

RECENT DEVELOPMENT OF TRANSPORT INFRASTRUCTURE IN SLOVENIA

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Abstract

Due to its good geographic position on the crossing of the V. and X. corridor, Slovenia is pursuing transport policy requirements towards the establishment of the pan-European network, despite the fact that in the past few years the development has been mainly directed at improving the road traffic infrastructure. However, the infrastructure development of other traffic modes has been neglected. This has deteriorated the accessibility of particular remote areas and has had a negative impact on their spatial and transport problems. The fact remains that by building only higher categories of roads Slovenia's spatial differentiation has intensified. Without an adequate strategy, traffic and management of negative effects will deteriorate –something which is neither in line with the development directives of Slovenia nor with the principles of sustainable development.

Key words: traffic, traffic development, traffic infrastructure, regional development

Povzetek

Slovenija zaradi dobrega geografskega položaja na sečišču V. in X. koridorja sledi zahtevam prometne politike k vzpostavitvi vseevropskega omrežja, vendar je bil razvoj v zadnjih letih usmerjen predvsem v izboljšanje cestnega prometnega omrežja, ostale vrste prometnih sistemov pa so zaostajale v razvoju infrastrukture. Zaradi intenzivnih vlaganj v avtocestno omrežje je zaostajalo posodabljanje drugih državnih cest. To je prispevalo k vse slabši dostopnosti posameznih območij, ki ne ležijo ob avtocestnem križu, ter vplivalo na njihove prostorske in prometne težave. Dejstvo je, da je izgradnja višjih kategorij cest in zapostavljanje nižjih kategorij krepila prostorsko diferenciacijo Slovenije. Brez ustrezne strategije bo področje prometa ter obvladovanja negativnih učinkov vse bolj problematično, kar pa ne podpira strateških smernic razvoja Slovenije ter načel trajnostnega razvoja.

Ključne besede: promet, razvoj prometa, prometna infrastruktura, regionalni razvoj

1. INTRODUCTION

Traffic is a key feature of contemporary economies; hence, its large economic importance needs to be taken into account when future activities are being planned. Without an efficient traffic system a full

usage of an internal market and globalized business operations are not possible. Through this, numerous traffic problems arise, from traffic congestion to other external effects, caused by traffic.

The fundamental prerequisite for the provision of a balanced spatial development from the European viewpoint is the provision of good accessibility across Europe. The basis for that is the pan-European transport network that is the frame of the European transport infrastructure. The guiding principles for sustainable spatial development in Europe present the potential need for checking and modifying the concluded agreements on designing transport networks from the viewpoint of spatial development, which means the spatial aspect may not have been taken into account sufficiently.

2 . TRANSPORT INFRASTRUCTURE IN SLOVENIA

In the past, the planning process of the Slovene transport system has been extremely excluded from the wider social development and other spatial systems. Moreover, particular transport networks were not connected what results from the fact that just until recently there was no overarching strategic document that would set out the transport system and the spatial objectives. That is why in the field of transport system development, the national development schemes of certain transport networks were the fundamental documents in Slovenia, i.e. the enforcement documents with no strategic assets that would represent all national interests in the field of transport and space. To this date, the documents feature two networks of the Slovene transport system, i.e. the motorway and the railway network.

Transport infrastructure, which presents one of the basic prerequisites for efficiency in mobility provision and for the supply of the economy, needs to be tackled in greater detail (MP, 2004a: 35):

- from the viewpoint of inter-regional connectivity within the framework of national integrity of mobility provision and supply of the economy,
- from the viewpoint of integrating the national economy into an international environment and providing mobility in international transport,
- from the viewpoint of efficient provision of transit transport across Slovenia.

From the viewpoint of international freight flows, Slovenia has an advantageous geographical position, as it is situated at the crossroads of important international transport routes. To this end, Slovenia is building a motorway junction, based on an adoption of a document from 1993, the so called "National scheme for motorway construction" and the "Amendments and additions of the document" from 1998. The National scheme for motorway construction highlighted the following objectives (MP, 2004b):

- improvement of internal transport connections,
- improvement of transport safety and reduction of negative impacts on the environment,
- provision of more adequate connections with the wider European area, and
- facilitation of macro-economic development and provision and increase of direct economic effects.

