



UvA-DARE (Digital Academic Repository)

Matching Public Road User Charging with Private Partnership

van Haaften, W.; van Engers, T.

Publication date

2014

Document Version

Submitted manuscript

[Link to publication](#)

Citation for published version (APA):

van Haaften, W., & van Engers, T. (2014). *Matching Public Road User Charging with Private Partnership*. Paper presented at 10th ITS European Congress 2014: Proven solutions drive user services Helsinki, .

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Matching Public Road User Charging with Private Partnership

Abstract. In the past few decades several developments have lead to a new view on the division of roles between the public and the private sectors when performing public tasks. Developments like the application of information technology on a large scale combined with the notions of new public management increased the involvement of the private sector in public service. Now it seems that the private sector is being granted a prominent role in one of the most public of public tasks, taxation, in particular free flow, GPS based, road user tax. Next to various technical challenges this leads to new questions like how to get the levying of a tax financed by a private company. It appears that many factors play a role in the way the various actors, public authorities, toll charging companies and financiers behave in this particular Public Private Partnership process.

In this paper the arguments and considerations of the parties involved are being analysed. The thread in the story is that a tax levying process performed by a private partner can only be successfully implemented if there is a positive business case. The demand for ex ante full private financing of the collection of the tax can be an obstacle for that business case if financing cannot be made fully profitable. To close the gap and to achieve the business case the administration could for instance facilitate the financing of the road user charges with a guarantee. Putting the financing risks and costs entirely with the private partner could ill mean that the project is not financeable, or that it is only financeable at a very high fee that will be included in the DBFMO price. The latter option could be the most attractive if the road user charges also widens the tax basis for instance if tax money can also be gained from foreigners.

Keywords. E-government, good governance, road user charges, road taxation, tolling systems, public private partnership, public private financing.

Introduction

Since the 1990's two major developments have occurred within government and administration. The first and mostly technological driven development was the emergence of the e-government. Especially for administrations processing large amounts of data like taxation and social security, and registration processes like the registration of cars and buildings, information technology became essential for public service delivery.

Another development from that same period was the retreating government. The new public management idea was that the market was better equipped for delivering service to the citizen, now called customer. More and more of the classic public tasks originally performed by the public bureaucracy were outsourced to private parties. And because the tasks themselves did not become private and the responsibility for the public tasks was still a political one, new checks and balances had to be found. Outsourcing of public tasks seemed to be a way of getting the best of both worlds in those cases where a full transfer of the service to the private sector was not desirable.

This movement towards more private involvement in the public domain also threw a new light on a long existing phenomenon on the public/private interface: The Public Private Partnership (PPP). This type of cooperation between the public sector and private companies was mainly known from large infrastructural projects like roads, bridges and tunnels. In those cases the infrastructure was designed, build, financed, maintained and operated by the private (consortium of) companies. In return on there

investment they gained the right to charge a toll for the use of that particular infrastructure. Many examples of PPP with tolling are known all over the world.

The three for mentioned phenomena nowadays seem to come together in a relatively new public activity: Road User Kilometre Tax.

Road User Kilometre Tax

Since the turn of the century a few major influences have propelled the ideas on how to collect tax from vehicles. The classic car taxes, purchase tax, road tax and fuel excise were considered to be not specific enough for the desired subject of taxation, the use of the car. Except for the excise duty the taxation did and still does not seize to the actual use of the vehicle. Therefor these taxes were not suitable for contributing to the solution of two emerging political issues: road congestion and CO₂ and particle matter emission. A good political selling point was that it would be fairer to charge people for the use of the car rather than for owning it.

From the technical side the development of new information technology, in particular the breakthrough of GPS enables a levying process based on kilometres driven, specified in place and time. Also the huge amount of data that needs handling in such a process has become more feasible in the past decade, due to technological developments and gained experience in handling these processes. Road user kilometre charge is an e-Government development that could change the collection of vehicle tax permanently and that will enable more refined charging from vehicle users in the future.

However before this political dream has come true a few issues have to be addressed. One of them is public acceptance. Although the public considers Kilometre tax to be fairer than classic road tax, the idea of a GPS device in the car registering kilometres driven is not really appealing. Privacy issues will have to be taken care of in the right way, both technical as communicational. Another issue that is not easily solved nowadays is financing the kilometre charging process in a PPP construction. This paper addresses the financing issues that have to be dealt with when a public charge that requires substantial investments like kilometre charge has to be performed and financed by the private sector.

