

Summary:

Transport, Welfare and Economic Development in South Eastern Europe A Pilot Project

This report presents the findings and conclusions of the pilot project Transport, Welfare and Economic Development in South Eastern Europe. The project has been carried out jointly by the Faculty of Economics of the University "Džemal Bijedic" of Mostar, Bosnia and Herzegovina, the Faculty of Economics of the University of Tirana, Albania, the Faculty of Transport and Traffic Engineering of the University of Belgrade, Yugoslavia, the Institute of Transport Economics of Oslo, Norway (project co-ordinator) and the Transportation Department of the Civil Engineering Institute of Croatia – IGH.

The pilot project has been financed by the Research Council of Norway under the Cooperation Programme with South Eastern Europe - Research and Higher Education. The objective of the programme is "... to initiate, develop and fund collaboration within higher education and research between universities, university colleges and research institutions in South Eastern Europe and corresponding Norwegian institutions".

Background and Projects Contents

Armed conflicts have during the last decade had a devastating effect on the region. Economic and political instability, reduction in trade within the region and with other countries, have had a strongly negative impact on development and welfare. The transport sector has experienced extensive destruction of infrastructure and vehicles and currently, maintenance is insufficient due to the scarcity of financial resources.

The countries of the region face considerable challenges in respect of political and economic reform. Such reforms depend on stability and economic development, which again necessitate co-operation and trade with neighbouring countries as well as with other countries. A well functioning transport system is one of the preconditions for extended trade and economic development. The transport sector is, therefore, a key element in the current development process in South Eastern Europe (the region).

The objectives of the project have been competence and capacity building in South Eastern Europe, the set-up of a transport research network in the region

with links to Norway and identification of transport research priorities. The focus has been on four components that at project inception were considered priority areas for research in South Eastern Europe and for which state-of-the-art reviews of international experience have been made:

- ?? Transport sector policy development and institutional reform
- ?? Transport demand and supply
- ?? Ports, sea transport and inland waterways
- ?? Road accidents, environmental effects and countermeasures

The pilot project has investigated the research areas through review of literature, collection of easily available data and a regional workshop, which was held 24 – 26 June 2001 in Belgrade and was attended by researchers and key users (Ministry of Transport and national transport agency level) from Bosnia-Herzegovina, Croatia, Macedonia, Montenegro, Norway and Serbia.

Policy Development and Institutional Reform

The state-of-the-art review shows that transport sector has experienced substantial changes during the last decade all over the world. Improved efficiency of the sector has been a key objective in this context, and liberalisation, deregulation, restructuring of state enterprises and privatising has been on the political agenda in most countries. Transport policy changes have in a number of countries led to extensive institutional reforms and reorganising of transport ministries and transport agencies.

The report reviews the changing transport policy and changes and international experience from the three sub-sectors of railway, civil aviation and road. The review shows that there are substantial changes in transport policy in many countries in all parts of the world. Institutional reforms are parallel to this being implemented in many countries. There are many common features in the new policies and the sub-sector reforms. It therefore appears to be a global phenomenon.

Another interesting feature of the policy changes and the reform process is that changes occur at almost the same time all over the world. This implies that there is a high degree of consensus as to how to address the transport sector problems and that solutions travel fast from one continent to another. On the other hand, this implies that there is limited time for ex post evaluation and learning from experience. It therefore seems likely that policies and institutional reforms are introduced before decision-makers have a full overview of their likely effects. There is consequently a clear need for more research into the effects of reform.

It appears that the process of institutional reforms and restructuring will continue in most sub-sectors. Many transport agencies have been restructured, but many more are to follow. Generally restructuring leads to more autonomous agencies, which apply more efficient management practices, and to a much more extensive role of the private sector. As a consequence, competition becomes much more common.

The policy changes and the institutional reforms make the regulatory role increasingly important. Establishing of regulatory and controlling organisations has just started and

will continue for a long time to come. There is little experience about how to design the regulatory framework and ex post evaluation and research in this area appear as a major challenge.

Passenger Transport – Trends and Driving Forces

The state-of-the-art review of passenger transport and the need for knowledge related to the development of this type of transport shows that passenger transport has become more and more motorised and dependent on private transport resources. This development has consequences, which could not been foreseen 20-30 years ago, but which challenge local and national transport authorities in their work to meet the transport needs and simultaneously reduce the negative effects of transport.

The review emphasises that knowledge about passenger travel behaviour is most important as it provides an essential part of the basis for planning and implementation of measuring travel activity. It therefore discusses methods both for measuring travel activity and transport supply, and argues that transport and travel statistics at different levels are crucial for transport planning. The review also emphasises that it is cost-effective to standardise different types of travel surveys, both as regards comparison between countries and comparison over time in the same country.

