The Relationship between Infrastructure and Economic Development – Case of Kosovo

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ABSTRACT

This study aims to present the impact of infrastructure investments in economic development of Kosovo. A broader focus will be given to the transport and energy as key infrastructure sectors. In the case of Kosovo infrastructure investments are also very important for Kosovo's integration in EU. The biggest transport and energy infrastructure investments made in Kosovo are the Construction of the 400kV Interconnection Line between Kosovo and Albania and the building of R6 and R7 Highways. Despite the fact that 400kV Interconnection Line between Kosovo and Albania is not yet functional due to political issues and the last segment of R6 Highway is not yet finished, the paper shows that these investments in a long term period may have a great impact in Kosovo's economic growth.

1. Introduction

In the reports, publications and strategies of World Bank, International Monetary Fund and other international institutions, infrastructure plays an important role as one of the biggest factors that directly affects development of countries. Zangoueinezhad & Azar (2014), argued that a planned, funded and a maintained infrastructure extends a country’s global wealth.

In European Union (EU), infrastructure is seen as a key element for development, because infrastructure among other benefits, contributes a lot in improvement of single market (European Commission, 2014). Single market has a great impact for growth and development in EU, because it enables free movement of goods, people, services and capital (EUR-Lex, 2018). EU represents the biggest single market and almost every country of Europe continent aims to join EU, especially 6 Western Balkans countries (Albania, Bosnia & Herzegovina, Former Yugoslav Republic of Macedonia, Kosovo, Montenegro & Serbia – WB6). WB6 candidate countries to join EU have to fulfill requirements and make a lot of reforms in the way they are organized in order accomplish gradual integration with Union. EU requirements include different areas and one of them is infrastructure.

Having in mind that transport and energy are two of the most essential elements for the growth and survival of a country (Kumar, 2009; Leiringer, 2009; Zangoueinezhad & Azar, 2013), this study aims to present the impact of infrastructure investments in economic development from the perspective of Kosovo, a potential candidate country to join EU. Kosovo has made concrete steps to advance its infrastructure in accordance with EU directives, especially transport and energy infrastructure. The biggest transport and energy infrastructure investments made in Kosovo are the Construction of the 400kV Interconnection Line between Kosovo and Albania and the building of R6 and R7 Highways.

Despite the fact that 400kV Interconnection Line between Kosovo and Albania is not yet functional due to political issues and the last segment of R6 Highway is not yet finished, the paper shows that these investments in a long term period will have a great impact in Kosovo’s economic growth.

The paper is organized as follows: the section of literature review will bring the existing literature about the link between infrastructure investments and economic growth. The third part will present a review of WB6's infrastructure with a focus in Kosovo. The fourth part will discuss the impact of Kosovo's infrastructure investments in economic growth the final part will give the conclusions.

2. Literature review

The relationship between infrastructure and economic growth seems to be a very attractive topic for researchers as long as literature offers so many studies in this field. First study found in literature about this topic is study from Arrow & Kurz (1970). They were first that presented a link between capital investments and growth. Through the years, this topic was treated by a numerous authors who tried through different models to explain the impact of infrastructure investments in economic growth. Authors worldwide have presented different sides of the impact of infrastructure in economic growth. There is group of authors that
have empirically proved the positive impact of infrastructure investments in economic growth. In the other hand, there is another group of authors who are sceptic about this positive link. They have also proved through empirical methodologies that infrastructure investments do not impact economic growth or these investments have negative impact in economic growth. They have found that the relationship between infrastructure investments and economic development does not necessary seems to be significant.

Important roles in the debate about the impact of infrastructure investments in economic growth play also governments and policy makers. Investing in infrastructure is one of the biggest priorities of governments because as Holmgren & Merkel (2017), mentioned that investing in infrastructure is seen as a solution for unemployment, depopulation of rural areas and poor economy. Palei (2015), describes infrastructure services as crucial for households and economy. Mbaku (2013), showed that investments in infrastructure develop commerce and trade. Kodongo & Ojah (2016), pointed out that infrastructure promotes human development and economic growth.

Munell (1992), has put into question the desired results from infrastructure investments. Her views about this topic include suggestions that aggregate results cannot be used to guide investments in infrastructure. Munell (1992), concluded that only results from cost benefit analysis should take in considerations about the implementation of infrastructure investments.

Boarnet (1998), examined the negative outcomes from public infrastructure. He used a panel of data for Californina districts between the years 1969-1988. Boarnet (1998), found that changes in district production are positively linked with changes in street and highway capital within same districts, while he found negative link between changes in district production with street and highway capital among different districts.

