

# Competitiveness of CESEE EU Member States: recent trends and prospects

*This short study gives a comprehensive overview of the competitive strengths and weaknesses of the 11 Central, Eastern and Southeastern European (CESEE) EU Member States over the period from 2000 to 2014. It reviews traditional measures such as market share and price developments as well as indicators reflecting nonprice competitiveness and the influence of integrated production networks. While the CESEE countries have shown impressive improvements in their competitiveness over the review period, some of these gains are clearly associated with processing high-quality inputs, the transfer of technological and managerial know-how within international production networks and the participation in potent marketing and distribution networks. However, the CESEE countries continue to lag behind Western Europe with respect to infrastructure, institutions and innovation.*

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The opening of the countries of Central, Eastern and Southeastern Europe (CESEE) after the fall of the Iron Curtain went hand in hand with remarkable economic modernization and the region's integration into European and global economic structures. The related boost to economic performance was substantial. Between 1992 and 2008, average real per capita income measured in purchasing power parities in today's CESEE EU Member States<sup>2</sup> rose continually from 35% to 55% of the level of the euro area countries. Average GDP growth increased from around 2% in the late 1990s to a record of around 6.5% in 2006 and 2007, implying a substantial growth differential against the countries of Western Europe. This growth advantage reached its peak in the early 2000s at levels of around 3 to 3.5 percentage points (chart 1, left-hand panel). While the economic crisis that unfolded in 2008 put a brake on convergence, CESEE countries again started to outpace euro area countries in terms of growth from 2011 onward.

The CESEE region seized the opportunity of liberalized market access and promoted the export of goods and services to the rest of Europe and to other countries around the world. Between 2000 and 2014, international market shares increased for all CESEE countries, even though individual country performances were heterogeneous (chart 1, right-hand panel). In cumulative terms, the global export market shares of Slovakia, Slovenia and Bulgaria expanded by 20% to 25% in this period while they quadrupled for Romania.<sup>3</sup> Furthermore, Latvia, Estonia and the Czech Republic more than doubled their world market shares, while Croatia, Hungary and Poland experienced an increase of around 40%. This strong

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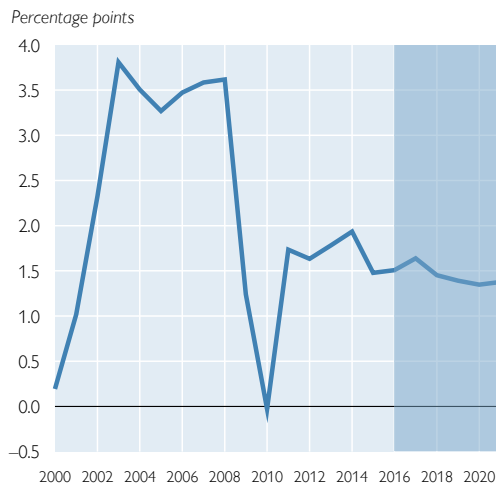
<sup>2</sup> In this analysis we cover the 11 EU Member States in CESEE: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

<sup>3</sup> Romania attained a global market share of 0.7% in 2000 and reached 0.33% in 2014 while Bulgaria's market share expanded from 0.12% to 0.15% in the same period.

Chart 1

### Growth performance and development of international market shares

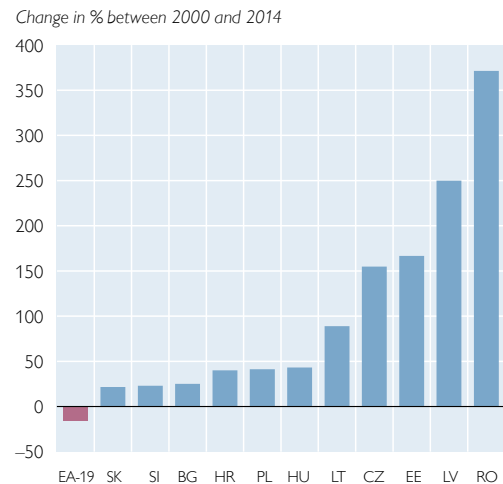
#### GDP growth differential between CESEE and euro area



Source: IMF, Eurostat.

