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Logistical performance in the Balkans – trend evidence

Abstract

This article, through a critical analysis of one of the most important indices of the World Bank – the Logistical Performance Index – aims to highlight the efficiency of the performance in logistics of the Balkans. The evidence shows that the examined countries follow different efficiency trends but that the levels reached are still inadequate compared to the efficiency average of EU countries. The study shows that the area still needs funding aimed at integrating the entire system into the European continent.

Keywords: *Balkans, performance, logistics, public policy, EU*

Introduction

This article examines the competitiveness of networks and public infrastructure systems – ports, airports and rail networks – across the Balkans. Competitiveness may generate benefits in terms of lower prices and product quality improvement, but the globalisation process has extended the concepts of competitiveness to how competition affects territories and operating systems in terms of creating the conditions for economic and social development and attracting new entrepreneurship. Porter (1990) has emphasised the existence of exogenous factors that allow the creation of competitive advantage for firms or nations. Exogenous factors that overlap with the 'allocation of production factors', which include physical resources and infrastructure in the surrounding area, and the 'governance' related to public institutions and territorial policies are characteristics that have become highly relevant.

'Logistics', as one of the most important elements of productive economic activities, is intertwined with many variables that affect, more or less directly, countries' efficiency and growth. That is, a sustained effort to foster the logistics could help to boost countries' competitiveness while positioning them to tackle structural impediments to productivity. However, logistics might be seen as a complex sequence of co-ordinated activities because they refer to both traditional logistics as well as management across the entire supply chain. That is, logistics:

> Encompasses freight transportation, warehousing, border clearance, payment systems and increasingly many other functions outsourced by producers and merchants to dedicated service providers. (World Bank, 2014)

The capacity of developing countries efficiently to move goods and connect manufacturers and consumers with international markets is improving – albeit slowly. However, much more is needed to close the existing 'performance gap' between high

and low performers. Supply chains are only as good as their weakest link and sustainable improvements require complex changes in a range of policy dimensions in areas including infrastructure, trade facilitation and services. These efforts require focus and persistence – a combination that few countries have achieved so far, according to a new World Bank Group survey on trade logistics.

Transport is a fundamental sector of and for the economy, since it embraces a complex network of private and public companies which convey goods and services to citizens and businesses in the EU and its trade partners. It also provides mobility for European citizens, thus contributing significantly to the free movement of people within the EU's internal market. Efficient transport services and infrastructure are vital to exploiting the economic strengths of all EU regions and supporting the internal market and growth, thereby enabling economic and social cohesion. They also matter for trade competitiveness as the availability, price and quality of transportation services have strong implications for production processes and choice of trading partners. Given such a central role, transport is, by definition, also inter-related with various other policy areas such as, for example, environmental and social policies.

A road and rail network able to support businesses and links with foreign states is the goal being pursued in Serbia, Albania and Kosovo with the ultimate aim of promoting national economic growth by attracting chains of investment. The Belgrade and Tiranë governments are expected to refer to the European Union an ambitious project for the construction and upgrading of several sections of the road and rail network which interconnect Serbia, Kosovo, Albania and Montenegro; the goal is to establish approval for the plan from Brussels and then an allocation of funds for its implementation, which will require significant funding.

One of the works in question is a road that enables Serbia to have direct access to the Albanian ports on the Mediterranean Sea: this will start from Niš, the southern Serbian city, and will connect with the Albania-Kosovo Highway, completed in 2013, which connects the Albanian coastal city of Lezhë with the Kosovo capital Prishtinë. In this way, Belgrade will see established a faster connection for businesses with the countries of southern Europe while, simultaneously, allowing Albania to become a transit point for trade and additional support. This will aid the central regions of the Balkans peninsula which, in part, suffer from a lack of infrastructure that connects them to European markets.