Esfahani & Ramirez (2003), pointed out that the link between infrastructure investments and economic growth is controversial. Furthermore Esfahani & Ramirez (2003), argued that controversial situation is caused because infrastructure does not affect just productivity and production, but economic growth can also shape the demand and supply of infrastructure services which are likely to cause an increased bias in infrastructure returns. Authors mentioned above developed a model of infrastructure and production growth that consider institutional and economic elements that interfere in the interactions between infrastructure and economic growth. They made a cross country analysis with a panel of data for the years 1965-1995 and they found that the impact of infrastructure in economic growth seems to be “substantial”.

Calderon & Serven (2008), came up with a study that examined the relationship between infrastructure investments and economic growth in Sub-Saharan Africa countries for the period of time between 1960-2005. They estimate empirical growth and inequality equations to present the impact of infrastructure investments in economic growth in this area. Calderon & Serven (2008), pointed out the importance of infrastructure development in the region of Sub-Saharan Africa, but their finds do not support totally this view in the aspect of economic development. They found strong evidence that infrastructure development has a positive impact on long term period growth, but has a negative impact on income inequality.

Farhadi (2015), described infrastructure as a sector with vital role for growth. He cited World Bank (1994), which refers to infrastructure as “wheels” for development. His study examined the role of transport infrastructure and its impact in long run economic growth for the period 1870-2009 in 18 OECD countries. Study of Farhadi (2015), concluded that growth in labour productivity and total factor productivity is positively, but not enough influenced by growth in the stock of infrastructure.

Holmgren & Merkel (2017), came up with a study which reviewed existing literature in the topic about the impact of infrastructure investments in economic growth Their focus was on transport infrastructure. They reviewed 78 studies and made 776 observations. Holmgren & Merkel (2017), from the papers they had reviewed concluded that expected effect of investments in infrastructure vary from 0.06 – 0.52. According to their observations, they found that different types of transport infrastructure impact different areas of development. Based on their reviews, road infrastructure has the highest impact in production and manufacturing. Holmgren & Merkel (2017), also mentioned the fact that these investments in some cases do not bring the desired results. Authors mentioned above argued that this situation is as a result of productivity studies which are replacing cost benefit analysis which do not take into consideration important elements as time savings. Furthermore is explained that productivity studies should not replace cost benefit analysis because these studies “are not good instrument for deciding which projects to invest in the future”.

Bridge, Ozkaynak & Turhan (2018), brought a study that examined the importance of energy infrastructure in a country. They mentioned the fact that the energy sector is facing a lot of investments during last years and all these investments contribute in economic growth, but these investments should be equitable and sustainable.

This part of the paper reviewed some studies about the impact of infrastructure investments in economic growth. One is for sure, infrastructure investments are very important part for all countries worldwide, but which is their impact in economic growth? In the literature there are a lot of papers that
studied this relationship and in this paper were presented some studies about the positive impact of infrastructure in economic growth, but at the same time were presented some studies that did not find a direct relationship between infrastructure investment and economic growth or find a negative link on this relationship. This differentiation is caused by a lot of factors: region analyzed, period of time analyzed, panel of data and a very important factor mentioned from Holmgren & Merkel (2017), “cost benefit analysis and productivity studies”. While the debate about the impact of infrastructure investments in economic growth is still ongoing, this paper in the next parts will have a focus in a specific case, like the Kosovo's case. Infrastructure investments in Kosovo have faced a lot of criticism and despite the fact that investments made are so important for the Kosovo's integration in EU, there is still a debate about their impact in economic growth.

3. Infrastructure of WB6

Western Balkans 6 (Albania, Bosnia & Herzegovina, Former Yugoslav Republic of Macedonia, Kosovo, Montenegro & Serbia), represent a very important hub for EU, because of their geo-strategic position. As is mentioned in the EU Strategy for the Western Balkans (2018), the Western Balkans has an EU perspective, because this region geographically is surrounded by EU Member countries and the peoples of the EU and the region share common heritage and history. The EU Strategy for Western Balkans (2018), contains six flagship initiatives that will support integration of WB6 in EU. According to this EU Strategy for Western Balkans (2018), these six flagship initiatives are:

- Initiative to strengthen the rule of law
- Initiative to enhance support for socio-economic development
- Initiative for a digital agenda for the Western Balkans
- Initiative to reinforce engagement in security and migration
- Initiative to increase connectivity
- Initiative to support reconciliation and good neighborly relations

From the “initiative to increase connectivity” we can see how important infrastructure is for EU. In the Strategy is mentioned that WB6 needs more support in the infrastructure investments especially in transport and energy. Moreover part of the strategy is expansion of EU’s Energy Union with WB6. All these activities are taken in order to have economic growth for WB6 and a gradual integration in EU. In fact the EU Strategy for Western Balkans (2018) is just a continuity support for this region.