Note: EA=euro area.

#### Growth in export market shares



performance of all CESEE countries is remarkable given the increasing importance of large global traders such as China and other emerging economies over this period. Even the crisis of 2008 only temporarily affected the performance of CESEE. More than half of the region under observation continued to report further gains in international market shares in the period from 2009 onward, despite substantial downturns in GDP growth in some countries. It is therefore safe to say that – drawing on a definition of competitiveness as the ability to sell products on the world market – the CESEE region not only experienced a boost to economic growth, but also a boost to international competitiveness.

The roots of this performance are not easy to identify, and looking at price and cost measures would clearly be too narrow a focus. In this article<sup>4</sup> we concentrate on traditional and novel indicators of competitiveness and describe the relative position of CESEE EU Member States compared to the average performance of the euro area. In section 1 we focus on measures of price competitiveness, in section 2 we complement this “narrow” view with a discussion of quality improvements, while in section 3 we turn to a more differentiated view which explicitly takes into account the consequences of the international fragmentation of production. The integration into global (or, in the case of CESEE, mostly European) production networks implies that traditional measures of competitiveness based on the performance of gross exports and general price developments may yield a misleading picture. When countries specialize in certain stages of the production process, the relative price of the total export good is not a good indicator of competitiveness, and a more refined view that differentiates between domestic and foreign value added in exports is called for. Combining the evidence explained

<sup>4</sup> A short version of the key findings of this article was published in the White Paper entitled “Beyond the Equity-Efficiency Trade-Off: Practical Ideas for Inclusive Growth and Competitiveness in Europe,” published by the European Investment Bank (EIB) and the World Economic Forum in 2017.

in the first three sections of this paper, we identify future potential for competitiveness and discuss existing shortcomings in sections 4 and 5. We conclude with policy priorities for a sustained competitive economy.

## 1 Traditional price-based measures of competitiveness

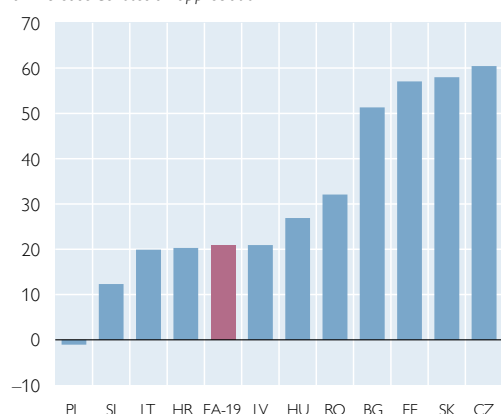
In the period between 2000 and 2014, CESEE countries experienced a deterioration in their price competitiveness vis-à-vis the euro area. The deterioration was rather broad based among individual countries and was also evidenced by various indicators. Real effective exchange rates appreciated noticeably in many countries, and the growth of unit labor costs throughout the region<sup>5</sup> (with the exception of Poland) outpaced that in the euro area (chart 2). The reasons for these developments are manifold and in part related to the transition process itself. For example, a convergence of wages closer to Western European standards and nominal currency appreciation were clearly a consequence of a successful catching-up process.

