THEORY AND PRACTICE OF
TRANSITION AND ACCESSION
TO THE EU

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ANDREJ KUMAR

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TRANSPORT INTEGRATION OF SEE COUNTRIES WITH THE EU

Heri Bezic1
Gordana Nikolic2

Key words: transport, transport integration, South East European region, European Union, economy situation, transport system.

ABSTRACT

Transport is the base of every modern economy and one of the primary factors of development. Although each of the transport system operates on the market principles, it is necessary to cautiously coordinate their development so it could in the most suitable way, satisfy the needs of some state’s or region’s economics. An adequate transport policy is necessary to determine links between the goals, the instruments and the subjects that will lead to the desired or optimal transport system structure.

Transport in the South East Europe region (as in other transition economies) has not yet received a substantial theoretical reflection, nor are all relevant factors that influence the development of transport being considered in practice. Given the positive impact that a developed transport system can have on a country’s economy, the role of transport in the economy of the South East Europe countries should be carefully examined, possibilities of future developments explored and consequently adequate solution offered.

1. INTRODUCTION

The development of transport networks in the South East Europe region, connected and compatible with the corresponding European internal networks and those of the neighboring candidate countries, is an important means of improving links within the region and integrating the countries of the area into the political and economic mainstream of Europe.

This paper focuses on the countries included in the Stabilization and Association Process, comprising Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia and Serbia and Montenegro. It takes account of the wish of these countries to participate in the process of European integration, as well as the need for them to engage in political and economic reform and regional co-operation.

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International economy and transport conditions like subjects in which countries of South East Europe exist as an independent and save region states, as a basic part of Europe, force the need for more intensive investments in the whole transport system, especially in multimodal transport infrastructure in the further period of economy and transport development.

Geographical-transport exposure of Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia and Serbia and Montenegro, their intensive integration in European and world’s transport and economy corridors, have to define a transport corridor that should valorize the advantage of their position in Europe. With correct and prompt linking of means of transport, in the end, can result with achievement geostatic and geographic valorizations of our area with higher safety.

For achieving the goal of South East European countries faster, inclusion into European traffic flows regarding this paper, the subject of research is: to explore and substantiate the relevant economy and transport system characteristics of South East European countries, and their influence on future development of adequate transport structure. The problem and subject of this research have determined a working hypothesis which is consistent cognition concerning relevant economy characteristics of South East European countries, stage of transport infrastructure development in that area and the opportunities given by Pan-European corridors. It is possible to point out the advantages raised in multi-modal transport realization by different transport branches.

The results of research have influenced on a theme model interpretation within five linked parts. Following the introduction, the second part (Overview of economy situation in South East European countries), exactly shows the international trade index and its implications on economic development; the third part (Analysis of transport infrastructure in South East European countries), gives the transport infrastructure grading; the fourth part (Pan-European Transport Corridors in the SEE Region), elaborates Corridors influences on transport integration; and the last part (Conclusion) gives the research result synthesis.

2. **OVERVIEW OF THE ECONOMY SITUATION IN SOUTH EAST EUROPEAN COUNTRIES**

The five countries of this region had a population of more than 25 million people, which is about 7% of the population on the European Union. They had an average Gross Domestic Product per capita of about €2,050, only about 11% of the EU figure. This shows the long way mat these countries have to go in order to reach an economic level, comparable to EU standards. An additional problem is the great differences in the level of development between the countries of the region. Per capita GDP is ranging from €890 in Albania to €5,000 in Croatia. The table 1 shows significant indicators for each country.

In 1997, a regional approach defined the political setting for relationship development and southeast European states cooperation. By expressing the possibility of an institutional cooperation (cooperation agreements) with the states of that particular
region (Albania, BiH, Macedonia, Croatia and SR Serbia & Montenegro), EU had set so called "conditionality policy"\(^3\) by which all conditions states have to meet are stated. Contract rules negotiations are set by meeting the conditions which combine democratic values, human rights protection, market economy reform, and especially for Croatia, BiH and SR Serbia & Montenegro rule is to comply the obligations undertook by Dayton or Erdut agreement as well as by BiH peace enforcement Council.

In May 1999, the council suggested a regional approach modification by stabilization and joining process for states of this region by which current EU policy towards the region is promoted. The process anticipates signing the Stabilization and joining agreement which goal is to make these region countries stabile by putting them closer to European integrations. The union confirms its willingness to give these region countries a chance for complete integration in its structure and a chance for membership based on Copenhagen criteria complying.

The Agreements regulate political, economical and trading relationships, and is to enable setting up the free trade zone, customs union, and including into unique European market. Also, a base for economic, political, diplomatic, humanitarian and army cooperation is to be set, as well as the cooperation regarding justice system and interstate affairs, cultural, technological, scientific and other forms of cooperation. Basic indexes for Albania, BiH, Macedonia, SR Serbia & Montenegro and Croatia are shown in the table:

**Table 1 The Basic Economic Facts of South East European Countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP Rates of increase %</th>
<th>Inflation %</th>
<th>Unemployment %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>8</td>
<td>7.3</td>
<td>8</td>
</tr>
<tr>
<td>Croatia</td>
<td>2.5</td>
<td>-0.4</td>
<td>3.7</td>
</tr>
<tr>
<td>BiH</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>FYROM</td>
<td>2.9</td>
<td>2.7</td>
<td>5.1</td>
</tr>
<tr>
<td>Serbia&amp;Montenegro</td>
<td>2.5</td>
<td>-19.3</td>
<td>10</td>
</tr>
</tbody>
</table>