Conflicts in ex-Yugoslavia in 90s were a test for EU which showed that Balkans can be a source of instability for the EU and the best thing that EU can do was integration of this region within Union (Anghel 2018). Furthermore Anghel (2018), pointed out that since the period of conflicts, especially in 1998-2003, EU seriously took in consideration the integration of Western Balkans in the Union and finally European Council in Thessaloniki, in June 2003 took the responsibility to an enlargement to the Western Balkans when countries meet criteria for membership.

The EU decision for enlargement to the Western Balkans has opened the way for the biggest transformations of WB. Support and reforms started immediately. Part of these reforms as a WB country was Croatia too, which is EU member from 2013. This part will discuss supports and reforms just in the infrastructure field.

In December 2003, the WB countries signed “The Athens Memorandum – Integration into the European Community Internal Energy Market”. The main goal of this memorandum was creation of integrated regional electricity in WB by 2005 and to ensure further integration into EU’s internal electricity market (Athens Memorandum, 2003).

In June 2004, the WB countries signed the “Memorandum of Understanding for the development of the Core Regional Transport Network” which created South East Europe Transport Observatory (SEETO) organization (SEETO, 2018). The goals of SEETO are development of extension of TEN-T (Trans European Transport Network is an EU programme which was established to support the construction and to upgrade the transport infrastructure across EU” (European Commission, 2018) Comprehensive Network to the WB, improvement and harmonizing of regional transport policies in accordance with EU regulations, maintenance of an effective and coordination and communication network, and integration of the extension of TEN-T Comprehensive Network to the WB in the framework of Trans European Network (SEETO, 2018).

In October 2005, WB and EU signed “The Energy Community Treaty” which created an internal energy market within WB and EU countries (European Commission, 2005).

Berlin Process of 2014 is another support from EU for WB6. The main goals of Berlin Process are to enhance cooperation between WB6 and to aid this region through its integration in EU (Berlin Process, 2018). According to Berlin Process of 2014, WB countries will annually participate in summits which will contribute in integration of WB6 in EU.

Transport Community Treaty signed in 2017 from EU and WB6 is a direct result of the Berlin Process which connects states of WB6 through an integrated transport system and at the same time it brings closer this region with EU (SEETO – Multi Annual Plan, 2018).
Despite the fact that WB6 has been moving forward in the field of infrastructure, this field faces significant gaps too, especially due to limited fiscal space for financing (Atoyan et al., 2018). Since EU has an enlargement strategy to the WB6, they provide financial support too for the investments. In the figures below are shown the share by source of funding in infrastructure investments in WB6 in total and by region.

Figure 1: Infrastructure Investments in WB6 – Total share by source of funding

![Figure 1: Infrastructure Investments in WB6 – Total share by source of funding](source: SEETO Multi Annual Development Plan 2018)

Figure 2: Infrastructure Investments in WB6 – Total Investments by regional participants by source of funding

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EU through its institutions and bodies also monitor reforms made by WB6. Energy Community Secretariat monitors and measures the achievements in the field of energy in WB6 which targets the
development of the electricity market in different areas like spot market development, cross-border balancing, regional capacity allocation and cross cutting measures (Energy Community Secretariat, 2018). Since the Berlin Process, reforms that improve energy sector have increased. In the figure below is shown the overall implementation of reforms in energy as in June 2018.

Figure 3: Overall implementation of reforms from WB6 in energy sector

![Bar chart showing overall implementation of reforms in WB6 energy sector](source: Energy Community Secretariat – WB6 Electricity Monitoring Report June 2018)

The figure shows that Montenegro and Serbia are making more progressive steps than other WB6 countries through energy developments and reforms. The figure also shows that in WB6 there is still room for improvements in this sector.

The transport mode that has dominant investments in WB6 is road transport mode (SEETO, 2017). Road transport mode seems to be an important part of infrastructure because it has the biggest impact in economic growth. Janjos et.al (2016), in their report presented data that road transport is the most used mode of transport in WB6 for trade exchange. From the fact the road transport is widely used, it is understandable why the main investments are made in this sector.