However, this project does not concern only the road network: existing railway links will also be renewed, strengthened and adapted to the standards of current-day requirements, necessary to make Serbia and Albania attractive to foreign investment. Both being candidates for EU membership, this will allow them to meet the standards imposed by Brussels, which requires further efforts by both governments to improve the quality of infrastructure in the field of transport. Involvement in this project will be extended to the Belgrade-Bar railway, whose 467 kilometres link the Serbian capital with the port city of Bar in Montenegro. Its construction dates back to the times of Yugoslavia; in fact, it was started in 1952 finally being completed in 1976, 24 years later. Time and the lack of maintenance work, however, have caused the degradation of the line which, in addition to being slow, has also become unsafe; in 1998 and 1999, it was a target of NATO air strikes because of its strategic impor-

tance. The damage was later repaired, but its modernisation and, in some places, its reconstruction from scratch are essential conditions to make the Belgrade-Bar infrastructure one that can still be useful to the development of the region.

That a project involving four different countries and, above all, combining Serbia, Kosovo and Albania into a single team, in an area where, after years of war, the relationship has always been tense, represents a big step forward in the difficult normalisation of relations between the different entities that occupy one of the hottest regions of the Balkans.

Literature review

Beškovnik and Twrdy (2015) present a wider perspective on the possibilities of developing a regional strategy for the efficient management of the transport industry in the Balkans. Their focus is mainly on ports – their actual and future role in the transport industry and the regional economy – and they present a complete overview of the actual situation of the port industry and inland infrastructure. Based on a seven-pillar model, other key elements, such as the information technology systems in use, documentary procedures and the management strategies of ports in the Balkans are also analysed. The main proposal of the authors is connected to the development of a regional role for the ports on the eastern coast of the Adriatic Sea in order to secure port regionalisation and specialisation. On this basis, the inland infrastructure and other supporting elements, such as IT platforms and documentary procedures, should be developed accordingly. The entire region and economy should benefit from such co-operation as new supply chains might be attracted.

In further development, Carbone and Stone (2005) report on research into the ways in which European providers of logistics and transport services develop and grow. The strategic behaviour adopted by the leading twenty third-party European logistics service providers between 1998 and 2004 is examined, particularly their approach to mergers and acquisitions and logistics alliances. It shows that growth among such companies is aimed at providing more cohesive European logistical coverage, but national culture constrains their efforts. Consequently, a greater level of consolidation is expected within the industry. A few market leaders offer a wide range and scope of services, while most other firms have a diversified portfolio of interests.

The twenty-first century has, according to Tatham and Rietjens (2015), seen a significant rise in all forms of disasters, which has resulted in military and humanitarian organisations becoming more frequently engaged in the provision of support to those affected. Achieving an efficient and effective logistical preparation and response is one of the key elements in mitigating the impact of such events, but the establishment of mechanisms to deliver an appropriately integrated civil-military approach remains elusive. Not least because of the high percentage of assistance budgets spent on logistics, this area is considered to represent fertile ground for developing improved processes and understanding. In practice, the demands placed on civilian and military logisticians are broadly similar, as is the solution space. Speaking a common language and using common concepts, it is argued, therefore, that the logis-

tics profession should be in the vanguard of the development of an improved civil-military interface.

D'Aleo and Sergi (2015) aim to test the weight that the main sub-components of the global competitiveness index might have on the logistics performance index. They deploy a novel technique based on three newly-particularised clusters ('infrastructure', 'institutions' and 'human factor') to look at whether such clusters are related to efficiency in the 28 European Union countries. It is manifest that the human factor is far more important in improving the logistics performance index than infrastructure and institutions. It follows that, in this new domain of analysis, all initiatives to prioritise investment in the human factor constitute an appropriate means of stimulating innovation and economic outlook, in the knowledge that the logistics sector accounts for an average of 10% of the European Union's GDP.

Finally in this brief overview, Pupavac and Golubović (2015) analyse how trade between countries is operated within a network of increasingly global logistics operators. However, the ease with which traders can use this network to connect with international markets largely depends on country-specific factors such as trade procedures, transport and telecommunications infrastructure and the domestic market for support services.

The Logistics Performance Index (LPI) and its component indicators provide a unique global point of reference in which we can better understand these key dimensions of logistical performance. The first worldwide LPI was developed by the World Bank to provide a better assessment of how respective countries rank in the managerial and physical effectiveness of their logistics. At the global level in 2010, Croatia ranks 74th, behind developed EU countries but also behind the Balkan countries which are also members of the EU: Bulgaria, Romania and Greece.