As obvious, the table shows strong transition economic growth is accompanied by a great inflation (Serbia and Montenegro – 115.1%), as a result of great chronic macroeconomic imbalances. Stronger GDP economic growth has not improved the labor market situation, so the unemployment rate in all countries had been growing, since 1998 till now, as a result of a continuous microeconomic reconstruction and rationalization process, where general trends for dealing with the labor forces surplus

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\(^3\) <http://www.mvp.hr> 24.01.2002.
and investing into modern and more efficient technologies are general solution trends for problems stated, but had not led towards creating new working posts, at least not short-term. These countries’ commodity exchange with the EU, are shown in the next table:

**Table 2 EU Exchange with BiH and Macedonia, 2000**

<table>
<thead>
<tr>
<th>EU IMPORT</th>
<th>Products</th>
<th>BiH</th>
<th>Value</th>
<th>%</th>
<th>Macedonia</th>
<th>Value</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agricultural products</td>
<td>93</td>
<td>0,12</td>
<td></td>
<td>69</td>
<td>0,1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Energy</td>
<td>0</td>
<td>0,00</td>
<td></td>
<td>0</td>
<td>0,0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Machines</td>
<td>20</td>
<td>0,01</td>
<td></td>
<td>23</td>
<td>0,01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Means of transport</td>
<td>10</td>
<td>0,01</td>
<td></td>
<td>62</td>
<td>0,06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemical products</td>
<td>6</td>
<td>0,01</td>
<td></td>
<td>3</td>
<td>0,00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Textile and clothing</td>
<td>101</td>
<td>0,15</td>
<td></td>
<td>258</td>
<td>0,4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EU EXPORT</th>
<th>Products</th>
<th>BiH</th>
<th>Value</th>
<th>%</th>
<th>Macedonia</th>
<th>Value</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agricultural products</td>
<td>192</td>
<td>0,32</td>
<td></td>
<td>135</td>
<td>0,2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Energy</td>
<td>25</td>
<td>0,08</td>
<td></td>
<td>262</td>
<td>0,9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Machines</td>
<td>230</td>
<td>0,08</td>
<td></td>
<td>182</td>
<td>0,1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Means of transport</td>
<td>134</td>
<td>0,09</td>
<td></td>
<td>198</td>
<td>0,1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemical products</td>
<td>92</td>
<td>0,07</td>
<td></td>
<td>83</td>
<td>0,1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Textile and clothing</td>
<td>99</td>
<td>0,25</td>
<td></td>
<td>201</td>
<td>0,5</td>
<td></td>
</tr>
</tbody>
</table>


This table shows the deficit of commodity exchange, since both countries are still a EU export market. Only the textile and clothing market surplus is visible, so one can state that both countries have competitive advantages concerning this industry, most likely because of low labor costs.

Data shows that these regional countries are on a recovery path concerning their economic aspects, in regard to political and war crisis in the last decade. The union, in purpose of a faster crisis overcoming and goal achievement of Stabilization and joining process has announced a new help programme for regional countries, named CARA. The programme would be focused on three main areas: public institutions and administration development for better democratic and lawful conditions, reconstruction and development as well as the economic reform and regional cooperation. The aid is to be given trough national and regional programs, and a shape and amount will depend upon willingness of the countries for enforcing these reforms. For the period from 2000-2006, EU will put aside approximately 5.5 billion euro, mostly for the reconstruction and regional cooperation.⁴

On a global scale, Croatia belongs to a group of small, open economies. The necessity of including Croatia into integration processes, and the interest Croatia has for bondage

with EU is perfectly clear: advanced international cooperation by commodity and services movement liberalization, as well as creating conditions for foreign capital inflow.

Commodity exchange by states shows powerful orientation of Croatian economy towards the EU market. That is the consequence of favourable changes of trade Croatian products treatment by members of EU and recently signed agreements, but also of insufficient relationship recovery concerning traditional market of narrow region. In the group of the rest European countries, the biggest part of exchange is with Russia and Bosnia and Herzegovina (approximately 76%), as for non-European countries, biggest ones are USA and Japan. Almost 86% of commodity exchange concerning previous year has been done with European countries. Regarding the country graduations, far biggest part of Croatian commodity trading goes to European Union countries, 55%, while on the CEFTA countries as well as on the rest of the world goes approximate share of 14% each. Table 1 gives the interpretation of Croatian commodity exchange for 2001, grouped by countries.

**Table 3 Croatian Commodity Exchange in 2000 and 2001 Grouped by Countries**

<table>
<thead>
<tr>
<th>Country integration</th>
<th>Export</th>
<th>Import</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mil. USD</td>
<td>%</td>
<td>mil. USD</td>
</tr>
<tr>
<td>EU Countries</td>
<td>2.547</td>
<td>54.7</td>
<td>5.061</td>
</tr>
<tr>
<td>EFTA Countries</td>
<td>49</td>
<td>1.1</td>
<td>193</td>
</tr>
<tr>
<td>CEFTA Countries</td>
<td>566</td>
<td>12.1</td>
<td>1.420</td>
</tr>
<tr>
<td>Other European countries</td>
<td>933</td>
<td>20.0</td>
<td>933</td>
</tr>
<tr>
<td>Rest of the world</td>
<td>564</td>
<td>12.1</td>
<td>1437</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4.659</td>
<td>100</td>
<td>9.044</td>
</tr>
</tbody>
</table>


After Croatian commodity exchange for 2001, grouped by countries table, next table shows the most important trading partners for Croatia, individually:
Table 4 Ten Biggest Croatian Trading Partners for 2001 by Total Value

