, the GDP per capita is still lagging behind as compared with the developed nations of the European Union (see Table 2).

**Table 2: GDP (nominal) per capita in EU and South Eastern EU candidates**

<b>Country</b>	<b>GD per capita 2016</b>
<b>Albania</b>	<b>4,209.865</b>
Austria	44,561.310
Belgium	41,491.123
Bulgaria	7,091.323
<b>Bosnia and Herzegovina</b>	<b>4,289.320</b>
Croatia	11,858.473
Cyprus	23,424.933
Czech Republic	18,325.891
Denmark	53,242.908
Estonia	17,896.465
Finland	43,492.071



France	38,536.705
Germany	42,326.025
Greece	18,077.638
Hungary	11,902.793
Ireland	65,870.825
Italy	30,294.082
<b>Kosovo</b>	<b>3,877</b>
Latvia	14,140.926
Lithuania	14,899.372
Luxembourg	105,829.045
Malta	24,297.670
<b>Montenegro</b>	<b>6,809.227</b>
Netherlands	45,210.243
Poland	12,309.295
Portugal	19,758.744
<b>Republic of Macedonia</b>	<b>5,060.185</b>
Romania	9,438.991
<b>Serbia</b>	<b>5,293.922</b>
Slovakia	16,648.064
Slovenia	21,359.999
Spain	27,012.161
Sweden	51,603.944

Source: Authors' adaptation from IMF, *World Economic Outlook October 2016*, available at <http://www.imf.org/external/pubs/ft/weo/2016/02/>

Even though the recovering process led to further job creation, including in the private sector, unemployment rates remain stubbornly high. Despite some progress in fiscal consolidation, still high public debt levels in most countries of the region remain a cause for concern (for a detailed technical and quantitative description see European Commission, 2017).



Internally, the Western Balkans region is still marked by the consequences of the Yugoslav wars triggered by ethnic tensions and provoking long term economic and political damages. At the same time, these countries struggle for their development within a troubled and tense global environment. Political, institutional and policy uncertainty in advanced economies, still low commodity prices and exceptionally low interest rates dampen growth expectations. Growth is slow everywhere and the EU, a major destination for South Eastern Europe exports, grew in 2016 only 1.9 percent (Trading Economics, 2017). Uncertainty in the EU has been increased by Brexit, the ongoing crisis in Greece, political tensions in Turkey and the huge refugee crisis. Brexit has renewed the debate about the EU future and the potential impact on states being on the accession path. But the 6 analyzed countries continue to pursue firmly their aspirations of becoming EU members, with some of them having opened new chapters of the *acquis communautaire* in 2016 (World Bank Group 2016).

It is important to state that the countries of South Eastern Europe share considerable characteristics as regards the social, economic and political context. They were always at the crossroads between the Western and Eastern empires. For an empirical investigation this fact provides homogeneity. The following analysis will try to determine the factors which played a substantial role in fostering economic growth for the 6 EU candidate and potential candidate countries. The sample group consists of neighbouring countries with similar economic characteristics. Because of the gaps in data for certain states, the paper opted to use the quasi-maximum likelihood estimation which is suited for panel data with short-T.

The rest of the paper is structured as follows: section two offers the main insights of the literature overview. Section three contains the data and methodology used for the empirical examination. The results can be found in section four of the paper. Finally, section five presents the concluding remarks of the analysis.

## **2. LITERATURE OVERVIEW**

The study of the main factors that determine economic growth is a complex one. The literature considers two major types of variables, namely the *proximate* or economic determinants or the *ultimate* or non-economic ones (Acemoglu 2009).

Research studies have analysed the impact on economic growth of such determinants like investment, human capital, research and development, economic and fiscal policies, trade



openness, foreign direct investment, institutional and political framework, socio-cultural factors, geography and demography. Our study opted to focus only on the proximate factors of economic growth.

At present, the debate among scholars is how to construct a more comprehensive model to measure all these variables. This topic is also of great concern for many investigations regarding South Eastern European states. For instance, studying the determinants of economic growth in Central and Eastern Europe, Próchniak (2011) builds in his regression analysis 10 alternative variants of empirical models of economic growth.

Most research studies consider foreign direct investment a significant factor of promoting economic development for many states, including the SEE region. This type of investment can overcome shortages in the host country and lead to an increase in production and quality (Mehic, Silajdzic & Babic-Hodovic 2013; Pelinescu and Radulescu 2009).

