

M1/M15 Motorway, Hungary

(with comments on other Hungarian Motorways)

WHY READ THIS CASE STUDY?

The M1/M15 motorway is presented because;

- A The project was completed and the two sections opened in 1996 and 1998 so there is experience of completed project implementation and operation over a substantial period.
- B The project shows a number of relevant aspects for toll road planners.
- C The project was constructed to a high standard, but failed financially due to optimistic traffic forecasts and was nationalized partly due to unpopularity of tolls and especially the high tolls.
- D The implications of renationalization were not fully understood by the government.
- E The M5 motorway is also commented on because;
- F Notwithstanding the problems on M1/M15, similar problems were experienced on M5, which opened in 1998.
- G Problems arose from optimistic traffic and resulting financial issues.
- H A number of measures however were taken which resulted in this case in refinancing rather than nationalization.
- I As a result of these difficulties, the toll road program was quite substantially affected. Although in the early 1990s, Hungary had been very advanced in its PPP program, by 2007 it still had only 3 toll roads under private sector operation.

Project overview

The M1-M15 project consisted of the Design, Building, Financing, Operation and Transfer (concession of 35 years) of 43 km of Motorways between Gyor (North West of Hungary) to the Austrian Border (M1) and 14 km of motorway linking the M1 to Bratislava (M15).

The M1- M15 lies on the Trans European Corridor N°IV connecting three capitals: Budapest, Vienna and Bratislava.

Toll collection relied on one main toll plaza and five tolling stations on three interchanges.

Key dates:

- Project tendered in 1992/1993 (4 bidders, 2 invited for negotiation)
- Concession signed in April 1993, Financial Close in November 1993
- Construction started in January 1994
- Completion and opening M1 in January 1996 and M15 in July 1998
- Road users started a well publicized legal action against the concessionaire to reduce the tolls
- Negotiations and proposals for restructuring
- Subsequent concession substitution September 1999 leading to nationalization of the project

Financing:

- 80% debt (EUR 230 million) and 20% equity (EUR 50 million), with debt provided by EBRD combined with international (USD and DEM nominated) and local (Hungarian Forint nominated) commercial debt in an "A & B-type loan structure".
- Standby loan facility available (EUR 50 million).
- Loan maturity: 14 - 15 years (longest maturity secured by a Hungarian public or private borrower, at this time).

Subsidies:

- No financial contributions,
- Provision of land for motorway construction,
- Restriction on construction of parallel competing roads.

Toll Rate:

- Set at tender award with formula for maximum annual toll increases, depending on local inflation and exchange rate developments.
- Initial toll rate based on "revenue maximization principle".
- Possibility to adjust them in accordance with agreed indexation tariffs (HUF CPI inflation adjustments for HUF/foreign currency exchange rate variations).
- Given the high level of foreign and occasional traffic and the existence of only one toll barrier between the border and Budapest, traffic studies indicated that a relatively high toll could be charged.

The M1/M15 project was the first toll motorway project tendered and implemented in Central Europe. Following a successful tender and financing, construction was largely completed on time and within budget even though the construction period was ambitious and Hungary underwent a period of high inflation.

M1 traffic at opening and traffic growth during the first three years was substantially below expectations, resulting in the impossibility to service debt. The level of toll rates turned out to be politically unacceptable and a court case made the financial situation

untenable. Attempts to restructure company finances, starting with the issue of letters of credit by Government and shareholders, remained unfruitful. Government and lenders agreed however on a substitution process after three years of operation.

Project description

The M1/M15 Project is an ideal case study project as it shows how a major infrastructure project can be successfully implemented on a project finance basis, but also demonstrates that the combination of a poor preparation leading to a major structuring fault, and lack of political support can reverse the fortunes of a project very quickly.

In 1989 Hungary opened its borders to the west and required a good motorway link with Austria. Thus the completion of the M1 Motorway between Budapest and the Austrian border became a high priority. Given Hungary's high state debt, a number of studies were undertaken in order to analyze whether a private concession structure would be a viable solution. The results both indicated that the M1 project could be developed as a 100% private finance solution and that there would be sufficient interest to create a competitive international tender. As a result, the Hungarian Government decided in 1991 to introduce extensive legislation for constructing toll motorways by way of concessions, to create a specific office within the Ministry of Transport to deal with concessions and to launch an ambitious program of motorway construction, starting with the missing section of the M1 motorway.

