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Why It Is So Hard? A History of Highway Concession Contracts in Poland

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Abstract

In this paper we analyze the early stages of the highway construction program in Poland. We argue that the whole investment process could be accelerated if much attention was paid to establishing a better legal framework. Investigating the bids for the A2 highway and the implementation of the concession agreement, we highlight the excessive red tape and poor monitoring system which led to a serious slowdown in the construction process. We also stress the necessity of choosing the best adapted financing method for infrastructure investments, as the use of the Public-Private Partnership (PPP) scheme has partially failed because of its financial weakness.

Key words: *Franchising, Contractual Design, Concession Contract, Public-Private Partnership*

JEL classification: *D23, H11, H54, K12, L14*

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1 Introduction

Among economists, there is a consensus concerning the need to improve infrastructure, especially in the transport sector, which is seen as a necessary condition for successful economic growth. However, in the case of a few, rather successful transition countries, the problem of a poor transport infrastructure had not yet been resolved. The best example is Poland, where the quality of its transport infrastructure constitutes an important barrier to the country's development, especially in the context of European integration. Although the total length of the roads is relatively high, Poland lacks the minimum required standard of density of highways and expressways. In order to overcome this unfortunate situation, the State authorities have decided to launch the "Infrastructure - A Key to Development" program, formulating radical changes in the law as well as new methods of financing infrastructure projects. The core concept of the government's program was to turn to the private sector to provide infrastructure improvements, basically highways. One motivation was very limited tax resources, which led to the State borrowing as much as it could from development banks and private capital markets. A second motivation was the hope that the private sector - motivated by profit - would be more efficient than the State. The adopted solution was a Public-Private Partnership (PPP) concept, in the form of long-term concession contracts.

In this paper we investigate the reasons why highway construction projects have been delayed. We argue that some aspects of this unfortunate situation could have been avoided if the predictions of Transaction Cost (TCT), as well as Incomplete Contract (ICT) Theories had been taken into consideration. By

taking as an example the concession allocation for the first section of the A2 highway (supposed to link the eastern and western parts of the country) we will explain why this project has partially failed. We enumerate some - in our opinion - blatant errors by both public and private parties. We especially focus on the control issue, as contract execution yielded flagrant deficiencies. For each step of the A2 PPP agreement we indicate at least one possible solution, as they became evident from a theoretical point of view. To conclude, we propose a brief confrontation of the lessons to be learned for the future, especially as the new government program for land infrastructure has recently been published.¹

Unfortunately, this project was never realized because of the high construction costs, an extremely low level of car ownership and - the most important factor- the start of the 2nd World War. After the War, because of the frontier change of about 250 km from East to West, Poland inherited 140 km of highways built by the Germans. During the socialist era, there were only 117 km of highway-like roads built, as well as 342 km of expressways. The relatively low level of cars to the kilometer (in 1957: 20 cars/km in Germany, 18 cars/km in France and only 3 cars/km in Poland) meant that the central planners paid much less attention to the road infrastructure issue. In spite of the fact that Poland had signed some COMECON co-operation agreements concerning the development and modernization of the Moscow-Warsaw-Berlin road linkage, the preparation for construction only started in 1980, as the necessity of this axis became indispensable for the organization of the Olympic Games in Moscow. At that time, the project of the future A2 highway was initiated and necessary land

¹“Program Budowy Autostrad i Drog Ekspresowych w Latach 2006-2013”: national plan for the construction of highways and expressways published by the Ministry of Infrastructure January 19, 2006.

was bought by the State. However, the construction process was frustrated until the mid nineties, when the increase in lorry traffic became a serious problem.

2 Project schedule

Everybody who has ever been to Poland surely remembers its poor transportation network. In the early 90's, numerous ideas for financing highway construction were proposed. None of them, however, were applied. A short time later, the Polish government proposed the "National Plan for Highway Construction" based upon a PPP method. The government was encouraged by the World Bank's "private participation in infrastructure" policy. Indeed, by 1996, the project draft had been prepared. The program was launched in early 1997 within the first successful concession auction bidding. In 2001, public opinion was shocked by the Supreme Chamber of Control report revealing that in 1998-2000 0 km of highways were built in the four PPP concession schemes.² After a stormy period in Parliament and media, followed by some ministers' dismissal, no reconstruction project emerged. Therefore, one may ask, how could this happen?

²Najwyższa Izba Kontroli (NIK) - supreme state audit body. Its status is regulated by the Constitution of April 1997 and by the NIK Act of 23 December 1994.