Chart 2

### Real effective exchange rates and nominal unit labor costs

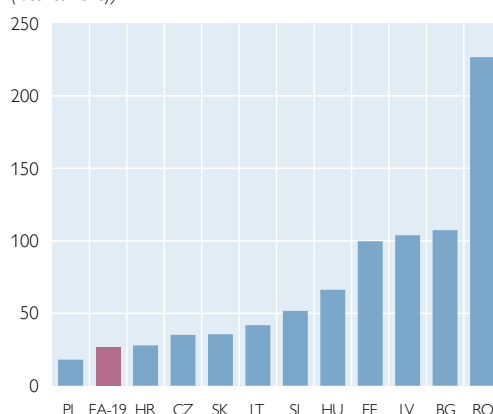
#### Real effective exchange rates

Change in % in the whole economy between 2000 and 2014, deflated by ULC; an increase denotes an appreciation



#### Unit labor costs (ULC)

Change in % in the whole economy between 2000 and 2014 (local currency)



Source: AMECO, Eurostat.

Without any doubt, however, wage growth was excessive in several CESEE countries especially in the boom years before the crisis and it outpaced productivity gains that were also strong. Nominal compensation per employee more than doubled in 7 of the 11 countries under observation between 2000 and 2014, while it increased by only around 40% in the euro area on average (chart 3, left-hand panel). This translated into a strong growth of nominal unit labor costs and a related deterioration in price competitiveness, in particular in the Baltic countries, Bulgaria and Romania, but considerably less so in Croatia, Poland and the Czech Republic. At the same time – and thus countering these adverse wage developments at least to some extent – productivity advanced rather swiftly (chart 3, right-hand panel).

<sup>5</sup> This finding is broadly robust across different definitions of unit labor costs and real effective exchange rates.

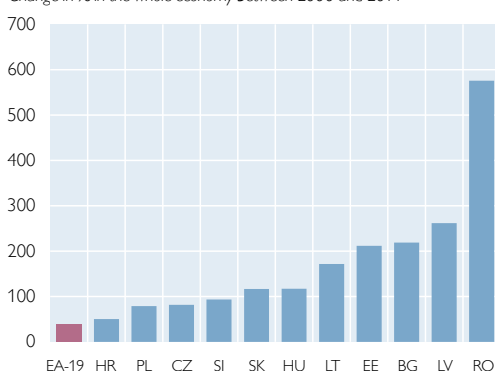
Again, this was in part related to transition, as the relocation of resources between sectors and higher labor market flexibility increased allocative efficiency and the introduction of new technologies – often related to foreign direct investment – increased technological efficiency. This led to a notable narrowing of the productivity gap between CESEE and the EU average. Real GDP per person employed – as a measure of productivity – advanced on average by around 50% in the CESEE region between 2000 and 2014. This compares to a plus of only 10% in the euro area in the same period.

Chart 3

### Compensation of employees and productivity

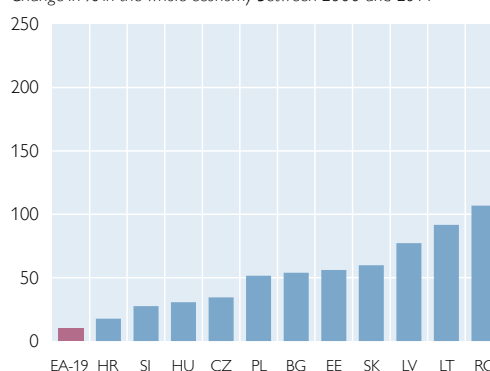
#### Nominal compensation per employee

Change in % in the whole economy between 2000 and 2014



#### Real GDP per employee

Change in % in the whole economy between 2000 and 2014



Source: AMECO.

## 2 Focus on quality improvements and export sophistication

As prices and costs alone cannot explain the development of CESEE countries' market shares, a broader definition of competitiveness is needed, and other factors, including quality upgrading, shifts in demand and the like also have to be taken into account. An economy's overall standing is shaped by a wide range of determinants. They include a country's endowments (including natural resources, geographic location, historical legacy, etc.), the macroeconomic, political, legal and social context given by the country's policies and institutions as well as microeconomic factors such as business environment, linkages and externalities between firms and their sophistication.

Furthermore, structural factors such as shifts in global demand patterns, the entry and exit of competitors and especially nonprice factors (including changes in product quality and consumers' tastes) play a crucial role. Goods within a single classification of the trade statistics are not homogenous but differ in terms of quality and other factors that influence the demand for that good (e.g. design, marketing, etc.).

