

Application of shared financing in road infrastructure development in Hungary

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Abstract:

This study was elaborated in the framework of TIPP (Transport Institutions in the Policy Process) project in the EC's 5th Framework Programme, to find answers for institutional questions about how to involve private capital into road infrastructure development successfully, in politically acceptable way. We have applied a new model of political acceptability, developed by TU Dresden group (Wieland, Seidel, Matthes, Schlag, Schade). This approach is a synthesis of two models, the first one by Schade & Schlag (2000) represents theoretical and empirical work concerning the acceptability of pricing measures in transport policy from a psychological point of view, the second one by Wieland (2003) is an attempt to combine the media system and cognitive aspects of media production and of transport policy making into the positive theory of economic regulation. In this analysis we focused on M1/M15 concession motorway project, which was the first charged and the first private concession motorway in Hungary. The systematic description and positive analysis of the different key actors lead explanations of the situation and the causalities in the case of Hungarian concession motorway project. The conclusion attempts to give lessons to be learned and answers to institutional and regulatory questions.

Keywords: TIPP, motorway concession, transport institutions, political acceptability, Hungary

JEL-code:

1 INTRODUCTION

The transport infrastructure development in the NAS area is interconnected to falling into line with the EU member countries. After transition from planned to market economy there were serious changes in the society and economy. The transition process has not been finished yet, although road transport and management of road networks underwent substantial changes during last decade, also in Hungary. This transformation created new responsibilities in road management (e.g. creating the possibility of private financing) and strengthened the accounting discipline and transparency, but the implementation of regulations still faces to many problems of the existing institutional system. The missing financial sources for development and the lasting financial funding of maintenance in the road sector lead to a substantially fall in the asset value of the national road network.

These problems shall be solved; they are requirements of primary importance for improving the quality of operation of a service provider. The former trials for improving the private capital's participation in infrastructure development almost always failed. The involvement of private investors aimed extending financial sources to be able to supply the very scarce public sources. In 1992 the first international call for concession of a motorway project of M1/M15 meant that Hungary was the first country in the NAS area which tried to introduce a new financing method in the transport infrastructure development. The lack of international experiences and the uncertain circumstances of the transition process did not allow insuring the success of the privately financed motorway project, although both politicians and independent professionals participated in the preparatory work. Unfortunately, the history justified the concerns of some professionals' saying that the NAS specialities could cause trouble.

This study was part of TIPP (Transport Institutions in the Policy Process) project, funded by the European Commission's 5th Framework Programme – DGTREN, written by Tanczos et al.¹ (2004). The overall objectives of the TIPP project are to provide a comprehensive picture of institutional

¹ Katalin Tanczos, Agnes Kosztyo, Ferenc Meszaros (BUTE)

framework conditions (constraints and enablers) for implementing transport policies throughout Europe, to develop a TIPP approach for studying the range of institutional implementation issues covered, to derive results regarding the implications and impacts of different organisational and regulatory constraints and settings and to develop, based on the above considerations, concrete policy conclusions.

In this case study, we give a short overview of the Hungarian motorway history and the formation of concession tenders (from the preparation of laws on concession to the results of analysing the reasons of failure). According to the model of political acceptability developed and described in the framework of TIPP's Workpackage 4 by Seidel et al.² (2003) (see detailed description of model of political acceptability in the next chapter), we set up the key actors of the analysis, on the side of the politicians/regulators, transport providers and their interest groups, the public and its interest groups and the media. The setting up chapter is followed by the in-depth analysis of the stakeholders' motivations and decisions to be able to confirm the hypotheses or find any hypothesis for the applied approach. The study ends with conclusions.

2 ANALYSIS CRITERIA AND ANALYSIS MATRIX

The model of political acceptability is not a formal mathematical model but rather a set of criteria and hypotheses that seem to be essential for analysing the institutions and the political processes involved in European transport policy making. Seidel et al. attempted to adopt an approach that is frequently used in the non-economic social sciences and psychology. The developed "psycho-economic" is a synthesis of common ideas of the two input models. The first one by Schade & Schlag (2000) represents theoretical and empirical work concerning the acceptability of pricing measures in transport policy, they look at the problem from a psychological point of view, with several central variables into a heuristic model of acceptability of transport policies. The second one by Wieland (2003) is an attempt to combine the media system and cognitive aspects of media production and of transport policy making into the positive theory of economic regulation. The model is based on identification of

² Tina Seidel, Bernhard Wieland, Andreas Matthes, Bernhard Schlag, Jens Schade (TU Dresden)

key actors and interest groups in the policy process and relevant analysis criteria (the choice of criteria was led by empirical and theoretical work of the authors).

The main goals of the approach were to analyse the relations between the key actors and their impact on the implementation of a policy measure (see Figure 1.).

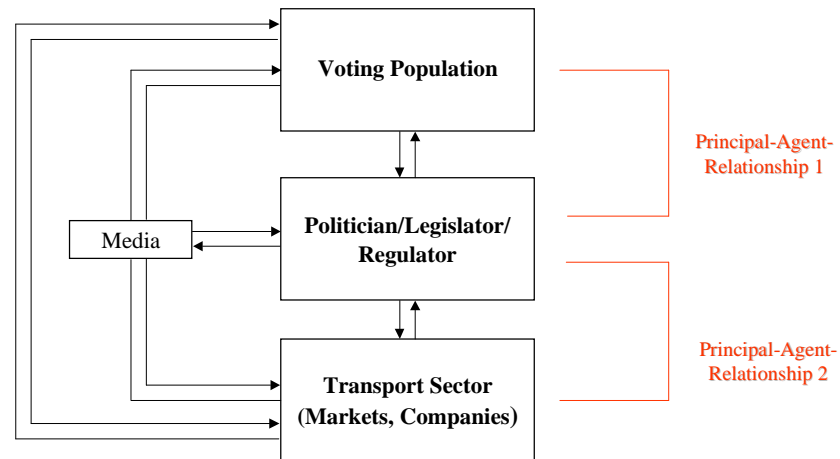


Figure 1: Framework of political acceptability (key actors and relations)

(Source: Seidel et al., 2003)

The key dimensions of the model are reflected in matrix structure, where each column corresponds to a particular actor of transport policy and each row contains a criterion.