<table>
<thead>
<tr>
<th>Num.</th>
<th>STATE</th>
<th>Export Mil. USD</th>
<th>Export %</th>
<th>Import Mil. USD</th>
<th>Import %</th>
<th>Total Mil. USD</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Italy</td>
<td>1.10423.7</td>
<td></td>
<td>1.52416.8</td>
<td></td>
<td>2.62819.2</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Germany</td>
<td>68914.8</td>
<td></td>
<td>1.54717.1</td>
<td></td>
<td>2.23616.3</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Slovenia</td>
<td>4269.1</td>
<td></td>
<td>7127.9</td>
<td></td>
<td>1.1388.3</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Austria</td>
<td>2685.8</td>
<td></td>
<td>6317.0</td>
<td></td>
<td>8996.6</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Russia</td>
<td>831.8</td>
<td></td>
<td>6547.2</td>
<td></td>
<td>7375.4</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Bosnia and Herzegovina</td>
<td>56012.0</td>
<td></td>
<td>1271.4</td>
<td></td>
<td>6875.0</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>France</td>
<td>1362.9</td>
<td></td>
<td>3984.4</td>
<td></td>
<td>5343.9</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>USA</td>
<td>1072.3</td>
<td></td>
<td>2973.2</td>
<td></td>
<td>4042.9</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Great Britain</td>
<td>671.4</td>
<td></td>
<td>2262.5</td>
<td></td>
<td>2932.1</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Hungary</td>
<td>571.2</td>
<td></td>
<td>2382.6</td>
<td></td>
<td>2952.2</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Other countries</td>
<td>1.16224.9</td>
<td></td>
<td>2.69029.7</td>
<td></td>
<td>3.85228.1</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>4.659100</td>
<td></td>
<td>9.044100</td>
<td></td>
<td>13.703100</td>
<td></td>
</tr>
</tbody>
</table>


This rating chart has been unchanged with regard to the previous year. The exchange with the first ten countries sums up to $13.7 million - 72% of total Croatian exchange with the world; 50% of exchange is with the first four countries. Besides Bosnia and Herzegovina, Croatia has a negative trading balance with all other nine partners. The first ten partners represent 65% of Croatian commodity exchange deficit, which means that export is covered by import with 55%.

Croatia has the largest commodity exchange with Italy, which sums up to $2.6 million - 19.2% of total exchange. Croatia has exported the value of $ 1.1 million to Italy - 12% more than the previous year. At the same time, import from Italy has summed to $1.5 million and has increased by 16%. The exchange with Germany is $2.2 million, 16% of total exchange, and the export is $689 mil. That is a 9% increment regarding the previous year, while the import, $1.5 million is 19% higher. In spite of diminished export by 11%, and import by 14% higher, Slovenia is still the third Croatian trading partner. The situation is similar with Austria, the fourth, where Croatian export has decreased by 8%, and import from Austria has risen by 19%. Next ones are Russia (primary because of oil import), Bosnia and Herzegovina, France, USA, Hungary and Great Britain.
3. ANALYSIS OF TRANSPORT INFRASTRUCTURE IN SOUTH EAST EUROPEAN COUNTRIES

Transport in South East European Countries has just recently reached its expansion phase. Construction of few main roads, reconstruction of railway tracks, as the return of cargo into Croatian sea harbours identifies the need for introduction and affirmation of transport integration networks. Transport integration could be made by organization of multi-modal transport network.

Unlike the conventional, classical transport, international multi-modal transport cannot exist as a single, independent transport form, but only as a complex system in its surrounding. By internationalizing economy subjects businesses concerning transport, a faster inclusion into international transport and economy flows shall be enabled. Multi-modal transport as a modern way of merchandise transport, successfully bonds almost every branch of transport (means) and modern transport technologies on international transport corridors. Modern social and economy development of each country is tightly bonded with the development of its traffic movements. Transport flows modernization is regarded as an inevitable demand brought up by time and future needs.

3.1. Traffic Infrastructure in SEE Countries

More particularly in the various modes of transport the situation is as follows:

Roads
Road endowment, in the region is significant, although not reaching the typical levels of the European Union. In all five countries, road networks are relatively extensive, albeit density and quality are quite different. Primary and secondary roads amount to
some 57000 km. There are 1008 km of motorways (two-by-two lane divided highways) concentrated in Croatia, the Federal Republic of Serbia & Montenegro and the Former Yugoslav Republic of Macedonia. The state of the network is very uneven, although in general it shows a serious lack of periodic and current maintenance. The maintenance problem is becoming particularly acute in certain cases.

Railway
The railway network of the region consists of some 9 000 km of lines, of which only 612 km have double track and 3 333 km (37%) are electrified. Network densities are low for Albania, Bosnia-Herzegovina and the Former Yugoslav Republic of Macedonia. The main route of the region, the Trans-Yugoslav Railway (Corridor X) is, at present, interrupted for long-distance traffic.

Seaports and waterways
The countries of South East Europe have outlets to the Adriatic Sea via major ports in Rijeka, Split, Ploče and Dubrovnik in Croatia, Bar in the Federal Republic of Serbia & Montenegro and Durres in Albania. These ports are generally significant for hydrocarbons and other bulk commodities, although container traffic is gradually being developed. Croatia has the biggest commercial maritime traffic (40 million tons) in the region.

The situation obviously differs according to each country, because of their respective potentials and historical development, also because they entered into the process of transition at different times and were not affected in the same way by the recent political crisis in the region.