3 The attribution problem

3.1 The story

Under the Polish law on toll highways³ the building and exploitation of an highway requires a limited three-step auction process, which leads to the objective selection of the best concessionaire. The winning company for the A2 highway was “Autostrada Wielkopolska SA”⁴. Following the winning tender, the Concession Agreement was signed. As the concessionaire, “Autostrada Wielkopolska SA” was initially bound to build and operate the first section of the A2 Highway from Swiecko to Konin (the first segment of 148,7 km²). Furthermore, “Autostrada Wielkopolska SA” did not become the owner of the A2; it ensured the performance of the Concession Agreement for the term of 40 years, that is by 2037. The land on which the highway is built remains the property of the State Treasury and the Company pays an annual rent to the State. The party to the Concession Agreement on behalf of the Polish government is the Minister of Infrastructure, while the body responsible for its implementation is the Highway Construction and Exploitation Agency. In order to meet its obligation under the Concession Agreement, a Development Company was established - “A2 Bau Development GmbH”(founded by the shareholders of “AWSA”: “Strabag AG” and “NCC international AB”) which is responsible

³1994 Toll Highways Act. The Act provides a legal framework for the construction of highways (procedures for location of the highways, acquisition of property on which the highways are to be built, tender proceedings, concessions for the construction and operation of highways). The Act also regulates financial issues related to the construction of highways.

⁴“Autostrada Wielkopolska SA”, the first Polish special purpose entity incorporated in 1993 was founded in 1994 with the goal of financing, building and operating the A2 Toll Highway. Its capital is made up with Polish and foreign shareholders’ funds.

for the construction, and the operating company - “Autostrada Eksploatacja SA” (founded by the shareholders of “AWSA”: “Transroute International SA”, “Kulczyk Holding SA” and “Strabag AG”). In order to ensure proper performance under the contracts, in strict compliance with Polish law and the provisions of the Project Agreements, the parties to the concession: the Minister of Infrastructure and the Concessionaire, appointed an Independent Engineer - “WS Atkins” from the UK, whose duty was to supervise the design process, the construction and operation of the highway, as well as to oversee for the proper execution and adequate quality of the work. Though on first sight the contractual clauses seemed to be clear and sound, their interpretation and implementation were baffling.

3.2 What went wrong?

As we have already mentioned, once the Concession agreement was signed, a three-year period of astonishing inactivity in the construction process took place. After analyzing the Concession contract, some issues remain, at least, doubtful. Therefore, it seems clear that:

- The Concessionaire did not fulfill the definitive “commencement deadline for the first segment”, stipulated in the Concession contract for March 10, 1999. This situation resulted from the lack of financial closure for the project. Indeed, some contract clauses were too lax, especially those concerning the issue of risk distribution between the Concessionaire and the State. Particularly, there were no clauses making clear the State’s guarantees given to the Concessionaire for credit with investment banks

⁵. As a result, the Concessionaire was not able to finalize his financial project.

- The other side of the same coin reveals that the auction jury members (the State Agency) were (at least should be) in perfect possession of information on the financial situation of the bidders, as required for the tender. Besides some restrictions on shareholders' equity, there were some other legal obligations such as minimum fund gathering by the Concessionaire ⁶. Therefore, two possibilities emerge: either the jury members were incompetent, or the contracting offer was incomplete.

⁵The Concessionaire was perfectly sure that (taking into consideration its equity weakness) he would not be able to build without the State's guarantees for credits. This is the best example of the Concessionaire's opportunism which is seen in his public statement stressing that

“...based on the analysis of the toll revenues generated so far showing slight excess over the assumed levels, it may be said that there is no risk that the State Treasury guarantee will be exercised”.

⁶At the level of 100% coverage of the first segment. The final Financial Plan for the first section was settled down in 2000 (!) and annexed to the initial Concession Agreement. The lump sum contract price for the investment was agreed at EUR 875 million (EUR 637.5 million excluding indirect costs). The funds required to meet the foregoing costs came from three major sources:

- i equity coming from the Concessionaire's shareholders accounting for more than 27% of the total development cost;
- ii loans in the form of the bond issue and supplier credit;
- iii Senior Loan;
- iv the loan from the European Investment Bank (never granted).

