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CRITICAL POINTS OF DEFINING AND REALIZING SERBIAN TRANSPORT POLICY

Kritične tačke definisanja i realizacije transportne politike Srbije

Abstract

Transport infrastructure is the bloodstream of every country, and accounts for an important part of the production cost which is an integral part of the final price of goods and services. The importance of a modern and efficient and therefore competitive transport network is a prerequisite to development and progress of every society. Our strategic goal is to create opportunities to connect within the country as well as with neighbors and the region taking numerous variables in the equation into consideration.

There is a multitude of possibilities, but also certain critical points in the development of Serbian infrastructure. Beside showing a clear commitment of Serbia and the region to the development of infrastructure and connecting within the region, this paper aims to clearly define the possible points of stagnation in connecting as well as factors that need to be overcome in the short or long period especially in the field of infrastructure expenditure.

Keywords: *transport infrastructure, connecting, infrastructure cost*

Sažetak

Transportna infrastruktura predstavlja krvotok svake države, ali i bitan deo proizvodnih troškova i krajnje cene roba i usluga. Važnost modernog i efikasnog, a samim tim konkurentnog transporta, predstavlja uslov razvoja i napretka društva. Mogućnosti povezivanja unutar zemlje i sa susedima i regionom strateški su ciljevi, i sa sobom nose mnoge jednačine sa nepoznatima. Pored mnoštva mogućnosti, isto je toliko i kritičnih tačaka infrastrukturnog razvoja.

U ovom radu se pored jasnog opredeljenja Srbije i regiona za razvoj infrastructure i njeno povezivanje sa regionom jasno definišu moguće tačke stagnacije u povezivanju, kao i faktori koje je potrebno prevazići u kraćem i/ili dužem vremenskom periodu, posebno u pogledu infrastrukturnih trošenja.

Ključne reči: *transportna infrastruktura, povezivanje, troškovi infrastrukture*

Introductory notes

Without adequate infrastructure available today millions of people around the world remain without access to jobs, markets, hospitals and schools. The world has long been in the process of rapid urbanization, which along with environmental protection and sustainable prices requires better and more efficient mobility of goods and people. Infrastructure investments in all countries of the world are growing as a result of urgency for new and sustainable infrastructure [5], [6].

At the same time, although the infrastructure market is fully global, projects are never fully invested in despite the growing demand . The basis of the economic policy of a country is modern and developed infrastructure, which is a prerequisite for economic development and regional networking [28].

Infrastructure is the means that each year becomes more and more open to investment by private investors, from pension funds which seek low-risk and economically regulated assets to banks that work with experienced contractors - contractors and financiers of large projects. With a lot of private money in the market, privatization of assets of core infrastructure represents an attractive way of market development and obtaining sufficient funding for the public sector.

Investment in capital projects

The necessity of greater influence of private investment and closer cooperation with other countries in regard to management of the investment cycle are prerequisites which ensure delivery of projects at a faster rate than the state could guarantee, and at economic prices. As never before, sustainable construction and efficient infrastructure network directly accelerate economic growth. Better transit, an efficient network of transfer and transportation of cargo, reduced congestion, enhanced connectivity, bigger capacities, better communication, clean energy and stable energy supplies are decisive factors in connecting economies [3].

The World Economic Forum has estimated that the current global investment gap in infrastructure is one trillion dollars a year on the global investment demand of 3.7 trillion dollars a year, despite the still low prices of oil (which are very slow-growing), political instability in almost all parts of the world and low prices of raw materials. Global infrastructure costs have risen after the financial crisis of 2012 from four to nine trillion dollars (a figure expected in 2025) and an annual growth rate of 6% in 2014 increased to 7.5% in 2016 [13].

Steady demand for economic growth almost forces the world to secure the missing 14 trillion dollars in infrastructure investment by 2030 [13].

It is also estimated that the world will have spent nearly 78 trillion dollars on infrastructure in the period between 2014 and 2025. Interestingly enough, the growth of investment in Europe will not reach the level of investment before the crisis, as opposed to the new markets that "have been crying" for investments, such as Asian and the Chinese market, so they will participate with 60%in total expenditure for infrastructure (and Western Europe around 10% in 2025, a decrease compared to the 20% that it had in 2006).

The investment gap can be sealed in only one way, and that is through main structural projects, but so as to satisfy all stakeholders - from the government to the public and priority investors [18], [19] and [26].

The question of infrastructure expenditure is directly related to the sources of financing, which is a great opportunity for billions of dollars of private capital [5], [6], [16]. Investments in infrastructure are to be made right at the stage of economy growth, since the additional 1% of GDP to be invested in transport and telecommunications leads to the growth of per capita GDP at a rate of 0.6%. Productivity growth, and hence competitiveness, is much higher in countries that have an adequate supply of infrastructure services. Therefore, precisely those countries that have not sufficiently developed their infrastructure set investment therein as priority economic policy (China, India, Brazil ...), and today account for almost half of the infrastructure demand, continuing to grow and spreading their influence (see Table 1).

Table 1: GDP in 2009 with estimates for 2050 for G-7 and E-7countries (trill USD PPP)

	2009	2050	2050/2009
G-7 (global economies: united States of America, Japan, Germany, Great Britain, France, Italy, Canada)	29.0	69.3	138%
E-7 (developing economies: China, India, Brasil, Russia, Indonesia, Mexico, Turkey)	20.9	138.2	561%

Source: [21].