The first row of the analysis matrix describes the key actors and interest groups:

- § The transport providers and their interest groups
- § Politicians/regulators
- § The public and its different interest groups
- § The media

The first column of the matrix contains the analysis criteria, which are the following:

- § Problem perception
- § Goals
- § Information provision
- § Effectiveness
- § Equity/Fairness

- § Social environment
- § Implementation process
- § Political and institutional setting

Explanation of criteria is summarised in the following.

The first criterion shows the perception level of policy problem by the key actors. It goes without saying that completion of this criterion means not an automatic successful implementation procedure of a transport policy, but a crucial precondition for the acceptability.

The goals and level of goal conflicts of different actors are important factors for implementing policy measures; the less goal conflicts give chance for a success.

Information provision and level of being informed are of primary importance and the timing of the disclosure of information could hardly influence the success or failure of policy implementation. The distinction between objective (effective) and subjective (supposed) own knowledge is needed, because individual decisions are based mainly on subjective information knowledge. The measurement of knowledge is a very difficult process, thus this case study analyse this question only in a descriptive way.

The criterion of perceived effectiveness of a policy measure also could determine the success or failure of implementing it. Correspondingly to information provision criteria, the objective (selfish) and subjective (moral) judgement of the effectiveness of a policy are different, but both of them are crucial factors.

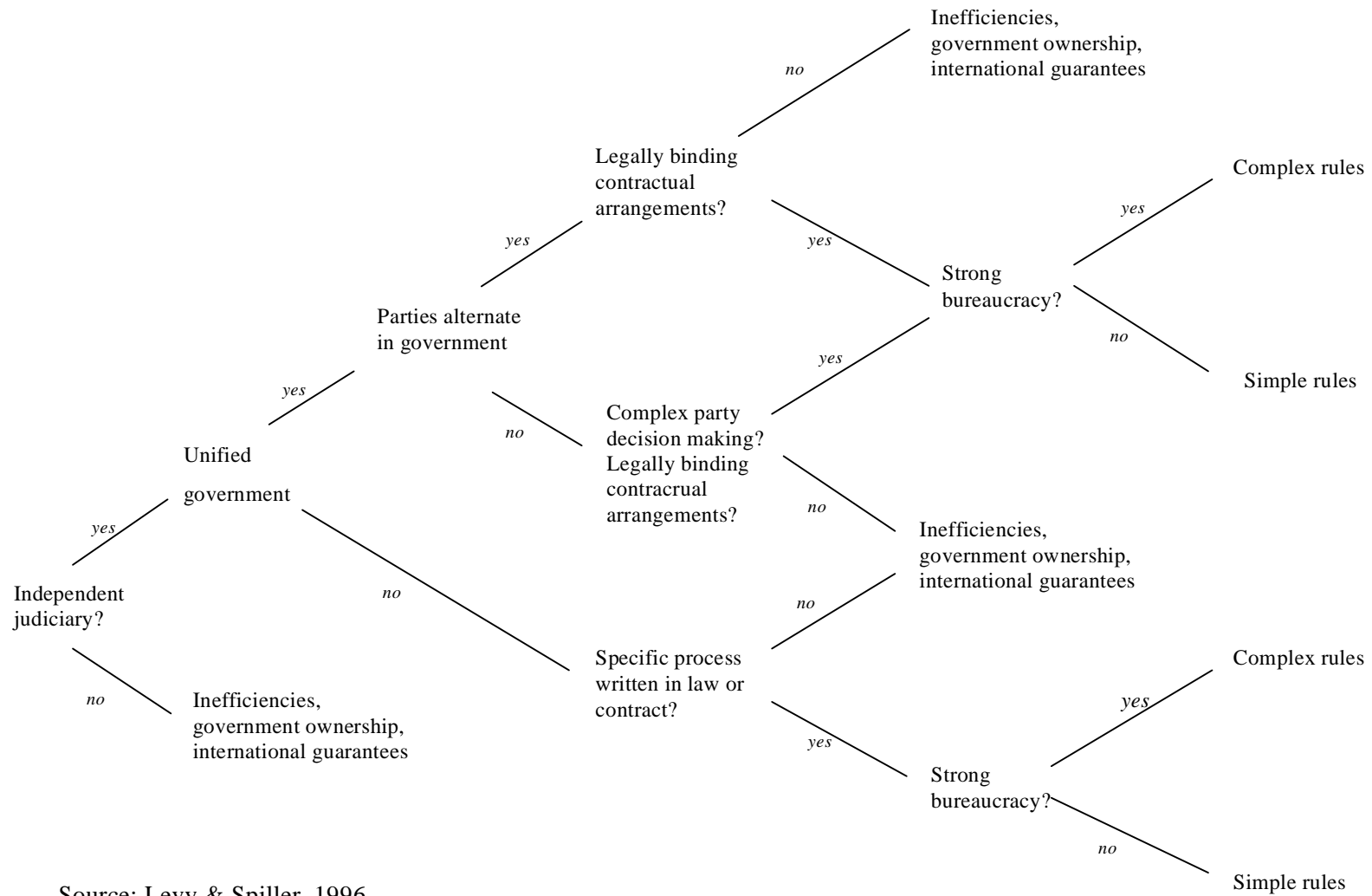
Equity and fairness issues are one of the most important determinants for a successful implementation. Transport policy findings show that principle of equality has more influence on public's opinion than the principle of equity, therefore package solutions of policies are more welcome and accepted if they contain equal issues on access to mobility for all members of the public. Furthermore equity and fairness issues are always in favour of media reports, they make the emotionalising of political issues

possible for the public. Therefore news and reports induce interest and readership, hereby revenues for the media.

The next criterion attempts to shed light on social environment of key actors, which could influence their behaviour and decisions with environment's opinions and norms. Public responds to attitudes and opinions of their families or friends, politicians act in a way that improves their status, position in their parties and journalists attempt to be held in high esteem.

Implementation process is also of primary importance for accepting a transport policy. Two basic ways are differentiated in the implementation process, the "big bang" and gradualism, they must be judged also differently according to their respective contexts.

The last criterion, political and institutional setting focuses on specialities of the national institutional system. It is important factor, particularly in the NAS area, where the transition period have not been finished yet, problems still stem from the old times of planned economy e.g. lack of an unambiguous economic-political and management regulatory system (Timar, 2004b). A decision tree scheme of Levy & Spiller (1996) (see Figure 2.) was applied in the framework of model of political acceptability, analysing the influence on implementation of transport policy. This scheme is based on transaction cost theory and has already proven very successful in analysing telecommunication policy.