3.3 What are the theoretical suggestions?

When we look at the theory, some crucial questions must be clarified. Logically, one may ask whether a “perfect auction” exists. Surely, the trivial response is “no”, but that does not explain some procedural errors. As highlighted by Williamson [1976], the effectiveness of franchise bidding firstly depends on the ability of the franchisor to characterize the service he wants to put to tender. Yvrande-Billon [2005] explains that an adequate service specification is important in franchising, first as a basis for competition in the bidding process and, secondly, to set the benchmarks for evaluating bids. Therefore, it is important for the franchisor to refine his call for tender as much as possible. If he fails, the costs of bidding may increase and applicants may not be interested in the auction, discouraged by the high uncertainty of the project. Furthermore, as mentioned in Bajari et al.[2003], a vague description of the subject matter of auction may lead to adverse selection and end by selection of the most opportunistic candidate. If the call for tender is incomplete and investment is complex, the auction process may result in choosing the bidder who can exploit the contractual blanks and thus may make the most of the fact that the contract in question is likely to fail. A potential danger of this situation consists in the opportunistic anticipation of a renegotiation of contract by the auction winner, who may benefit from the financial compensation stipulated in avoidance clauses.

Another problem with the auction process is intrinsic to the nature of concession agreements. For instance Posner [1972] stresses that

“[p.113]...the concession method deprives the franchise system of one of its most attractive features, ease of administration, since when

the franchise is awarded to the higher bidder the process of choosing among applicants involves a minimum of administrative machinery and official discretion”.

Indeed, the simplicity of the auction process could be preserved only if the concession concerned less complex investment. In the case of infrastructure concessions, one should remember that a highway concession in the PPP scheme typically covers the financing, building and operating of a road. Thus, is there a tenable means of anticipating for all factors? And, similarly, is there a solution for internalizing the plurality of states of nature that might occur?

With respect to the transaction cost economics framework, in the case of an undoubtedly incomplete long term contract, the extreme importance of the ex ante stage, that is the auction process, become obvious. It follows that in the ex ante stage it should be anticipated by the franchisor that contract renegotiation will inevitably occur. Summarizing, it appears that the contract incompleteness should be taken into consideration at the very beginning of the project.

On the other hand, one could imagine how difficult it is to decide ex ante what has to be done ex post. We fully agree with Crocker and Masten [1996] who argue that, as the transaction becomes more complex or uncertain, contracts are likely to become more

“...’rational’ in character. Rather than attempting to lay out a detailed specification of the terms of the agreement, relational contracts attempt simply to establish the process through which future terms of trade will be determined⁷, or, to establish, in effect, a constitution governing the ongoing relationships” (Goldberg [1976],

⁷p.9

p.428).

Some remarks have to be made concerning the State guarantees for credit by the Concessionaire. Because of the high risk associated with highway franchises, lenders (investment banks) have refused to grant loans to the Concessionaire unless the government guarantee the debt. Engel et al.[2001] qualify this situation as an usual pitfall for the State. Firstly, guarantees reduce the incentives for lenders to screen projects and monitor their performance. A second danger concerns the overestimation of demand such that the Concessionaire could not face significant losses if traffic turns out to be below expectations, that is to say, the whole investment might become a “white elephant”. In addition we argue that bailing out the Concessionaire stands against the idea of PPP, where the State is rather looking to be free of financial commitment, as its Treasury cannot afford the investment alone. Therefore, we are pointing out that the liability of the State⁸ in the case of the investment fiasco is excessive.

3.4 What should have been done?

We are trying here to enumerate some propositions in order to avoid an impasse situation in the future. We do not claim a “miracle” solution. Nevertheless, it seems that the call for tender *needs to be more explicit* in that the financing structure and risk sharing ought to be specified⁹. In our opinion, the weakness of Polish equities constituted a sufficient incentive to broaden the call for tender. A strong start-up capital mixed with the know-how of foreign

⁸By “the liability” we mean all legal responsibilities of the State excepting the statutory ones, such as being the the party to the Concession agreement or the land owner.

⁹This can be done by simulating a least-present-value-of-revenue (LPVR) auction. For details see Engel et al.[2002]

investors (capital groups) would have accelerated the construction. But, paradoxically, foreign investors could not have felt attracted by the blanks in the project and the low chances of taking money out. Therefore, a preliminary independent financial audit should always be welcomed. Finally, the presence of clear and precise avoidance or retraction (annulation) clauses not only smoothes bilateral relations but also creates an atmosphere of trust.

4 The supervision problem

4.1 The story

The Ministry of Infrastructure entrusted the supervision of highway construction to The Highways Construction and Exploitation Agency (HCEA). This is a common example of delegation of authority, as The Head of Agency accomplishes public management and supervision tasks on behalf of the Government. We notify that The Head of Agency is directly subordinate to his administrative superior, and thus, supposed to execute his decisions. In the case of the A2 Concession, however, the coordination between those two institutions was not as smooth and efficient as it should have been.