Variations between countries in respect of car use, e.g. in western and eastern Europe are still significant. This, however, is mainly due to differences in economic development. Countries with a relatively low level of car ownership have some advantages that the more affluent countries don't have at this stage. They have still time to consider more efficient measures to contain the extensive car use like in some of the western European countries and in the USA.

Measures aimed at improving passenger transport have to be adjusted to the local contexts. In order to choose the right measures or packages of measures a solid basis of knowledge is required in addition to efficient decision-making. The review presents methods for collecting such data and statistics. The various types of surveys have to be adjusted to local conditions. It is, however, advantageous that the same methods are being used. This will on the one hand make the results directly comparable. On the other hand, application of the same methodology may lead to economics of scale and facilitate international co-operation.

Ports, Sea Transport and Inland Waterways

The functioning of an efficient infrastructure is essential for the development of all regions. The state-of-the-art review shows that the recommended policy is the choice of the least cost mode. The term "cost" here refers to operational costs and time costs as well as external costs. The latter has in recent years obtained considerable attention from policy makers, especially in the EU, as they have become increasingly concerned about congestion in the road network and negative environmental impacts. Hence, focus has been put on the development of a "sustainable" transport system where the organisation of the different modes are viewed in terms of complementarity and integration, and not simply as modes competing against each other. This has led to the

establishment of the Trans-European Transport Network (TEN) where one hope is that the increased use of water-based transport shall solve some of the problems cited above.

In the report, advantages and disadvantages of using water-based transport have been discussed. The positive sides of this mode of transport are mainly related to low costs per tonne and tonne-kilometre, low atmospheric pollution, accessibility to peripheral regions and safety measures. On the other hand, several obstacles may distort its development. These are to a great extent related to recent trends in the freight transport market where the requirements to transport quality such as time, reliability and flexibility prevail. This is the result of an increasing concern among transport users to increase efficiency. Transport on links is slow. At the same time, extensive costs, both operational and time costs, occur during pre- and end haulage as well as during operations in terminals and ports. Some studies show that as much as 50 per cent of the costs in short sea shipping are related to charges and taxes paid in ports. It is also argued that short-sea ships spend, on average, 50 per cent or more of their time in ports. Insufficient volumes in ports also produce a complex, and hence, time consuming, system of transshipment and routing. In order to increase the competitiveness of this mode of transport, efforts should therefore be made to overcome these obstacles. Consequently, it is in the interest of both the private and public sector to co-operate in this matter. The same considerations, and based on financial realism, will probably guide the development process in the countries of South Eastern Europe.

Road Safety and Environmental Impacts of Road Traffic

Experience from Central and Eastern European countries shows that road fatalities and injuries increased sharply after the transition to a market economy. The state-of-the-art-review concludes that environmental problems of road traffic were probably increasing as well. The increase in accidents and environmental effects was mainly due to the increase in motor vehicle travel and to lack of adequate countermeasures. A similar trend can be expected in South Eastern Europe when the economy starts to grow, unless effective countermeasures are introduced.

Experience from Norway indicates that research on road safety is a cost-effective means of accident prevention, and research on environmental effects of road traffic is an important basis for the development of countermeasures. This is also important in respect of economic development, as road accident costs constitute a significant percentage of the GNP, in the range of 1-3 per cent of GNP.

A wealth of information exists internationally about measures for reducing road accidents, and knowledge of how to reduce road traffic environmental effects is increasing. Even though knowledge exists internationally, the knowledge must be adapted to local conditions if the countermeasures are to work properly. There are cultural, social, economic, climatic and topographical differences between countries that make for differences in road traffic problems and possible solutions.

Although knowledge of effective road safety and environmental measures exists, the implementation of the most effective measures may be difficult. Most effective countermeasures have side effects, like limiting the freedom of choosing speed, the cost

of building fly-overs on motorways or bypasses around towns or the cost of taxes on vehicles and fuels. Improving road traffic mobility will often be more important in the public transport policy than reducing road accidents and environmental problems. Politicians will often be reluctant to approve of costly or unpopular measures or measures reducing mobility. There is no easy solution to these problems, but national road safety and road traffic environmental plans will normally help. International and national research demonstrating the effects of countermeasures and the costs of road accidents and environmental problems will also help.

A large number of governmental bodies, institutions, private companies as well as non-government organisations are involved in the implementation of countermeasures against road accidents and environmental effects. Co-ordination of the stakeholders as well as an implementation strategy will be necessary for the successful implementation of countermeasures.

Environmental and safety measures are often in conflict with other objectives such as mobility, freedom, or the reduction of costs, and the strategy should consequently include possibilities for solving conflicts. The conflicts should be made visible and should be defined carefully. Negotiations with the purpose of achieving a compromise, focusing on the countermeasures rather than disagreement in values, may produce results. It is also important to realise that changes, such as reductions of road accidents and environmental effects, take time.