Figure 4: Total investments by WB6/ transport mode

![Bar chart showing total investments by transport mode in WB6](source: SEETO Investment Report 2017)

Another reason why the main investments in the transport of WB6 are made in road transport mode is the fact that through WB6 passes very important corridors and routes. An importance of the WB6’s road infrastructure lies in the fact that road investments in WB6 connect Austria to Greece (EEAS Europa, 2018). Was mentioned in the introduction part that single market is very important for EU, because it enables free movement of goods, people, services and capital (EUR-Lex, 2018), and this is easily achievable only with proper infrastructure investments. WB6 in order to join EU have to make infrastructure investments in accordance with EU directives and all these initiatives are made to have stabile economic development.
Infrastructure as one of the key sectors for development and integration has faced a lot of investments and transformations in WB6. There are still a lot of improvements to be done, but one is for sure what is invested in infrastructure of WB6 has brought this region closer to EU.

4. Infrastructure investments in Kosovo and their impact in economic development

Kosovo as a participant in all initiatives, summits and treaties for WB6, has been moving forward positively in order to fulfill requirements in accordance with EU directives. Kosovo has invested in proper projects which are part of important strategies of EU. According to SEETO (2017), in Kosovo 83% of the infrastructure investments are made in road transport. Also SEETO (2017), pointed out the fact that in Kosovo has been invested a total amount of 1.99 billion euros in extension of TEN-T Comprehensive Network projects and it is shown that 80% of this amount is invested in core projects. The main source of funding in Kosovo’s investments in road infrastructure is national budget with a share of approximately 68% (SEETO, 2017). SEETO Investment Report of 2017 suggests that Kosovo in the future can use International Financial Institutions loans to finance its investments.

Was mentioned above that road transport is the main investment category in all WB6 countries because it is widely used for trade (Janjos et.al 2016). The biggest road transport investments made in Kosovo are the building of R6 and R7 Highways. The R6 Highway connects capital Prishtina with Skopje (FYROM) and R7 Highway connects Prishtina with Tirana (Albania). Two routes are very important part of extension of TEN-T for WB6. Despite the fact that these routes represent an important hub in region, in Kosovo is ongoing a debate about the impact of these routes in economic development. Riinvest Institute & KFOS (2015), presented a study which examined with qualitative approach the outcomes of R6 and R7 Highways. Beside other aspects, the study examined the effects of these investments in employment. Riinvest Institute & KFOS (2015), pointed out that one of the reasons why Government of Kosovo built these highways was employment of people. The study argued that these jobs are important, but not stable because as soon as project ends, the employment ends too.

In the case of R7, Riinvest & KFOS (2015), also analyzed the effects of investment in foreign trade. They presented data for the trade exchanges between Kosovo and Albania for the years 2012-2014 which are shown in the table below.
Table 1: Trade Exchange between Kosovo & Albania (2012-2014)

<table>
<thead>
<tr>
<th></th>
<th>Export</th>
<th>Import</th>
<th>Trade Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>40,179,000 €</td>
<td>109,824,000 €</td>
<td>-69,645,000 €</td>
</tr>
<tr>
<td>2013</td>
<td>43,800,000 €</td>
<td>110,486,000 €</td>
<td>-66,686,000 €</td>
</tr>
<tr>
<td>2014</td>
<td>44,017,000 €</td>
<td>133,701,000 €</td>
<td>-89,684,000 €</td>
</tr>
</tbody>
</table>

Source: Riinvest Institute & KFOS (2015), Route 6: Highway Prishtina Skopje

According to Riinvest Institute & KFOS (2015), the table shows that R7 Highway did not bring the desired result for Kosovo. Those exports from Kosovo to Albania from 2012 to 2014 have increased for only 9%, while the imports have increased for 18% which result to an increase of trade deficit for 22% (Riinvest Institute & KFOS, 2015). An important part that the study of Riinvest Institute & KFOS (2015), mentioned is the fact that the R7 is widely used as an alternative route for trade exchange to Bosnia & Herzegovina, FYROM, Montenegro & Serbia. The study also pointed out that Kosovo would benefit a lot from the use of R7 for trade exchange when pay toll will be applied and by selling in oil, restaurant and hotel industries.

In the case of R6 Highway, even it is not yet finished the impact in trade exchange between Kosovo to FYROM remains unclear. Study of Riinvest Institute & KFOS (2015), pointed out that R6 may increase imports from Macedonia in Kosovo similar to the case of R7 with Albania, or according to the declined import trend from Kosovo to FYROM in the last years R6 would have a positive impact in increase of exports from Kosovo to FYROM. As long as this route is not yet finished is difficult to know its impact in economic growth.

The case of R6 and R7 Highways confirm the study of (Janjos et.al 2016), who argued that road transport in WB6 is widely used for trade exchange. These highways represent important routes of TEN-T extension for WB6, but it is too early to know their impact in Kosovo’s economic development. R6 is not finished at all and pay toll in these routes is not yet applicable, but in the future their impact may be great not just for Kosovo, but for the whole region.