The initial hypothesis of this study is that improving LPI to acceptable levels (to an index level greater than 3.5) would significantly improve trade expansion, the ability to attract foreign direct investment and economic growth. The research results are based on primary and secondary research methods and the findings should provide a realistic way of improving national competitiveness in the European and global logistics market.

Conceptual framework

The Logistics Performance Index measures the competitiveness gaps that exist between various countries, especially with regard to international trade. The construction of the index attempts to identify the key variables that are the basis of a nation's ability to move goods quickly and economically across its borders. The LPI takes account of the efficiency of the national supply chain operation on the basis that good logistics facilitates efficiency. The World Bank's partnership with the International Association of Freight Forwarders, the Global Express Association and the Global Facilitation Partnership has seen the development of the LPI for transportation and trade under which countries are evaluated using six components:

- efficiency of customs and border management clearance
- quality of trade and transport infrastructure
- ease of arranging competitively-priced shipments

- competence and quality of logistic services
- ability to track and trace consignments
- frequency with which shipments reach consignees within schedule or expected delivery times.

International LPI, based on the assessments of foreign operators located in the country's major partners, is a weighted average of these six components (World Bank 2002). The components were chosen based on recent theoretical and empirical research and on the practical experience of logistics professionals involved in international freight forwarding (WTO 2012). Allowing for comparisons across 160 countries, the Index can help countries identify challenges and opportunities and improve their logistical performance (WTO 2014). The index ranges from 1 to 5, with a higher score representing better performance (World Bank 2014).

The LPI consists therefore of both qualitative and quantitative measures and helps build profiles of logistical friendliness. It measures performance along the logistics supply chain within a country and offers two different perspectives: international and domestic.

The World Economic Forum's Global Competitiveness Index measures the microeconomic and macroeconomic foundations of national competitiveness so as to define competitiveness as the set of institutions, policies and factors that determine the level of productivity of a country (WEF 2014). GCI use a scale ranging from 1.00 (less competitive) to 7.00 (highly competitive). The GCI provides an overview of the competitiveness performance of 144 economies and represents a most comprehensive assessment. The concept of competitiveness involves static and dynamic components but we take into consideration here, and for contrast, only the pillar related to infrastructural competitiveness.

Data and variables

The performance of the Balkan nations is not homogenous and does not by itself exhibit a trend, which the data over a number of years confirms is the case. Below, we analyse specifically all the countries of the Balkans on the basis of the performance score of the efficiency of the logistics system of each one between 2007 and 2016.

In each of the country remarks is included a summary data table; but the remarks also include comments referencing the more detailed breakdown of statistics – for these details, see Appendix 1.

Albania

Table 1 shows that the performance of the Albanian logistics system was positive from 2007 until 2012; in fact, Albania – occupying 139th position in 2007 – grew in just five years to occupy position number 78, climbing above 61 nations in the logistics efficiency ranking. In 2016, the country was assessed as being in 117th position, with a general worsening in its overall score.

Table 1 – Albania LPI score

Year	LPI rank	LPI score	GCI Infrastructure
2007	139	2.08	-
2010	119	2.46	4.0
2012	78	2.77	3.5
2016	117	2.41	3.5

Analysing the LPI sub-components as regards 'infrastructure' performance highlights that overall quality did indeed reached a peak in 2012, with a score of 2.43, while the worst result was recorded in 2016 with a score of 1.98, showing a clear decline in the quality of infrastructure. The overall figure is, instead, more closely related to trends in human resources – the 'logistical competence' component – which, in contrast to the infrastructure data, records a progressive improvement over the years, reaching in 2016 a score of 2.48. For all the other parameters taken into account by LPI (customs, international shipments, tracking and tracing, and timeliness), 2012 is the year in which Albania recorded the highest score, with a negative trend in subsequent years.

The global competitiveness index related to the infrastructure pillar shows a negative trend.

Croatia

Table 2 shows that the performance of the Croatian logistical system is more linear than that of Albania. In fact, in 2007 it was positioned in 63rd place, then recording a positive trend until 2012, due to the improvements required for entry in the European Union. The next two years saw the position worsen and then turn positive but without reaching the efficiency levels recorded in 2012. In 2014, the positive trend stopped, before returning in 2016 to the levels of 2012.

