

120. Looking forward, Serbia's enterprise subsidies have been justly criticized for distorting markets, undermining the country's long term competitiveness, and wasting money on non-economic enterprises. Serbia's EU ambitions, if not the force of these arguments, will eventually force it to scale back its remaining sector specific subsidies. The European Commission (EC) has adopted a "State Aid Action Plan for 2005-2009" which seeks a relative reduction of the overall state aid in GDP and reorientation of aid to address market failures, rather than supporting specific industries. In the new EU member states, subsidy reform has been a key component of the pre-accession and post-accession reform agenda. If Serbia is to follow this example, enterprise subsidies would have to be limited to development aid, R&D, closures, and staff reductions.

121. To this end, the Ministry of Finance is in the process of drafting a Law on State Aid. This is intended to be consistent with the EU state aid rules and the institutional arrangements and system of ex-ante control of state aid specified in Serbia's Stabilization and Association Agreement with the EU⁵⁴. The draft law, however, has scope for improvement. Under the current draft, the proposed Serbian Commission for State Aid Control would lie within the Government, being presided over by the Minister of Finance. All Commission members would be Government appointees, while administrative, technical and other support would be provided by the Ministry of Finance. The draft law envisages annual reporting to the Government only, thus limiting access by the public or the legislature.

122. As a whole, this approach fails to provide the commission with sufficient autonomy and protection from political influence. The Government should consider establishing the Commission for State Aid Control as an independent body reporting the Parliament, with professionals recruited through open, public competition. The role of the Commission could be strengthened by expanding the present definition of its responsibilities⁵⁵ and authorizing it to provide preliminary opinions on any legislative proposal or strategy concerning state aid, which would be binding prior to their adoption by the government.

ROADS

123. Spending on roads--including spending financed from tolls and earmarked tax revenues--accounted for about five percent of consolidated central government expenditure in 2008. In the immediate future, the Government confronts the need to

⁵⁴ EC Progress Report, 2008.

⁵⁵ These could include responsibility for: (i) the assessment of state aid proposals and aid schemes within annual and multi-annual state aid approval plans; (ii) monitoring the implementation and effects of state aid granted and order the recovery of unlawfully granted state aid; (iii) collection the data on the use and effects of state aid granted; (iv) cooperation with the authority responsible for state aid to agriculture and fisheries in the preparation of annual reports on state aid; (v) cooperation in the budget preparation process with the authorities responsible for the preparation of the state budget and the budgets of regional and local self-government units, in compliance with the separate law; and (vi) participation in the preparation of draft proposals for laws and other regulations concerning state aid, as well as promotion and encouragement of improvements in the state aid system.

increase maintenance spending (particularly on regional roads), restructuring the debt of the state road agency, and providing counterpart funding to a major program of highway investments in Corridor X. The prospects for financing these expenditures from increased tolls and fuel taxes are limited. Instead, the Government's most promising option would be to extend the construction schedule for the Corridor X works and seek immediate efficiency improvements in the planning and execution of works by the state roads authority.

THE SERBIAN ROADS SECTOR

The density of the road network in Serbia is similar to that of neighboring countries. Serbia has a road network totaling approximately 40,845 kilometers—with 5,525 kilometers of main and primary roads, 11,540 kilometers of regional and secondary roads, and around 23,780 kilometers of local roads.⁵⁶ Road density in Serbia is 462 km per thousand square km, in line with most regional neighbors, but lagging behind Albania (657), Croatia (506), and Montenegro (500) and substantially behind the levels found in new EU member states and in OECD countries. On a second measure, road density per one thousand inhabitants, Serbia, with 5.4 km per 1,000 inhabitants, has a higher road density than Albania, but below that all other countries in the Western Balkans.

Although there has been an improvement in the condition of the main and regional road network in the last three years, about 40 percent of the network remains in poor or very poor condition. Figure 24 illustrates the results of a survey of the main and regional road network conducted in 2008.⁵⁷ This shows that while the majority of the motorways and main roads are now in good condition, slightly over half the regional road network ranks as poor or very poor. In addition, the design characteristics of much of the existing network in terms of speed and axle loads is below European standards, increasing vehicle operating costs, and reducing safety and competitiveness.

⁵⁶ This corresponds to what the national road agency calls roads of Class I, II and III respectively.

⁵⁷ These results are from a survey conducted in 2008 as part of the road and inventory database study under the World Bank funded Transport Rehabilitation Project and became available in March 2009. The survey defined road condition using the International Roughness Index (IRI), but with different boundary values for different road classes.

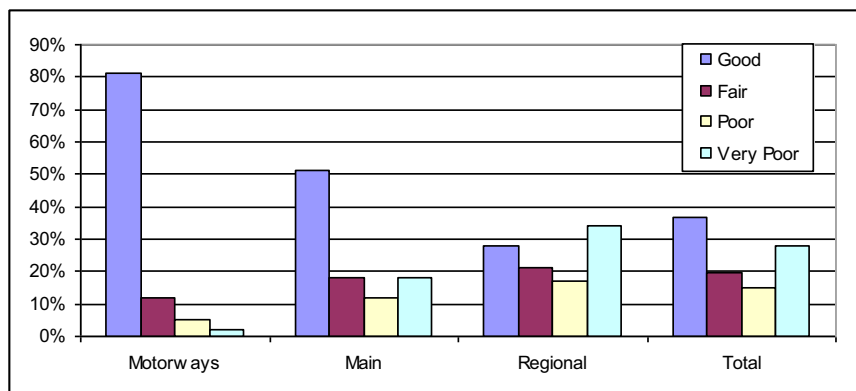


Figure 24: Condition of the Main and Regional Road Network, 2008
 Source: PEPS.