Some other studies tried to catch the impact of population growth on economic growth, their conclusions validating our opinion that the population determinant usually has an insignificant or rather negative influence on economic growth (taking into account, for example, the associated increase in government spending). Headey and Hodge (2009) bring evidence in support of the increasingly adverse effects of population growth in the post-1980 period, suggesting that demographic issues should warrant greater attention than they currently receive from the policymaking community.

Alexiou (2009) also found the population growth to be statistically insignificant. At the same time, using two different panel data methodologies, his paper shows that government spending on capital formation, development assistance, private investment and trade-openness have positive and significant effect on economic growth.

One of our conclusions, namely that enrolment in pre-primary and primary education has a significant impact on economic development confirms the literature results in this domain: Aghion et al. (2009), who study the causal impact of education on economic growth bringing evidence from U.S., Schütt (2003), who discusses more generally the importance of human capital for economic growth or Temple (2001), who analyses the growth effects of education in the OECD countries.

Paul (Vass) and Alexe (2012) analysed the effects of the global economic crisis in ten South Eastern European countries (Albania, Bulgaria, Bosnia and Herzegovina, Croatia,



Greece, Kosovo, Macedonia, Montenegro, Romania and Serbia – SEE-10), within a European perspective. They point out the main transmission channels of the economic crisis, by outlining the strong economic and financial ties with the EU, acting like contagion corridors in the event of global downturns. Taking as benchmark the Romanian experience during the crisis, they outline several important structural reforms intended to boost competitiveness in the area. The above mentioned paper concludes that, in spite of the recent negative evolutions, the SEE-10 region has an important economic potential for the future. In the final recommendations this paper explores the creativity potential of the region, as a strategic opportunity for putting the region on the global competitiveness map.

A similar conclusion can be found in Sanfey's study (2010), showing how the crisis has evolved in South Eastern Europe and why this region was affected by developments that originated elsewhere. This paper argues that the impact has been better than many feared and that this resilience can be attributed in large part to the mature and sensible reaction of the region itself. It also points to the strong financial support from publicly owned international organisations, and the continued commitment of privately owned foreign companies and banks to the region. The paper concludes that the region is well-placed to take advantage of a future global upturn but at growth rates that are likely to be subdued compared with those seen in the few years before the crisis.

Bozidar and Uvalic (2010) provide a complex analysis regarding progress achieved in bringing Western Balkans countries closer to the EU and the remaining political and economic constraints preventing their full integration into the EU. These authors show that, even if all Western Balkans countries are already economically integrated with the EU through trade, FDI, financial flows and banking systems, the process of economic transition is far from complete. They also focus on EU conditionality and its compatibility with these countries' development needs and on alternative EU approaches that could provide stronger incentives for economic growth, especially on the background of their high vulnerability to the global economic and financial crisis.

There is indeed a rich literature comprising both theoretical and quantitative research conducted to determine the appropriate determinants of economic growth in SEE in relation with the EU potential membership. With the awareness of the above insights and differing



arguments, we try to develop further up-to-date analysis that could help future decisions of policy makers in the region.

### 3. METHODOLOGY AND DATA

The paper aims at determining the factors that have an effect on economic growth for Bosnia and Herzegovina, Montenegro, Kosovo, Serbia, Albania and Former Yugoslav Republic of Macedonia. Therefore the dynamic panel data consists of the six countries analysed from 2000 to 2014 (so  $N = 6$ ,  $T = 15$ ). The statistical data were collected from the statistical database of the European Union - Eurostat and from AMECO database (the GDP deflator). Real GDP per capita is used as the dependent variable. All monetary data are expressed in constant prices and denominated in a common currency (ECU). Nominal GDP is deflated using the Eurostat country deflator, with the base year being 2010.

The investigation does not use the standard logarithm or natural logarithm like most of the research articles. This is because in the data panel there are positive and negative values for some variables (trade balance or inflation). Using standard logarithm will reduce the number of observations. In this context, it is appropriate to choose a transformation that behaves like  $\ln(z)$  when  $z$  is positive and like  $-\ln(-z)$  when  $z$  is negative. So the analysis will use a logarithm called "L" =  $\text{sign}(z) \cdot \ln(|z| + 1)$ , where  $z$  is the value of the variable. It has been called the neglog transformation (Whittaker et al. 2005).