Nonprice competitiveness is clearly a key characteristic of CESEE export industries. Being mostly small and open economies, the new EU Member States were not able to exploit economies of scale to a large extent by entering mass production. Instead, they specialized in narrowly defined sectors and focused on providing parts and components as well as assembly activities, particularly so in the machinery and automobile industries. Chart 4.1 displays export prices relative to the world average in 2014 on the x-axis, while on the y-axis these prices are adjusted for quality

improvements in export goods.<sup>6</sup> The difference between the two price indices reflects the overall improvement or deterioration in the quality of the goods exported by a particular country over time relative to the year 2000. Observations that fall on the 45° line reflect countries where changes in competitiveness were driven only by price factors (that means that a further adjustment for nonprice factors did not lead to changes in overall competitiveness). Observations below this line show countries whose quality-adjusted export prices rose less or declined more than unadjusted export prices. This difference reflects improvements in nonprice factors which led to a higher (physical or perceived) quality of the export products of this country. Vice versa, observations above the 45° line reflect countries whose quality-adjusted export prices rose more or declined less than unadjusted export prices relative to the world average. Chart 4.1 shows that quality improvements in export goods positively impacted the competitiveness of CESEE countries. Based on this indicator, almost all CESEE countries (with the exception of Croatia) outperformed the Western European countries, some – e.g. Poland, the Czech Republic, Bulgaria and Romania – substantially so. Quality upgrading in export goods therefore is an important explanatory factor for the region’s gains in global market shares. It has to be emphasized here that chart 4.1 shows relative changes and does not allow a comparison of the absolute quality of export goods across countries. This means that even though countries like the Czech Republic and Romania show huge

Chart 4.1

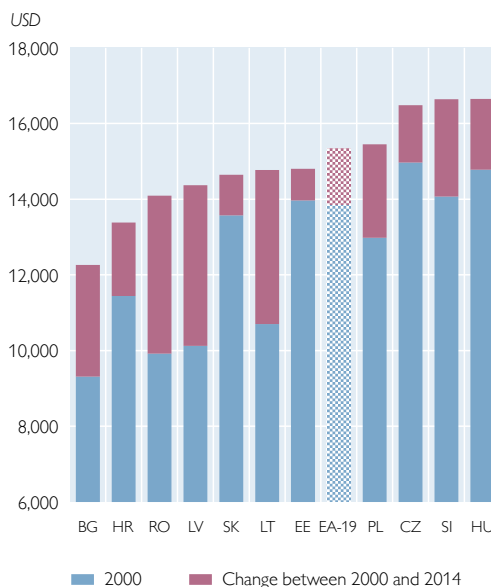
### Export prices relative to world average in 2014



Source: ECB CompNet.

Chart 4.2

### Export sophistication index for goods



Source: ECB CompNet.

<sup>6</sup> See Benkovskis and Wörz (2016a) for the derivation of the quality-adjusted relative export price index. This adjustment is based on the reasoning that the utility derived from consuming imported goods depends on the price of the good, the possibility of choosing between different varieties of the good, its physical attributes (objective quality) as well as intangible attributes such as labeling or meeting consumers’ tastes (subjective quality). By solving this consumer maximization problem, it is possible to introduce nonprice factors into an index for relative import prices. This formula can be applied to export prices as exports are a mirror image of imports.

improvements in nonprice competitiveness, the quality of their export goods may still be lower in absolute terms than e.g. the quality of German export goods.