By the end of 1991, financial and legal advisors to the Ministry were appointed and a pre-qualification procedure was started leading to four international groups being invited to submit bids (August 1992). Of those four, two groups were invited to negotiate in parallel the concession contract and the results thereof were formalized in the submission of improved bids (January 1993). On the basis of these bids (taking into account the construction price, the toll rate and the proposed financing package including the commitment to provide equity), negotiations were concluded in April 1993 with the signing of the concession contract with the preferred bidder, ELMKA Rt, a private company comprising international contractors and toll-road operators.

Following a construction period of two years, the M1 section opened to traffic in January 1996.

Risk allocation and funding

The draft concession contract prepared by the Ministry's advisors offered a good basis for negotiating a viable concession with a proper allocation of risks. As the construction of the remaining sections of the M1 did not pose specific problems (no big structures required, flat land with little ground risk, no particular archaeological risk, no specific environmental issues), the contractor was able to broadly accept these risks and offer a turnkey, lump sum and fixed price for the construction works.

The acceptance by the private sector of the full traffic risk was driven by a combination of tender requirements (the Ministry did not want to accept any traffic risk), competition

(showing low projections would mean losing the tender) and the relatively high traffic flows indicated by the various studies.

Traffic forecasts were also based on time savings to be realized by users (estimated at 20 minutes per full journey).

The private sector agreed to accept this traffic risk provided that it would be "free" to set the toll rate, which was translated into fixing the initial maximum toll rate within the concession contract and allowing for increases in this rate on the basis of a particular formula that took into account Hungarian inflation and the devaluation of the exchange rate between the Hungarian Forint and the currencies in which the project would be financed. The initial toll rate was determined on the basis of the revenue maximization principle.

As the traffic projections indicated high growth during the early years of operation, the development of a viable financing structure depended on finding the right combination of an equity/debt structure and loan maturity, whilst achieving acceptable annual and loan life coverage ratios. Moreover as the revenue would be in Hungarian Forints, funding in Forints would reduce foreign exchange risks.

Given the financial market for and in Hungary at the time, these goals were very ambitious. Nevertheless, the participation of the EBRD in the financing made it possible to raise foreign financing with a loan maturity of over 14 years (a first in modern Hungary) and to raise a significant amount in local financing with a similar loan maturity.

The EBRD, created in 1991 to promote private sector investment in the former Warsaw Pact countries, played a crucial role in getting the necessary finance raised as it provided the lenders, but also the investors, with the necessary reassurance that the Hungarian Government would not turn against the project once the construction works had been completed and the project would benefit from a significant cash flow to repay its debt and provide the investors with an adequate return. Although the cost of bringing in EBRD in financial terms was significant, without it, it would not have been possible to reach financial close 6 months after the signing of the concession contract.

Finally, the total funding (320 millions of Euros) was shared as follows:

- 19% provided by ELMA, the private concessionaire in the form of equity and shareholder funds.
- 81% provided by International and Hungarian commercial banks, insurance companies and the EBRD.

Experience during the operational phase of the Concession

Four major difficulties have appeared since the first year of operation:

- Low level of traffic: Traffic volumes amounted only to 46% of the forecasted figures reducing the concessionaire's revenues at a critical point. In fact, many commercial vehicles preferred to use the parallel free roads to avoid tolls even if they were to remain unimproved. In addition, due to the economic development of Hungary, the forecasted traffic

- growth of the passenger cars was also reduced, as inhabitants benefited from shopping centers within the country, removing the need for cross border travels.
- Financial difficulties of the concessionaire: as a result of the revenue shortfall, the company was unable to pay the first debt principal due in June 1998 and was on the brink of bankruptcy. In December 1996, the EBRD as security agent, realizing that the financial case for this project as a private venture did not exist anymore, strongly encouraged all the Ministry of Transport to renegotiate the deal. Within this changing environment, the Ministry "refused to take sides" arguing that the project it had so vigorously promoted was a private undertaking which needed to be resolved privately. It became clear that only under strong pressure would the Ministry eventually agree to support the project for an interim period by issuing a letter of credit (the investors also provided a letter of credit) in July 1997. Albeit all intentions, the negotiations with the Ministry never really took off prior to the national elections in 1998.
 - Complaints about the level of toll rates: the toll rate on M1/M15 appeared the highest in Europe per km traveled, led to the accusation that the concessionaire was abusing its dominant position at the expense of the Hungarian users and resulted in a court case against the Concessionaire. The litigation was supported by a well organized association of users, including the Hungarian Automobile Club. The first instance court's decision obliged the concessionaire to pay back to the plaintiff about one third of the toll, but did not oblige the company to reduce its tariffs.
 - Change of the political framework: the new government elected in 1998 considered that motorway users had only to pay the operation and maintenance costs, while capital costs could be financed by international grants, budgetary contributions and sovereign borrowing.