The efficiency of the Croatian logistics system seems to have been positively influenced by entry into the European Union.

Table 2 – Croatia LPI score

Year	LPI rank	LPI score	GCI Infrastructure
2007	63	2.71	-
2010	74	2.77	4.6
2012	42	3.16	4.7
2014	55	3.05	4.7
2016	51	3.16	4.6

If we analyse specifically the LPI 'infrastructure' sub-components, the score remains relatively stable, with a peak reached in 2012 (a score of 3.35) and the mini-

mum score in 2010 (2.36), and a general oscillation which is balanced across the years. Also for Croatia, 2016 saw the best results in the field of human resources, with a score of 3.21 in 'logistical competence'. For all the other sub-components, the trend is positive.

In the Croatian case, the GCI has been steady during these years.

Bosnia and Herzegovina

Trends in the Bosnia and Herzegovina data describe that, in the years 2007 to 2012, the country made great strides in terms of the efficiency of its logistics system but, since 2012, the trend has been reversed bringing performance levels in the system of to the worst levels of 2007.

Similar to Croatia, Bosnia and Herzegovina recorded the best efficiency score for 'infrastructure' in 2012 with a figure of 2.86; the figure for 2016, however, shows a substantial deterioration in infrastructure efficiency (2.61). All sub-components, except 'international shipments' (which recorded in 2010 the highest level of efficiency), confirm 2012 as the year of the best performance for the logistics system.

Table 3 – Bosnia & Herzegovina LPI score

Year	LPI rank	LPI score	GCI Infrastructure
2007	88	2.46	-
2010	87	2.66	3.2
2012	55	2.99	3.4
2014	81	2.75	-
2016	97	2.60	3.2

Again as with Croatia, the Bosnia and Herzegovina GCI for infrastructure has remained steady during the years under consideration.

Macedonia

Macedonia, compared to other Balkan countries, shows a trend that tends towards the negative, recording in 2010 its best ranking (73).

Table 4 – Macedonia LPI score

Year	LPI rank	LPI score	GCI Infrastructure
2007	90	2.43	-
2010	73	2.77	3.5
2012	99	2.56	3.6
2014	117	2.50	3.7
2016	106	2.51	3.8

Analysing in detail the sub-components of the logistics system, we can see that performance drawn from the 'infrastructure' components has been relatively stable over the years, with slight deviations being relatively insignificant. The most significant element that is worthy of note is represented by 'tracking and tracing' that, in 2016, recorded its lowest score (2.32). The general index shows a negative trend, but it is more correct to say that the deviation is minimal since, as we report, the general trend in logistics efficiency has been relatively stable.

Macedonia shows a positive trend in infrastructure competitiveness (GCI).

Montenegro

Montenegro showed a steady improvement in logistical performance up to 2014 (2.88), only to suffer a decline in the following two years (to 2.38).

However, the paradox is demonstrated within the 'infrastructure' segment; indeed there is a negative trend in efficiency, with 2016 recording the most negative figure, of 2.07 (it was 2.84 in 2014). For all other components, 2014 was the year of best performance.

For Montenegro, the GCI is now showing a negative trend after a period in which it had been relatively steady.

Table 5 – Montenegro LPI score

Year	LPI rank	LPI score	GCI Infrastructure
2010	121	2.43	3.8
2012	120	2.45	4.1
2014	67	2.88	4.1
2016	123	2.38	3.9

Serbia

The trend in the Serbian data is positive, with the overall logistical efficiency score showing a progressive improvement and a slight decline recorded only in the most recent set of data.

Table 6 – Serbia LPI score

Year	LPI rank	LPI score	GCI Infrastructure
2007	115	2.28	-
2010	83	2.69	3.4
2012	75	2.80	3.8
2014	63	2.96	3.9
2016	76	2.76	3.9

The performance of the various sub-components records a near-constant positive trend, which sees 2014 as the one in which there was the best performance.

Serbia is, like Macedonia, the only nation to show a positive trend in the Global Competitiveness Index related to infrastructure.