The improvements in the quality of CESEE export products are also corroborated by the observed trend toward more sophisticated export goods. Chart 4.2 shows that in 2014, the export production of four CESEE EU members (Poland, Slovenia, the Czech Republic and Hungary) was already more sophisticated than the euro area average. Furthermore, the export sophistication index for goods (measuring the similarity of a country's export bundle to the export bundle of rich countries) shows that most CESEE countries fared comparatively well: The index advanced on average by over 20% in the CESEE countries between 2000 and 2014, compared to only 10% in the euro area. The highest growth rates in CESEE were recorded by the countries with the largest gap in export sophistication back in 2000.

### **3 Integration into international production networks implies a more differentiated view on competitiveness**

Today, the production of many common products is scattered all over the world. In fact, globalization has reached unprecedented levels: About 60% of world merchandise trade is trade in components. The international fragmentation of production has reshaped the implications of world trade for individual countries. Today the competitive strength of a country is crucially determined by its role within global value chains (GVCs).

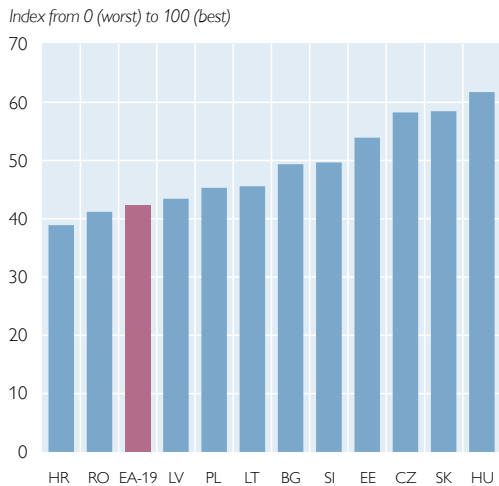
The increasing integration of CESEE into international production networks is clearly visible in the data depicted in chart 5 (left-hand panel). The participation index given below can broadly be seen as an indicator of a country's openness reflecting the degree of integration into global production chains, with higher values indicating deeper integration into cross-border production structures. More precisely, the participation index measures both a country's use of imported intermediate goods in its own production and its supply of intermediates to be used in other countries' export production in relation to the country's total gross exports. As such it measures the importance of global supply chains for a country.<sup>7</sup> In 2014, most CESEE countries were more integrated into GVCs than the euro area average. In fact, the Czech Republic, Hungary and Slovakia belong to the most economically integrated countries in Europe. They form part of the Central European automobile production cluster, centered on the (highly competitive) German car industry. Also, they have specialized in medium-high-tech products such as electrical machinery, motor vehicles and chemicals, which is not entirely surprising as these countries had performed particularly well and developed innovative concepts exactly in these segments in the 1920s (e.g. in the production of consumer goods). Some investors tried to pick up those loose ends after the beginning of transition and restarted the respective firms, which had been state-owned or closed in the socialist era. As a result, many CESEE countries report a clear comparative advantage in these industries vis-à-vis their competitors (chart 6, right-hand panel).

<sup>7</sup> For more information concerning this indicator, see Karadeloglou and Benkovskis (2015), section 4.10.