During the last ten years, reforms oriented towards the establishment of a market economy and the strengthening of institutions has been introduced in all countries of the region. While the starting points and present situation differs considerably from country to country, it is obvious that major gains would be achieved through increased regional co-operation. Improving transport and energy infrastructure in the region and integrating the countries of South Eastern Europe to the rest of Europe is important in order to support better quality of life through economic growth, regional integration, social cohesion and adequate environmental conditions. In this context, conditions for improvement of the situation would include:

- Rapid progress in the reform process at the national level, notably through the introduction of market mechanisms;
- Modern operating practices and sound infrastructure financing and management;
- Strengthening of institutions through improved legislative and regulatory frameworks; restructuring of the sectors, including the eventual privatizations of some assets;
- Introduction of new technologies;
- The Stabilization and Association process should provide the necessary guidance for the reform process and the progressive adoption of EU standards and policies for infrastructure development, including environmental, social and safety policies.
3.2. Croatian Transport Infrastructure Analysis

After ex-Serbia & Montenegro fell apart, Croatian international transport, previously done by the transport corridor Ljubljana-Zagreb-Beograd, has been altered to V.corridor Hungary-Zagreb-Rijeka. Insufficient investments and bad infrastructure shape concernably diminishes transport on that corridor. Croatian transport infrastructure is generally below European standards. That includes roads, railways and airports. Demolished bridges on the Danube and the Sava still interrupt road and railway transport and land navigation.

Croatian railways sum up to less than a one third of transport they had in the 1990’s. Service quality is unsatisfactory at almost the entire area of existing railways. As an exception to this there is only one part of railways that belongs to X. pan European corridor. Numerous speed limitations are the result of the unsatisfactory maintenance or aged signal-safety and telecommunication devices. Development of Croatian railways is far behind European Union countries, and greater part of railways is even behind Eastern European countries. This underdevelopment is especially visible concerning electrification of railways and dual-gage railway. Maximal speed that can be driven at only 13% of railways is 100 km/h, while at the almost 43% of railways maximal allowed speed is 60 km/h. The only exception is the railway speed between Novska and Vinkovci, dual-gage railway, electrificated and allows speed of 160 km/h. The table shows length and thickness railways comparison within Croatia territory and European Union countries as well as with the Middle East Europe.

Investments in roads have been six times greater than those in railways, regarding the last decades, but still no road or railway infrastructures are developed, as they should have been, especially concerning quality. By partial building planned highways, and further plans of building new and renewing current roads, Croatian road transport should get closer to European road system easier and faster. But, the current situation is still far behind. Road thickness is approximately 70% compared to European Union. The Croatian road network quality is not satisfactory for the same reason as it is not satisfactory regarding railways, which is insufficient investment into maintenance, which affects the safety aspect of road transport.

Croatia has its coast on the Adriatic Sea and its main harbours are: Rijeka, Zadar, Split, Ploče and Dubrovnik, along with the largest conventional transport (40 mil. tonnes) in the region of southeast Europe. It is realistic to expect that there shall be an orientation on to travel and freight harbours among these five. Concerning geographic position, and the background of these harbours, Rijeka and Ploče should be developed as freight harbours and Zadar, Split and Dubrovnik as travel ones.

Total length of Croatian inland waters is 936 km, on which there are different sales conditions. On certain parts of the rivers only boats up to 1.500 tons are allowed, and on some only up to 400 tons. According to international categorization, the fourth international category of inland waterway for boats up to 1.500 tones in Croatia, has the river Dunabe at its total length in Croatia of 137.5 km and the river Drava to Osijek, 14 km in length. The third category, up to 1.000 tons has the Sava to Jasenovac.
The second category up to 650 tones has the Sava to Sisak, and the first category up to 400 tones has the Sava to Zagreb a total length of 446 km.

Croatian air transport has been growing during the last years, which had a modernization and reconstruction of an air transport infrastructure as a consequence. Seven airports have takeoff–landing path that can accept conventional airplanes almost without limitations.

4. PAN-EUROPEAN TRANSPORT CORRIDORS IN THE SEE REGION

It is not accidental that traffic and networks have been a main topic of discussions and decisions at all levels of European integration. The European Union has given its approval for creation of a European Transportation Network. In the meantime, a few Pan-European Forums of Transport and Transport infrastructure were held in cooperation with the EU, wherein ten Pan-European axes were adopted initially. Five of them are directly related to southeast Europe. Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia and Serbia and Montenegro have covered by V, VII, VIII, X Pan-European Corridor, and Bulgaria and Rumania by IV Pan-European Corridor.

4.1. V. Pan – European Corridor Characteristics

The fifth corridor is a multi-modal transport link running from the south-western Europe, Italy, towards north-eastern Europe in the Ukraine. Main corridor V. line links Trieste and Venice (Italy) via Ljubljana (Slovenia) and Budapest (Hungary) with Lviv and Kiev (Ukraine). Along with the main corridor V. link there are three branch links, which lead towards Adriatic harbours, and one branch to connect Corridor V with Corridor IV in Bratislava.