Not only will the growth of developing economies be faster and by 2050 they will have achieved 6.6 times the GDP compared to the global economies, but the gap between emerging economies and the global economy will also grow to the benefit of developing economies. In 2050 the GDP of developing economies in relation to the global economies will be 99% higher, albeit lower by 27% in 2009.

The needs for infrastructure are growing with every newborn child, because there is an annual increase in population moving into urban areas, with the estimate that by 2030, 60% of the population will be living in cities, which means greater needs for infrastructure [20], [21]. In addition to that the population structure is also changing as the number of elderly (60 and over) rises, with their estimated participation of 21% in 2050 (from 8% in 1950 and 10% in 2000) [25]. The growth of investment in infrastructure has also been fueled by the increase in the number of natural disasters. Only in 2015 there were 346 reported natural disasters in which 22,773 people lost their lives, but the disasters also affected lives of another 98.6 million people, with an assessment of economic loss

of 66.5 billion dollars. Only in the last 20 years, natural disasters have led to death of 600,000 people and left 4.1 billion people homeless.

Infrastructure expenditure structurally changes as the country progresses in economic growth towards a higher living standard and quality of life, and does so in the following phases: investment in basic living conditions and housing at the stage of the fight for survival of the economy, towards creation of conditions to improve quality of life through the construction of hospitals, schools, roads, intercity transportation lines, to the next more advanced stage of investment in transit roads, air, rail and sea connections and special natural disaster risk management [14], [26], [27]. The goal is the high living standard entailing investments in the ecological way of life, green spaces and the environment [1].

Infrastructure costs are directly proportionate to the degree of economic growth. Economic growth leads to increase in investment in capital projects, but at a higher technological level of development. Only the markets that have the potential for economic growth are attractive from the point of view of investment in infrastructure projects. Poor infrastructure, whether it is energy or transport, is the biggest obstacle to the economic development of each country.

Infrastructure development is driven by economic and social, societal and environmental factors. If a country wants to develop, it must create favorable conditions for infrastructure development. Otherwise, it is doomed to isolation and will be bypassed by others in all-important strategic connections.

It is not possible to accept nor cope with choice of ways of financing infrastructure projects if there is no national model of evaluation and decision-making on the types of projects, fiscal responsibility, reduction of and the absence of trade barriers, access to finance, risk reduction instruments etc. As transport policy drives the development of the whole system, if adequately fragmented into individual policies (road, rail, air, water transport), it serves as the basis and framework for defining the strategy of economic development. Further definition and implementation of transport policy without guidance and monitoring can only produce desired results in the short run, and this is another reason why transport policy should be developed and directed deliberately, in a predefined desired direction, toward achievable goals [22].

Transport policy of Serbia

Serbia is, in geostrategic terms, an important European country and represents a route that can connect East and West and West and East in the fastest way. As the central country of the Balkans, it has always been an important meeting point r of different civilizations and religions (primarily Orthodox, Catholic and Muslim) as well as economic, political and colonial interests. Serbia has geo-political and geo-strategic importance, both for Europe and for Russia, China and the United States[1]. At the same time, it has been a bone of contention in the world superpowers' rivalries and competition stemming from their strategic interests. For many years Serbia has been an area of latent and real conflicts, dangers and a low living standard with infringement of human rights. It has learnt its lessons and is currently on the path of economic recovery, but also experiencing a difficult economic and political climate and dealing with problems which plague Europe and the world, from the migrant crisis to terrorism. The vision of transport policy of Serbia is that of an unavoidable corridor connecting East and West, North and South, measured by the volume of transport, length of transport network, the value of investments, the share of transport in gross domestic product, as well as the degree of the increase in living standard. The geographical position of Serbia is its competitive advantage, as it is located at the crossroads of the Balkans and important corridors 10 and 7, as well as 4 (Danube-Rhine)[2] crisscross it.

Being the shortest and the most profitable route, Serbia has long defined the priority investment in energy and transport infrastructure, above all transit infrastructure.

1 St. Sava used to say that Serbia is the East of the West and West of the East, and thus if it decided to take one side it would be on the verge of distortion. Therefore, Serbia has to be avoid being either east or west, being at the same time their unavoidable and most profitable connector.

2 Corridor 10 with the main route from Salzburg to Thessaloniki (Salzburg–Ljubljana–Zagreb–Beograd–Niš–Skoplje–Veles–Thessaloniki), Corridor 4 from Dresden to Thessaloniki, passes through: Germany, Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Greece and Turkey and Corridor 7 is the Danube Corridor (2.300 km).

Thus the very importance of the geographical factors, i.e. Serbia's position, defines its existence and development, affects its status in the international political and economic relations and defines the behavior of other countries towards it. The task of transport policy is to develop a competitive and efficient transport system, in accordance with the EC White Paper, which presents the plan for a Single European Transport Area [23]. The geographical position of Serbia conditioned its clear strategic commitment to invest in infrastructure connections with the region. Any reduction in investment in infrastructure may lead to bottlenecks in terms of connecting the entire region of Central and Eastern Europe.

Taking into consideration that a constant change of priorities was visible in the past, and many projects received the status of developmental, but without clear criteria, it was of particular importance in the last few years to determine which infrastructure capital projects could be considered developmental.