The Current Situation and Challenges in the Region

All countries in the region face serious challenges in respect of political and economic reform. The reforms depend on stability and economic development, which again necessitate co-operation and trade with neighbouring countries as well as with other countries. A well functioning transport system is one of the preconditions for extended trade and economic development. Transport is also an increasingly important element in people's welfare. On the other hand, increased transport demand, in particular the possible rapid increase in road traffic, has many negative side effects, among them traffic accidents, traffic noise and air pollution.

There is an urgent need for rehabilitation and strengthening of the transport sector to avoid that it becomes a barrier for development in the region. This implies not only reconstruction and rehabilitation of infrastructure but also new rolling stock and renewal of the vehicle fleet, extended maintenance and training. The results from the pilot project show that there is an urgent need for developing a transport policy that can facilitate integration with Europe and deregulate the sector. There is also an extensive need for planning of transport infrastructure and operation. Finally, there is an urgent need for better education, training and research to secure knowledge based and effective planning and implementation of all the many faceted challenges facing the transport sector.

Transport policy and the public sector in the region are to a high extent still characterised by the traditions of central planning. An updated transport policy and extensive institutional and organisational reforms are needed in almost all transport sub-sectors in order to make government an effective agent for change. This applies to all

transport sub-sectors and in particular to the road sector, the railway sector and intermodal transport, i.e. transport that includes several transport modes.

All countries in the region have experienced considerable decrease in the amount of passenger transport from the start of the war in 1991 and up to now. In Croatia the passenger transport is 49 per cent (1999) of the amount in 1990. Public transport has decreased more than private transport. This is due to the economic situation, destruction of infrastructure (e.g. nearly 25 percent of the road networks in Bosnia Herzegovina, and a number of bridges), lack of maintenance of both roads, railroads, ports and the public transport equipment.

Road transport is the most important passenger transport mode in all countries. During the 1990s, rail transport decreased, and only in Croatia this transport mode still has a significant share of the passenger transport. Comparable statistics for the development over time are not found. Information about passenger transport, mode of data collection and period of data collection vary among the countries. What seems to be the same tendency, however, is an increase in car ownership the last years. The number of cars per inhabitant is still low compared to western European countries. For the region, this means on the one side a great potential for car ownership and car use, on the other side a great challenge for the development of public transport.

The former Yugoslavia experienced an increase in freight traffic between the 1960s and the mid-1980s. This period of growth was followed by a period of stagnation that lasted until the beginning of the war in 1991. Since then, the number of tonne-kilometres carried out in the region has decreased extensively. The general lack of data prevents a proper analysis of the situation. However, the little data that exists clearly support this view. Road is often referred to as the most flexible mode of transport as it can easily cover areas which are difficult to pass. This might explain why the decrease in the amount of tonne-kilometres covered by road is less than in the case of rail, pipelines and inland waterways, for which the state of the infrastructure is generally defective after several years of warfare. Parts of the railway tracks are for instance missing and bridges are destroyed. In Croatia, the amount of tonne-kilometres covered by road was halved between 1990 and 1996 while the amount of tonne-kilometres by rail dropped by more than 70 per cent in the same period. In Albania the latter was reduced by as much as 93 per cent.

In 1996, the pipeline transporting crude oil from the Port of Rijeka in Croatia carried less than 20 per cent of its 1990-level, and only 4 per cent of the 1990-level was transported on inland waterways. Maritime transport is however the mode the least affected by the conflict. Sea transport is not as flexible as road transport, but it does require little infrastructure. In Yugoslavia, the amount of tonne-kilometres carried by maritime transport dropped by 25 per cent in the period 1988 to 1996, which is a relatively low figure compared to those presented above. In Croatia, the use of maritime transport is even believed to have increased during the 1990s.

The data basis and the information level of statistics about passenger transport vary between the countries in the region, but all of them claim that the quality is not good enough for planning or research purposes. The same applies to freight transport statistics. Data on freight flows and patterns is not available and it is difficult to obtain

data sets covering the development in transport activity for different modes over the same period of time.

Experience from Central and Eastern European countries shows that road fatalities and injuries as well as environmental effects of road traffic increased sharply after the transition to market economy. The increase in accidents and environmental effects was mainly due to the increase in motor vehicle travel and to a lack of adequate countermeasures. A similar trend can be expected in South Eastern Europe unless effective countermeasures are introduced.

The knowledge of the road safety and environmental problems varies quite much among the countries. However, in road safety availability of data is a problem. Data on environmental effects of road transport are either not existing or only sporadically. Data on the number of vehicles and km driven are important for further analysis of accident and environmental data, but these data may be unavailable or unreliable. Some of the countries still face a situation where information on problems such as road accidents and environmental effects are considered the property of the agency that collects it. However, expertise in these fields exists in all countries, and the potential for collecting and analysing data as well as presenting information to the politicians and the public seems good.