Source: Levy & Spiller, 1996

Figure 2.: Decision tree for regulatory design

3 HISTORY OF THE PRIVATELY FINANCED MOTORWAYS M1/M15

From the beginning of the 1960's – the early years of Hungarian motorway construction – ten proposals had been made to develop the motorway network. In those times of the socialist economic system investments were financed in the framework of the so-called 'five-year plan' by the central state budget through the State Development Bank. As the economic policy was not in favour of road transport or infrastructure financing in general, which worked on the 'spend what you have left' principle, in order to finance the road network the officials responsible for the road network tried to seek a solution consisting of automatic procedures.

After the introduction of the 'New Economic Mechanisms' in 1968 – the market- and entrepreneur-oriented reform movement of the socialist economy – a '500 kilometres of Motorway Programme' had been elaborated by 1970. This contained an overall 500-km long tolled motorway network that should have been implemented within a 10 years deadline. The planned toll level was set to the fuel costs of an average car. The international tendering procedure was led by the Hungarian International Trading Bank and five serious bids arrived from France, Italy, Germany, the UK and Japan. However, after the first oil crises, the preparatory works had slowed down by 1974. Finally, because of political concerns, it was declared in 1976, 'there is no need for foreign investment and toll collection on the socialist Hungarian motorway network'.

Financing habits returned to the 'five year plan' scheme funded from general taxes. Just before the political and economic transition in 1989, the gasoline price tax earmarked for the Road Fund became the only financial source and remained so until 1994. From the middle of 1980's, the loans of the international financial institutions (the World Bank and the European Investment Bank) with state guarantee started to accumulate robust financing costs, which resulted in the necessity of tendering for construction contracts. Although from that point onwards the situation improved a lot, demand grew much faster than road supply.

In 1990, when urgent developments were needed after the political changes, the previous plans no longer pertained, yet there were no new plans available, either. The Ministry of Transport, Communications and Water Management commissioned the 'Development Program for National Public Road Network' to be prepared and the program was approved by the government in 1991.

Although studies were made and also there were some attempts to introduce a vignette system like a user charge at the end of the 1980's, these efforts were undermined by the opposition of the public road users and the lack of supplementary funds. Because of the real budgetary constraints and high public debts the attention turned to extra financial sources; the pure private financing first and then, after the first experience, to public / private partnership. As a first phase of the implementation of this programme, altogether 383 km was put into operation by 1994 on 5 different toll-free motorway stretches (M0, M1, M3, M5, and M7).

According to the laws on concession enacted by the parliament in the beginning of 1990's, the monopolistic rights of financing, building and operation of infrastructure are transferred to the private concessionaire under certain conditions included in the contract for a limited period. This means that the consortium that has won the tendering procedure is allowed to finance, build and operate motorway stages and to collect tolls from the users to recover the project costs, to make secondary developments or use them directly for motorway service. After the end of the concession period, the concessionaire transfers the motorway back to the state while the motorway facilities and the land remain the propriety of the state all the time.

The M1/M15 motorways lie on the TEN Helsinki Corridor No. IV, E60, E65, E75 (see Figure 3.). They connect three capitals: Budapest (Hungary) to Vienna (Austria) and Bratislava (Slovakia) respectively. The length of the concession sections was 43 km on M1 and 14 km on M15. The project contained 7 interchanges and 5 rest/service areas.

Following the procurement notice published in September 1991 the concession contract was signed in April 1993. The concession company named ELMKA Rt. (First Hungarian Motorway Concession Co. Ltd.) was established by French-Austrian-Hungarian operators, contractors, oil companies and banks.