The basis for a successful and rapid development of road transport and hence the economy is a quality road network with modern roads and additional transport infrastructure and has international implications, for contemporary roads also integrate the state into international transport flows and

hence the global society, whereas inadequate roads separate the state and exclude it from the world economy.

The main aim of the motorway network construction in the Republic of Slovenia is to meet the following objectives (ReNPJA, 2004):

- link all Slovene regions with the most important economic centres in the state, as well as link Slovenia with the European motorway network and thus with the wider European area;
- approximate and link the Slovene economic area with the European area;
- approximate and link the Slovene cultural area and facilitate its recognisability and connectivity with the wider European area;
- facilitate economic development of the Slovene economy;
- improve the level of transport safety for road users;
- reduce excessive negative impacts on the environment.

Slovene motorway network has not yet been entirely developed. In line with the Resolution on the national scheme on motorway construction, in 2008 the motorway on the X transport corridor will open, followed by the motorway on the entire V pan-European transport corridor, which is due to open in 2010.

Since Slovenia's declaration of independence, the remaining existing network of state roads (main and regional roads) has been maintained and conserved with the aim to increase traffic capacity and provide safety of road transport. This way, in the vicinity of the main hubs, regions have rapidly started developing, whereas the dependence on the motorway system has not improved.

Recently, the situation of the existing network of the main and regional roads has deteriorated (congestions, bad transport safety). This presents a restriction factor of the coherent regional development of remote Slovene regions, which do not lie in the vicinity of the main motorway hubs.

The situation regarding the municipal roads is not too different. Due to scarce resources it has largely been invested into road network maintenance at the local level, in increased safety on the roads as well as in modernisation of existing macadamized roads.

Slovenia has an advantageous and to the European Union strategically important geographical position at the crossroads of the V. and X. European transport corridor. This is something the strategy of the national development of the public railway infrastructure needs to take into consideration. The strategy encompasses (AŽP, 2004:2):

- projects for constructing the new railway routes on the said corridors,
- projects for new regional railway routes,
- projects for the reconstruction and modernisation of existing railway infrastructure.

The existing railway routes, predominately built in the 19th Century, with a curve radius of 300 m, frequent level crossings and slopes of up to 27 %, are completely inadequate for contemporary transport needs of passengers and goods in terms of technical parameters or capacity.

Table 1. INVESTMENTS INTO TRANSPORT INFRASTRUCTURE IN SLOVENIA (IN 1000 EUR)

	2001	2002	2003	2004	2005
motorways	240.183	299.561	420.360	484.917	525.565
%	71.9	82.5	83.7	85.3	87.2
State roads	53.146	43.484	61.571	65.717	66.430
%	15.9	12	12.3	11.6	11
railways	38.102	18.607	19.090	15.285	9.453
%	11.4	5.1	3.8	2.7	1.6
airports	2.010	956	1.316	2.386	1.236
%	0.6	0.3	0.3	0.4	0.2
ports	641	404	179	145	3
%	0.2	0.1	0	0	0
Total	334.083	363.012	502.517	568.450	602.685

Source: Plevnik (2007).

Future developments of transport infrastructure must follow the following trends (Oplotnik, 2007):

- the development of the European White Paper on transport policy and the established European corridors, which cross Slovenia and allow it to use its competitive advantage in terms of developing logistics and intermodal terminals and link Slovenia with its priorities;
- the decisions, met today, define to a great extent the future conditions for business, management, settlement and the way of life;
- the degree of interconnectivity of various transport subsystems and ways of how to equally or accordingly finance all transport subsystems with priorities, set on professional basis.

3. REGIONAL DEVELOPMENT OF TRANSPORT INFRASTRUCTURE

Based on the Decree on the Standard Classification of Territorial Units of Slovenia, the country is divided into 12 statistics regions, as follows: Pomurska, Podravska, Koroška, Savinjska, Zasavska, Spodnjeposavska, Jugovzhodna Slovenija, Osrednjeslovenska, Gorenjska, Notranjsko-kraška, Goriška and Obalno-kraška (VRS, 2000).