Research Needs

The pilot projects has identified the following five as priority areas for research during the next few years:

- ?? Transport policy and institutional reform
- ?? Transport planning and evaluation methods
- ?? Passenger transport demand and supply
- ?? Freight transport demand with emphasis on ports, sea transport and inland waterways
- ?? Road safety and environmental concerns

These priority areas would also provide the starting point for design of a possible main project as successor to the pilot project. Research-based knowledge is urgently required by the transport sector in the region to solve the massive problems ahead. Such knowledge would contribute to a more effective organisation and management of the public sector within transport, in particular the public sector good governance aspects but to some extent also to the developing of smaller enterprises, which is also an issue in the current reform process in the transport sector. Such research requires an interdisciplinary approach with focus on social science involving competence from the fields of economics, planning, political science and sociology. This is important for the region at this stage, because transport research in the past was oriented towards technical science and there is a need for strengthening other disciplines to provide a stronger and wider basis for future research.

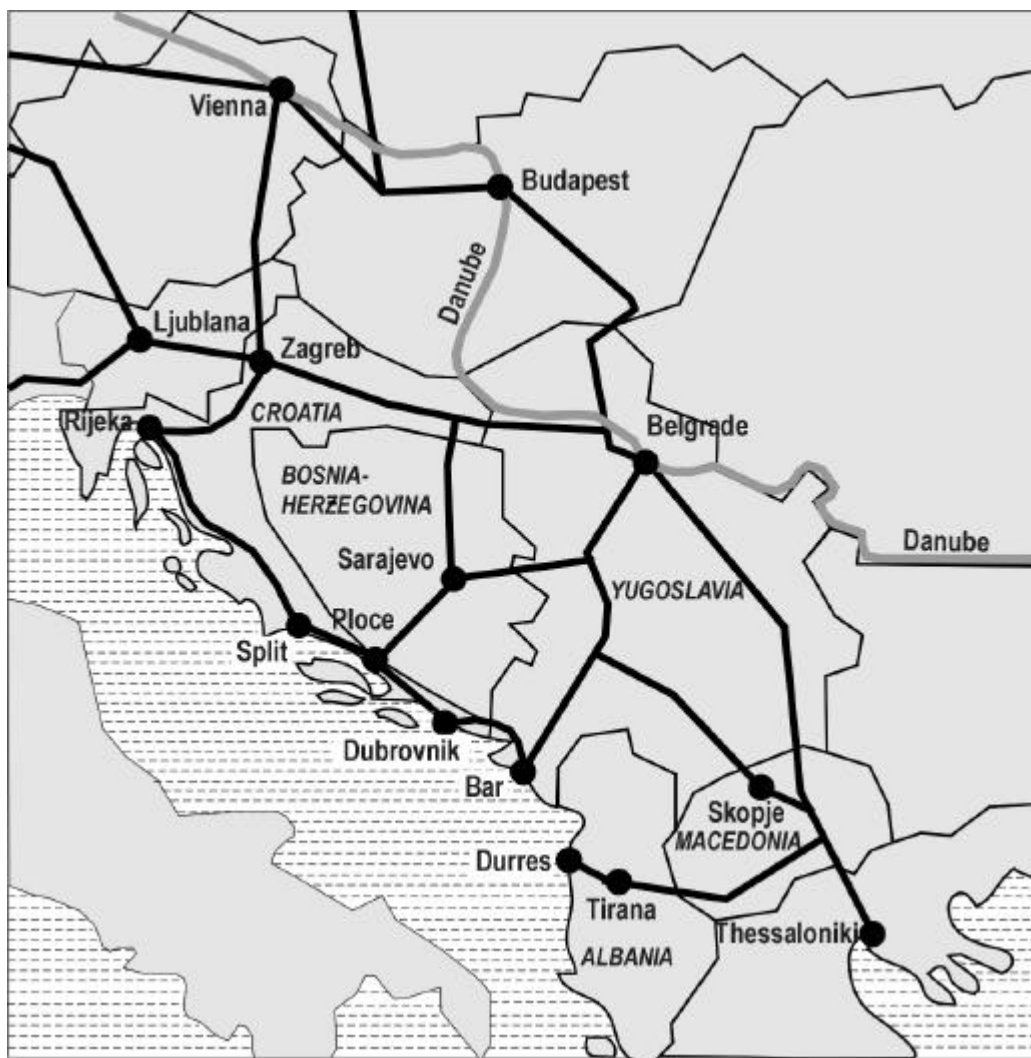


Figure 1: Trunk Transport Network in South Eastern Europe