Discussion

Highlighting Table 7, the performance of Balkan countries is below the combined average for countries belonging to the European bloc and for those from central Asia. Croatia, due to be recorded among the western bloc in 2016, saw a value close to the average for the EU/central Asia bloc. However, the physical infrastructure performance level of Balkans states as a whole is far below the Europe and central Asian average.

Analysis of the World Bank's Logistics Performance Index shows a slightly different ranking, but the overall picture is similar. One of the components of this composite index is quality of trade and transport-related infrastructure (e.g. ports, roads, railways, information technology). The index is again the lowest for central and east European countries (Romania, Croatia, Bulgaria and Latvia), but Cyprus and Malta also show a low index. The best performing European countries are Germany, the Netherlands, the UK, Belgium and Sweden.

It is worth adding that, concerning the global Logistics Performance Index, 18 EU member states are ranked in the top fifty of the 160 countries compared by the World Bank, with Germany being first and the Netherlands second, so, despite the increasing challenges, European countries are still performing relatively well.

Table 7 – Regional comparison (2016 data)

Country	World Bank		World Economic Forum	
	LPI rank	LPI score	Infrastructure rank	Infrastructure score
Region: Europe and central Asia		3.23		3.16
Croatia	51	3.16	53	2.99
Serbia	76	2.76	85	2.49
Bosnia and Herzegovina	97	2.60	77	2.61
Macedonia	106	2.51	79	2.58
Albania	117	2.41	148	1.98
Montenegro	123	2.38	138	2.07

Faced with Brexit and geo-political crises spilling over into the region, Europe finds itself in a critical condition in many respects. Nevertheless, the region – which includes the EU-28, Iceland, Norway, Switzerland, the Balkans and Turkey – still

performs above the global average in terms of competitiveness. The region's countries are clearly divided, with a significant gap between the innovation assessment for northern and western European countries when compared to central, eastern and southern European ones. This gap has been a persistent challenge, but there are some recent encouraging signs of convergence in certain dimensions.

Meanwhile, the quality of the infrastructure is negatively affected by insufficient investment in the upgrade and maintenance of the transport network. The level of public investment in transport infrastructure has been stagnating since the 1990s. Road and rail infrastructure has been degrading across the continent because of insufficient funding and a backlog of outstanding road maintenance. Maintenance budgets have not evolved in line with the increasing length of the infrastructure and with the ageing of crucial links, often – in contrast – experiencing severe cuts, having a negative impact on the state of roads in many states. Furthermore, the adaptation of the infrastructure to new mobility patterns and the requirement to deploy the infrastructure for clean, alternative fuels pose additional challenges that require fresh investment as well as a change in approach to the design of transport networks and business models.

Given the regional specificities and differences in transport patterns, a possible indicator to compare the situation among member states is the index of satisfaction with the quality of transport infrastructure produced by the World Economic Forum as regards its Global Competitiveness Index. This points out clearly that overall satisfaction with the transport infrastructure is lowest in central and east European countries (i.e. Bulgaria, Romania, Poland and Slovakia). On the other hand, Spain, the Netherlands, Finland, Austria, France and Germany are ranked highest.

Conclusions

Transport network infrastructures, and in particular the trans-European transport network (TEN-T), require a proper level of investment in new infrastructure, the refurbishment and modernisation of the existing network and increased co-ordination between member states and the Balkans countries affected by cross-border infrastructure projects.

Transport policies in the Balkans are characterised by divergent national priorities, while a fragmentation of the transport market continues negatively to affect the quality of transport services in the Balkans and leaves growth potential untapped. To date, transport is still plagued by technical, legal and administrative barriers which penalise the export performance of companies and their integration in global value chains. In addition, gaps in the social legislation related to transport and divergent national practices have led to a deterioration in social conditions for transport workers and, in some cases, have also negatively affected the quality of transport services. Market opening and social cohesion are thus intrinsically linked.

Meanwhile, the economies of the Balkans are not in good health, despite GDP in the countries of the region having at least returned to pre-crisis levels if not having exceeded them. Otherwise, the mournful notes include: imbalance in the trade balance (partially bridged by remittances); very high, and rising, public debt; unemployment (at least in Serbia and Albania); and the small share of the export of goods and

services of a still-too-small GDP for countries intending to make exports the engine of their systems.