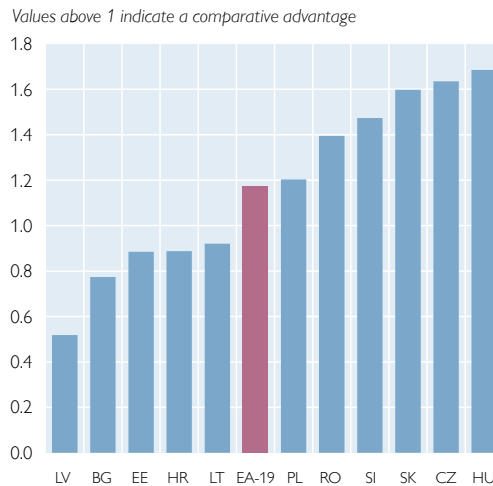
Chart 5

### Global value chains and comparative advantage

#### Participation in global value chains (2014)



#### Revealed comparative advantage in medium-high-tech goods



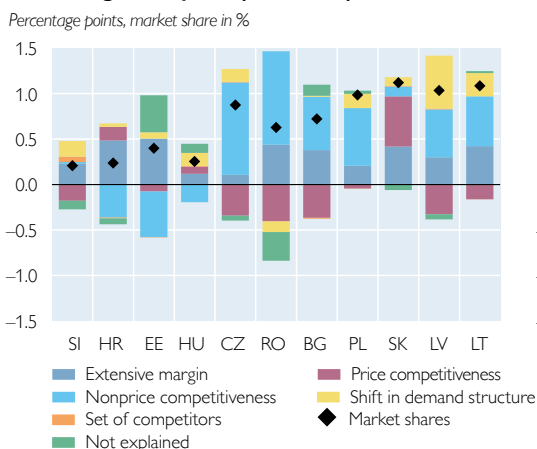
Source: ECB CompNet.

Chart 6 breaks down the gains in world market shares the CESEE countries achieved between 2000 and 2014.<sup>8</sup> When using the traditional gross concept of trade flows (i.e. exports in the classical sense, incorporating both domestic and foreign value added in export goods), the analysis shows that CESEE countries improved their world market shares mainly on the basis of rising nonprice competitiveness and despite a loss in price competitiveness (chart 6, left-hand panel). Furthermore, the extensive margin (comprising changes in market shares related to entering

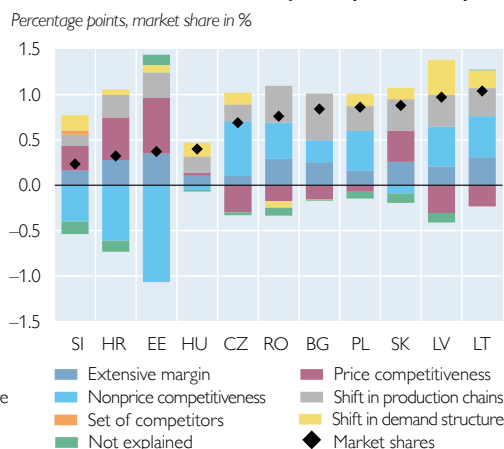
Chart 6

### Decomposition of changes in world market shares

#### Based on gross exports (2000–2014)



#### Based on value added in exports (2000–2014)



Source: Update of Benkovskis and Würz (2016b).

<sup>8</sup> See Benkovskis and Würz (2015) for an explanation of this breakdown. The method used to derive nonprice factors follows the same reasoning as the one described in footnote 6.



entirely new markets) played an important role. This was clearly related to the opening of the formerly centrally planned economies to world trade and the subsequently easier access to European and international markets.

The factors driving market share gains, however, change when the analysis is based on domestic value added in exports (i.e. when the value of domestic exports is adjusted for imported inputs into production). Taking this view, we observe that the positive contributions of the extensive margin and of nonprice competitiveness gains are notably smaller. Instead, we see that market share gains have strongly profited from shifts in production chains (see chart 6).

#### 4 Future potential

Having identified the drivers of past export performance, the question arises which of these factors can serve as a sustainable basis for future improvements in international competitiveness. The favorable development of the extensive margin for sure was related to the integration of CESEE into the world economy after 1989 and as such cannot be easily reproduced. Nevertheless, there is evidence that CESEE countries still have a notable potential for tapping new markets (Silgoner et al., 2015).

In the period under observation, CESEE's participation in global value chains was associated with high-quality inputs, the transfer of technological and managerial know-how and the participation in potent marketing and distribution networks. All these developments clearly fueled the competitiveness of the CESEE economies. While it certainly makes sense for these countries to strive to reap these advantages also in the future, it is not entirely clear how much further the integration into international production networks can go. Furthermore, such policies can also be associated with certain risks. Export sectors are potentially too little diversified as – in the case of CESEE – countries are strongly linked to a single industrial center (Germany) and/or to only a few specific industrial sectors (e.g. automobiles). In case of turbulences in one of these areas or in case of increasing protectionism in traditional export markets, the implications for the whole economy might be substantial, including declining export production, pressure on the external accounts, lower employment, impediments to productivity growth and productivity spillovers from export-oriented firms to the whole economy and/or a reduced technology transfer.