Road safety is also a major concern in Serbia. As shown in Figure 25, the number of fatalities and injuries from traffic accidents has been increasing fairly steadily over this decade (although peaking in 2007). The fatality rate, at 4.8 casualties per 10,000 vehicles in 2008 remains about five times higher than that of the best performing European Union countries, and compares unfavorably to several countries in the region, as shown in Figure 26.

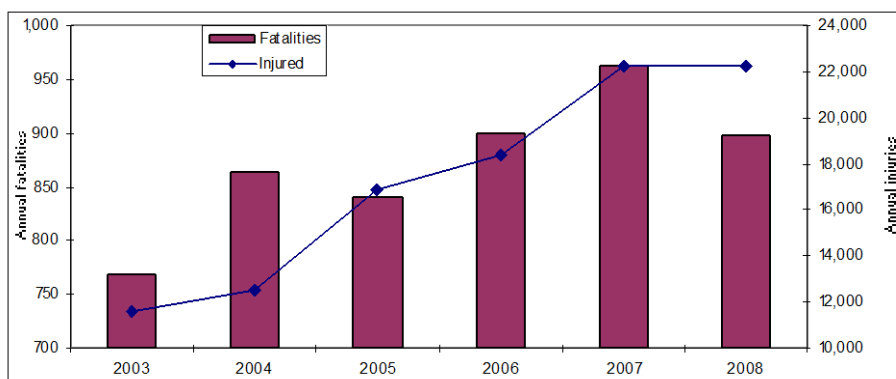


Figure 25: Trends in Injuries and Fatalities
 Sources: PEPS, Bank estimates

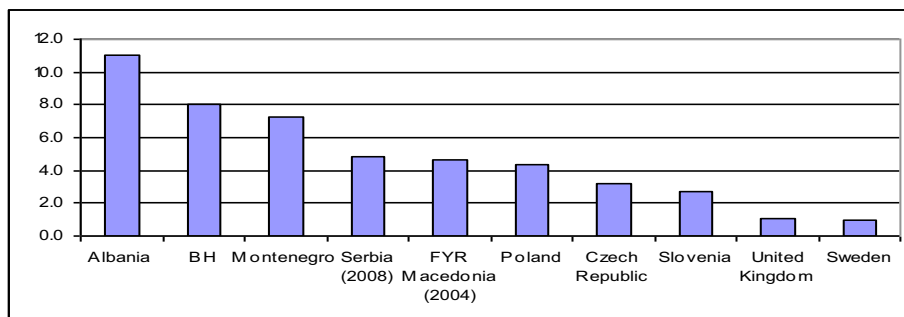


Figure 26 International Comparisons of Traffic Deaths (deaths per 10,000 vehicles)
 Sources: PEPS, Bank estimates.

Box 6: Road Safety Initiatives

The road safety situation in Serbia is serious and, against the background of rapidly increasing motorization, will deteriorate further unless urgent, well-orchestrated and appropriately funded evidence-based action is taken. Currently, the main institutions with governmental responsibilities for road safety are the ministries of infrastructure, interior, justice, education, and health, as well as PEPS and the Public Health Institute. Currently, there are a number of gaps, including: (i) limited analysis of risk factors in transport, police and health sectors; (ii) little multi-sectoral understanding as to priority areas for action; (iii) poor collection and handling of road safety data; (iv) lack of road safety management capacity; and (v) limited coordination between the various agencies. The seriousness of the problem is fully acknowledged by all key stakeholders, as is the need for further reforms in public policy, road safety strategy, legal and compliance frameworks, and road safety management capacity. The Global Road Safety Facility financed the “Review of Road Safety Management Capacity and Proposals for Investment Strategies” (RSMCR) in August 2007.

The draft Road Safety Law (RSL), expected to be adopted in 2009, is the first major update in legislation since the 1980s and addresses many aspects of the EU Transport *Acquis* and recommendations given in the RSMCR. However, road safety funding arrangements are inadequate and lack transparency. The public sector as a whole needs to devote appropriate levels of resources if Serbia is to improve its safety performance to match current European practice. In this regard, at present it is difficult to estimate the amount of public funds allocated to road safety and there is a need to change this, especially if there is to be a rise in the allocation of funds allocated on improving road safety.

The Serbian roads agency Public Enterprise Putevi Srbije (PEPS) is responsible for managing the primary and secondary (regional) roadwork (Its mandate does not extend to tertiary roads or urban streets.) PEPS was established by the passage of the Road Law in November 2005, with effect from January 1, 2006. As shown in Table 13, it is largely financed from transport-related taxes and fees. Proceeds from the national investment plan (i.e., Government privatization receipts) and foreign borrowing provide much of the remainder. Transfers from the central government’s ordinary budget constituted only five percent of PEPS’ receipts.

124. The overall level of PEPS' reported expenditure has increased only modestly in real terms in recent years. Total expenditures increased only fourteen percent between 2005 and 2008.

Table 13: PEPS: Trends in Source and Uses of Funds
Nominal RSD, mn.