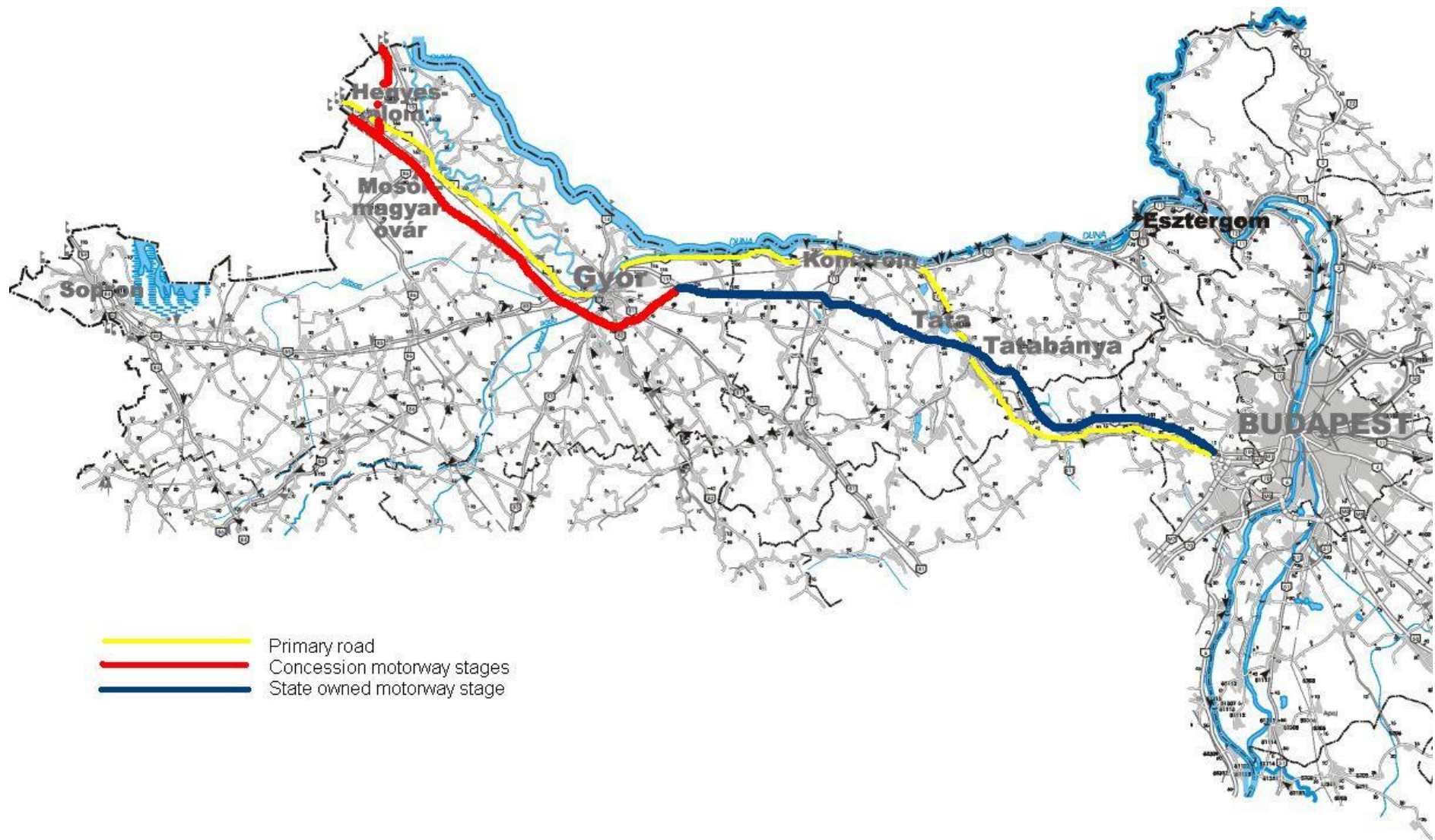


Figure 3.: Motorways M1/M15 and the parallel primary road

They reached the financial closing by December 1993 involving EBRD (European Bank for Reconstruction and Development) plus 11 European and 2 Hungarian banks among the lenders of the EUR 329 million equivalent project. The financing structure was based mainly on the highest possible involvement of international working capital. The project agreements passed as much project risk as possible to the private sector, a strategy that led to failure due to the lack of necessary state presence in the project (Tanczos, 2001). Principal and interest repayments were to be fully financed by ELMKA Rt.'s toll revenues.

The state contribution agreed upon during the negotiations for the concession contract, later for the financial closing consisted of the following factors (estimated less than 5% of the total project costs):

- preliminary planning and design costs including building permits and environmental clearance for a non-tolled motorway;
- land acquisition and registration, archaeological exploration and site delivery, free of charge at dates agreed.

In order to reach the financial closing, some amendments to the concession contract had to be made:

- the project had to be phased. Phase II was defined to allow for a deferred implementation of the second carriageway plus the lay-by areas of motorway M15 and an intersection of motorway M1. Depending on financial tests defined in the concession contract, Phase II was scheduled for different deadlines but not later than December 31, 2009.
- the Government had to guarantee not to collect toll on the formerly existing section of M1 within 10 years from the opening date of the new section implemented under the concession. Originally, collecting toll on the whole section was intended to virtually spread the high toll of the concession section to the complete span between Budapest and the border. Now, experience shows that, in deed, a lower toll rate for the whole section would have been more desirable, which could have resulted in a higher demand. According to the position adapted by the actual government, tolling could only be considered in case of new or upgraded motorway sections. The said commitment agreed by the government then did not cause any conflict at that time but created problems later when the successors intended to spread toll collection to the whole network.

As to the partition of sources, the equity represented 17%, long-term debts were 81%, generated cash was estimated at 2% and there was an 18% extra standby facility. Concerning the segmentation of costs, construction costs represented 65% (billed under a lump sum, fixed priced turn-key contract), the operation during the implementation was 2%, project development costs and other company costs were 18% and financing costs (interests during construction and other fees) were 15%.

After two years of construction the M1 concession section was opened in January 1996 and M15 was to be opened in June 1998, closing the budget with less than a 0.5% cost overrun.

The toll collection was implemented by a ‘semi open’ system. There was a main toll gate or barrier (handling 95% of the toll income) and there were four satellite toll barriers on two legs of two interchanges. The initial toll rates were defined in the concession contract by four vehicle categories and toll plazas (for passenger cars and bikes the allowed maximum toll rate was EUR 0,15 / km). Different multipliers were assigned to different vehicle categories. The passenger car category served as a basis with no multiplier (or 1,0) and then each category received a weight (i.e. a multiplier) according to the load affected on the road by vehicle falling into the category. Rates were automatically escalated without any prior consent of the ministry according to domestic CPI and/or the exchange rate differential in proportion of loans raised in USD and DEM.

If comparing the average incomes/month values between Hungary and the EU, the high values of toll rates can be established. (See Table 1.)

	Hungary (M1/M15)	EU average
Motorway toll rate for PCs	0,15 EUR/km	~0,07 EUR/km
Average income/month	~400 EUR	~1000 EUR
Average monthly income allows to travel by PC	~2670 km	~14300 km

Table 1: Comparing of toll rates and incomes in Hungary and in the EU in 1999

A 30% higher rate could be applied during two months in the summer holiday season for passenger cars, bikes and buses. Four discount schemes were used on the motorways for local and frequent users.

From 1996 to 1998, the annual average daily traffic (AADT) was between 6,300 and 6,500 vehicles per day. It represented 55% of the estimated amount of the initial traffic study. On a yearly average, the toll motorway captured 45% of the traffic in the corridor as initially estimated. Among other factors the traffic shortfall was due to (Siposs, 2002):

- the fact that the much lower than expected traffic in the corridor consequently influenced the motorway traffic (as a result of worse than estimated macroeconomic environment in Hungary as a transition country);
- the length of the tolled section (only 43 km, easy to divert, time saving was limited to 15-20 minutes);
- the location of the project (close to the border, where waiting time for trucks is often measured in hours);
- the structure of traffic on the motorway (mainly long distance traffic, West-European users, passenger cars, but 80% of buses and trucks diverted the tolled section of the road, because the multiplier of the toll rate was too high for these categories in the first months of operation).

All the above factors brought very hard times to the concession company. (SAO, 2001). While the company initiated the already mentioned discount schemes in the first months of 1998, traffic growth was close to 8% compared to the previous years.

The revenue shortfall was bigger than the 30% income loss forecasted by the 'worst case scenario' so the concession company heavily needed restructuring. As it was easy to project that in June 1999 ELMKA Rt. would be unable to meet the first principal repayment obligation goals, negotiations between the shareholders, lenders and the ministry, to solve the financial problem, started in January 1998. The negotiations aimed at a possible agreement to extend the length of the toll collecting section to Budapest and lower the average toll rate. The existing government started a dialogue with the concessionaire, but due to the upcoming election process, they did not want to assume any obligation, which could hurt their electoral chances.