For CESEE, the largest potential probably lies in further quality improvements and boosts to nonprice competitiveness. There is evidence that the CESEE countries have gained competitiveness within production networks mainly by assembling rather than producing high-quality export goods. In other words, the domestic value added in those exports was often rather small. To some extent, the increasing quality of export goods in the period under observation was ascribable to the better quality of imported intermediate inputs rather than genuine quality improvements in domestic production. Put differently, these countries would have experienced even stronger gains in global market shares had they also increased the relative quality and valuation of the domestic content of their export goods or moved into higher value-added parts of the production chain.

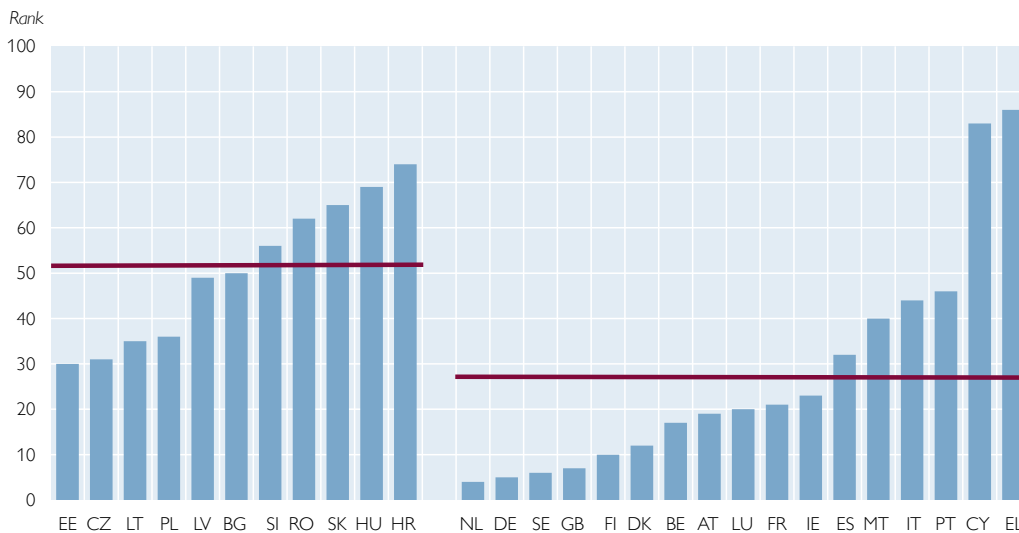


## 5 Competitiveness gaps remain with respect to infrastructure and institutions

Against this background, it becomes clear that there is ample room for further improvements in CESEE’s international competitiveness. In the respective rankings, CESEE countries still mostly occupy no more than mid-table positions. The CESEE region’s average rank in the Global Competitiveness Report of the World Economic Forum for 2016–2017 was 51 compared to 28 for the Western European average. Chart 7 lists the rankings of all 28 EU Member States (a lower rank corresponds to a better performance). There is, however, a vast degree of variation among CESEE countries. Estonia and the Czech Republic, for example, are close to the Western European average, while Croatia occupies one of the last ranks in the EU.

Chart 7

### Global competitiveness report: ranking of most competitive countries in 2016



Source: World Economic Forum.

Note: Red lines show the arithmetic average of the ranks of the CESEE EU Member States and of the non-CESEE EU Member States.

A closer look at the subindices of the ranking reveals that the CESEE countries lag behind Western European EU members especially in terms of innovation and sophistication factors. The gap is less pronounced in basic requirements (including factors such as the macroeconomic environment, health and education, etc.) and efficiency enhancers (including factors such as goods, labor and financial market efficiency). However, the variation in outcomes in individual subcomponents that make up the subindex “basic requirements” is very high. While the CESEE countries actually perform somewhat better than Western European countries in terms of macroeconomic environment and broadly similarly when it comes to health and education, there is a noticeable gap in the area of infrastructure and institutions.