The study highlights how necessary convergence is in the region if the further substantial investments aimed at improving and adapting the existing infrastructure are to be delivered. It is clear that the crisis has been a highly depressive element in the performance of the logistics system; at the same time, progress in Croatia shows that the necessary measures for inclusion into the EU system is an effective cure in the sense of facilitating the required level of overall improvement. The amount of investment and the availability of European programmes have had a positive impact on human factors; indeed, the index component of the 'skills' recorded the best performance, with an increasing trend in the last ten years. However, much more needs to be done in terms of the physical infrastructure.

The crisis in the EU has led to a commitment to maintain unity after Brexit, and has forced it to focus on the problems of migration and the financial challenges, leaving room for other players ready to invest in the logistics system of the Balkans. In recent years, China has played an increasingly important role in a depressed region desperate for foreign investment: in 2014, commercial exchange between China and the Balkans reached a figure of $50bn. Beijing has been concerned from the start with ports, highways and railways. Additionally, we find Chinese investment in the construction of a high-speed rail line that would connect Belgrade and Bucureşti (estimated investment value: €800m for the stretch on Serbian territory alone). Another €800m will be invested in the construction of the highway which, in the future, will connect the port city of Bar (in Montenegro) to the Serbian capital. Chinese investment banks will also support the construction of two motorway sections in Macedonia (Kičevo-Ohrid and Miladinovci-Štip).

In the coming years, it will be important to understand whether the logistics system of the Balkans will be more integrated with the EU; or whether the presence of external actors will lead the integration of the system eastwards.

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Appendix 1: Detailed country-by-country data (overall LPI score and component data)

2007 data		Croatia	Bosnia and Herzegovina	Macedonia	Serbia and Montenegro	Albania
Overall LPI	Score	2.71	2.46	2.43	2.28	2.08
	Rank	63	88	90	115	139
	Confidence interval	0.2	0.17	0.24	0.13	0.17
	% of highest performer	53.7	45.7	45.0	40.1	33.9
Customs	Score	2.36	2.32	2.00	2.33	2.00
	Rank	78	84	126	83	132
Infrastructure	Score	2.50	2.26	2.29	2.18	2.33
	Rank	61	86	83	98	78
Ease of shipment	Score	2.69	2.50	2.67	2.25	2.33
	Rank	66	86	70	116	109
Logistics services	Score	2.83	2.37	2.33	2.29	2.00
	Rank	54	98	101	107	130
Ease of tracking	Score	2.46	2.29	2.50	2.07	1.67
	Rank	87	105	84	124	145
Domestic logistics costs	Score	3.08	3.41	3.00	3.07	2.78
	Rank	50	9	63	51	105
Timeliness	Score	3.45	3.00	2.83	2.54	2.13
	Rank	48	77	99	128	144

2010 data		Macedonia	Croatia	Serbia	Albania	Montenegro
Overall LPI score	Score	2.77	2.77	2.69	2.46	2.43
	Lower bound	2.62	2.51	2.32	2.22	2.20
	Upper bound	2.93	3.03	3.05	2.70	2.66
Overall LPI rank	Rank	73	74	83	119	121
	Lower bound	56	51	50	83	88
	Upper bound	90	112	133	145	147
	% of highest performer	56.9	56.8	54.1	46.8	45.9
Customs	Score	2.55	2.62	2.19	2.07	2.17
	Rank	61	57	108	129	112
Infrastructure	Score	2.55	2.36	2.30	2.14	2.45
	Rank	68	87	95	112	74
International shipments	Score	2.83	2.97	3.41	2.64	2.54
	Rank	79	62	18	104	114
Quality logistics services	Score	2.76	2.53	2.55	2.39	2.32
	Rank	60	87	84	103	113
Tracking and tracing	Score	2.82	2.82	2.67	2.39	2.44
	Rank	76	75	88	124	117
Timeliness	Score	3.10	3.22	2.80	3.01	2.65
	Rank	105	91	137	120	145