In the development of transport infrastructure the main emphasis has mainly been on the improvement of road transport system, especially on the construction of motorway infrastructure. A number of investments have been made into the motorway network, hence neglecting the modernisation of other state roads. This has deteriorated the accessibility of particular areas situated away from the motorway hub as well as their spatial and transport issues. The fact remains that by constructing the higher category roads and neglecting the lower category roads the differentiation of Slovenia has been negatively influenced.

In the field of state road development, in the past decade, the state has been favouring the construction of long-haul roads, i.e. motorways on the trans-European transport network and high speed roads. Motorway network has been developed rapidly within the framework of the National scheme for motorway construction. However, delays have occurred and in 2002 a Resolution on the National scheme for motorway construction was adopted, according to which a motorway on the X corridor is planned to open in 2008 followed by a motorway in the entire V pan-European transport corridor which is planned to open in 2010.

The remaining state road network (main and regional roads) has mainly been maintained. Bottlenecks have been removed with the aim to reduce traffic capacity and road transport safety (in the field of Northeast of Slovenia, for example an extension of the high-speed road H2 from Ptujška cesta in Maribor in direction of Hoče and the bypass "Pragersko").

At the level of local community there was no actual progress. Smaller municipalities are already coping with scarce financial resources for the maintenance of municipality roads and cannot afford any investments in new transport connections. The majority of investments have been made in the field of transport-security measures, where drastic improvements have been made (reconstruction of road surfaces, construction of pavements, road lighting, pedestrian crossing, measures for traffic calming etc.).

The described development of road transport infrastructure has enabled the development of areas close to the motorway junction, whereas the accessibility and dependence of other areas to the motorway system has not shown any improvements. The situation of the main and regional roads, which have this function, has actually deteriorated. From the viewpoint of balanced spatial development the problem remains that the construction of motorway network that presents the frame of road transport infrastructure in Slovenia, has taken too long which is why the areas next to the motorway junction have not been developing with the same pace. Certain areas are now becoming less competitive due to lack of accessibility and higher transport costs, despite other advantages (less expensive land, trained workforce, etc.).

Regional railway connections are being cancelled or the number of passenger trains is being reduced due to low usability, what has a negative impact on the regional development. Priority areas use the already scarce financial resources for the improvement of railway transport infrastructure and hence improved competitiveness of the railway transport system.

Success of a particular region also depends on the development of airport infrastructure. Slovenia has three international airports. Jože Pučnik Airport, Airport Maribor and Airport Portorož. Based on the investments into the public transport infrastructure the development of airports has not been following the development trend. Jože Pučnik Airport is the only successful airport. The airport is situated in Slovenia's central region and also positively influences the economic factors of this region.

Table 2. COMPARISON OF TRANSPORT INFRASTRUCTURE IN SLOVENE REGIONS

Regions	Motorways (km) ⁶⁰	Two- track rails	International airports	Port	GDP (mio EUR)	GVA
Pomurska	14,2	No	-	-	1.151	56
Podravska	48,4	Yes	Maribor	-	3.775	226
Koroška	-	No	-	-	815	34
Savinjska	63,4	Yes	-	-	3.233	148
Zasavska	0,6	Yes	-	-	453	12
Spodnjeposavska	36,5	Yes	-	-	792	29
Jugovzhodna Slovenija	17,7	No	-	-	1.800	92
Osrednjeslovenska	161,2	Yes	Ljubljana	-	10.147	779
Gorenjska	52,4	No	-	-	2.388	167
Notranjsko-kraška	32,4	Yes	-	-	538	38
Goriška	-	No	-	-	1.613	78
Obalno-kraška	68	No	Portorož	Koper	1.539	250

GDP growth and the number of companies are the economic growth indicators of individual regions, registered in the field of individual statistical regions. Figure 1 depicts the degree of GDP growth and the number of companies from 2001 to 2005. The number of companies has increased in most regions, mostly in *Osrednjeslovenska* and *Obalno-kraška* regions. The two regions have the largest number of kilometres of motorway network. Moreover, they are situated at the main railway route, which is a priority of the trans-European network. Both regions also have an international airport.