	2005	2006	2007	2008
	Actual	Actual	Actual	Actual
Use of Funds				
Maintenance and periodic rehabilitation	27,468	28,658	26,692	24,101
% of GDP	1.62%	1.44%	1.15%	0.88%
Construction and reconstruction	5,677	6,777	6,333	7,899
Other	3,162	2,398	1,996	2,640
Credit repayments	3,655	1,451	2,684	2,969
Arrears to suppliers	0	10,159	16,140	22,262
TOTAL	39,962	49,444	53,845	59,870
% of GDP	2.36%	2.49%	2.31%	2.19%
Sources of Funds				
Excise duty on fuel	0	4,951	5,389	9,510
Toll revenue	9,684	12,838	14,685	16,499
Other own resources	1,673	1,262	1,400	1,548
Central budget	3,278	1,578	310	2,046
National Investment Plan (NIP)	0	2,261	5,799	6,046
Foreign borrowing	5,811	5,081	4,056	3,353
Donations and privatization proceeds	7,631	0	113	343
Funds carried forward				1,234
TOTAL	28,077	27,970	31,751	40,579

Source: PEPS.

increase in maintenance, rehabilitation, upgrading, and construction expenditures. This would be accompanied by increased spending on Corridor X, which will be carried out by the road agency's daughter company, Koridor 10 D.O.O.

125. Inadequate maintenance hastens the deterioration of any road at an increasing rate until reconstruction is necessary, at considerably greater expense than any short term saving in maintenance expenditure. Adequate maintenance can sustain the pavement of a road for a period far beyond the original design life, depending on traffic, ameliorating the need for any reconstruction. By contrast, inadequate maintenance leads to an increase in the rate of deterioration, hastening the failure of the pavement, and engendering a need to reconstruct the road, a need that could have been avoided. Heggie and Vickers (1998) report that reconstructing a paved road is three to five times more expensive than maintaining it, in current terms, and around 35 percent more in net present value terms.⁵⁸

⁵⁸ Heggie, Ian, & Piers Vickers (1988) "Commercial management and financing of roads" World Bank Technical paper No. 409. Washington DC.

126. In Serbia, routine maintenance is underfunded. From 2005 to 2008, reported spending on maintenance (including related arrears) averaged RSD44 billion, after adjusting for inflation. While, this is close to the level estimated as necessary for the maintenance of main and regional roads, including routine winter snow clearing⁵⁹ it is inflated by the inclusion of upgrading expenditures. As a result, it remains unclear how much of the reported amount has actually been spent to maintain the road network, and how much has been spent on upgrading activities, which should be more appropriately categorized as capital expenditures. (In this regard, Article 59 of the Law on Public Roads defines the attenuation of gradients, curve straightening, the widening of pavement or shoulders, and the enlargement of at grade intersections as enhanced maintenance, whereas one would more logically regard those activities as capital expenditures.) Expenditures on maintenance *per se* are therefore lower than the reported figure. In addition, there are significant questions about the efficiency and efficacy with which PEPS uses the funds.

127. In addition to ongoing maintenance, the future financing requirements of the road sector include two forms of capital expenditure: (i) those that are necessary to clear the current maintenance backlog and return the road network to good condition; and (2) additional capital expenditure necessary to keep pace with growing demands and ensure that the country develops a road network that contributes to economic development.

128. The total costs of capital expenditures necessary to address the backlog of maintenance expenditure has been estimated at €1.45 billion (RSD113.1 billion). This estimate is based on the unit cost of specific activities using PEPS' 2008 price list, together with information on the current length of the network under PEPS' mandate, new road condition data, and a policy objective of achieving 'good' conditions for all reconstructed roads.⁶⁰ Willingness to accept a lower quality standard on lower category/volume roads, would result in a correspondingly decreased costs. The immediate budget implications of this figure depend on the time frame over which it would be implemented. As shown in Table 14, clearing the maintenance backlog would cost €290 million (RSD22.6 bn) per year if the work were completed in five years but €145 million (RSD11 bn) if it were completed in ten years. Given the other claims on the budget, the ten year time horizon would appear to be preferable.

⁵⁹ The latter calculation was made on the basis of PEPS' 2008 price list and assumes the following maintenance regime standard: 40 mm asphalt overlay every 5 years on motorways and main roads and the same overlay every 7 years on regional roads.

⁶⁰ A lower policy objective of only aiming for 'fair' condition for secondary roads would obviously reduce this estimate.

Table 14: Cumulative Maintenance Backlog and Annual Expenditure Needs
(Euro millions, 2008 prices)

Road Category	Cumulative Maintenance Backlog	Annual Expenditure to Address Maintenance Backlog		
		5 years	7 years	10 years
Motorways	32	6	5	3
Main roads	400	80	57	40
Regional roads	1,020	204	146	102
TOTAL	1,452	290	207	145

Source: Bank estimates.

129. With respect to expansions of the network, the Government intends to focus on Corridor X. A series of improvements in this corridor will enable Serbia to capitalize on its geographical position as a key transit country in the Pan-European Network. The total investment required for the modernization of infrastructure on Corridor X is significant, amounting to an estimated €2.079 billion.⁶¹ Out of the total, €1,303 million would be financed by international financial institutions, including €1,088 million from the World Bank, EBRD, and EIB credit currently under preparation. The Government's contribution will nevertheless be considerable, totaling €774 million over the construction period, although over half of this sum represents transfer payments in the form of VAT, taxes and duties.⁶²

DIRECTIONS FOR REFORM

130. **Reschedule works on Corridor X.** The fiscal impact of the Government's contributions to Corridor X will depend to a large extent on the phasing of construction works. The Government has stated that the original intention was to complete the work in

⁶¹ Works on Corridor X would include: (i) the construction of a second 2-lane carriageway on 118 km of motorway between Horgoš-Novi Sad (Corridor Xb) at an estimated cost of €223 million; (ii) the construction of a motorway on 98 km of the section of corridor between Niš and the border with Bulgaria at Dimitrovgrad (Corridor Xc) at a provisional cost estimate of €749 million; (iii) the construction of a motorway on the corridor between Leskovac and the Macedonian border (Corridor Xd) at a provisional cost estimate of €658 million; and (iv) the completion of Belgrade Bypass, which would form an important section of Corridor X estimated cost €166 million. These costs include design, expropriation and construction costs and include VAT and supervision costs. They are likely to be revised after tender documentation has been produced, and as such remain provisional. On the other hand, expropriation costs may be overestimated, as current revisions to existing legislation mean that public land can be offered instead of financial compensation. This could lead to significant downward revisions to estimated expropriation costs.