The economic growth model used has the following equation:

$$LY_{it} = \beta_0 + \beta_1 LY_{i,t-1} + \beta_2 LTB_{it} + \beta_3 LLEND_{it} + \beta_4 LDEBT_{it} + \beta_4 LINFL_{it} + \beta_4 LENER_{it} + \beta_4 LTOUR_{it} + \beta_4 LPOP_{it} + \beta_4 LEMPLM_{it} + \beta_4 LEMPLF_{it} + \beta_4 LRAIL_{it} + \beta_4 LAUTO_{it} + \beta_4 LEDU1_{it} + \beta_4 LEDU2_{it} + \beta_4 LCOAL_{it} + \eta_i + \varepsilon_{it}, \quad (1)$$

where:

$LY$ : the neglog of real GDP per capita; this variable represents the negative logarithm of per capita real gross domestic product, expressed in euros;  $LY_{t-1}$ : the neglog of one lag real GDP per capita;  $LTB$ : the neglog of trade balance (euro);  $LLEND$ : the neglog of the lending interest rate (one year) per annum (%);  $LDEBT$ : the neglog of general government consolidated gross debt relative to GDP (%);  $LINFL$ : the neglog of the inflation rate (%);  $LENER$ : the neglog of the net imports of all energy products (Thousand TOE);  $LTOUR$ : the neglog of arrivals of non-residents staying in hotels and similar establishments (Thousand);



LPOP: the neglog of total population size; LEMPLM: the neglog of employment rate (15 to 64 years), males (%); LEMPLF: the neglog of employment rate (15 to 64 years), females (%); LRAIL: the neglog of length of railway lines (km); LAUTO: the neglog of the number of passenger cars (Thousand); LEDU1: the neglog of the number of pupils in pre-primary education (ISCED level 0); LEDU2: the neglog of the number of pupils in primary education/first stage of basic education (ISCED level 1); LCOAL: the neglog of primary production of hard coal and lignite (Thousand);

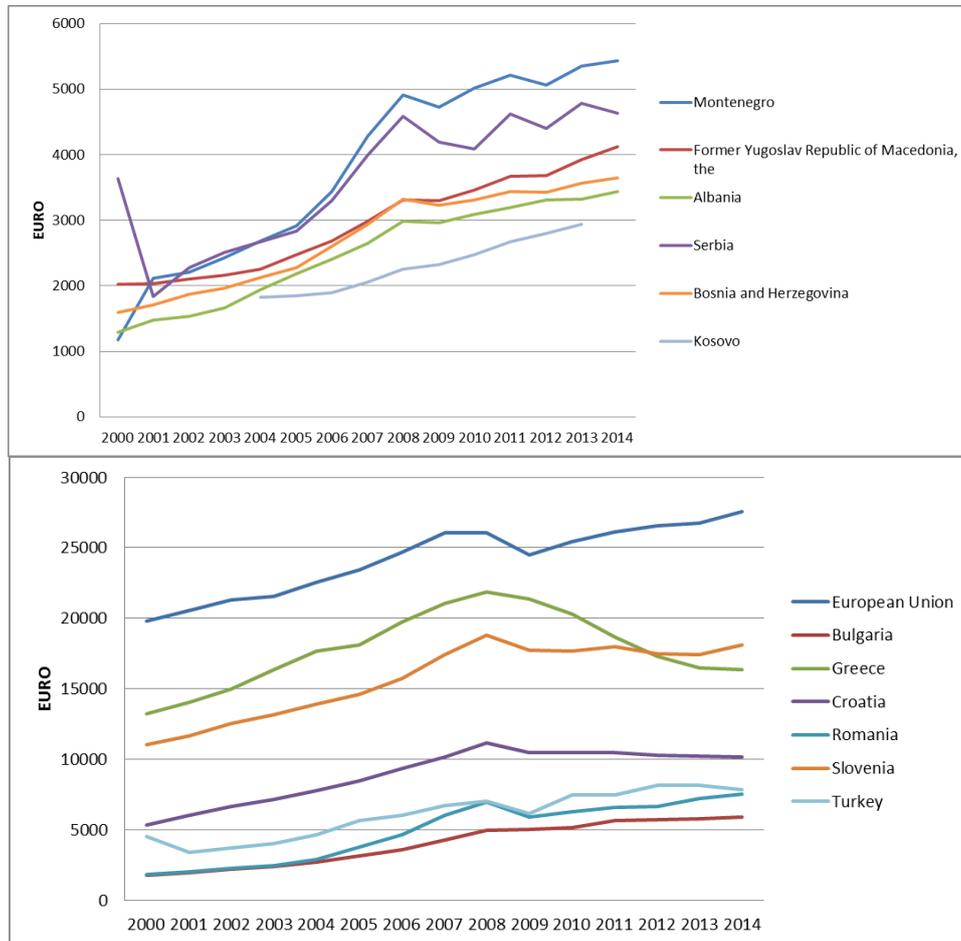
$\eta$ : is the unobserved country-specific effect;