The regional development is one of the key factors for economic competitiveness. Transport as an economic drive plays a key role in the development of individual regions. The development of transport infrastructure as an indicator for transport development depends on the adopted national programmes for transport infrastructure development. Based on the geocentric location of Slovenia the national programmes are oriented towards transport infrastructure development in the field of European corridors, which are crossing Slovenia.

⁶⁰ Data for the year 2005.

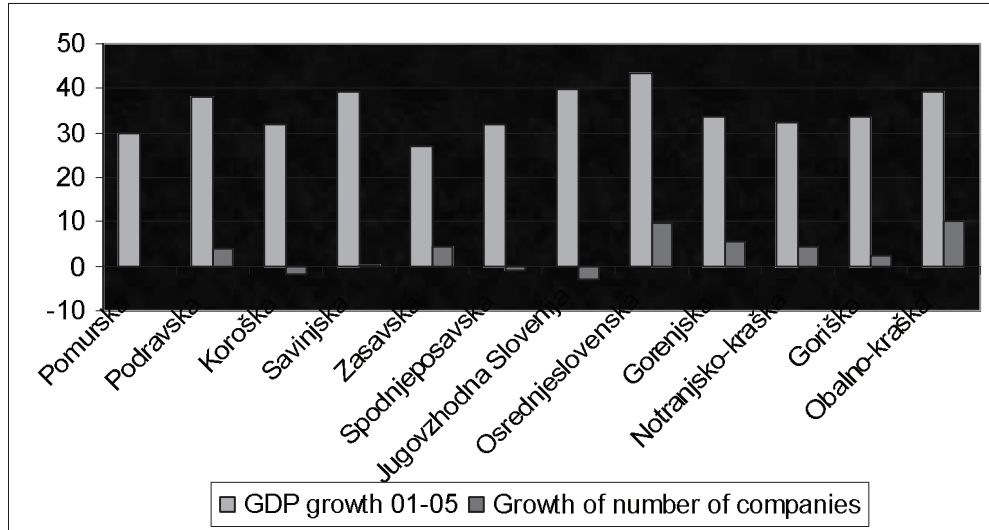


Figure 1. GDP GROWTH AND THE NUMBER OF COMPANIES IN STATISTICAL REGIONS 2005/2001⁶¹

Source: Own calculation based on the data, acquired from SURS (2008).

To this end, the development of particular regions also depends on their geographical positions in the state; the regions which are situated next to certain corridors show better economic indicators. The GDP growth between the years 2001 and 2005 was between 30 and 40 per cent. In the regions, *Podravska*, *Savinjska*, *Jugovzhodna Slovenija*, *Osrednjeslovenska* and *Obalno-kraška* growth was higher than 35 per cent. These are the regions, situated at priority areas of transport infrastructure development, i.e. development of motorway network. These regions indicate a slow development of transport infrastructure, although *Pomurska* and *Spodnjeposavska* regions are also situated at priority areas. Regions in priority areas have also been indicating a positive growth based on the number of companies between the years 2001 to 2005.

4. CONCLUSIONS

Traffic growth is increasing rapidly. Moreover, passenger transport has seen a significant rise in private vehicles, whereas the use of public transportation is on the decline. With freight traffic being on the rise, the negative traffic situation is further deteriorating. The aim of traffic policy is to manage the growing traffic and to remedy the imbalance between various modes of traffic. This can be achieved through spatially-oriented development of traffic infrastructure and by using contemporary traffic systems. Due to intense investments into the motorway network, the construction of other state

⁶¹ This includes companies with activities C – K, according to the classification of activities, as follows: mining industry, processing; electricity, gas, steam and water supply; civil engineering; trade and vehicle repair; food service activities; transport, warehousing; financial agencies; real-estate, renting and business services.

roads has been neglected. This has influenced the accessibility of individual areas, which lie further away from the motorway junction as well as their spatial and transport issues. The fact remains that the construction of higher category roads and negligence of lower category roads has strengthened the spatial differentiation in Slovenia. Due to bad accessibility and thus higher transport costs specific areas are becoming spatially less competitive, despite the fact that they meet other requirements, necessary for the development (less expensive land, trained workforce etc.)

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