Private financing of road user taxation

Private financing of taxation may sound not very disruptive, at least not to outsiders, but there are some peculiar aspects to it. To unravel the relation between financing and taxation we will have a look at taxation first. Then we will make some remarks on financing in general and finally we will look at the combination of both phenomena. Finally we will look at the matter from the three different angles, the public authority, the operator and the financer to end with a suggestion how to deal with the issue and by whom.

The properties of Taxation

But let us start with taxation first. Taxation is a public issue by definition. The key aspects of taxation are:

1. Levied from subjects on the basis of a law
2. Backed up with enforcement means
3. On behalf of the general treasury

The first distinguishes taxation from plain robbery. Generally it is accepted that tax must be based on a decision from the Parliament. That is the only way to get a wide

enough basis for the acceptance necessary for actually collecting the money. The second aspect emphasises the compelling, common character of taxation. It is taken from all addressees, for the benefit of all. Non-compliance will not be accepted. The third aspect distinguishes the road user *tax* from a road user *charge*, one might say. Road user charges on conceded roads could be considered as a payment for a service. In that case the money will go to the concessionaire company to finance their DBFMO¹ activities. In return the company maintains and operates the road, and makes it available to the user. If road user charges are a tax however, there is no service relation between the road use and the destination of the revenues. Not paying does not necessarily lead to a prohibition to use the road. It will lead to a tax debt, probably raised with a fine. The right to deny the service is if payment has not been made is basically a notion of private law, and not in public (tax) law. The third aspect means that the tax revenues will be added to the treasury, and will also be available for other public spending. The decision on how to spend the revenues therefor is political one.

Running user charge as a tax

On non-conceded roads the instrument of taxation is often used as the basis for the public levying, for multiple reasons. The first one is that the legal infrastructure for the levying of taxes in general is already in place. Usually there is a Tax Administration attributed with sufficient powers necessary to ensure a proper levying of taxes. Public toll chargers can also be enabled with at least some of these powers. Another reason is that a tax creates certainty for both state and citizen. A law has the proper status and is subject to democratic control, which means that it cannot be abolished overnight. Therefore when road user charges apply on public roads, the tax framework will often be the starting point (Benelux, France, Denmark, Sweden)².

It is however possible to levy a road user charges on public roads without shaping it as a tax. The German scheme as foreseen in 2003 had the shape of a kilometre charge ‘comme suis’. It was entirely managed by the German Ministry of Transport and Housing, while a private consortium³ provided the service. In this approach the Ministry of Finance and taxation was playing only a minor part, and the available tax framework was not used. It is possible that the lack of expertise in the field of collecting public revenues may have contributed to the problems that arose around the start of the levying. In most other countries however, certainly when the Ministry of Finance is involved in one way or the other, the road user charges is most likely to be shaped and conducted as a tax.

Next to the levying of taxes itself, financing of this operation traditionally is a public –state- affair. Financing in it self has never been much of an issue since the state has all the means to collect the tax money and is capable of doing so in a very economical way. For instance in 1992 the costs for levying all taxes in the Netherlands were 2.7% of the acquired revenues. In 2012 the costs had run up to 3%, but that seemed to be more due to a lower income level than to higher perception costs. So the

¹ Design, Build, Finance, Maintain and Operate

² The Benelux, Denmark and Sweden all have shaped the Eurovignette as a Tax, as France did with its Ecotaxe.

³ Tollcollect, a company established for this special purpose by Daimler and Deutsche telecom.

amount is relatively stable at a modest level⁴. Looking at the KM charges that are on the road today a figure of 5% perception costs does seem too low. Even the 10% that is being aimed at in the PPP based Belgian tender could appear to be a rather optimistic estimate.

Public DBFMO for public road user charges

It is only fair to state that a tax administration will not easily take on Kilometre charging as a viable way of collecting tax money. As shown it is a rather uneconomical way to collect taxes. Kilometre charging however often carries more goals than only collecting revenues. Goals like covering the internal costs of road-use, charging for using the vehicle during rush hour in order to reduce congestion and the reduction of the emission of CO2 and particulate matter. When the public authorities are not very eager to take on the execution of Kilometre charging within their own realm, a step to a private service provider seems logical, even if it will jeopardize the 3% track record on perception costs.

So what are the pros and cons for the public authorities to perform a road user charges as a tax their selves?