After the elections bringing the victory of the opposition, who had previously stressed that they opposed tolls and other PPP solutions, there was a very uncertain environment for private capital and financing in the public sector. Therefore the EBRD started a discussion with the ministry on taking part in the debt service through substitution for the concession company. Given the various other interests of the main stakeholders, the investors were forced to agree to this substitution (which could otherwise not have been implemented under Hungarian law) and to transfer the concession rights to the public operating company (World Bank, 2002). After a year long discussion the parties agreed about the application of the substituted entity clause of the concession contract. The ministry established the state owned NYUMA Rt. (West Hungarian Motorway Co. Ltd.) which was appointed by the lenders as a substituted entity in September 1999. In order to facilitate this change, a new loan agreement and a guarantee agreement – with which the state guarantee entered – was signed. The transfer agreement relating to the concession contract described the legal frame of the substitution. The settlement deed contained the renouncement of the parties from any claims and the demobilisation deed contained the way of the final accounting of the original private concession company. The private investors had lost their joint capital, app. 60 Million EUR (Timar, 2004a).

After the substitution, the NYUMA Rt. cut the tolls by half, which resulted in a 30% increase of traffic on average on the tolled motorway section. As a bottom line, the income was reduced by 35% compared to the previous term.

In 1999 the government decided that motorway users have to pay only for the operation and maintenance while construction and financial costs should be covered from the central budget. A vignette system was introduced in January 2000 on the whole length of the M1. This vignette system was enlarged in two steps on the whole length of Hungarian motorway network.

4 SETTING UP OF KEY ACTORS

4.1 Transport providers and their interest groups

In case of the motorway M1 the main actor on behalf of the transport provider itself is the ELMKA Rt. as concessionaire and consequently its owners and lenders. The equity investors are international and domestic road constructing, operating and maintenance enterprises. The debt was financed by foreign and national banks led by EBRD in the aggregate estimated 97% of the total project costs. The remaining part means direct Hungarian state contribution in form of land acquisition, registration and archaeological exploration, approximately 3%. The EBRD played a significant role in getting the adequate satisfaction of the lenders and the investors. That means that the Hungarian government would not only enter the project when the construction works had already been completed and that the project would benefit from a significant cash flow to repay its debt and provide the investors with a necessary return (World Bank, 2002). Therefore, it can be determined that the opinions and the behaviour of EBRD were dominant among the members of the interest group of the transport provider.

4.2 Politicians/Regulators

The Hungarian state and the actual Hungarian government possessed the financing, building and operating rights of transport infrastructure. When these possibilities would be transferred to the potential future concessionaire, the role of political and decision maker actors would also change from an owner/operator function to a regulatory one. Regarding the structure of the then government, the main stakeholders are the Ministry of Transport, Communications and Water Management (recently Ministry of Economy and Transport), and the Ministry of Finance. Other institutions connected to the state, such as the Directorate of Motorway and the National Bank of Hungary were involved in the discussion period of the concession process. After establishing the Hungarian Bureau for Motorways and in line with the objectives formulated in the laws on concession, the Bureau was awarded the concession upon the advices of Morgan Grenfell & Co. and the New York law firm Stroock & Stock & Lavan. Due to the re-nationalisation of the motorway M1, the structure of decision making had also

been changed. The rights for using development credits and state financial funds were transferred to the newly-established National Motorway Inc. that is responsible for the building, reconstruction, operation and maintenance of motorways approved in the road development program ensuring toll collection. This enterprise had been authorised to practise the proprietary rights of national motorway operating companies. Therefore, it set up the State Motorway Management Company, which is responsible for operation of the existing state motorway stages and works, toll collecting and fulfilment of the former motorway companies' debt services. So the liability of decisions and disposition on state budget resources had been transferred from the ministry to the National Motorway Inc. and the Hungarian Development Bank Ltd. However, these rights were revoked from the latter.

4.3 The public and its different interest groups

As public stakeholders, the main actors are the motorists on this route improving connections between Budapest, Bratislava and Vienna, as concerned customers. Naturally, other indirectly-concerned consumers are those who do not use the ELMKA Rt.'s motorway stages but own a vehicle and drive under similar traffic conditions but on other roads that could, however, turn privately-financed and operated roads in the future. They are taxpayers interested in the operation of the government and the affairs of state budget; practically the whole population with suffrage. Motorists, of course, mean both individual users (motorbike or car) and commercial users, i.e. transportation entrepreneurs of different size (foreign and domestic). It is necessary to differentiate the concerned and non-concerned people regarding the toll system since the objectives of the two groups are opposite. On one hand, the concerned users want to pay as little as possible for motorway use and want the state budget to take a share in financing the operation and the maintenance of the infrastructure. On the other hand, the unconcerned population wants the minimal load of the central budget and wants to validate the 'users pay' principle. The major interest group related to the voting public and also an active participant of the Hungarian public life is the Hungarian Automobile Club. Commercial users are represented by the Hungarian Road Haulage Association and the Hungarian Chamber of Commerce.

4.4 The media

When speaking about the media there are several kinds of ways to look at it and distinguish. In this study, a heuristic insight is given into political, Internet-based, professional and public media.

In the “Freedom of the press 2003” edition of the Freedom House (a US-based international organization ranking countries according to the degree of liberty of the press in each country). Hungary has the ‘Free’ classification. On a scale from 0 (absolutely independent) to 100 (not free) Hungary has a total of 23 points, which is under the 30-point limit of the ‘Free’ category. The majority of the points come from political influence and economic pressure. Independent media thrive, but some political interference continues to trouble the press. Article 61 of the constitution provides for freedom of expression and the press. A 1996 media law requires both ruling and opposition parties to share delegates to state media oversight boards. Opposition parties had accused the previous government of stacking the oversight boards. After losing power in 2002, the former ruling party accused the new government of improperly influencing state television and radio. The main opposition newspaper alleged that the new government was exerting inappropriate pressure on its advertisers, thus endangering the paper’s financial viability. Pro-government media outlets at times receive better access to official information. Hungary’s two national private television broadcasters attract the vast majority of country’s viewers, while the three state-owned stations account for roughly 10 percent. Numerous private radio stations operate throughout Hungary. All of the country’s national newspapers are privately owned (Freedom House, 2003).