In Slovenia one branch links the port of Koper with Corridor V in Divaca. In Budapest (Hungary) the Corridor splits into two branches, one of them goes to Rijeka (Croatia) and other via Sarajevo (Bosnia-Herzegovina) to the Croatian port of Plce to be connected with the Corridor V. Map 1. shows territory covered by this corridor.
Technical Corridor V. characteristics could be shown in another manner:

<table>
<thead>
<tr>
<th>States interested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosnia and Herzegovina, Croatia,</td>
</tr>
<tr>
<td>Italy, Hungary, Ukraine, Slovakia</td>
</tr>
<tr>
<td>and Slovenia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Means of transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>railway, road, air and waterways</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approximate corridor length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railway 3270 km</td>
</tr>
<tr>
<td>Road 2850 km</td>
</tr>
<tr>
<td>Inland water ways</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>Airports number</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>Sea and river ports number(^5)</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

\(^5\) Only country which are include in TINA program.
Alignment:

• **Venice – Trieste/Koper - Ljubljana -Budapest - Uzgorod – Lvov - Kiev**
  
  **Railway**
  
  **Road**

• **Branch from Koper**
  
  **Railway**
  - Koper - Divaca
  
  **Road**
  - Koper - Ankaran - Kozina – Divaca

• **Branch from Rijeka**
  
  **Railway**
  - Rijeka - Karlovac - Zagreb - Gyekenyes -Kaposvar - Dombovar - Pincehely - Budapest
  
  **Road**
  - Rijeka - Karlovac - Zagreb - Varazdin -Letenye – Becsehely

• **Branch from Ploce**
  
  **Railway**
  - Ploce - Mostar - Sarajevo - Zenica - Osijek -Magyarboly - Pecs - Dombovar
  
  **Road**
  - Ploce - Mostar - Sarajevo - Zenica - Osijek -Udvar - Mohacs - Dunjauvaros – Budapest

• **Branch from Bratislava**
  
  **Railway**
  - Bratislava - Leopoldov - Puchov - Zilina -Poprad - Kosice - Cierna n/T. - Cop
  
  **Road**
  - Bratislava - Horna Streda - Trencin - Zilina -Martin - Poprad - Presov - Kosice - Dargov -Zahor – Uzgorod

Multimodal transport and logistics are beginning to appear as main issues concerning Corridor V. construction and development. Understanding memorandum signed 16. December 1996 by all parties interested, was not signed by Croatia. A traffic connection understanding between Trieste and Rijeka could not be reached. There is a strong Adriatic ports competition about the ports and land terminals, which are playing a main role in Corridor V development. Within this corridor three largest Adriatic ports are positioned: Trieste, Koper and Rijeka. The highest level of traffic is done trough Trieste, followed by Rijeka and Koper. The corridor includes port Ploce and land port Zahony, which is concerned to be a largest land transfer European port.

It is estimated that Corridor V construction and reconstruction costs by the year of 2015 will reach about €13 million. The following table shows expenses with railway and road traffic by states of Corridor V.
Table 5 Costs Estimated for Corridor V by States, Divided by Railway and Road Transport

<table>
<thead>
<tr>
<th>State</th>
<th>Railway (€ million)</th>
<th>Road (€ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>200</td>
<td>-</td>
</tr>
<tr>
<td>Slovenia</td>
<td>2,334</td>
<td>1,747</td>
</tr>
<tr>
<td>Hungary</td>
<td>1,695</td>
<td>2,950</td>
</tr>
<tr>
<td>Ukraine</td>
<td>/</td>
<td>61</td>
</tr>
<tr>
<td>Slovakia</td>
<td>1,142</td>
<td>2,949</td>
</tr>
<tr>
<td>Croatia</td>
<td>300</td>
<td>/</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Total</td>
<td>5,671</td>
<td>7,707</td>
</tr>
</tbody>
</table>


The railway throughout the corridor has a weak technical standard and demands to be modernized and upgraded. Only 40 per cent of the corridor length is double – tracked and only 60 per cent allows 100 km/h speeds. Modernization railway plans are continued in spite the fact that the railway corridor is still under exploited. Railway connection between Venice and Zagreb and forward towards Budapest already exists. Slovenia and Hungary are planning a direct line establishment and Italy wishes to develop a more efficient railway connection between Venice and Ljubljana, via Trieste.

Road conditions are in most cases satisfactory or good. In some states, such as Slovenia, Slovakia, Croatia and Hungary, most parts of highway are already in use, and as for the other parts, plans already exist. Elsewhere, improvements are being planned, which will be greatly dependent upon finding appropriate finance recourses.

The traffic infrastructure state in the states through which Corridor V goes could in short be described as:

- **BOSNIA AND HERZEGOVINA** – The traffic infrastructure state in Bosnia and Herzegovina is:

**Railway:** The railway corridor goes from Croatia – Bosnian and Herzegovina border (Bosanski Samac), via Zenica, Sarajevo and Mostar up to the Bosnia and Herzegovina - Croatian border (Capljina). The branch that goes from Sarajevo via Zenica to Doboj had been renovated in 1998.

**Roads:** The road branch, 435 km length, goes from Croatia – Bosnian and Herzegovina border (Bosanski Samac), to the Bosnia and Herzegovina – Croatian border (Metkovic). Total length is a class one road. Reconstruction of a part north from

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Sarajevo is on going and should be finished until 2003. The part from Sarajevo towards Metkovic is a long-term project. If finances are to be ensured, there are plans to build that highway.

- **CROATIA** – The traffic infrastructure state is:

  **Railway:** The branch that goes from Rijeka, via Zagreb and Gyekenesa to Budapest is a single-track railway, except on a part from Zagreb – Dugo selo. The second branch goes from the Hungarian – Croatian state border (Magyaboly) and via Osijek goes into Bosnia and Herzegovina (at Bosanski Samac). It enters Croatia at Metkovic and finishes in Ploce. It is a single-track railway, which will be modernized.