As we remember from the previous section, the construction of the first segment of the A2 did not start because of the lack of financial closure. In order to avoid this unfortunate situation in the future, the Concession Agreement was annexed, providing a new deadline for financial closure. Furthermore, there were some new clauses setting forth the possibility of cancellation once the deadline was passed. The new deadline was scheduled for the end of July, and, unfortunately, was also missed. In this case, the Concession Agreement should have

been cancelled by the State. But it did not happen. In spite of the Ministry of Infrastructure's wish to cancel, the Director of HCEA promoted his own vision of problem resolution, wanting to spread the Concession Agreement over a new consortium. This free-rider behavior was tolerated by The Minister of Infrastructure, who surely knew that - from the legal point of view - a kind of substitution of the Concession party was not possible (a new auction would have been required). Furthermore, the incorporation idea was a disaster, as the Concessionaire (AW SA) would never agree to integrate with another firm, as it was not interested in sharing profits. It is also important to mention that the contract renegotiation feasibility studies ordered by the HCEA cannot be considered as objective, since the audit provider company (PriceWaterhouseCoopers) was formerly hired by the AW SA as a consultant body to negotiate the initial Concession Agreement.

4.2 What are the theoretical suggestions?

In the face of the story above, one can imagine that the public agency is a haven for inefficiency. However, this is a very simplistic view of reality. Generally, the "bureaucratic" inefficiencies (as we think they should be called) result from the lack of coordination in the decision-making process. In the TCT, the governance structure mainly depends on the asset specificity (nature of investment), degree of uncertainty and type of transaction (and its frequency)¹⁰. Therefore, in our case, "internalization" of Concession management and its follow-up in the form of hierarchy was appropriate. The problems rather come from misunderstanding of the authority-hierarchy relation. It should be remem-

¹⁰For an exhaustive review of organizational theory see Menard [1996].

bered that

“ we can talk about hierarchical relations between the subsets of participants A and B when the subset B refers to the subset A’s goals rather than to its own in decision-making process and subordinates to A’s decision in the case of conflict”. (Guillaume [1972])

When we turn to analyze the situation between the public agency (The Highways Construction and Exploitation Agency) and its superior (The Ministry of Infrastructure) we can ascertain the lack of *acceptance* and *validation* of hierarchy by the public agency. There were two reasons for non-execution of the superior’s decision: firstly, the conflict of goals, and secondly, the acquiescence to insubordination. The latter results from the absence of a control mechanism. Furthermore, the control procedures undertaken by the superior and thus aimed at the subordinates are necessary for the execution of the decisions. It follows that the inefficiency of the State in the Concession-managing process was a direct consequence of the “weak” coercive mechanism. It is important to add that an efficient control procedure depends on an adequate span of control¹¹. As we have already mentioned, the superior’s decisions were ignored by the intermediary link in the hierarchical chain, namely the Minister’s Secretary General. In spite of the fact that the hierarchical structure was simple, and thus the span of control limited (only one intermediary level), serious inefficiencies resulted. The lack of control regarding the final subordinate - the Concessionaire (and the party of agreement at the same time !) had also contributed to the invest-

¹¹The span of control (SOC) is a simple managerial construct which identifies or regulates the amount of direct supervision that exists between a superior and his direct subordinates within an organization. For further readings see Yassine [2005]

ment fiasco. By adapting the initial Calvo-Wellisz [1978] model to the grantor-concessionaire relation, we will show the extreme importance of supervision.

Primarily, we assume that the concessionaire's utility index (U) depends on its future profit¹² (Π), and effort (e):

$$U = u(\Pi) - v(e), \quad (1)$$

$$\Pi \geq 0, 0 \leq e \leq 1,$$

and $u' \geq 0$, $v' \geq 0$, $u'' \leq 0$, $v'' \geq 0$. If $e = 1$, the concessionaire is fully effective; if $e = 0$, he is completely idle. The presence of a monitoring system implies that the supervision of the concessionaire's effort (i.e. progress of investment) is less costly than the direct measurement of his marginal product. Furthermore, effective supervision requires the imposition of penalties for substandard work. Let P be the probability of the concessionaire task being checked by his superior (i.e. The Highways Construction and Exploitation Agency). If the concessionaire is not checked, he is presumed to have made the maximum effort ($e = 1$) and he is given a credit guarantee g (measured in units of future discounted toll revenue). On the other hand, if the concessionaire's real performance is checked, his level of effort e is revealed and he gets only a part of credit guarantee eg , involving a penalty equal to $(1 - e)g$. Assuming profit equals guarantee of credit attribution, expected utility, γ , associated with selecting a level of effort equal to e is given by:

$$\gamma = P[u(eg) - v(e)] + (1 - P)[u(g) - v(e)] \quad (2)$$

¹²We assume that this is the present value of future toll incomes, and may be approximately given as LPVR.