2012 data		**Croatia**	**Bosnia and Herzegovina**	**Serbia**	**Albania**	**Macedonia**	**Montenegro**
Overall LPI score	Score	3.16	2.99	2.80	2.77	2.56	2.45
	Lower bound	2.98	2.82	2.52	2.48	2.26	2.21
	Upper bound	3.34	3.15	3.08	3.06	2.87	2.69
Overall LPI rank	Rank	42	55	75	78	99	120
	Lower bound	33	44	46	47	64	88
	Upper bound	56	71	106	112	139	142
	% of highest performer	69.2	63.5	57.6	56.7	50.1	46.3
Customs	Score	3.06	2.65	2.39	2.43	2.24	2.31
	Rank	37	62	92	86	120	106
Infrastructure	Score	3.35	2.86	2.62	2.43	2.60	2.30
	Rank	32	57	75	99	78	116
International shipments	Score	2.95	3.00	2.76	2.84	2.66	2.22
	Rank	58	49	80	70	95	1.41
Logistical competence	Score	2.92	2.93	2.80	2.65	2.66	2.35
	Rank	55	54	66	91	86	120
Tracking and tracing	Score	3.20	2.81	3.07	2.65	2.41	2.62
	Rank	43	71	55	88	120	89
Timeliness	Score	3.54	3.61	3.14	3.58	2.79	2.89
	Rank	50	41	82	45	120	112

2014 data		Croatia	Serbia	Monte-negro	Bosnia and Herze-govina	Mace-donia	Albania
Overall LPI score	Score	3.05	2.96	2.88	2.75	2.50	2.77
	Lower bound	2.80	2.75	2.59	2.52	2.28	2.48
	Upper bound	3.30	3.17	3.16	2.97	2.71	3.06
Overall LPI rank	Rank	55	63	67	81	117	78
	Lower bound	40	47	47	62	86	47
	Upper bound	76	80	104	114	143	112
	% of highest performer	65.8	62.9	60.1	56.0	48.0	56.7
Customs	Score	2.95	2.37	2.83	2.41	2.35	2.43
	Rank	50	113	60	105	116	86
Infra-structure	Score	2.92	2.73	2.84	2.55	2.50	2.43
	Rank	55	66	62	84	92	99
Interna-tional shipments	Score	2.98	3.12	3.15	2.78	2.38	2.74
	Rank	61	54	51	87	132	70
Logistics quality and compe-tence	Score	3.00	3.02	2.45	2.73	2.51	2.65
	Rank	56	53	117	81	105	91
Tracking and tracing	Score	3.11	2.94	2.76	2.55	2.46	2.65
	Rank	59	69	84	107	121	88
Time-liness	Score	3.37	3.55	3.19	3.44	2.81	3.58
	Rank	62	48	73	59	118	45

2016 data		**Croatia**	**Serbia**	**Bosnia and Herzegovina**	**Macedonia**	**Albania**	**Montenegro**
Overall LPI score	Score	3.16	2.76	2.60	2.51	2.41	2.38
	Lower bound	2.93	2.56	2.44	2.31	2.22	2.15
	Upper bound	3.39	2.97	2.75	2.71	2.60	2.61
Overall LPI rank	Rank	51	76	97	106	117	123
	Lower bound	37	66	79	83	95	95
	Upper bound	67	101	113	136	139	147
	% of highest performer	66.98	54.64	49.48	46.82	43.79	42.78
Customs	Score	3.07	2.50	2.69	2.21	2.23	2.22
	Rank	47	87	67	127	121	125
Infrastructure	Score	2.99	2.49	2.61	2.58	1.98	2.07
	Rank	53	85	77	79	148	138
International shipments	Score	3.12	2.63	2.28	2.45	2.48	2.56
	Rank	51	90	140	116	110	101
Logistics quality and competence	Score	3.21	2.79	2.52	2.36	2.48	2.31
	Rank	42	69	99	120	102	127
Tracking and tracing	Score	3.16	2.92	2.56	2.32	2.15	2.37
	Rank	52	66	95	123	135	117
Timeliness	Score	3.39	3.23	2.94	3.13	3.05	2.69
	Rank	67	79	103	89	94	131