  **Roads:** One part of a road Corridor, 284 km length, starts in Rijeka, via Karlovac and Zagreb and finishes at the Croatian – Hungarian border (Letenye). This branch either already is under highway (Rijeka – Kupjak, Karlovac – Zagreb), or is planned to be built. The second part, 141 km total length, starts at a Croatia – Hungarian border (Udvar) and via Osijek enters Bosnia and Herzegovina (at Bosanski Samac). It enters Croatia at Metkovic and finishes in Ploce. The total length is a first class road, and there are ongoing plans for speed road building.

**4.2. VII Pan – European Corridor Characteristics**

The Danube is the second longest river in Europe and represents the main inland waterway transport Corridor linking Western and Eastern Europe through the Rhine, the Main and the Rhine-Main-Danube canal. It connects the North Sea with the Black Sea crossing the countries of Germany, Austria, Slovakia, Hungary, Croatia, Serbia & Montenegro, Romania, Bulgaria, Moldova and the Ukraine. Corridor VII also refers to the relevant port infrastructures and to the Black Sea-Danube Canal.

The corridor VII length is 2.415 km, and includes 44 sea and river ports. Up until year 2015, it is anticipated that an investment of €657 million will be made in Corridor VII. Concerning that, year 1999,, "Phare multi Country Transport Programme had financed a "Enhancement in navigation study on Danube in Bulgaria and Romania". Having in mind the necessity for ecological protection, the European Union has declared a goal, which is to point traffic towards less toxic means of transport such as inland waterways transport. In 1992., a Rhine-Main-Danube canal opened, which connects river Danube with river Main and onward with commercial waterways of Western Europe. Shortly after the opening, cargo volumes grew in spite of existing problems, but currently, the passage through Serbia & Montenegro is un navigable, in regard to NATO bombing in 1999. Danube navigation and the freedom of shipping are regulated by international agreements: the principle of free navigation on the Danube for all states was included in the peace Treaty of Paris in 1856 after the War of Krim.
The most important shipping parameters hindering the economic use of the river, as an inland waterway is the depth and the width of the fairway. The free height under bridges is another critical factor. Natural conditions such as currents, fog and ice are of secondary significance. The three working groups, which have been established under the Steering Committee, are: Infrastructure (chaired by Romania), operation (chaired by Austria) and fleet (chaired by Hungary). The working group on infrastructure deals with port infrastructure and navigational infrastructure. When dealing with infrastructure it is important to respect the intermodality of the Corridor. The working group on operations covers the management of future traffic, costs of transport and logistics, but also the efficiency and quality of service including administrative obstacles. The working group on fleet deals with the development of characteristics of the Danube fleet size and ship types, and their inter-operability with the fleet of Rhine and Dnjepr. On the basis of information concerning potential cargo flows and traffic prognoses, waterway and port infrastructure conditions, evaluation of sufficiency of the Danube fleet in terms of structure and ship characteristics is done.
The interlink of the major water axis on Danube with other railway/road corridors is very important to ensure the intermodal inter-connectivity of the overall network. Most of the ports along the Danube have rail connections as well as road connections, thus making them an attractive mode for combined transport. The main inland ports connecting Corridor IV are: Budapest and Medgidia; with Corridor V: Bratislava, Budapest, Dunaujvaros and Mohacs; with Corridor VI: Oltenita, Giurgiu and Rousse; with Corridor X: Budapest, Belgrade and Novi Sad. In addition there is seaport Constanta, lying at the mouth of the Danube-Black Sea Canal.

4.3. VIII. Pan – European Corridor Characteristics

Corridor VIII is a multi-modal transport link from East to West in South-Eastern Europe, linking the Pan-European Transport Area Adriatic-Ionian Sea with the Black Sea Pan - European Transport Area. The Corridor starts at the port of Durrës (Albania), runs via Tirana (Albania) and Skopje (FYR Macedonia), further to Sofia (Bulgaria) and to the Bulgarian ports Burgas and Varna at the Black Sea.

The Corridor was not affected by any adjustments at the Helsinki Conference in 1997. However, Corridor X, as agreed upon in Helsinki being a new link between Austria to Greece with several side alignments, as well as Corridor IV, on the section of Sofia – Plovdiv, had integrated Corridor VIII into the core links of the Pan – European Transport Corridors. Interested countries are considering new connections to Italian ports and to the Trans-European Network at Greek borders. In the draft Memorandum of Understanding the alignment reads as follows: Bari/Brindisi – Dürres/Vlore – Tirana - Popgradec – Skopje – Sofija – Plovdiv – Burgas – Varna; and a branch from Popgradec to Kapstiche/Kristallopigi at the Albanian/FYR Macedonia border which has to be connected to the Trans-European Transport Network. (See Map 3)

A draft Memorandum of Understanding for the development of the corridor has been elaborated under Italian leadership. Through the linkage of Corridor VIII to Corridor IV it has been possible to involve the participation of both Greece and Turkey. A railway-working group was set up in May 1997, under the chairmanship of Bulgarian Railways (BDZ). The draft cooperation agreement between the railways still has to be signed. Under the stability pact for southeast Europe there are actual funding possibilities, which could be used for the rail link from Skopje towards Bulgaria. A railway link is interrupted in two sections in Albania and FYR Macedonia. Approximately 80 km of rail track have to be built in the mountains and in a difficult accessible region. There are a number of transport bottlenecks on the corridor such as missing links on the railways and poor road conditions.
Current traffic levels are not high enough to justify major transport infrastructure projects in the near future. It is essential that infrastructure policy in Albania, FYR Macedonia and Bulgaria is co-ordinated. Short and medium term transport policy should aim to achieve the following objectives:

- Improved maintenance of existing road infrastructure and elimination of corridor bottlenecks, particularly in Albania;
- Development of the port of Durres in terms of capacity and commercial practices;
- Completion of the rail link between FYR Macedonia and Bulgaria;
- Provision of a rail connection between FYR Macedonia and Albania when justified on sound economic grounds.