Only those projects implemented by the state, that is, those where investment triggers or accelerates The development of other economic manufacturing industries, increases employment of local companies, and directly impacts the quality of life, can be considered developmental. They stabilize and improve the social situation and increase competitiveness. Only substantial and continuous investment in building and maintaining the transport network can keep investors, direct their interest in capacity expansion, and attract new investment operations. Therefore, the creators and implementers of economic policies and national investment programs are responsible for laying the foundation of development, since they shall be accountable to the future generations.

Detection, defining and decision-making on the priority investment plan, and the manner of realization of the infrastructure projects, altogether represent a sensitive and responsible process in which it is necessary to define all relevant criteria, taking into account all the factors of influence. As presented in Table 2, planned factors are: the economic environment (demand for infrastructure, based on GDP growth and population growth), business environment (Serbia's position on the world list of Doing Business), risk (level of security, physical and legal for investors), infrastructure (scale of infrastructure opportunities, capacity to deliver) and financial environment (the degree of support for investment in infrastructure, development of the financial markets, tax policy, availability of financial services).

Table 2: Serbia's Index of competitiveness 2016-2017

	Position (out of 138 countries)	Result (1 to 7)
SERBIA	90	4.0
Institutions	115	3.3
Infrastructure	**74**	**3.9**
Macroeconomic environment	103	4.1
Healthcare and primary education	53	6.0
Higher education	69	4.4
Market development	121	3.8
Labor market elasticity	106	3.8
Financial market development	110	3.4
Technological literacy	70	4.1
Market size	74	3.6
Innovations	108	3.0

Source: [13].

In the Western Balkans, including Serbia, there are great social and public needs, ideas and plans for projects, as well as plenty of different financial models. What is recognized as a problem is that there are not enough investment projects and profitable sustainable projects. Therefore, the task of the defined strategy of transport development is to ensure long-term attractiveness for investment in infrastructure projects. The attractiveness is reflected in creation of the favorable climate for private investment in capital projects, either through generating long-term income through PPPs, or according to models - design, build, fund and maintain. The dialogue between the private and the public sector must be developed, not only in terms of realization, but also in the process of defining directions of infrastructure development, as a means to close the gap in the necessary investment and to create opportunities for business activity and achieving social benefit. Development of a sustainable transport system can be achieved through increasing traffic and mobility while reducing energy costs and greenhouse gas emissions and creating an efficient multimodal network of hubs (airports, railway and bus stations, ports), as well as with establishment of equality and competitive

conditions in transport within and outside the country [15]. Good infrastructure increases investment productivity while reducing the cost of transporting goods and it also stimulates foreign direct investment. The number of kilometers of constructed highways which have opened for traffic in Serbia is proportionate to the increase in the number of factories and direct investments set up in the vicinity of those highways.[3]

The quality and quantity of traffic infrastructure as a foundation for economic growth in Serbia ensures functioning of the internal network by providing safety, efficiency, availability and quality of transport services and the protection of users' interest.

The transport connection of the Western Balkans and Europe

The prerequisite of political stability and economic growth in modern-day Europe lies in political and economic cooperation, connectivity and integration. Infrastructure connections, and transport and energy represent a safe way of increasing growth regardless of the conflict of interests between old and new member states, the differences in the level and sector structure, enlargement fatigue, serious migration crisis that has exposed vulnerabilities of Europe, and the lack of clear strategy and directions of development. Faced with migration waves and pressure, unresolved demographic deficit that has lasted for two decades and closing in on itself, the EU can revitalize only through infrastructure corridors and connectivity [7], [8] and [9]. The Western Balkan countries, infamous conflict zones, politically and economically volatile and technologically underdeveloped, are deeply conscious that peace is a prerequisite of development and have therefore readily accepted the EU proposal and the formation of the transport network of the EU countries [10].

The rather shocking question impossible to avoid when it comes to Serbia is why the central Balkan country has not already become a part of the transport network of corridors of the EU? For decades, the transport infrastructure has been underdeveloped, inconsistent, and represented an obstacle to economic growth being uncompetitive and not harmonized with the EU regulations [22].

Although Europe and the developed countries established their transport policies at first through liberalization, deregulation and harmonization, and then through developing new transport technologies, Serbia had lost all those phases because it did not define its transport policy. The policy had been implemented haphazardly, with no set plan, or to the satisfaction of the personal interests of the ruling political elite, which further resulted in a complete inefficiency, corruption and backwardness in the development of transport.

It is impossible to find a logical explanation as to why the Corridor 10 or the bypass around the capital have not been built yet. Why roads in Serbia are of low quality, which influences not only the competitiveness of the economy, but also adversely affects safety of Serbia's citizens? How is it possible that roads in Serbia are built without construction plans, so that, for example, there is 12.5 km of a modern highway that has no beginning and no end, where there cannot be any traffic, but five-years' worth of preservation and maintenance money is allocated on a monthly level for such a highway.

At the same time, while the transport policy without a set transport policy was under control of each and every ruling elite, from the very beginning governed only and solely by their self-interest, modern highways which move traffic from Serbia to routes through Bulgaria and Romania have been built, although they are up to 100 km longer than the ones that Serbia could have had.

In addition to the fact that projects were not completed, the existing road infrastructure was devastated because it was neither properly maintained nor supported by the introduction of modern technologies in traffic management.