The unexpected victory of the opposition, which opposed tolls and other PPP solutions, the adverse decisions of the courts and the realization within the EBRD that the concession contract did not provide any protection in an environment where the Government opposes PPP solutions, resulted in the EBRD negotiating a deal with the Ministry for taking on the larger part of the debt through substitution for the Concessionaire.

In compliance with the appropriate provisions of the Concession Contract, the EBRD, the private lenders reached an agreement with the government in April 1999.

The revamping of the concession and its consequences could be summed up as follows

- The outstanding debt of the concessionaire ELKMA was transformed into a sovereign debt under much favorable terms and conditions than those of the original debt (which was non sovereign guaranteed)
- ELKMA was substituted by a newly established, fully state owned special purpose company(NyuMA)
- The Shareholders of ELKMA lost their participation in equity without compensation
- The toll rates were reduced by nearly 50% in August 1999

As a result, the traffic volume increased by 15-20% immediately, while the revenues on an annual basis decreased by 45 %.

In January 2000, the toll booths previously collecting money were replaced by a "vignette" system that allows a user to pay to use the tolled roads for a certain number of days (1, 4, 10, 31 or for the whole year). In fact, this system extended toll collection onto previously freely accessible sections of the motorways network, increasing potential revenues.

Progressively, cameras, using license plate recognition based electronic control system, were implemented and operated by the Ministry of the Interior's services.

This system, relying on random control of users by flying squads seems to be inefficient as it is estimated that 20% of users are not holding a valid vignette.

Moreover, the system is considered as unfair even by users as it is expensive for infrequent and short distance travels. Finally, the generated revenues on the network do not cover the maintenance and operation cost of the State managed motorways.

Since 2007, the government has been considering alternative distance based tolling systems and in particular the progressive introduction of electronic toll systems which will allow more flexibility for pricing.

For updated information, please refer to the official website for motorways in Hungary:



<http://www.motorway.hu/>

Other highway projects

Following the encouraging reaction of the private sector to the M1/M15 project, the Ministry started tenders for other motorway projects in Hungary: M5, M3 and M7. Unfortunately, studies showed that none of these projects could be financed 100% by the private sector (mostly due to the lack of foreign users). Notwithstanding this strong and obvious requirement for Government participation, the Ministry had difficulties in accepting this need. Consequently, reaching financial close on the M5 project took much longer and the tender offers for both the M3 and M7 projects were never fully analyzed.

This resistance to find proper PPP solutions for the M3 and M7 projects partly originated from the internal organization of the Ministry and the opposition of civil servants to a transfer of traditional public sector activities to the private sector.

However, the concession of the M5 in 1995 and its successful refinancing in 2004 has positively influenced the PPP policy framework in Hungary.

The M5 project is also part of the Trans-European Network on the Corridor n°IV linking Budapest to Southern regions.

The first phase comprises the upgrading and tolling of existing roads and the construction of new sections on 90 km. It was completed on schedule and within budget in June 1998. The second phase comprised a 45 km extension and was completed in 2004.

The initial classical toll system implemented for the first phase was substituted by a mechanism of availability payments based on performance criteria in 2004.

The M5 met the same kind of difficulties as the M1/M15 project at the end of 90's: Traffic below forecasted levels and litigation on toll rates led by users'. However, the concessionaire AKA had negotiated a more appropriate allocation of risks with the public sector to avoid the transfer of unmitigated traffic risk to private investors and lenders.

In particular, the contract anticipated the implementation of a "revenue deficiency facility", a sort of complementary fund financed by the government and available for the concessionaire as critical safety net to face cash deficiency and pay debt service obligations. The money drawn by the concessionaire on this facility has to be repaid after discharge of project indebtedness to senior lenders.