**ALBANIA**

**Rail:** The rail corridor extends from Tirana to Durres and further to the Albanian/FYR Macedonia border. Mostly consisting of single track line with some double track sections, the average maximum speeds are low, being 30-40 km/h. Track conditions are poor and rails and sleepers are up to 40 years old. Work stated on the reconstruction of the line between Durres and Lin (138 km) and should be completed in 2000.

**Road:** The road corridor runs from Durres to Tirana and further to the Albanian/FYR Macedonia border (Qafe Thane). It has length of 145 km. The total length will be rehabilitated; the planned start of construction is in 1999.
FYR MACEDONIA

Rail: There is no continuous east-west rail link in FYR Macedonia. In particular, the section between Albania and FYR Macedonia, a total distance of 65 km, and the section between FYR Macedonia and Bulgaria, a total distance of 55 km, are missing. The rail section from Beljakovce to the Bulgarian border will be newly constructed; the problem is the lack of financing means.

Road: The road corridor runs from the FYR Macedonia/Albanian border (Struga) to Skopje to the FYR Macedonia/Bulgarian border (Devebair). The road section to Kumanovo – Devebair is being rehabilitated. The construction of a dual carriageway road on the section Struga – Kicevo is a long-term project.

4.4. X Pan – European Corridor Characteristics

Corridor X is the youngest of the Pan-European Transport Corridors. The Helsinki Conference decided to include this Corridor in the Balkan area into the network of the Pan-European Transport Corridors. Corridor X is a multi-modal transport link running from the Northwest to South – East. It connects Salzburg (Austria) via Ljubljana (Slovenia), Zagreb (Croatia), Beograd (FR Serbia & Montenegro), Skopje (FY Macedonia) with Thessalonica (Greece). Besides this main link there are the following four additional branches:

- A branch from Graz (Austria) via Maribor (Slovenia) to Zagreb (Croatia)
- A branch from Budapest (Hungary) to Beograd (FY Serbia & Montenegro)
- A branch from Nis to Sofia and further on Corridor IV to Istanbul
- A branch from Veles (FY Macedonia) via Florina (Greece) to the Via Egnatia.

On the governmental level, Greece took on the task to organize meetings, inviting all parties involved, in view of preparing a Memorandum of Understanding by the Ministers of Transport. The first Pre-Steering Committee meeting took place in Thessaloniki, Greece, in November 1998, where the participants agreed on a draft Memorandum of Understanding. The second Meeting of the Pre-Steering Committee was held in Thessaloniki, on 26 November 1999. Due to the politically difficult situation prevailing on the region, the signing of the Memorandum of Understanding was postponed to a later date. Under the chairmanship of the Hellenic Republic a technical secretariat was set up in Thessalonica. The technical secretariat will assist the Steering Committee in carrying out its functions in accordance with the Memorandum of Understanding, as it stands today, in the period until July 2001. The railway companies have organized several meetings under the chairmanship of the Austrian Railways, who have set up a Corridor Management headquarter in Vienna. In May 1998, an agreement of the railways participating or interested in the promotion, modernization, reconstructing and development of railway traffic on Corridor X was signed. The Hellenic Railways have funded a study on the prospects for passenger and freight traffic, which proposes a two-phase action plan to develop the corridor. The war in Kosovo and its consequences have restricted progress to limited sections of the Corridor. Map 4 shows a land all Pan-European Corridors cover.
In September 1999, a conference on transport corridors in the area of Bosnia and Herzegovina was held in Sarajevo, to discuss the new situation at the end of the Kosovo crisis. A proposal was made to introduce a new element for an extension of Corridor X from Zagreb via Sarajevo to Montenegro and FY Macedonia. Technical features of Corridor X.  

**Concerned countries:** Austria, Bulgaria, Croatia, Macedonia, Greece, Hungary, Slovenia, Serbia & Montenegro

**Transport modes:** railways, road, aviation, navigation

**Approx. corridor length:**
- Railways: 2360 km
- Roads: 2150 km

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Inland waterways /  
Number of airports 4  
Number of Sea and River ports\(^8\) 1  

Alignment of Corridor X:  
- **Salzburg – Ljubljana – Zagreb – Beograd – Nis - Skopje – Veles- Solun**  
- **Railway**  
  Salzburg - Villach - Jesenice - Ljubljana -Zidani Most - Dobova - Zagreb - Novska -Vinkovci - Beograd - Nis - Skopje - Veles -Thessaloniki  
- **Road**  
  Salzburg - Villach - Karavanke - Ljubljana -Bic - Krška Ves - Obrezje - Zagreb - Beograd - Nis - Skopje - Gradsko - Solun  
- **Branch from Graz**  
  - **Railway**  
    Graz - Sentilj - Maribor - Zidani Most  
  - **Road**  
  - **Branch from Budapest**  
  - **Railway**  
    Budapest - Kunszentmiklos -Tass - Kelebia -Novi Sad - Beograd  
  - **Road**  
  - **Branch to Sofia (Istanbul)**  
  - **Railway**  
    Nis - Dimitrovgrad - Kalotina - Sofija  
  - **Road**  
  - **Branch to Florina (Via Egnatia)**  
  - **Railway**  
    Veles - Bitola - Florina  
  - **Road**  
  
  It is estimated that the costs of reconstruction and development of Corridor X till 2015, will reach approximately € 1.8 million. The following table shows expenses for railway and road traffic by countries Corridor X goes through.  