5 IN-DEPTH ANALYSIS

5.1 Problem perception

In the Hungarian case study, the objective was to understand the issues of the private financing of the infrastructure completed with pricing on infrastructure elements. The M1/M15 project can be considered special in this respect, since it was the first privately-financed infrastructure development and simultaneously the first charged motorway stage. It means that these two objectives were to be analysed at the same time, and due to this parallelism it is hardly recommended to make any distinction between them.

Profit maximisation was standing in the centre of the problem perception. If the assessed risks could be in any way decreased, because of any State contribution, then private capital would be fighting for opportunities. Therefore, it means that public participation in such projects is more desirable towards reducing costs and increasing benefits of private investors.

Politicians/regulators need to “act” to create opportunities to private capital in financing transport infrastructure. Therefore, it can substitute stage budget resources and can improve the efficiency and effectiveness of infrastructure operation.

Due to implementing private financing in transport infrastructure development, there were welfare losses regarding concerned and unconcerned citizens. Analysing the case of pricing policy, the welfare losses noticed were caused by the high toll rates, which caused a higher equality point than in ideal circumstances with reduced demand on the motorway, the remaining part of the traffic used the parallel primary roads in environmentally more sensitive areas (cities etc.).

From the media’s point of view, problem perception is not a relevant issue.

5.2 Goals

The goals of the transport provider and its interest groups were to fight for and win the best conditions and assurances regarding the concession contract, nevertheless reach their proposed, planned aims and meanwhile arisen goals. In short, their proposed goals were to reach financial feasibility and bankability, since during the life cycle of the concession company they aimed state financial contribution in the motorway project.

The main conflict - between the politicians/regulators and other key actors - was the degree of state contribution in the motorway development. Private investors wanted to get state guarantees on borrowed loans, independent professionals advised to the state decision makers that a minimal degree of involvement of state budget financial sources was needed by the development but the politicians and regulators counteracted these initiations. International experience and trends are showing on the long run the impossibility of the development of road infrastructure network with free admission to motorways, without toll collection and in addition, the de facto lack of state financial resources had made it easier for politicians to start to teach the public on the 'users pay' principle to achieve their concept. The only failure was the inadequate level of public involvement in transport policy questions, especially in determining toll rates that considered the economic conditions and purchasing power of the population.

Personal and commercial goals were to get better transport infrastructure service to enable winning travel time and improving attractiveness of their enterprises via personal cost minimisation (low level motorway tariffs). This question needs making a distinction between directly and indirectly concerned users. It can be established that the goals of directly concerned inhabitants were the previously mentioned better infrastructure service and later the decreasing of toll rates, whilst the aims of indirectly or not so concerned population were road network development, as well and the application of 'users pay' principle but only to a defined level.

The objective of media sources is to get as many viewers/readers as possible to attract the attention of advertisers, so that they can realise more revenues. In case of products that people have to pay for, subscription fees are secondary revenue sources also increasing with the number of subscribers.

5.3 Information provision

Transport providers and their decision makers use their own information source coming from the members of interest groups. During planning phase the applied traffic forecasts were based on a survey from 3-4 years earlier, which was a particularly problem due to the specialities of transition. Furthermore, there was no experience on willingness to pay of Hungarian car users. The missing and failed surveys and studies were the bases of the failure of the motorway project.

The politicians/regulators are getting information mostly from their advisors and substituted institutions and researchers, but in many cases this information fund will be extended with information service of (potential/bidding) transport providers as in the case of M1/M15. Also, the opinions of the public and the lobbyist media were not taken into consideration due to the lack of such studies.

The public and its interest groups really are gathering information in a non-conscious way about transport policies: they are looking for information sources that represent their political views. Most of the population is not interested in the professionals' opinions, half of them thinks it is too complicated to understand it, the other half is aware that professionals only want to abuse them. It is easier and more comfortable to listen to their chosen politicians. Important experience is that personal contacts and personal information exchange is more effective than the mass media propaganda, as it is the most popular means of politicians and parties before election periods.

All the key actors and their interests groups' representatives can be information providers for every kind of media.

5.4 Effectiveness

We make distinction here between the effectiveness of the pricing policy and of the private financing.

Analysing the effectiveness of pricing policy (parallel with success and fulfilment of planned profit maximisation) it can be assessed that the introduced charging system was not able to meet the requirements of demand and supply, therefore the applied toll rates were much higher than what could be accepted by the customers.

Evaluating the financing measure and regarding the Hungarian concept aimed at developing the motorway network with the help of private capital, the investors from the private sector could, in effect, consider the policy of private financing. This process was speeded-up when the concessionaire of the M5 motorway, the AKA Rt. started the operation of the second Hungarian concession motorway stage.

After the transferring of concession rights from the indebted company the newly established, state-owned motorway company took over a 52 Billion HUF debt, it means the state had to pay back 9 Billion HUF more to lenders than what was calculated at the start of the construction.

In brief, despite the success of the development of the motorway network, politicians/regulators did not want to continue with private financing in transport because of the failure of the pricing policy. These opinions have changed recently, the government and the ministry decided on new concession motorway project in Hungary (M6 between Budapest and Dunaujvaros).

In case of the public, effectiveness can be measured on acceptance. Two types of acceptance should be analysed, they are the selfish acceptance by the public is simply how they are affected by the policies, and the moral acceptance by the public means what they think is fair.

Considering moral acceptance it seems that the public and their interest groups had a high level of it regarding private financing and pricing on motorway policies, because people did require a more developed transport infrastructure and also accepted the fact that it cost money.

Studying the selfish acceptance needs a more detailed analysis of the situation. The improvement of the quality of transport provision is a requirement of the public that can be satisfied with the aid of private financing. The M1/M15 project aimed to develop the road service on the corridor beside scant state budget financial resources. Regarding private financing as a means to improving the quality of transport and the procession of traffic it can be stated that the policy was effective for the public. In case of pricing, the question could not be answered easily because tolls were directly affected by the financial conditions of the concerned population. The share of HGV-s and buses relatively increased on by-pass roads, while the overall traffic volumes in the corridor increased, and almost without exception HGV-s and buses belonged to international (probably trucks of Western European transportation companies) entrepreneurs (Meszaros, 2003), due to low purchasing power of the domestic population and the transiting HGV-s from the Eastern part of Europe. Furthermore, the high debt service arisen from high rates could not be covered solely from user charges (Timar, 2004a). The strong resistance of concerned people turned into litigations. Therefore, it cannot be diagnosed that the acceptance of pricing together with the effectiveness of the toll policy perceived by the public was at a high level.