$\varepsilon$ : is the disturbance term;

$i$  is the individual country dimension and  $t$  is the time period dimension.

In terms of nominal GDP per capita there are some significant differences between the six countries analysed in this study and the other states of South Eastern Europe. For example Montenegro and Serbia have a nominal GDP per capita in the range of 5.000 euro. Kosovo has the lowest value as compared with the other countries. The other states in the region have significantly higher values for the nominal GDP per capita.

As compared with the EU average, the SEE region has still a lagging deficit in terms of GDP. This is the reason why a better understanding of the factors of economic growth for the SEE countries (especially those analysed in this paper) can have a crucial importance for their development.



**Figure 1: The evolution of nominal GDP/capita for the Southeast Europe and the EU average**

Source: Authors' calculation

#### 4. RESULTS

Panel data techniques are widely used for obtaining appropriate results in investigating economic growth variation. The GMM (Generalized Method of Moments) estimator and the system of GMM estimator are better used for balanced panel data with a large T sample. For this investigation, it is more appropriate to use the QML methodology. The quasi-maximum likelihood estimation of linear dynamic short-T panel-data models was developed by Kripfganz (2016) based on the approach pioneered by Bhargava and Sargan (1983).

Before commencing the investigation, we have to determine if time dummies have to be used. The Parm test has been computed and the results are shown in Table 3. It confirmed the null hypothesis of the importance of time dummy inclusion.

**Table 3: The results of the Parm test**

Real GDP/Capita
chi(13) = 24.99
Prob>chi2 = 0.0000

Source: Stata v14

The results of the QML estimator with fixed effects and time dummies are presented in the table below (Table 4). From the total number of variables, nine of them were statistically significant.

**Table 4: The results of the QML method**

	(1)
L.real GDP/capita	0.0770 (1.04)
trade balance	-0.0162 (-0.82)
lending interest rate	0.0102 (1.00)
general government consolidated gross debt	-0.0594*** (-5.01)
inflation rate	-0.00891*** (-3.90)
net imports of all energy products	-0.00468* (-1.68)
arrivals of non-residents staying in hotels and similar establishments	0.0124* (1.70)
total population size	-0.159 (-0.36)
employment rate, males	0.102 (1.44)
employment rate, females	-0.00186 (-0.04)



length of railway lines	-0.141 <sup>***</sup> (-5.63)
number of passenger cars	0.152 <sup>***</sup> (6.68)
number of students/pupils in pre-primary education	0.0571 <sup>***</sup> (6.38)
number of students/pupils in primary education	0.137 <sup>***</sup> (3.15)
primary production of hard coal and lignite	-0.0160 <sup>***</sup> (-3.23)
Constant	7.470 (1.27)
<hr/>	
Observations	58

Notes: Standard errors in parentheses, \*  $p < 0:10$ , \*\*  $p < 0:05$ , \*\*\*  $p < 0:01$ . All regressions include country fixed effects, time dummies

Source: Stata v14

General government debt, the inflation rate, imports of energy products, length of railway lines and primary production of hard coal and lignite have had a negative correlation with economic growth. The biggest impact was that of railway infrastructure and government debt. The percentage of general government debt is considerably high for almost all of the six countries (in 2014 Albania had a percentage of debt equal to 71%, Serbia 72%, Bosnia and Herzegovina 42%). Inflation had a negative influence on economic growth for the six states because of the considerable variation between 2000 and 2014. Some of them have had annually a rate of inflation higher than 10%. High levels of inflation hinder economic growth, but smaller rates can be helpful (Barro 1996; Sarel 1996; Mallik and Chowdhury 2001).