Another important sector of infrastructure that has faced a lot of reforms and investments is energy sector. IEA & UNDP (2008), pointed out the fact that conflicts in ex-Yugoslavia have damaged a lot energy infrastructure in WB and the development of this sector would be beneficial for these countries and for EU at the same time. In the previous part were mentioned the energy treaties for WB6 that have aim to simulate cooperation between WB6 countries and WB countries with EU.

Kosovo and Albania are characterized as countries with small electricity markets and lack of generation and capacities, depended on electricity imports from other countries (KOSTT Newsletter, 2013). In Albania generation capacity is 100% hydro-based, which means that especially during dry season Albania face a lot of challenges generating electricity, in the other hand Kosovo’s main source of electricity generation is lignite powered which means that Kosovo face challenges during the snow season. Having in mind these parameters, these countries make a perfect match for establishment of a common market, beneficial for consumers of both countries and the whole region (KOSTT Newsletter 2013). To utilize, increase transmission capacities and improve safety, on 21th December, 2013 Kosovo and Albania signed the Contract for the Construction of a 400kV Interconnection Line (KOSTT Newsletter 2014). This project for the Kosovo part costed 33.5 million euros, of which 16.5 million euro were provided as a grant from German Government and 17 million euros were provided as a soft loan from KfW (KfW Bankengroup), (KOSTT Newsletter, 2014).

400kV interconnection line between Kosovo and Albania plays an important role in energy sector not just for these two countries, but for the whole region. Konxheli & Kadriu (2018), have presented the importance of this investment for the market integration of Kosovo with region and Europe. In their study authors mentioned above have showed the benefits of 400kV interconnection line between Kosovo and Albania according to the study of AECOM INC & USAID (2016). The aim of AECOM INC & USAID (2016), study was to present the establish the establishment of common market between Kosovo and Albania and to show the market
integration benefits. The figure below presents the comparison of the monthly average prices in Albania and Kosovo, before the market integration and post market integration as was presented in the study of AECOM INC & USAID (2016). The biggest benefit from the 400kV Interconnection Line between Kosovo and Albania as was presented on the study of AECOM INC & USAID (2018), lies in the fact that price differences in separate market are mostly disappeared in the common market case.

Figure 8: Comparison of separate markets and common market scenarios – monthly average prices in Kosovo and Albania

Source: AECOM INC & USAID (2016)- Albania and Kosovo common market study

The Construction of 400kV Interconnection Line between Kosovo and Albania started by the end of the year 2013 and has finished in the mid of the year 2016. Even this investment has finished from both sides, 400kV Interconnection Line between Kosovo and Albania is not launched yet due to political issues. As long as this paper is not focused in Kosovo’s political issues, it will not discuss furthermore this topic. It is important to show that this investment will have a great impact in economic development once it is launched.

5. Conclusions

WB6 countries Albania, Bosnia & Herzegovina, Former Yugoslav Republic of Macedonia, Kosovo Montenegro, and Serbia aim to join the EU. In order to have development and join EU, WB6 countries have to fulfill requirements and make a lot of reforms in the way they are organized. EU requirements include different areas and one of them is infrastructure. This study showed the impact of infrastructure investments in economic growth from the perspective of Kosovo, a potential candidate country to join EU. The literature about the linkage between infrastructure investments and economic growth is inconclusive. There are studies that found a positive linkage in this relationship, there are studies that found negative relationship and there are studies that do not find a link between infrastructure investments and economic growth.

Kosovo represents a specific case in the link between infrastructure investments and economic growth. Despite the fact that the main investments from the infrastructure are made according to EU directives, the impact of these investments in economic growth is not reliable. The building of R7 Highway did not bring the desired impact for Kosovo’s export and the R6 Highway impact is not defined yet because this investment is not yet finished. A positive fact about these highways is that are being used for trade exchange and a greater impact would happen after the launch of pay toll.

400kV interconnection line between Kosovo and Albania is one of the most important investments in the infrastructure of the whole WB6. It connects not just Kosovo with Albania, but it also connects WB6 with EU. This investment is not launched yet due to political issues. The reports that have studied its impact in economic development of Albania & Kosovo show a great link in this relationship.

Finally this paper concludes that infrastructure investments in Kosovo are very important for its gradual integration into EU and in a long time period this investments may have a great impact in economic growth.

References

29. Ramadani, M., 2013. Western Balkans Infrastructure Investment. Procedia Economics. 8, 135-140