<table>
<thead>
<tr>
<th>Country</th>
<th>Railway (€ million)</th>
<th>Roads (€ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Slovenia</td>
<td>567</td>
<td>312</td>
</tr>
<tr>
<td>Croatia</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Hungary</td>
<td>406</td>
<td>380</td>
</tr>
<tr>
<td>Serbia &amp; Montenegro</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>80</td>
<td>45</td>
</tr>
<tr>
<td>FYR Macedonia</td>
<td>47</td>
<td>/</td>
</tr>
</tbody>
</table>

\(^8\) Only for states included in TINA.
Infrasctructures changes by countries Corridor X goes trough could shortly be described as:

- **SERBIA & MONTENEGRO** – The state of infrastructure changes:

  **Railway:** The railway goes from Tovarnik on Serbia & Montenegro – Croatian border via Sid, Beograd and Nis to Presevo on Serbia & Montenegro – FYR Macedonian border, total length of 536 km. On that part modernization, electrification and double railway is planned by the year 2010. Section B from Subtica (Serbia & Montenegro – Hungarian border) via Novi Sad to Beograd, total length 183 km is a single-track railway which by the year 2010. should be replaced by double track railway. Section C from Nis to Dimitrovgrad (Serbia & Montenegro – Bulgarian border) total length 104 km is also a single track railway at which electrification and improvements are planned by the year 2005.

  **Road:** Roads start at Serbia & Montenegro – Croatian border and via Beograd and Nis are continued to Sopot (Serbia & Montenegro – Macedonian) border, total length 483 km. Part of Section B from Subotica to Beograd is 205 km long and part of Section C from Nis to Dimitrovgrad (Serbia & Montenegro – Bulgarian border) is 98 km long.

- **MACEDONIA** – The state of infrastructure changes:

  **Railway:** Railway goes from Macedonia – Serbia & Montenegro border (Tabanovac) via Skopje and Veles, to Gevgelij at Macedonian – Greek border, length of 216 km (single track railway). Section D from Veles via Bitola to Kremenice (Macedonia – Serbia & Montenegro border) is also a single-track railway, length of 146 km.

  **Road:** Roads length of 176 km goes from Macedonia – Serbia & Montenegro border (Tabanovac), to Macedonian – Greek border (Bogorodica). Total length is doubled; length of 127 km, but highway construction on that part is planned until year 2020.

- **CROATIA** – The state of infrastructure changes:

  **Railway:** Section that goes from Savski Most at the Slovenia – Croatian border, via Zagreb, Novska and Vinkovci to Tovarnik is single tracked railway total length of 308 km.

  **Road:** One part of the road corridor, length of 279 km starts at Slovenian – Croatian border (Obrezje), via Zagreb and Novska ends in Lipovac. On this road a part of a

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highway exists, but in 2004, the entire road is anticipated to be a four-lane highway. Section A from Slovenia – Croatian border (Gruskovje) to Zagreb is also anticipated to be a four-line highway, total length of 60 km.

5. CONCLUSION

Transport integration in South East European is an important link in the economy chain. It has a difficult task of laying before, establishing quality commodity and transport flows, which as such will have a substation part in the gross national product (GNP). Besides transport infrastructure and supra structure quality, establishing transport corridors is a basic condition for establishing efficient multi-modal transport which will be serving a more adequate and complete services on a national and international market.

Increasing commodity flows and upgrading transport infrastructure quality can only benefit economy growth of South East European countries. Fast development in strategic processes on a national level, economic and transport, have to be harmonized with the processes in the European union so that countries in this Region can easier and faster get all that closer to European integrations.

By promoting mutual economic cooperation by liberal commodity and services flows, and by creating conditions for foreign capital inflow all the advantages of transport are hightailed all over again. Analogous to that, by transport development, and by better traffic system organization, it is possible to increase current and creating new commodity flows, which then would, surely had an effect to trade balance.

The countries outside of the EU and the region in focus are specifically relevant and have been taken into account of following projects:

- The decisions of the Pan-European Transport Conferences, in particular those held in Crete and Helsinki, concerning the concept of Pan-European transport corridors and areas. A number of these Corridors and Areas (PETrAs) cross or concern the Balkan region: Corridors IV, V, VII, VIII, X and the Adriatic-Ionian PETRA.
- The activities carried out by the United Nations Economic Committee for Europe (UN-ECE) in the mid 90's concerning European Agreements on main international traffic arteries (AGR: International E-road network), on main international railway lines (AGC) and on important international combined transport lines and related installations (AGTC)
- The Transport Infrastructure Needs Assessment (TINA) in Central and East Europe concerning accession countries, some them neighbouring the five countries examined in this paper. This exercise is also useful as a methodology for identifying priority investments within transport networks.

For full integration of the South East Countries into the European and world transport flows it is necessary that they use their advantageous of geographic position. The fact is that one of the most important transportation corridors, which link the
Scandinavian and Baltic region through Central Europe and Middle East to South Africa runs through this region.

Fitting into the European traffic network, with all due respect to modern transportation technologies, technical and technological and other achievements, and adaptation to marketplace, would require the South East region traffic system to achieve a new quality level at a faster service rate. The great meaning for the South East Europe countries as potential candidates for membership in the EU has its mutual cooperation in order to become the part of political and economic integration in Europe faster and easier.

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