5.5 Equity/Fairness

In case of the Hungarian study tendering procedure, the final discussions and signing of the concession contract and post-discussions were involved in the analysis of fairness regarding transport providers. The tendering procedure was fully legal and competitive. The international tendering procedure created a situation, in which many different, foreign and domestic bidders were involved. It can be established that the preparation of the tender satisfied all the possible consortiums, and regarding the financial value of the full project the tendering procedure was fair fulfilling the needs of international and domestic road constructing, operating and maintenance enterprises, foreign and national banks and the main lender, the EBRD.

In case of Hungary, it can be stated that fairness issues play an important role regarding politicians, but in most cases, the discussions about it are potentially hindering the agreement and the further implementation process.

On the public side, the equity issue can be analysed in two prevailing ways: horizontal equity means that in similar situations issues are treated similarly – ‘get what they pay for and pay for what they get’ principle and vertical equity means that whether the government makes an effort to ensure that the poor receive more benefits from the policy, than the wealthy (MC-ICAM, 2003).

Considering these ideas the vertical equity cannot be assessed purely because consumers in an adverse financial situation (like ad hoc Hungarian users) did not get discounts compared to the situation of customer in a Western European country. Everyone had to pay the same toll rates for usage.

The horizontal equity corresponds with the fairness issue regarding the analysed objectives in both properties. Because of the relatively high rate of motorway tolls the Hungarian Automobile Club started litigation procedures against the concessionaire in respect of the ‘extremely high and unjustifiable’ toll level.

The fairness of pricing policy perceived by the public did not reach a high level and the horizontal equity as service – offset also did not realise regarding the perception by the public stakeholders.

The media was interested in the perceived unfairness and non-equity situations by the public and the litigations, the events concerning this topic were almost front-page stories. But this focusing just fully disappeared when the final judgements acquitted the concessionaire (already after the closing of the transfer of concession rights), because the actual government previously shared the opinions of the public, but at that time the media was already depending on its protection.

5.6 Social environment

The main investor was the EBRD in ELMKA Rt., therefore the opinions of EBRD played a dominant role in the decision making process. The members of the interest groups played a role in campaign contribution and provision of information.

A uniform deliverance from a politician party is an important issue and it is more favoured than any individual speak from a member. It can be assumed that this is a strong pressure on the members because anyone is standing on the opposite side; he can be easily restricted by the leaders of the party. Therefore, party members prefer getting instructions from the leaders.

On the public key actors' side, regarding private financing, all of them greeted the construction of the new motorway stage (saving time compared with the estimated time gap in case of public financing method) and they all aimed minimal toll rates to be paid when using the service of the transport provider, not accepting fully the 'users pay' principle.

5.7 Implementation process

In case of private financing and tolling there was a gradual implementation, but their elaboration and realisation were carried out in a 'big-bang' way with several serious mistakes. The transport policy implementation in case of private participants could have been got through easier because of additional financial sources and the need for efficient appropriation of private capital.

The media played a significant role in implementing and accepting transport policies. If looking at the required education of non-affected inhabitants, the most important principle to be learnt was the 'users pay' principle. This is the base of recent days' approach in financing transport infrastructure. In Hungary, this principle was heretofore unknown to the public furthermore the private financing of any previously publicly financed service was also a novelty. The de facto affected users of the M1/M15 motorways are only a little part of the whole population; the remaining part means the majority of the country. Considering that the acceptance of private financing and pricing in Hungary is relatively high, it can be stated that the learning process was successful, and the only relevant means in such a

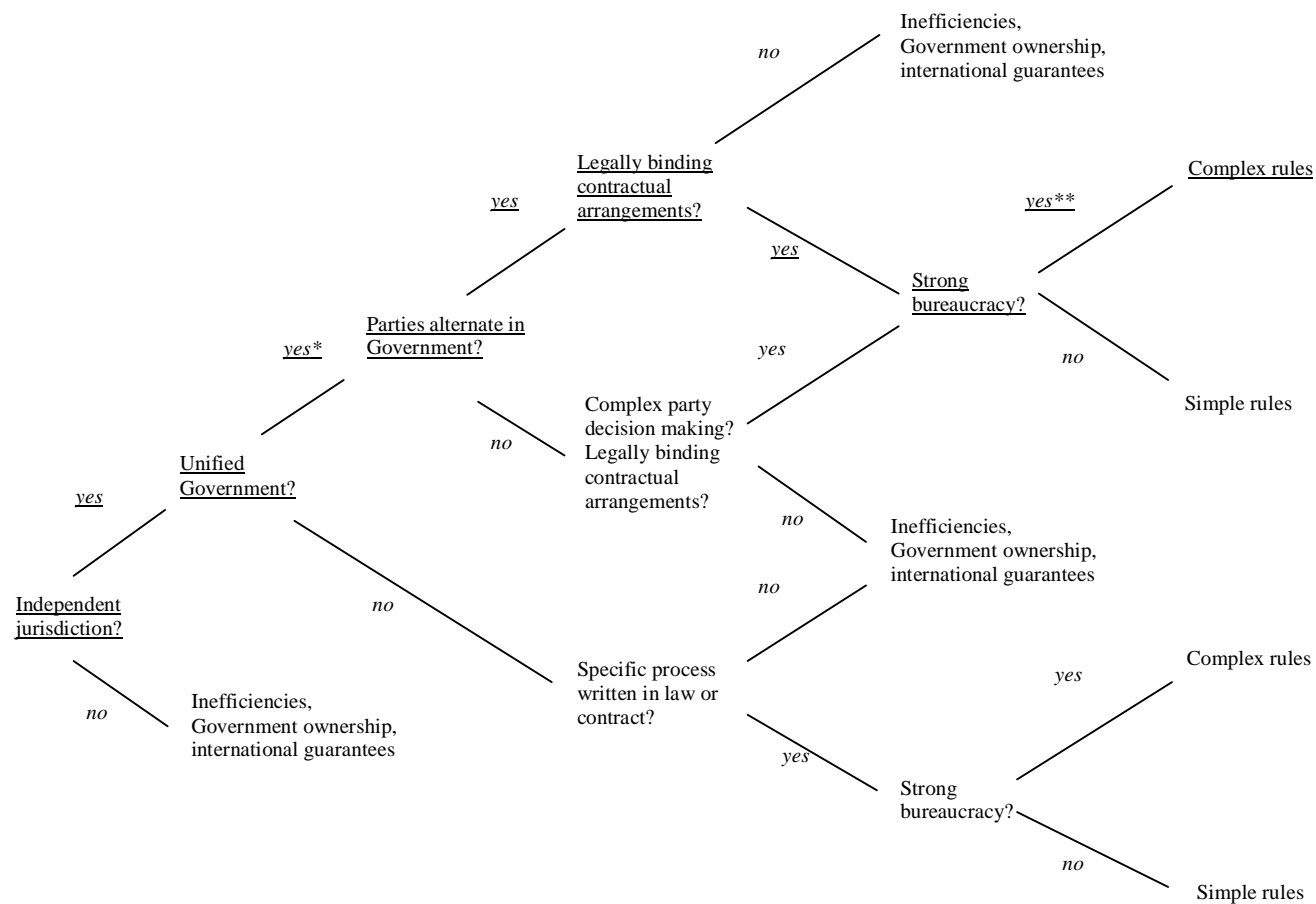
challenge is the media. From problem perception to the implementation process the media informs the public but also other key actors in a creditable way on transport policies. The first signs of any possible influences on media sources were seen only after the discussing, decision making and implementation period.