Moreover, contrary to M1/M15 case, the concessionaire and the government implemented very early active measures to enhance traffic with marketing campaigns and to limit the competition of alternative routes. The Ministry supported also AKA in the lawsuit against the toll rates and the claim was rejected on first instance in April 1998, calming public opinion.

AKA was able to resist pressures to reduce the agreed overall toll rates but proposed substantial discounts for frequent and local users.

Finally, the M5 project benefited from refinancing the initial borrowings in 2003. By then, the loan maturity available to borrowers had substantially increased as a result of Hungary's improved economic position and EU accession status. The new financial plan, supported actively by EBRD, took advantage of lower interest rates to increase the amount of debt compared to equity and enhanced investors' rate of return on equity.

Hungary extended also its network with the concessions of the M6 Motorway in 2005 and the M6-M60 project in 2008. Both were implemented on a DBFO scheme, with availability payments by the government to the concessionaire on the basis of pre-set performance criteria.

Both projects benefited also from loan facilities from EBRD which played an active role to attract other commercial lenders.

These transactions relaunched the private provision of capital and services in the Hungarian road sector. However, only three motorways are operated privately in 2007 whereas Hungary was among the first countries in the 90's to use PPP schemes.

Conclusions and Lessons Learned

Poor traffic forecasts had a substantial financial impact on these projects and led to wider national political issues.

- There will always be variations from forecasts but good project preparation can minimize such variations. Local specific issues should also have been taken into account in preparing forecasts in Hungary.
- User's willingness to pay should be assessed properly by the public and the private sector to set from the beginning relevant toll levels to attract traffic and limit public (then political) opposition to the project

Despite the negative aspects, it should be noted that the risk transfer undertaken on the M1 project created significant benefits to the Hungarian tax payer as:

- the construction was completed on time and within budget
- its operation and maintenance during the short period thereafter were effective and of the highest standard, and
- during the critical economic period following its opening to the west, Hungary benefited from the M1 whilst not contributing to its financing

In the early years of operations and the financial problems that occurred, the public sector did not wish to step in and find a viable PPP solution jointly with the private sector. This caused possibly more harm than good to the Hungarian state and tax payer. Earlier renegotiations may have avoided the re-nationalization process.

The decision of re-nationalization had major consequences in Hungary. Whereas the Ministry claimed victory after bringing this vital piece of infrastructure back into Hungarian hands whilst accepting only a part of the debt at very favorable conditions, it remains doubtful whether this was the best solution for Hungary in macro economic terms. International funding sources dried up (even private funding of the extension of the publicly and EBRD supported M5 motorway has become near to impossible). Of the ambitious motorway program outlined in 1991, only parts were realized by the end of the century and others postponed for a while. When problems occur, deal with them properly and quickly if possible, but always consider the wider impacts.

Toll reduction on M1/M15 was a popular way out but this meant that significant income from foreign sources fell away. After years of operation by the public sector, tax payers are still financing the gap between the revenues generated by the network and the real cost of maintenance and operation. Easy financial solutions have wider economic and financial ramifications.

In contrast, the M5 concession demonstrated that adequate share of risks and good cooperation between public and private sectors could help to face initial difficulties and avoid total revamping. In times of project difficulties, the public and private sectors should try and work together to produce a solution. Independent advisors can help.

The implementation of a revenue deficiency facility on the M5 project proved to be very efficient to face revenue shortfall due to traffic volumes below forecasts in the first years of operation. This kind of mechanism seems to be particularly appropriate for corridor without previous experience of tolling. Transferring too much risk to the private sector can lead to major problems subsequently. This suggests that proper project preparation with robust forecasts and proper risk mitigation is essential.

Refinancing of the initial borrowings could be very advantageous to benefit from new economic position of a country but it could also motivated during the concession life, once the construction period ended, as lenders are more willing to assume only operation risks. This should be considered and the contract should allow for this with adequate sharing of such resulting benefits between public/users and private sector.

Further information



<http://www.worldbank.org/eca/trans/roadfinancing/en/PPP-EasternEurope.pdf>



<http://www.ebrd.com/projects/psd/country/hungary.htm>



<http://www.motorway.hu/engine.aspx?page=MOTORWAYS>



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