⁶² The Government has recently agreed with the World Bank that no VAT will be paid for the World Bank financed sections of Corridor X. As this merely reduces VAT revenues that would be paid to the treasury, it does not constitute a savings to the Government. It remains to be seen whether the same will be agreed with the EBRD and EIB.

four years. This is now acknowledged to be overly ambitious, if not unrealistic. In light of the time needed for land acquisition, the length of the tendering process, overall readiness for implementation, and the scale of the construction works, the objective of implementing and completing a €1.79 billion investment program over 4 years looks ambitious, if not unattainable.⁶³ Expenditures in 2009 are instead likely to be a small fraction of what is included in the Action Plan. Land acquisition takes a minimum of 6 months, and the length of the procurement process for the IFI financed sections of Corridor X is estimated to be a minimum of 6 months. This suggests that there will be little or no construction on these sections before 2010. In addition, PEPS funds earmarked for Corridor X land acquisition have yet to be released (as of mid-March 2009) as PEPS' 2009 Business Plan has yet to be approved by the PEPS board.

131. Given the likely time frame for implementation, three alternative scenarios for the phasing of Corridor X expenditures are proposed. Using provisional cost estimates, these phasing scenarios presume the works are completed in a 5 to 6 year period. All three scenarios assume that: (i) in 2009 full expropriation costs and 10 percent of construction costs for the Dimitrovgrad Bypass included in the Action Plan 2009; (ii) all World Bank-EBRD-EIB funded sections will take one year longer to build than the other sections; (iii) full expropriation and construction of the 20 km section of Horgoš-Novı Sad in the Action Plan take place in 2009; (iv) construction of Levosoje-Presevo in 2009 (see Table 15). Further assumptions are made to differentiate the scenarios:

- Scenario 1. In this scenario it is assumed that Corridor X is built over a 6 year period, with a limited amount of expropriation and construction taking place in 2009 due to limited funds and implementation constraints. Additional assumptions are that: (i) €23 million worth of construction on Belgrade Bypass in 2009, with the remaining construction evenly split in 2010, 2011, and 2012. (ii) full expropriation and design costs are made in 2010 for remaining World Bank-EBRD-EIB sections; (iii) the construction profile for the World Bank-EBRD-EIB sections are staggered such that the remaining 15 percent of construction costs are paid in 2010, 30 percent in 2011, 25 percent in 2012, 18 percent in 2013, and 13 percent in 2014; and (iv) the expropriation and construction profile for the remainder of the Horgoš-Novı Sad is 25 percent a year over 2010-2013.
- Scenario 2. In this scenario it is assumed that Corridor X is built over a 6 year period and uses the same set of assumptions as in Scenario 1, with the exception that the construction profile for the World Bank-EBRD-EIB sections are staggered such that 25 percent of construction costs are paid in 2010, 35 percent in 2011, 18 percent in 2012, 15 percent in 2013, and 8 percent in 2014. In other words, in Scenario 2 there is significantly more construction works over 2010-2011 for the World Bank-EBRD-EIB sections.
- Scenario 3. In this scenario it is assumed that Corridor X is built over a 5 year period. Additional assumptions are the following: (i) two year construction period for Belgrade

⁶³ The same conclusion was made in the World Bank Policy Note, "Options for the Development of the Road and Rail Infrastructure on Corridor X", August 2008. The costs for the works and phasing presented in this chapter differ from that of the Policy Note, given new information available since August 2008.

Bypass, with 50 percent expropriation and construction a year in 2009 and 2010; (ii) full expropriation and design costs are made in 2010 for remaining World Bank-EBRD-EIB sections; (iii) the construction profile for the World Bank-EBRD-EIB sections are staggered such that the remaining 40 percent of construction costs are paid in 2010, 40 percent in 2011, and 10 percent in both 2012 and 2013; and (iv) the expropriation and construction profile for the remaining sections of Horgoš-Novi Sad is 50 percent a year over 2010-2011. These assumptions lead to significantly higher expenditures over 2010-2011 and a large drop in 2012 and 2013.

132. These alternative scenarios lead to significant differences in the expenditures over the next two years. For 2009, they range from €125 million (RSD 9.75 bn) to €201 million (RSD 15.7 bn). For 2010 they range from €248 million to €343 million.⁶⁴ In Scenario 3 works are completed in 2013, but with high levels of expenditure that appear incompatible with fiscal constraints, the time frame for land acquisition and IFI procurement process, as well as overall implementation capacities of Koridor 10 D.O.O.. The table below shows the cost to the budget of the Corridor X works under the three scenarios. It assumes €1.3 billion of foreign borrowing, with loan disbursements paralleling construction on foreign-financed sections. (Debt service on foreign loans is not included.) The projected financing gap is largest in 2010 in all three scenarios, at over €343 million (including VAT), as this is when the expropriation costs will fall disproportionately in all scenarios and these costs are not funded by foreign borrowing.