5.8 The political and institutional setting

This factor plays a dominant role in the future success or failure of introduced transport policies.

Hereinafter the decision tree from Levy & Spiller (1996) applied on the Hungarian case can be compared with the conclusions of the case study and other analysis. The application necessarily means the searching for a path to the ends. Based on the chapter's statements the "tour" seems to be the following (see Figure 4.).

The Hungarian case study seems to verify and validate the alluded decision tree models and contend the supposed factors which could be responsible for success or failure of a transport policy measure. The expectations can be quite fully confirmed, excluding the factor of national habits and norms, in this case probably the strong bargaining power at the table could be expletive.



* There were different adjudications by ELMKA (M1) and AKA (M5) (concession companies) in the subject of extremely high toll rates.

**Especially in the period of parliamentary election.

Figure 4: Decision tree model, applied on the Hungarian case (Source: Levy & Spiller, 1996)

6 CONCLUSIONS AND RECOMMENDATIONS

The legal and institutional system in Hungary was just transforming from a centrally planned economy to a market economy by the time the M1/M15 motorway project was initiated. But this framework was still insufficient and led to serious mistakes during the implementation of transport policies, increasing regulatory risks for private investors. That means after signing the concession contract and private investment (in form of sunk costs) the concessionaire became exploitable by the government or the regulatory authorities. The active political power was always stronger to influence decisions on transport infrastructure developments than professionals. Politicians had an incentive to exploit the investor's weak bargaining situation by lowering user charges, they respected that infrastructure by its very nature is used by a large part of the (voting) population. This regulated market environment did not offer strong institutional safeguards against this opportunistic behaviour. Hungary still faces to essential elementary changes in the institutional system. Due to the circumstances of transition in Hungary, insufficient information and experience (too optimistic traffic and macroeconomic forecasts) led to unrealistic economic estimations and ultimate failure of the project. Information provision in the implementation process played an important role, but acceptability played only a minor role in this case. The public felt unfairly treated because of the applied pricing policy, which led to two litigations against the operating company.

As overall conclusions of TIPP's Workpackage 4 (Seidel et al., 2004) about political acceptability and perceived legitimacy of transport policy implementation, the groups of actors that play a key role in the transport policy process, but the same does not hold true for the relationships between these key actors and how these relationships change over time. This kind of categorisation of actors used here does not account for heterogeneity of interests within groups (e.g. transport providers on one hand means operator companies that benefit from toll scheme, on the other hand other enterprises, such as road haulers, are negatively affected by the scheme because of an increase in costs. Thus the categorisation of actors needs to be further developed to incorporate and reflect the different roles of groups of actors and the dynamic aspect of the interaction of key actors. The conclusion concerning further research about policy implementation is that it should regard the four areas, such as:

- acceptability,
- country's or region's political and legal institutions,
- technological factors and
- financial issues

as modules of the overall analysis of transport policies. The characteristics of these modules is that they can be differentiated for research purposes but in practice they interact and influence each other in a complex way. Within each module further research should aim to find appropriate means for description and analysis. It should be considered which different research disciplines such as economics, psychology, sociology or political science could contribute to the analysis and how the different approaches could be synthesised.

Recommendations:

The analysis of the four case studies led to the following general policy recommendations, with respect to successful policy implementation:

1. The public has to understand the problem a policy measure is intended to solve (problem perception). It is important for the decision maker to spend resources on making his policies comprehensible to the audience. Otherwise the policy measure will not be accepted.
2. The public has to be convinced that the introduced policy measure will solve the problem effectively. Decision makers have to inform the public what they intend with the measure and explain its effectiveness in an easy and comprehensible way. In addition they must explain why this measure is superior to other measures that may look more plausible at first glance. For instance in the case of railway travel it is not clear to most travellers at first sight why peak-load pricing is the most efficient policy to allocate scarce railway capacity in rolling-stock and to provide the right economic incentives for investment. Instead, most customers tend to believe that the best policy to solve the crowding of trains would be to add additional passenger cars to the existing trains or to increase frequency. It is important for politicians to explain to the public apparent contradictions like this.

3. Politicians/transport managers have to take possible reactions of the media into account. In particular, they should avoid as much as possible everything which allows the media or opponents to negatively emotionalise the topic. This may mean, in some cases, that the policy measure has to be adjusted to prevent a negative media response. It may well be that this adjustment will lead to substantial departures from the “first best” policy.

4. Politicians need to be aware of the fact that in cases where positive welfare effects of a policy are not obvious and where long chains of reasoning are necessary to explain the welfare gains these are likely to go unnoticed in the public debate. In such a case people will judge a policy measure only by their individual gains and losses. Thus, a successful communication strategy needs to highlight the individual gains rather than focusing on a societal level.

5. It is important to solve possible conflicts with certain interest groups, e.g. consumer protection groups before the launch of a policy measure, to take their arguments seriously and to involve them as much as possible in the implementation process.

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