In his turn, the concessionaire chooses e in order to maximize his welfare and defines

$$\Gamma(P, g) = \max_{0 \leq e \leq 1} \gamma \quad (3)$$

For simplicity, we also assume that there exists a unique e associated with (3) and denote it

$$e = E(P, g) \quad (4)$$

Thus, it is easy to see that

$$\frac{\partial E}{\partial P} \geq 0 \quad (5)$$

and

$$\frac{\partial E}{\partial g} \geq 0 \cup \frac{\partial E}{\partial g} < 0 \quad (6)$$

Proposition 1 *The implementation of a supervision scheme increases the level of effort of the supervisee. At the same time, one cannot be sure whether application of penalties in the case of substandard work has a negative or positive impact on the supervisee's performance. It is important to say that the very awareness of being checked works as an incentive mechanism, as each and every supervisee prefers not to be checked. It follows that for a supervisor, providing a spontaneous and random check seems to be the optimal solution.*

Proof 1 *(Immediate)*

For any function $E()$, we know that $e \geq 0$, $P > 0$ and $g \geq 0$. In order to define the sign of partial derivatives of $E()$, we simply apply their definition formulas.

$$E'_P(P_0, g_0) = \frac{\partial E}{\partial P}(P_0, g_0) = \lim_{P \rightarrow P_0} \underbrace{\frac{\overbrace{E(P, g_0) - E(P_0, g_0)}^{\geq 0}}{\underbrace{P - P_0}_{> 0}}}_{\geq 0}$$

$$E'_g(P_0, g_0) = \frac{\partial E}{\partial g}(P_0, g_0) = \lim_{g \rightarrow g_0} \underbrace{\frac{E(P_0, g) - E(P_0, g_0)}{g - g_0}}_{\text{sign undetermined}}$$

■

4.3 What should have been done?

From now on it is clear, that the Concession agreement should have been *unilaterally* and *immediately cancelled* at the second financial closure deadline. The Infrastructure Ministry *should have ordered* its cancellation by his subordinate (i.e. Chief of The Highways Construction and Exploitation Agency). Tolerating the Concessionaire's inactivity brought about by two consecutive financial closures led to a contract renegotiation procedure (the renegotiation clauses added to the concession agreement constitute a brand new text, totally cancelling the initial one, so it is really difficult to call it a "rider"). Furthermore, the renegotiation process placed the State in a suppliant position. Finally, once the renegotiation had occurred, the State party *should not* have agreed to make the new text confidential, firstly, because the investment involved public expenditure and secondly, because the confidentiality excluded an independent audit.

5 Conclusion

In this paper we have emphasized the most striking problems which affected the very early stages of a highway construction program in Poland. The PPP concept failed to become successful because of the errors committed during the auction process. In the case of the A2 highway concession, it seems that the pre-qualification step was skimped, making impossible to shortlist bidders with the required financial means and expertise. A way to avoid this kind of situation in the future is to strengthen the domestic capital market. Strong domestic finance is preferable, all else being equal, because it raises fewer political sensitivities and avoids the complications of exchange rate risks. At the other extreme, it appears that more consideration should be given to the use of concession contracts that are shorter and simpler, so that they have a greater chance of being complete. It is also clear that the management of concession agreements should be simplified and monitoring schemes ought to be implemented in order to prevent a contractor's opportunistic and/or free-rider behavior. Finally, the State should be extremely careful while delegating authority: as we have seen, softening of subordination in the hierarchical chain may lead to bureaucratic pitfalls one rather than of its more desirable features, such as ease of administration instead.

It is important to mention that the A2 highway construction is continuing, in spite of the renegotiation process, and one may expect that it will be possible to reach the German border by 2008. It seems that the government has learned its lesson and is keen to engage more budgetary sources in infrastructure projects. It has very strong monetary incentives to do so, as Poland will receive substantial aid from EU funds (the EU budget for 2007-2013 projects EUR 91 bn for

Poland, roughly EUR 20 bn of which will be spent on road and highway construction). Nevertheless, extreme vigilance is required concerning its spending. The Ministry of Infrastructure's recent statement informs us that the "government's ambition" is to use all resources assigned for road construction, as in 2005 Poland had used only 63% of all funds available for this purpose. Finally, the recent experiments with a new financing system called "Special Purpose Issue" need to be watched, as the bureaucratic machinery is not very keen on recognizing its own errors.

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