Table 15: Estimated Cost to Budget for Corridor X in Three Scenarios, 2009-2014
(Euro millions, 2008 prices)

	2009	2010	2011	2012	2013	2014	TOTAL
Scenario 1	125	248	143	130	94	33	703
Scenario 2	135	271	153	106	88	20	703
Scenario 3	201	343	178	26	26	0	703

Source: Bank estimates.

133. **Refinance Arrears.** In addition to the costs of maintenance and rehabilitation works and Corridor X construction, the Government also confronts the costs of paying down PEPS' arrears. PEPS has accumulated significant arrears to contractors. Outstanding arrears to suppliers for investment and maintenance services totaled RSD31.8 billion as of end 2008, slightly up from RSD31.3 billion in 2007.⁶⁵ The bulk of outstanding arrears, RSD29.5 billion, are owed to suppliers for maintenance works. According to PEPS, these arrears reflect decisions to go ahead with planned works despite a lack of funds. Arrears in construction works also reflect lower-than-expected funds from the National Investment Plan, but also the decision to finance projects ahead of elections and cost overruns. PEPS is awaiting a decision from the Ministry of Finance regarding a sovereign guarantee that would allow it to take out a commercial loan to repay RSD20 billion, the total level of guarantees as per the 2009

⁶⁴ Figures include VAT.

⁶⁵ These arrears are classified as operating liabilities to local suppliers in the Independent Auditor's Report for 2007 Financial Audit of PEPS.

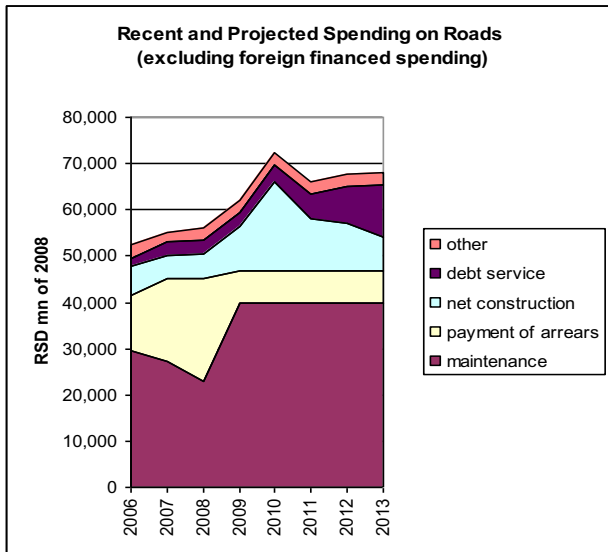


Figure 27

roads, including PEPS expenditures financed from own source revenues and Government counterpart contributions to Corridor X, would be about ten percent higher, in real terms, than in 2008.⁶⁷ Spending would spike in 2010 with the increase in spending on Corridor X,

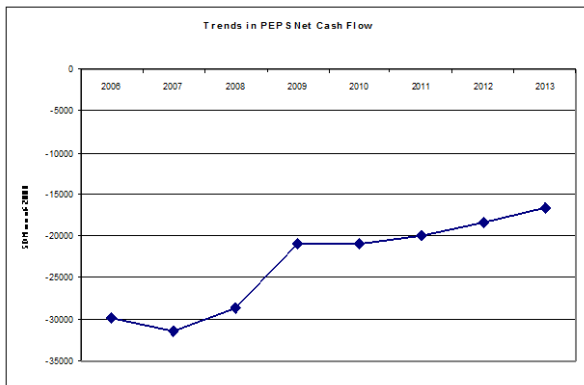


Figure 28

projection.⁶⁹ One way of covering the immediate gap would be to implicitly lower

budget. An additional RSD1.6 billion of arrears to Jugopetrol is to be written off, in exchange for Government forgiveness of an equivalent amount owed to it by Jugopetrol. The remainder of arrears is programmed to be repaid in a 5 year period.⁶⁶

134. Taken together, the immediate budgetary implications of the proposed maintenance and rehabilitation program, the construction of Corridor X, and the resolution of PEPS' existing arrears are fairly significant. As shown, in Figure 27,

total Government spending in 2009 on roads, including PEPS expenditures financed from own source revenues and Government counterpart contributions to Corridor X, would be about ten percent higher, in real terms, than in 2008.⁶⁷ Spending would spike in 2010 with the increase in spending on Corridor X, and would the revert to its previous trajectory, gradually increasing as debt service on Corridor X works comes due.⁶⁸

135. PEPS' financial situation would remain precarious. As shown in Figure 28, the agency's cash flow deficit, while declining, would remain substantial even under the somewhat optimistic assumption used in the

⁶⁶ Out of the total outstanding stock of arrears, RSD31.8 billion, RSD20 billion is expected to be repaid through commercial loan, RSD1.6 billion will be written off, with the remainder, RSD10.2 billion, to be repaid over a 5 year period.

⁶⁷ This projection assumes that the entire stock of arrears is refinanced at a real interest rate of 5 percent and five years maturity, and that foreign borrowing for Corridor X construction is financed at a real interest rate of 5 percent and a maturity of 30 years, with no grace period. Estimates for Corridor X are based on Scenario 1.