Those findings are also corroborated by other indicators. For example, the European Innovation Scoreboard summary index reports an average reading of 0.3 for the CESEE countries compared to 0.52 for the euro area in 2015 (the index is normalized between 0 and 1, with higher values indicating better outcomes).

According to this indicator, the largest gaps exist in the areas of research systems and linkages and entrepreneurship (comprising factors such as innovation and collaboration in SMEs). At the same time, the CESEE countries score a comparatively high value for human resources (comprising achievements in tertiary education).

Institutional shortcomings are also documented by the World Bank's Worldwide Governance Indicators. For the CESEE countries an average score of 0.67 is reported, compared to 1.13 for euro area countries, in 2015 (scores range between -2.5 and 2.5, with higher values indicating better outcomes). Gaps are especially large when it comes to corruption and the rule of law. Also the EBRD Transition Report 2016-17 mentions a continued prevalence of informality and corruption and a mixed track record with respect to the enforcement of competition policies for the region. Yet, despite these observations the report also attests a comparatively good business environment for small and medium-sized enterprises (SMEs), which is ascribed to government efforts on streamlining administrative processes and the emergence of e-government measures (EBRD, 2016). The importance of a sound business environment is also underlined by firm-level studies. Crespo Cuaresma et al. (2014) show for the 11 CESEE EU countries that the perceived quality of business climate is an important determinant of the growth of firms. They also identify firms with high employment growth and a high probability to have survived the global financial crisis in 2009 – i.e. those firms that will represent the backbone of economic recovery after a crisis – to be highly sensitive to changes in the business environment.

Finally, let us mention two region-specific vulnerabilities: First, especially those countries that report a high energy intensity in production are negatively affected by strongly changing oil prices. Following their recent decline, oil prices are likely to rise back to higher levels. This is to be seen against the fact that energy use per unit of GDP is about 20% higher in the CESEE region than in the EU on average. Second, geopolitical uncertainty stemming from the Russia-Ukraine conflict, the situation in Turkey and other conflict zones in the neighborhood affect the CESEE countries more than others. Sanctions against Russia, but also politically unsustainable developments in Russia, Turkey and other emerging economies run contrary to a deepening of trade relations with these neighboring countries and potentially threaten to put the CESEE region in a peripheral position.

## 6 Conclusions

The CESEE economies have been successful in international markets not only due to cost advantages, but also owing to improvements in their nonprice competitiveness. Their export products show a high degree of sophistication and the countries have profited from their profound integration into international production networks. Their strong competitive performance in the recent past – as evidenced by strong world market share gains – notwithstanding, there are still some caveats that may limit CESEE's future competitiveness. Investments in infrastructure and institutions as well as the creation of a more innovation-friendly environment seem pivotal to sustaining and even improving the standing of the region in international markets. Measures in this respect include investment in physical infrastructures, the further development of political, legal and economic institutions, the fight against corruption and red tape, the support of research and scientific institutions with the purpose of developing marketable ideas as well as the promotion of innovative firms, especially SMEs.

All of these measures are meant to promote the expansion of CESEES's domestic export industry into new (and potentially higher value-adding) fields of production and to result in a higher content of domestic value added in existing export production in order to further exploit the benefits of integration into European production networks. Certainly, the deep integration into the Single Market is a vital precondition for unlocking the full potential of the CESEE countries and making innovation and entrepreneurship thrive in the region. This fact is also stressed in the 2017 White Paper on competitiveness and inclusive growth by the EIB and the World Economic Forum, which stresses the importance of integrated markets for goods and services, sound labor markets and human capital as well as access to finance as key enablers of competitiveness.

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