Pro

Full control
Public financing, low interest rates
Full use of the tax instruments
Economies of scale
Financial risks limited

Con

Political risk
Claim on budget
Pre financing on national debt
Perception costs not 100% transparent

The advantages of having the administration running the road user charges itself are mostly of a rational economical nature. Performing the road user charges gives the administration full control over all the aspects of the operation. On top the administration can use all the general instruments on collecting and enforcement of the road user charges, without having to connect these processes to an external party. Being part of a far larger tax collecting scheme and a large organisation also emerges economics of scale. Financially a 'do it yourself' scenario will cost less due to lower interest rates and also the financial risks will be less complicating because the risk is born where it initially belongs; within the public domain.

The Contra side of the sheet however shows clearly why politicians have a preference for a PPP construction in case of a road user charge, even on public roads. Financial risks may be lower within the public domain, but the political risks are high for a Minister directly responsible for the levying administration. Further more public money may be cheaper, it also happens to be scarce and the inevitable investments in systems and on-board-units (OBU's) will in this case be put on the public balance sheet.

Private partners in public tasks

⁴ In 2002 at the end of the first Global Positioning System based KMH project in the Netherlands one of the opponents of KMH in Parliament made sure that a legal condition for introducing the km charge was set at a maximum cost of 5% of the revenue per annum. That was regardless of the fact if it was set up as a full public operation, or as a PPP.

So the question is; can road user charges as a tax be carried out as a PPP? And if yes, in what way can a PPP be constructed in case of a public road user charges?

There are many ways to create a PPP. In fact even in a full public operation like levying tax by the Tax administration private partners will play a certain -limited- role.

The declaration form is delivered by mail and the money transfers are taken care of by the banks. Very loose partnerships with modest consequences for the financial positions of both sides, but nevertheless a role for the private sector in handling taxation.

A bigger role is being played when the public service outsources its computer centre to a private party. A complex juridical relation between public and private is born. Risks remain mostly at the public side, although the public standard conditions for contracting are sometimes harsh in trying to transfer the risks to the private partner. The IT Company however will calculate these risks as costs and transfer them into financial claims as much as possible.

Closer to our road user charges scheme is the situation where the public service outsources the building of a tunnel or a bridge to a private consortium. The private party is loosely coupled to the public domain and could for instance have obligations towards the public customer laid down in a contract. In this case risks seem to be manageable within the private sector and financing the project will be possible on the basis of building assets. While money is being spent from one side of the balance sheet, on the other side the assets -tunnel or bridge- grow more or less accordingly. In the latter two examples the financial risks are being directly transferred to the private (financial) sector.

Private partners in public road user charges

So what then are the benefits of a DBFMO contract for road user charges for private companies? From an economical point of view a good DBFMO contract for road user charges can provide profitable business. More over it can provide this business for a long term (>10 years). For a road user charges company or consortium also the maintenance of skills and credibility are an important issue as they relate to the continuation of the company. Finally the public domain remains a creditworthy partner, even in -or maybe especially in- times of economic crisis.

Private finance when building infrastructure in two phases

Despite these benefits the financial risks for the private sector remain substantial. In order to manage them they should be split in two phases, each with a dynamic and a risk structure of its own.

The first phase is the project phase. The project phase requires project financing. That means money will go in, but revenues will not come out yet. In this phase financiers will require certainties for their investment. A mortgage right on the build assets, or a transfer of future revenues for instance. These measures make the risks much more calculable and assessable and, more or less, maximized to the investment itself. Both private equity and bank loans could provide for the necessary investments in this case.

A very important issue in the investment decision will be the presence of a historical context. Bridges and tunnels have been built for a long time and the expertise on these activities is widely spread. More over a guarantee on the number of traffic

that will eventually use the tunnel or bridge may help to close the business case. These measures will reduce risks and will make it easier for financiers to step in.

The second phase is the going concern phase. In this phase financing becomes less exciting. Revenues start coming in from users and the going concern financing can even be arranged for within the operating company itself. If that is not possible parties interested in long-term steady income, like institutional investors, may be interested. Private equity and banks⁵ usually have a more short-term horizon and are not likely to step or stay in at the going concern phase.

Private finance for a public road user charges

How does private financing work out in case of a public road user charges? The first step to be taken by the public service is inviting the market to deliver a tax collection system on a DBFMO basis. This means the beginning of a complex juridical relation where risks, including the financing risk, tend to move from the public to the private sector. When proceeding on the slippery path of PPP in taxation a few general issues can be distinguished for the public as well as for the private side, and in some cases for both sides.

Starting with the latter, one of the issues that come up when private companies take on public tasks is the different social, economical and legal context that applies to public tasks in particular. Coming from a private position the impact of public tasks is not day-to-day business. The politically driven public domain has a set of rules that substantially deviates from the market place, where a financial plus at the end of the day is the main driver. The public/private interface must be developed for and by both the private service provider and the public customer. Since both come from very different worlds in practice managing the interface often appears not to be easy.