⁶⁸ The recently approved 2009 PEPS Business Plan foresees expenditures and revenues equal to RSD66,646, with no deficit. There are two main reasons why there is no forecast deficit. (1) toll revenue projections are optimistic given the economic contraction forecast for 2009; and (2) maintenance expenditures are significantly below what has been calculated as necessary by this Report. Expropriation for Corridor X (RSD2,305 million) is to be financed from PEPS' own resources, suggesting that if revenues are below what is projected, there is a genuine risk of an accumulation of arrears or the posting of a deficit in 2009.

maintenance standards on regional roads by continuing their neglect, which is what has tended to occur in recent years. Such an approach essentially would allow such roads to continue to deteriorate, ultimately raising the costs of restoring them to acceptable conditions.

136. **Raise Revenues.** An alternative would be to raise additional revenues. PEPS' non-investment expenditures are financed by fuel excise tax, toll revenues, and annual vehicle registration charges, as is the practice in other European countries. The rate of the excise tax on petroleum derivatives is set by the Ministry of Finance. A percentage of the revenues are earmarked for PEPS for the maintenance of state roads. PEPS' share has been increasing over time, from 10 percent in 2006, to 15 percent in 2008, to 20 percent in 2009.

137. A recent report on road financing in Serbia noted that increasing fuel tax revenues was not a very promising source of new revenue. As shown in Figure 29, prices for both diesel and petrol were relatively high, compared to other Balkan countries, even before the increases after 2006.⁷⁰ The Government's April 2009 fiscal package calls for a further increase in fuel tax revenues of about ten percent, which implies yet another price increase. Any increases on top of this would need careful consideration in terms of affordability. In principle, PEPS' revenues could be increased by raising the share of the fuel excise tax that is allocated to the agency. As noted earlier, it now stands at 20 percent. Given the central government's current economic difficulties, such a move would need to be considered carefully against the other spending commitments of the Government and other austerity measures.

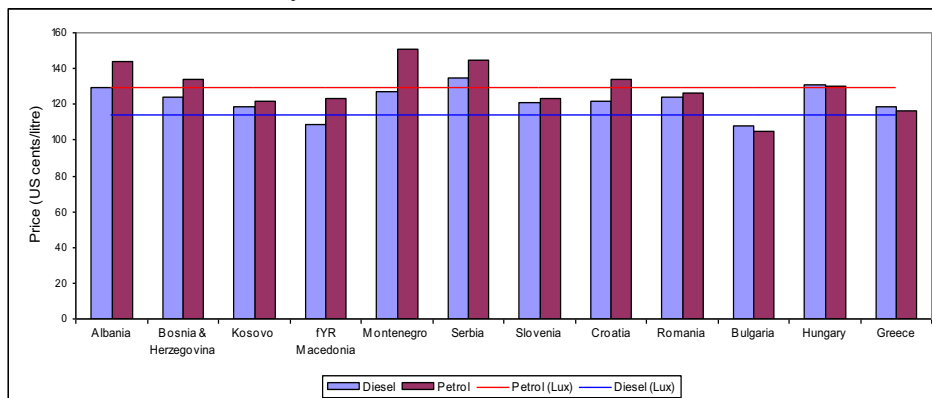


Figure 29: Fuel Price Comparisons
(US cents per liter, 2006)

Note : November 2006 prices.

Source: International Fuel Prices 2007 (GTZ 2007).

⁶⁹ In addition to the expenditure assumptions cited earlier, this projection assumes that PEPS will receive 20 percent of the proposed increase in excise tax on fuel and that revenues from the excise tax, toll revenues and other own-source revenue will continue to increase at the rate of GDP growth over subsequent years. It assumes that maintenance expenditures will remain constant in real terms and that no construction works will be financed from PEPS own source revenues.

⁷⁰ Diesel (Lux) and Petrol (Lux) stand for the diesel and petrol retail prices in Luxembourg respectively, and are usually considered the benchmark for new EU accession countries. Source: GTZ (2007).

138. The possibility of raising tolls also appears limited in Serbia at this time. In the first half of 2006 toll rates for domestic vehicles were raised by 20 percent and a further 18 percent in February 2008. On February 22, 2009 the government decided to equalize the price of highway tolls for local and foreign vehicles, meeting a commitment it took on nearly seven years ago. The harmonization does away with the practice of charging foreign vehicles nearly twice as much as those registered in Serbia. This could potentially lead to a decline in toll revenue in 2009, although PEPS is forecasting a rise in transit traffic, and therefore a rise in toll revenue collected from foreign vehicles, from RSD 7,804 million in 2008 to RSD 8,647 million in 2009.⁷¹ However, the early indications suggest that toll revenues are likely to be, at best, flat.

139. At first glance, it might appear that there is scope to increase overall level of tolls, but such a step needs to be viewed in terms of its affordability and in terms of the rates charged in neighboring countries that offer competitive routes. As shown in Table 16, Serbia's toll rates as of February 2009 are in line with those of neighboring countries with similar levels of GDP per capita. In the case of Category IV vehicles (vehicles with four or more axles) the rates appear to be on the high side, but these vehicles are the ones that do the most damage to the road network, and any change in this rate would need careful analysis. This suggests that there is limited scope for increasing toll rates, without compromising the competitive position of Serbia as a transit country for traffic.