The Logistic Performance Index [2] shows the efficiency of the logistics system at the international level and ranks countries according to the criteria of efficiency of customs and non-customs procedures, the quality of trade and transport infrastructure, the efficiency of the organization of delivery at competitive prices, capacity and quality of logistics services (freight transport, freight

3 According to the National Employment Office and the data gathered by the National Bank of Serbia between 2014 and 2016 the unemployment rate of Serbia's population reduced from 23.5% (2014) to 13.6% in 2016 (third quarter).

forwarding, customs brokerage), ability to track shipments, as well as the frequency of arrival of shipments within the allotted time of delivery (see Table 3).

Compared to the countries in the region Serbia has not only improved its position in the last five years, but has also seen the highest rate of the changes made.

In addition to coming closer to the first 50 countries, Serbia has shown a great potential in improving logistics performance (see Figure 1).

Trade and transport infrastructure take a special place in the structure of this index. The trends in the infrastructure index in 2016 in comparison to those of 2007 show that the three countries in the region improved their infrastructure index: Croatia (+0.49), Bosnia and Herzegovina (+0.35) and Serbia (+0.31). At the same time there has been a deterioration in Albania and Montenegro (see Figure 2).

Deeper analyses are to be conducted by historians, but today's transport policy is clear, the long-term course of action determined and very concise. It has become a part of the EU transport policy, both in terms of the legal framework and the investments in the transport network.

Serbia borders eight countries (Bosnia and Herzegovina, Croatia, Montenegro, Albania, FYR Macedonia, Bulgaria, Romania and Hungary) and with each of these countries Serbia has got a special cross-border cooperation. However, in addition to investments in rail and road infrastructure, modernization of railways, better maintenance, highway construction, as well as introduction of higher-speed o trains and railway network, it is necessary and equally important to do everything to eliminate or reduce non-physical barriers i.e. to simplify cross-border transportation of passengers and goods [17], [27]. For if today the average waiting time in passenger transport at crossings is 45-80 minutes, and in cargo 160-500 minutes, then decrease in competitiveness and problems in the economy of not only Serbia, but also the countries which it borders are perfectly conceivable.

Table 3: Global logistic transport system efficiency indicator (elected countries)

	2016	2014	2012	2010	2007
1 Slovenia	50	38	34	57	37
2 Croatia	51	55	42	74	63
3 Romania	60	40	54	59	51
4 Bosnia and Herzegovina	97	81	55	87	88
5 FYR Macedonia	106	117	99	73	90
6 **SERBIA**	**76**	**63**	**75**	**83**	**115**
7 Bulgaria	72	47	36	63	55
8 Montenegro	123	67	120	121	
9 Albania	117		78		139

Source: The World Bank.

Figure 1: LPI index 2016/2007

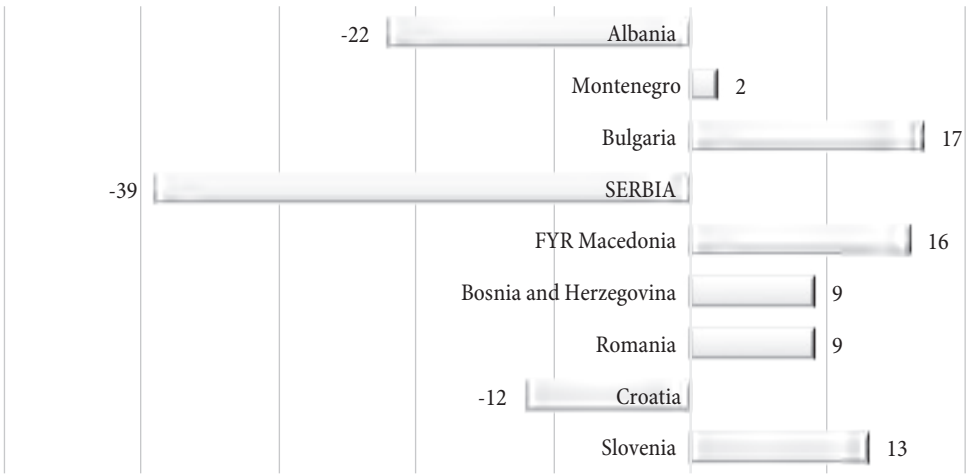
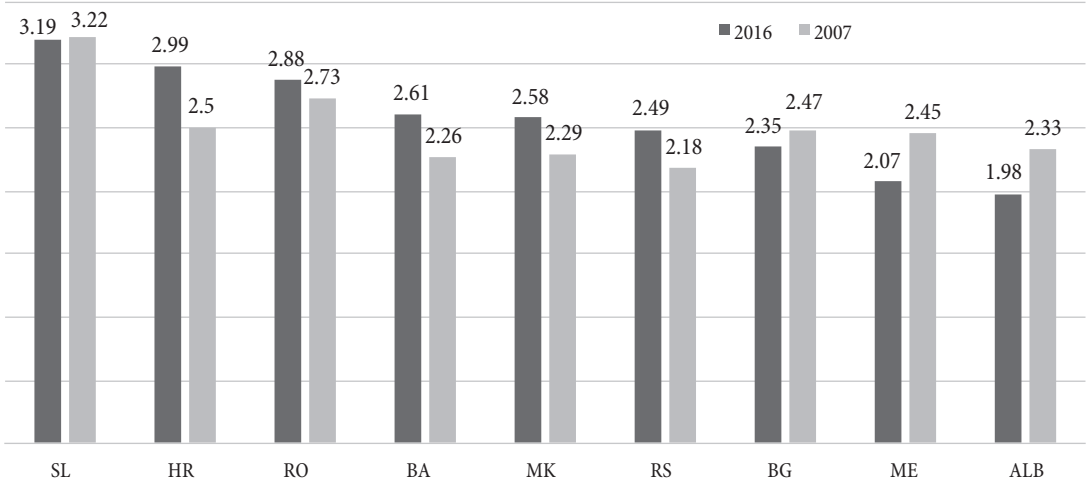