Let's put the pros and cons in balance:

Pro

High interest rate
Strategic considerations
Idealistic motives

Con

No short term revenue
High investment, dedicated system and OBU
Subject to political turmoil

So the Design and Build project seems to be not very attractive to potential private finance-partners. This means the profit must be in the Maintain and Operate part. The interest in the investment in the project should be coming from the expected –potential- remunerations in the operation phase. In fact this phase does not stand out that much from financing a private road user charges operation as described in the former paragraph.

Project phase

The first question on financing the project phase of a public road user charges could be; why would anyone invest in a road user charges project? Building up a GPS based road user charges system costs a lot; a back-office system with customer relations and financial handling, an enforcement system and last but not least OBU's for all road users. On the other side of the balance sheet however appear no revenues (yet) and also no real estate assets, like in the case of building roads, tunnels or bridges.

⁵ Banks have to compensate for long term loans on their balance sheet according to Basel 3 rules

Also the fact that the public customer will have no in depth expertise on road user charging at the first start will not help to achieve a business case for financing road user charging privately. A final blow for the financier's appetite in the project phase could easily be the political uncertainty whether the system will come into operation at all, or whether it will be abolished after the next (advanced) elections. The interest rate and risk premiums must be very high to even consider financing such an operation.

When the end of the project approaches another big issue for the private company will be the start up risk. This risk should be considered a project phase risk, since the operation can only be started after the customer has accepted the project results. The complexity of a road user charges scheme implicates that, even if all processes are generally well controlled, the chances of failure of (parts of) the system at the start up remain substantial⁶. It is obvious that all the main issues mentioned above could have a serious impact on the extent to which the public road user charges can be financed.

So far we have extensively looked at the financing of the road user charges. The barriers that have to be overcome in this field can be considered an issue both for the private as for the public side. For private investors because of the high risk of losing money due to the absence of collateral, and for the public side because of the risk of not being able to find a consortium that is willing and able to meet the (financial) requirements.

Going concern phase

The various issues on private financing of the road user charges can be divided in project financing issues and going concern-financing issues. The two stages of the DBFMO-agreement do not have the same financial dynamics. Obviously the project phase is by far the most complex one where the above-mentioned issues playing a large and sometimes even prohibitive role. It is the phase of investing and developing.

All the factors will have to be compensated for in the remuneration for the investor in the going concern phase, either a bank providing a loan or an investor providing private equity. This can lead to substantial costs for the customer since the uncertainties will be calculated in the eventual service fee. This is the harvesting phase. The better the project phase was conducted and the smoother the system has been introduced, the lower the investment can have been.

In the going concern phase itself financing becomes less of a problem. A regular income will be gained from the agreement with the customer for a long period of time, usually more than ten years. Although there is always a risk of system failure, that risk is hardly comparable with the risks in the project and start up phase. It should be possible to avoid, or at least minimize losses on revenues and fines, provided that the operating company meets the high standards that are imposed by the customer.

Financing public road user charges - a stakeholder view

Now summing up the arguments pro and contra a PPP in case of a public, tax based, road user charges one can clearly distinguish the three (groups of) players. The

⁶ Most of the road user charging schemes have serious problems and loss of revenue during the first 6 months of their operation. Eurovignette 1994, German Maut 2003, French Ecotaxe 2013, and the various schemes in the Mid European Countries that had to change their contracts and laws during the start up phase, sometimes even more than once.

public authorities are operating within their own financial realm with its specific public finance rules and implications. The DBFMO contractor will be mainly interested in doing the job. And the financial partners will be seeking return on their investment.

Public authority

A major concern for the public authorities is to avoid investments in a road user charges system to appear on their balance sheet. In that case they will affect the State debt and that does not seem acceptable these days. This is an important incentive for leaving the investments to the private partners. Reduction of political risks is another important advantage of outsourcing, both operational and financial. In this way the political responsibility for a possible loss of tax revenue and the complex operation with a lot of potential pitfalls are being put at a distance from the authorities, thus providing a buffer to the direct political risks.

The downside for the public authorities is probably more felt at the administration level than at political level. These include higher costs for financing the system, the risk of becoming too much dependant on a Single Service Provider, and the fact that little road user charges skills will be built up within the Tax administration itself.