Enrolment in pre-primary and primary education has a significant impact on economic development for the 6 potential EU member states. This confirms the literature results in this field, as shown in the Literature Overview. Moreover, the results suggest that primary education has a bigger impact on economic growth than pre-primary schooling.

Tourists from abroad, (arrivals of non-residents staying in hotels and similar establishments) have a positive effect on growth. This variable can have a meaningful result



for economic development in the SEE region. Promoting tourist attractions can benefit economic development for countries like Serbia, Bosnia and Herzegovina or Albania. The results also show that the number of passenger cars is a significant factor in fostering economic growth.

## **5. CONCLUSIONS**

The EU integration of the South Eastern European states that were ravaged by years of war, political turmoil and economic depression can be an important step for their economic development, security and stability. This is why, as the countries obtained their independence and national identity and as stability is now settling in, the EU integration, with the associated conditionality criteria, becomes a top priority for their politicians. It seems that the EU aspirations of the Western Balkans states were not affected by Brexit and other recent destabilising events. Under the EU conditionality requirements, the SEE countries that already became EU members (Slovenia, Romania, Bulgaria and Croatia) had obvious advantages materialized in high economic growth rates and good perspectives in exploiting their economic potential. The Western Balkans could draw important lessons from Romania and Bulgaria's positive EU experience. On the other hand, the EU map would not be complete without South Eastern Europe.

Various studies revealed and explained the resilience of the region to the global economic and financial crisis and its high economic and creativity potential helping to boost competitiveness and take advantage of a future global upturn.

The present study utilized a growth model in order to determine some important factors that can have positive influence on economic growth for 6 potential EU members in South Eastern Europe. By computing the QML estimator, the results indicate that nine out of the fourteen variables were statistically significant. The number of non-resident tourists, the number of passenger cars, the number of children in pre-primary and primary-education are positive factors for economic growth. In contrast, government debt, inflation, all energy products imports, railway transportation and primary production of coal and lignite are hindering development.

If the number of non-resident tourists positively influences the SEE economic growth, policy makers of this region should focus on policy options enhancing the tourism sector



competitiveness, facilitating travel into the region, creating supportive structures for skills development in this important economic sector, finding new, sustainable solutions for tourism development.

The stock of vehicles at regional level is also indicative for the economic growth performance. The transport related indicators are often closely related to levels of economic activity. The transport policies in the SEE are at the very heart of efforts to reduce disparities and inequalities between the Western and Eastern part of the European continent. The transport indicators, such as the number of passenger cars, can provide a better understanding of the impact of transport policies on economic growth, transport needs and of course environment.

The number of children in pre-primary and primary education as a positive factor of economic growth means, for the SEE policy makers, increasing efforts to improve early childhood education and care, that can bring social and economic benefits both for individuals and for the society as a whole. The early childhood education represents an essential foundation for future educational achievements. So investment in pre-primary and primary education offers long term returns for integration into the labour market and is more likely to help children, especially those from low socio-economic status, than investment at later educational stages.

Some studies arguably state that causality between public debt and economic growth is hard to be established (Gorgievski, 2013) or find a positive impact of higher debt on growth (Checherita and Rother, 2010), the explanation staying in the fact that those deficits were used to finance productive public investment. Nonetheless, the latter study admits that targeting a higher debt level to support growth is not a policy option. In line with this and with our analysis results, we insist on the detrimental impact of the public debt stock and of the standard crowding out effect. Therefore we consider that the SEE countries need implementing strategies for debt reduction in order to improve their growth perspectives.

The negative impact of railway transportation could be translated into the need of realizing more efficient transport and infrastructure systems in the SEE region. More efficient transport systems are indeed a pre-condition for economic development. The challenge is to ensure transport services that are affordable and secure. Just as liberalization of trade can open



new markets for developing countries, efficient transport systems and routes can increase the volume and movement of people, thus contributing to higher growth (Gligorovska, 2013).

There is an obvious negative influence of inflation, energy imports and primary production of coal and lignite, but they also have important policy implications, like finding solutions for reducing dependence on foreign energy supply, increasing energy efficiency, implementing the renewable energy and limiting the coal and lignite production given its high adverse environmental impact.

An attentive examination of the factors affecting economic growth in South Eastern Europe with the associated policy measures could contribute to their quicker EU accession.

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