Figure 2: LPI index for infrastructure



In addition to transport infrastructure investment, i.e. the expansion of border crossings, or the increase in border crossing capacities and the expansion of cargo space it is equally important to overcome other non-physical barriers that directly influence the reduction of competitiveness and increase the cost of transport (see Table 4).

The transport system of Serbia has to comply with the environmental protection regulations and the EU system, and border crossings and procedures must be at European standards. Special attention has only in recent years been devoted to Corridors 10 and 7, as well as inland navigation Corridor 4, because these pass through Serbia and enable Serbia to become an essential transit corridor.

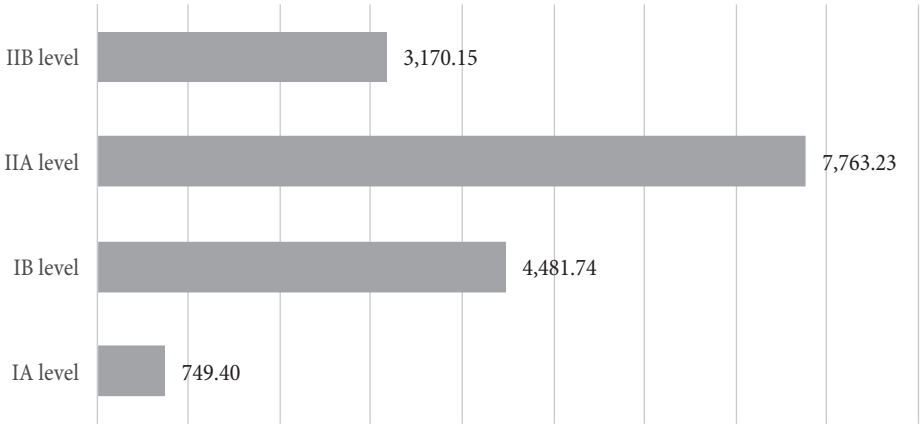
Road transport is dynamic, and a dominant mode of transport in Serbia with the total network of state and local roads 39,164.5 kilometers long which represents the most valuable asset worth close to five billion Euros. Although the structure of the transport of goods by type of traffic goes places road first (as high as 52%), this form of transport cannot be commended for its good characteristics. Roads as major financial public assets are state-owned in most countries. For example, European road network of 5.5 million km, worth about 8.000 billion Euros is

Table 4: Physical and non-physical barriers or transport and trade policy of Serbia

	Montenegro	FYR Macedonia	Bulgaria	Hungary	Romania	Bosnia and Herzegovina	Croatia
	2009/10. Agreement on the single border stop Bijelo Polje	2015/16. Agreement on the single border stop Tabanovci	2004/06. One border crossing established Dimitrovgrad	Agreement 1972/74.	1997. Agreement on a single border crossing not implemented	Agreement on border crossings	Border crossing extension 2016 – 2 scales to measures 6 lanes, plus truck lane
Status	Never established	In process	Agreement expired	Negotiations for the new one ongoing	Negotiations initiatives	The construction of bridges Ljubovija-Bratunac, with one border crossing	
Waiting time Serbia (min)	Passenger – 25-35 Cargo – 30-40	Passenger – 30-40 Cargo – 45	Passenger – 20-30 Cargo – 120	Put – 30-35 Cargo – 90-180	Passenger – 30 Cargo – 120		Goal – the reduction of waiting time by 50%
Waiting time other countries	Passenger – 27-40 Cargo – 120	Passenger – 25-35 Cargo – 120	Passenger – 25-50 Cargo – 120	Passenger – 45 Cargo – 300	Passenger – 30 Cargo – 100		
Plan	Investment 1.7 mil. Euros 2017 – one border crossing	2017. Tabanovci, one border crossing	New Agreement	2017. Agreement 2018. one border crossing	2017. initiation of negotiations	2017. opening for traffic of the bridge and border crossing	2017. second phase of expansion 18 lanes

Source: Authors' work.

Figure 3: Public roads infrastructure, in km



managed by the local, regional and national authorities and institutions. In comparison with road maintenance expenditure in Europe, financing and maintenance of 16,000 km of roads in Serbia are not in accordance with all international standards and system and criteria of assigning jobs to companies that should maintain roads has not been established yet. The rehabilitation and an improvement of road safety campaigns for 1000 kilometers of critical road sections in Serbia were initiated only in 2014, and since January 2017, 3,000 km of roads have been maintained by issuing public calls for best companies, with the view to maintaining the whole road network through public bids.