DBFMO Contractor

For the DBFMO contractor the advantages are more on the long run. The public authorities will happen to be a credit worthy customer in most countries. The contract that will be concluded will provide long term revenue and continuity (>10 years) and the operator holds and even increases its expertise, necessary for the continuity after the contract has ended.

On the other hand the high financial risks are a serious downside to the public taxed road user charges as is the complexity of the system due to public rules and standards.

Finally the fact that the public authority is a layman could appear to be both an advantage as a disadvantage depending on the situation.

Financer

From the financer' point of view a distinction should be made between the project phase and then going concern phase.

In the project phase the financer will go for the high-risk premium and high rates. However this could appear not to be enough to attract private capital. In that case the public authority could consider granting a public guarantee for at least a part of the investment, in order to provide for a solid business case. For private equity particularly a profitable sale after surviving the start of the system will be preferred. For the banks high margins on loans during the project phase could be interesting.

In the going concern phase the most apparent advantage is the long-term stable income that will come out of the operation. For private equity the lack of expertise on the subject on their side and the political uncertainty could prove to be showstoppers. They will probably sell the project after start up. Also banks do not care too much for long time loans because of the internal consequences due to Basel 3 rules and the absence of collateral like real estate. More likely it seems that the operating company itself will do the financing. Also Institutional Investors⁷ could be interested, although to them next to the lack of expertise as well as the (relatively small) size of the company could appear problematic.

⁷ Like equity- and pension funds.

Conclusion

Modern public administration in the field of road user charging involves cooperation between administrations and private organizations. Complex issues sometimes require complex technical solutions that may be better designed and exploited by private partners. Arranging for such PPPs however often face administrations with challenges, especially when the issue is so ultimately public as levying road user charges as a tax. A business case has to be found in order to get private partners interested in playing the service provider role. For the entire operation over a long term this business case seems to be there, looking at the interest of numerous consortia for the tenders that have been submitted in Europe during the past decade.

When it comes to financing however, the partnership seems to be out of balance. During operation financing should not really be a problem, but in the project phase, including the start of the system, this is different. An unbalance between the risks and the revenues for the financier are a major concern for the applying consortia. This means that less energy can be given to the design of an optimal system. It could even lead to a selection procedure where the financial side is decisive, and the actual system becomes sub-optimal, with all consequences thereof.

The solution could be that the administration, if it decides to outsource the road user charges, provides for the right conditions. As in most public policy dossier also levying tax within a road user charges does not lead to a private business case as such. The first reaction of private investors will probably be not to get involved. If they persist in that attitude, in some cases there will be no tax based road user charges with a PPP operation at all.

The possible breakthrough could be to facilitate the private financing in the project phase. This could be done by means of a guarantee, or a special interest rate, covered by the public authorities for the duration of the design and build phase including the actual start up of the system. Here the problem arises that the State could become involved in the liability for the (non) performance of its private partner. Therefore this possibility needs further study.

If the administration decides to leave all the risks with the private partners the financial partners will fill the gap towards the business case by charging high fees and sharp negotiations on the contract. The fees will be accepted by the administration as long as in the long run extra income can be gained (f.i. from foreigners). Whether this is the current model is too early to tell, but it is clear that private financing of public policy projects like road user charges is not easy and has become a main, if not dominant, issue in the tendering procedures for public tax based road user charges. This could eventually jeopardize both the quality of the provided service and the relation between the customer and the service provider even before the operation has started, or it will most probably lead to substantially higher costs.

Literature.

Good governance in the European Union, Tanja A. Börzel, Yasemin Pamuk, Andreas Stahn (Berlin, January 2008)

On the rule of law, History, Politics, Theory
Brian Z. Tamanaha, Cambridge University Press 2004

Road user charging and electronic toll collection
Andrew T. W. Pickford, Philip T. Blythe. Artech House ITS series ISBN 1-58053-858-4

Tolling Heavy Goods Vehicles on European Roads. From a Diverse Set of Solutions to Interoperability?
José Viegas, CESUR – Instituto Superior Técnico; and TIS.pt, Transportes, Inovação e Sistemas, s.a. Lisbon, Portugal, EJTIR, 2003

A review of European truck tolling schemes and assessment of their possible impact on logistics systems
Alan C. McKinnon, Logistics Research Centre, Heriot-Watt University, Edinburgh, 2011.

Road Taxes, Road User Charges and Earmarking
David M. Newbery and Georgina Santos, © Institute for Fiscal Studies, 1999

Road User and Congestion Charges
David M. Newbery*, University of Cambridge, Cnossen / Theory and Practice of Excise Taxation 2004