140. PEPS can, nevertheless, take administrative steps to reduce costs and revenue leakage at tollbooths. A recent study of electronic toll collection (ETC) systems, funded by the Public-Private Infrastructure Advisory Facility (PPIAF), reviewed the existing toll collection system and made an assessment of reform options.⁷² It found that ETC was little used, so that the advantages of such a system have not been exploited.⁷³ Over the medium-term, the study recommends that a private sector organization take over toll operations using the concessionaire model. In the short term, it recommends several more immediate measures. These include including equipping 'old-style' toll lanes with ETC and offering discounts to drivers who use them; making better use of video surveillance systems to reduce the extent of fraud; and reducing the number of vehicles eligible for exemptions. It is estimated that these measures could increase net toll revenues by ten percent. The report also finds that there is a relatively large number of vehicles which are exempt from paying tolls and recommends that in the short-term there should be a more detailed investigation of these exemptions.⁷⁴

⁷¹ In the first half of 2007 there was a significant decrease in traffic volume due to waiting times in borders and truckers decided to reroute via Romania. This underscores the fact that Serbia faces a competitive environment for transit traffic and that increases in toll rates needs to take into account the impact it could have on traffic diverting to Corridor IV.

⁷² Ian Catling Consulting, *Review of Existing Toll Collection System and Assessment of Reform Options, Draft Final Report*, January 2009.

⁷³ Evidence elsewhere suggests these investments are both economically and financially viable.

⁷⁴ The report found that 7,500 vehicles did not pay tolls in 2008, representing 930,000 journeys represents a significant number of toll passages and hence a significant amount of revenue which is not collected from these exempt vehicles. In addition, the 12 categories of exemption need to be reviewed.

Table 16: Cross Country Comparison of Toll Rates, 2008

	Category of vehicle (euros/km)				GDP per capita, 2008 (Euros)
	I	II	III	IV	
Bosnia	0.020	0.040	0.067	0.094	3,488
Croatia	0.055	0.084	0.124	0.195	10,370
Macedonia	0.032	0.049	0.081	0.117	3,369
Serbia	0.032	0.047	0.095	0.189	5,075

Note: Exchange rates from local currency to Euro as of February 22, 2009. Nominal GDP per capita data is from the IMF World Economic Outlook October 2008 and are estimates.

Sources: IMF, Bank estimates.

141. The prospects for increasing annual vehicle registration fees are good. Vehicle registration fees have not been raised since 2000 and appear low compared to other countries in the region. Table 17 presents the table of registration fees for different category of vehicles across countries in South East Europe. Serbia's rates appear to be relatively low across the board. Such an increase, while feasible, would not generate much revenues. Evening doubling the fees would generate only RSD400 million, or about 1.7 percent of PEPS estimated financing gap.

**Table 17: Annual Vehicle Registration Fees, 2007
(€)**

Country	Car	Bus	Medium truck	Heavy Truck	Trailer
Albania	18	44+285	45+396	60+835	70+835
Croatia	16-110	600	265	530	345
Bosnia and Herzegovina/RS	72-160	240	260	520	465
Bosnia and Herzegovina/FBH	12-125	420	175	415	490
Macedonia	17-93	140	280	740	400
Serbia (2009)	1-33	29	77	180	130

Note: Medium trucks weight 10 tons, heavy trucks 20 tons, and trailers over 20 tons.

Sources: Mihajlovic (2007), PEPS, Bank estimates.

142. Overall, the prospects for raising significant amounts of additional revenue from transport related taxes and fees appear to be limited. The Government is already committed to raising the tax on fuels. Further increases in highway tolls run the risk of diverting international freight traffic to other countries—although there is some scope for reducing costs and revenue leakage at tollbooths. Increases in vehicle registration fees, while feasible, will not raise much revenue. This makes it all the more important for PEPS to adopt measures to improve the efficiency of expenditure.

143. **Undertake Institutional Reforms.** The third option is to achieve better outcomes for the same amount of money. The lack of a professional approach to asset management, limited use of formal techniques of economic appraisal in project identification and prioritization, weakness in financial planning and the under-use of

performance contracting all contribute to inefficient resource use and the waste of budgetary funds.

144. The establishment and use of an asset management system is a prerequisite to better maintenance planning. This involves regularly collecting and computerizing data on pavement conditions and traffic counts. An economic decision model such as the Highway Design and Management Model (HDM-4) can then be used to identify priorities for maintenance, taking into account overall budget constraints. An ongoing World Bank project is financing improvements to the computerized road database. This is expected to be operational by the first half of 2009. PEPS should use the new database and the Highway Development and Management Model to identify those priorities for funding with the highest returns in order to ensure that only the highest priorities are supported with public money.

145. Efforts should also be made to improve project planning. PEPS' current planning and budgetary process is weak, as evidenced by the large gaps between actual and planned road works. (See Figure 30). Maintenance, rehabilitation and construction activities should be planned in advance using a medium-term development plan (MTDP) for the network. While routine maintenance activities can be easily incorporated into annual plans, the medium-term expenditures for periodic maintenance, rehabilitation, reconstruction, upgrades and new construction should be planned over a longer time-frame (e.g., 5 years).

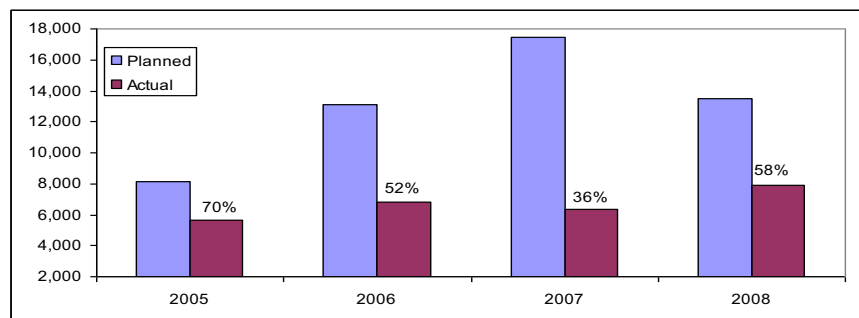


Figure 30: Planned and Actual Road Capital Expenditures
(RSD mn, current prices)