Serbia is surrounded by the following corridors and their arms: Corridors 4 (Budapest-Arad-Craiova-Sofia-Thessaloniki), Corridor 4a arm (Arad-Bucharest-Constanta), arm of Corridor 5c (Budapest-Šamac-Sarajevo-Ploče), Corridor 8 (Vlore-Tirana-Skopje-Sofia). Hence why the transport system of Serbia should become an important part of the future TEN-T network for transport, transit and logistics activities in the Balkans.

Corridor 10 is of strategic importance for the EU, given the potential for reducing the cost of transportation and other logistic activities, and it can be said that it is of even greater importance for Serbia since 792 km of Corridor 10, arms10b and 10c, happen to be on its territory. This Corridor has been a topic of discussion and has been under way for several decades now and one of the priorities is its completion, which is going to take place in 2017 and 2018. (Grdelica gorge, 27 km, no later than March 2018), while the direction of E- 75 south and the completion of road E-80 will take place in 2017. This is how the continuous connection of a full profile highway to the border with Hungary in the north will be secured, including the so-called "Y arm" to Subotica, and to borders with Bulgaria and FYR Macedonia. See Table 5 for road and railway corridors.

Completion of the bypass around Belgrade and Kragujevac is also directly linked to the function of Corridor 10, and with the rehabilitation of the road network it will surely help increase the competitiveness of the economy and GDP growth. Equally important is the completion of the highway E763, from Belgrade to Preljina, and continuation to Montenegro. With the highway Nis-Priština-Merdare, Morava Corridor (Pojate-Preljina), Fruška Gora Corridor (Novi Sad-Ruma-Šabac-Loznica) and Banatski corridor (Belgrade-Vršac-Romania), Serbia will become an important transit corridor in this part of Europe. These projects represent a part of the extended road network –the Single European Transport Network, enabling connection with Corridor 10, i.e. transverse connection to Corridor 7 (Rhine-Danube) and Corridor 4 (Prague-Vienna-Bratislava-Budapest-Bucharest-Sofia-Constanta).

In the last eight years, the volume of cargo transport has grown by 3%, in particular the transport of goods by road (258%), and in 2014 additional 4.6 million tons of goods were transported by road compared to eight years earlier. In the same period, the number of passengers decreased by 14.9%, mainly in domestic transport and road traffic. Considering investment not only in construction but also maintenance, as well as advancement of Serbia

Table 5: Railway and road corridors connected to the transport system of Serbia

Corridor	Route
Railway corridors	
Corridor 10 (1.177km)	Savski Marof (Slovenian border) – Zagreb (Croatia) – Belgrade (Serbia) – Skopje (FYR Macedonia) – Đevđelija (Greek border)
Corridor 10b (151 km)	Kelebija (Hungarian border) – Stara Pazova (Serbia)
Corridor 10c (104 km)	Niš (Serbia) – Dimitrovgrad (Bulgarin border) – Sofia - Istanbul
Road corridors	
Corridor 10b (185 km)	Horgoš (Hungarian border) – New Belgrade (Serbia)
Corridor 10c (110 km)	Niš (Serbia) – Gradina (Bulgaria)

Source: Author's work.

as a transit route, passenger and cargo transport are to increase by 73% and 62% respectively by 2025.

The geographical position of Serbia[4], as a landlocked country, defines a large part of the foreign trade exchange with the world. It is an undeniable fact that more than 63% of Serbia's total exports and imports of goods are with the EU, then with Russia, China, neighboring countries and Turkey (all together 10% of total foreign trade). The volume of direct foreign investment also comes largely from the EU countries whereas third -world countries invest in production facilities the products of which are intended mainly for the export to the EU and to a much lesser extent to the countries that are members of the Customs Union around the Russian Federation.

It is therefore necessary to integrate the transport system of Serbia into the market of the Western Balkans, the EU market and the Chinese market through the port of Piraeus, but also with the Russian market. Today, the total value of ongoing projects in transport is four billion Euros (three billion Euros in roads and one billion in rail), while the total value of new transport projects for which the directions of negotiation have already been defined, documentation completed and / or commercial or financing contracts on financing signed, or both amounts to 4.87 billion Euros (2.8 billion roads and two billion Euros railway).[5]

Along with the development of infrastructure in road transport, special attention is given towards the development of rail transport, with a view to reducing carbon emissions, as well as redirecting transport to multimodal transport and clean transport systems. Railway network in Serbia is 3,809 km long and 1,768 km of that are main lines whereas 1,251 km are regional lines, and the rest are local and handling lines. Only 283 km are double track lines and only 1,275 km have been electrified, which is why Serbian railways are considered underdeveloped in infrastructure and slow in speed.

The implementation of ongoing projects on the railway Corridors 10 and 11 has been set in motion (Bar railway). The technical documentation for projects south and east of Nis is being prepared, and the core of modernization is the project of reconstruction and modernization of Belgrade- Hungarian border railway, to have it meet the requirements for main TEN-T corridors. Moreover, the reform of the Railway Company and development of Serbian legislative framework related to the reform have created conditions and opened the market of services of transport infrastructure capacities for other railway operators.

The railway from Belgrade to Budapest project represents the first step towards true modernization of railway infrastructure in Serbia, and is in compliance with all the standards of trans-European network of the 21st century. As Corridor 10b, the railway is a part of the shortest railway transit corridor of Western and Central Europe with Greece, Turkey and the Middle East. The existing single-track which is over 130 years old, will be rebuilt as a double track railway for freight and passenger traffic, with speeds of up to 200 km per hour. Not only will it be electrified, but it will also be equipped with the latest control systems and traffic management systems. In addition to connectivity, the goal is to reduce the travel

4 Land-locked country.

5 Agreements, commercial contracts and loan agreements for each project, conclusions from sessions of the Government of the Republic of Serbia.

time by three hours on this 350 km-long railway (currently: eight hours minimum).

To facilitate the coordinated functioning and financial programming and also to enable merges between public and private resources, European Commission has defined the so-called core network corridors for the period to 2020, especially in known bottlenecks, as well as development of cross-border relations and promotion of integration and interoperability aspects.

In addition to having defined nine basic network corridors, European Commission has preliminarily identified projects that could be financed from European funds, taking into account the added value that the projects may have for the TEN-T network. From Serbia's viewpoint, it is very important to establish effective links with the Baltic-Adriatic corridor, the Oriental Eastern Mediterranean and the Mediterranean corridor. The Rhine-Danube corridor essential for the inclusion of inland waterways of Serbia into the basic network corridor TEN-T passes through Serbia.

The main strategic partner of Serbia in transport network planning is the South East Europe Transport Observatory. The main transport policy goal of Serbia as a future member of the EU is to enable significant extension of the TEN-T to the Western Balkans and to improve and coordinate regional transport policies and the technical standards for extension of the TEN-T to the Western Balkans and integration into the framework of the wider Trans-European network.

Serbia has got a dense, primary and comprehensive network within the wider multimodal SEETO network (see Table 6).

The Progress Report of Serbia for 2015[6] declared regulations related to the safety and functioning of traffic and the realization of all projects harmonized, which is the basis for the opening negotiations on chapters 14 (Transport Policy) and 21 (Trans-European Networks), expected in the course of 2017, and closing towards the end of 2018. In addition to opening the chapters, pre-accession funds become available along with other favorable sources of investment financing, bearing in mind that in addition to the constant growth of GDP, and good forecasts, there are frequent funding restrictions for high- cost infrastructure projects.

Serbia has concluded commercial contracts worth 730 million Euros over a period of six months only. The contracts have been signed for the projects of the reconstruction of the Hungarian-Serbian railways (315 million), the construction of the bypass around Belgrade (207 million Euros), and one section of Corridor 763, Surčin-Obrenovac (208 million Euros). If the loan agreements, so-called preferential loans, with the Chinese Export Bank are signed under the same terms and conditions as for other projects, Serbia as borrower will increase its indebtedness to foreign countries by 85% of the sum and simultaneously provide funds for 25% of their own participation in the loan.

A realistic assessment for Hungarian-Serbian railway project shows that for the section from Novi Sad, via Subotica to Kelebija it is necessary to provide from 1.12 to 1.20 billion Euros. It is necessary to obtain 200 million Euros for the tracks on the section Stara Pazova - Novi Sad (since the so-called Russian loan finances only the tunnel and the viaduct) and 2% of the value of investments to engage the Notification body (which should confirm and control the enforcement of EU standards),so the total value of investments required for the 180 km railway line, which meets the requirements of the TEN-T corridors, reaches 1.9 billion Euros, or more than 10 million Euros per kilometer of the double-track high-speed railway.

If Serbia is to become a transit corridor in the railway transport system it is necessary to modernize the railway from Belgrade to Niš, i.e. from Preševo to Dimitrovgrad, meaning another 510 km that require additional 5.2 billion Euros, that means seven billion Euros to complete Corridor 10, not including the arm from Belgrade to Šid (119 km).

Taking into account the aggravating circumstances, in order to increase competitiveness and in addition to hiring new skilled and motivated staff, the reorganization and transformation of not only the operators or the infrastructure manager and relevant logistics agencies, it is necessary to ensure intermodality between all modes of transport, which still requires investments for t development of multimodal nodes, especially ITS systems for accelerated

6 Report on Serbia's progress in the pre-accession process to the EU for 2015.

processing of cargo documentation, together with sanitary and other check-ups.

The longer Serbia waits for accession to the EU, the more significant the cross-border formalities will be. Waiting time at border crossings for many suppliers imposes higher costs than fares for covering further 100-200 km of the bypass road (e.g. Corridor 4) but not having to deal with border formalities.

Set priorities, adopted national list of priority projects, defined methods of funding and funding sources, identified and appointed key institutions to implement projects represent the first steps. However, if the goals, the responsibilities and the dynamics of the project implementation are not clearly defined, not only the cost of construction, but the enormous delays can occur, thus slowing down economic growth.

Aware of this, Serbia has created national book of practices for each capital project, defining the responsible entities, the time required for management of transport infrastructure, and the procedures of spatial planning and design, preparation of project documentation, feasibility studies, provision of administrative transparency in the process, dynamics of the implementation of the expropriation process and the continuous monitoring of the implementation process [12].

Final considerations

Better infrastructure promotes education and science, technology, mass transit and commercial events such as business-parks. It also means infrastructure system ready to respond to the challenges of global climate change and more frequent natural disasters.

All this leads to a higher quality of life, which represents the aspiration of every individual, and society as a whole.

Cultural activities, leisure, green spaces, deep respect of healthy environment and ecological way of life are possible only if the necessary infrastructure in the decades to come is well taken care of and planned. It is therefore important to ensure continued investment in infrastructure, especially when the economy is growing, because withdrawal leads to bottlenecks and congestion, lack of access, and later rebounds as a decline in living standards and quality of life.