146. Third, PEPS should expand the use and the scope of performance-based maintenance contracts. Such contracts, in hybrid form, have been tested on a pilot basis in two regions, Mačva and Kolubara. The two pilot contracts, involving both winter maintenance and routine maintenance for 1,200 km of roads, were signed in August 2004 and ran through August 31 2008. The experience was very encouraging, with results suggesting significant reductions in costs. Unit costs for winter maintenance, for example, declined by 24 percent. This approach is now being extended to all twenty-five districts of Serbia, but there is significant opposition from the regional maintenance companies. In addition, the opportunity to extend the original pilot schemes in the two regions, in terms of the scope of activities that are subject to output based approaches, has

been missed, with PEPS management opposing testing an extension within the World Bank financed project, that could realize further savings.

147. Finally, over the medium term, the Government should reduce the size of the network for which PEPS is responsible. The recent Law on Public Roads clarified the legal status and respective responsibilities for the road network. As noted earlier, PEPS is assigned responsibly for national, magistral, and regional roads (Classes I and II) while local governments are responsible for municipal or local roads. However, this reclassification of the network was introduced without a prior inventory of the road network and the current use of each segment. Once a detailed inventory of the road network is completed, some of the lesser-used segments now under PEPS' jurisdiction could be reassigned to local governments.

Box 7: Will Structural Funds Help Finance Serbia's Transport Infrastructure Investments?

On 29 April 2008, the EU and Serbia signed the Stabilization and Association Agreement (SAA) and the Interim Agreement on Trade and Trade-related issues. The SAA will be submitted to parliaments for ratification and the implementation of the Interim Agreement will start as soon as the European Council decides that Serbia fully co-operates with the International Criminal Tribunal for the former Yugoslavia (ICTY). In its 2007-2013 Budget, the EU allocated €10 billion for the Instrument for Pre-Accession Assistance (IPA), to facilitate candidate and pre-candidate countries to strengthen their institutions to utilize EU structural funds as soon as they become full members. The IPA has replaced all previous instruments of support to countries with a candidate and pre-candidate EU membership status.

The IPA consists of a total of five specialized components for: a) assistance in the process of transition and capacity building aimed at meeting the EU membership criteria and strengthening of administrative and legislative capacities; b) assistance in regional and cross-border cooperation; c) regional development; d) development of human resources; and e) rural development and agriculture. Before it acquires the status of a candidate, Serbia will have access only to the first two components, that is, transition and market reforms funding, although infrastructure expenditure is allowed under Component 1. For this reason, for the time being, it is unlikely that the EU structural funds could help Serbia's large transport infrastructure needs.

RAILWAYS

148. Subsidies to the state railway company Zeleznice Srbije (ŽS)⁷⁵ cost the central government budget about RSD11.12 billion in 2008. Even this level is insufficient to cover the operating losses of the railway or to permit an adequate level of maintenance of the railway infrastructure or rolling stock. While freight traffic has been growing, passenger traffic has been declining, and the financial performance of both has continued to suffer. The Government is nevertheless planning to make a major investment in high speed rail in Corridor X. This chapter proposes a more modest and cost-effective set of initiatives

149. Overall rail traffic volumes have risen steadily since the start of the decade, after following precipitously in the late 1990s. As shown in Figure 31, the rise in traffic volume has been uneven, with a steady rise in freight traffic over the 2000-2007 period accompanying a decline in passenger traffic over the same period. In the first half of 2008, due to the unfolding economic crises, freight traffic decreased by 5.2 percent⁷⁶, driven by a 24 percent reduction in domestic freight traffic and static international traffic. Passenger traffic continued to decline (by 10.4 percent in terms of total numbers and by 6.1 percent in terms of passenger km.) The limited quantity and poor quality of passenger rolling stock, combined with unreliable and low quality services and increasingly competitive road transport explains much of the decline in passenger traffic. The average commercial speed in 2007 was on 43.3 km/hour.

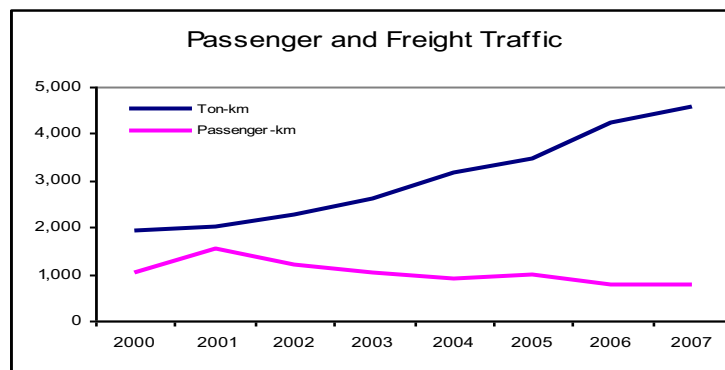


Figure 31: Trends in Passengers and Freight Carried by ZS
(mns of passengers/mn tons of freight)

150. Productivity despite improvements remains poor by EU standards. As shown in Figure 32, ZS has substantially reduced staffing levels over the past six years (by a

⁷⁵ Under legislation governing the sector, public rail infrastructure (i.e., trackage) is owned by the Republic and is open to all licensed rail transporters. ZS is, at present, the exclusive manager of Serbia's rail infrastructure as well as the primary provider of both passenger and freight services.

⁷⁶ Compared to the same period in 2007.