Serbia has clearly defined its transport policy after many years, taking into account all internal and external factors that may affect implementation thereof.

Meeting EU standards, clear planning, implementation of mobility and integration of markets, without unfair competition in the transport markets, is the safe course taken by Serbian corridors. How persistent Serbia will be to develop its transit role will determine success of its economic policy and thus the behavior of great powers towards it. Regional connectivity and removal of trade and infrastructure barriers will make Serbia a stable country instead of highly volatile ground it used to be.

The importance of infrastructure indeed calls for establishing the Serbian "Athens Council", since this policy has for decades been an instrument of political parties and interest, rather than means of connecting cities, regions and countries.

References

1. Anand, P. B. (2006). *Millennium development goal 7: An assessment of progress with respect to water and sanitation; legacy, synergy, complacency or policy?* (No. 2006/01). Research Paper, UNU-WIDER, United Nations University (UNU).
2. Arvis, J. F., Mustra, M. A., Panzer, J., Ojala, L., & Naula, T. (2007). *Connecting to compete: Trade logistics in the global economy-the Logistics Performance Index and its indicators*. Washington, DC: World Bank.
3. Attard, M., & Shiftan, Y. (2015). *Sustainable urban transport*. Emerald Group Publishing Limited.
4. Banerjee, S., Wodon, Q., Diallo, A., Pushak, T., Uddin, E., Tsimpo, C., & Foster, V. (2008). *Access, affordability, and alternatives: Modern infrastructure services in Africa*. Washington, DC: World Bank.
5. Clark, X., Dollar, D., & Micco, A. (2002). *Maritime transport costs and port efficiency* (No. 2781). Washington, DC: World Bank.
6. Cumming, D. (Ed.). (2010). *Venture capital: Investment strategies, structures, and policies* (Vol. 9). John Wiley & Sons.
7. European Commission. (2004). *Regulation No 261/2004 of the European Parliament and of the Council*. Retrieved from: http://ec.europa.eu/transport/passengers/air/doc/neb/questions_answers.pdf_reg_2004_261.pdf.
8. European Commission. Directorate-General for Energy. (2006). *Keep Europe moving: sustainable mobility for our continent: mid-term review of the European Commission's 2001 Transport White Paper*. Office for Official Publications of the European Communities.

9. European Committee for Standardization. (2012). *Transport – logistics and services*. Published standards. Retrieved from http://www.en.eu/cen/sectors.
10. European Western Balkans. Retrieved from: https://europeanwesternbalkans.com/.
11. Fiskalni savet. (2016). *Ocena fiskalnih kretanja i strukturnih reformi u 2016. godini*.
12. Ghoshal, S. (2005). Bad management theories are destroying good management practices. *Academy of Management Learning & Education, 4*(1), 75-91.
13. Global Competitiveness Report (2016-2017). Retrieved from: https://www.weforum.org/reports/the-global-competitiveness-report-2016-2017-1.
14. Hertel, T. W., Walmsley, T., & Itakura, K. (2001). Dynamic effects of the "new age" free trade agreement between Japan and Singapore. *Journal of Economic Integration*, 446-484.
15. Islam, D. M. Z., & Zunder, T. H. (2014). The necessity for a new quality standard for freight transport and logistics in Europe. *European Transport Research Review*, *6*(4), 397-410.
16. Lazonick, W. (2008). *Entrepreneurial ventures and the developmental state: Lessons from the advanced economies* (No. 2008/01). WIDER Discussion Papers, World Institute for Development Economics (UNU-WIDER).
17. McLinden, G. (2012). Collaborative border management: A new approach to an old problem. *World Bank-Economic Premise*, (78), 1-6.
18. Ministarstvo građevinarstva, saobraćaja i infrastrukture. (2015). *Srategija razvoja vodnog saobraćaja Republike Srbije od 2015. do 2025. godine* (Official Gazette No. 44/14).
19. Ministarstvo građevinarstva, saobraćaja i infrastrukture. (October 2009). *Generalni master plan saobraćaja u Srbiji* (05SER01/04/016).
20. OECD. (2006). *Competitive cities in the global economy*. Paris.
21. PricewaterhouseCoopers. (2007). *Largest City Economies in the World in 2005 and 2020*. Retrieved from: http://www.pwc.com/extweb/pwcpublications.nsf.
22. Stopher, P., & Stanley, J. (2014). *Introduction to transport policy: a public policy view*. Edward Elgar Publishing.
23. Strategija EU za Dunavski region (COM (2010) 715/4). Brisel.
24. Treasury, H. M. (2003). Bridging the finance gap: a consultation on improving access to growth capital for small businesses. *HM Treasury/HM Stationery Office*, *4*(03), 743-831.
25. United Nations. (2002). *World population ageing, 1950-2050*. UN.
26. Vlada Republike Srbije. Retrieved from: http://www.srbija.gov.rs/.
27. Wilson, J. S., Mann, C. L., & Otsuki, T. (2005). Assessing the benefits of trade facilitation: A global perspective. *The World Economy*, *28*(6), 841-871.
28. Yusuf, S. (2007). *About urban mega regions: Knowns and unknowns*. Washington DC: World Bank.

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