

# **A comparison of non-profit toll companies and Built Operate Transfer initiatives – the case of Norway**

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## **1. Introduction**

Policy makers in the Norwegian road sector face major challenges in the years ahead. Increasing maintenance costs, greater focus on traffic safety together with lacking funds for realizing the political objectives for public transportation (especially in the largest cities) results in less public funds for new road investments in the coming years. In addition, the constantly increasing growth in traffic implies a need for new road investments

Facing these challenges, different measures are being suggested. In the largest cities, converting the present toll cordons into congestion pricing schemes has been suggested, even though it is politically complicated. What accentuates the relevance of congestion pricing more than ever, is firstly that the Norwegian Parliament has passed an amendment to the road traffic act that allows congestion pricing to be implemented. The bill has however not yet come into force, although it is almost two years since the decision was made in parliament. Secondly, and maybe most important, the toll collection period for the toll cordons of Trondheim and Oslo (the Bergen toll cordon was recently approved for another 10 years) are soon coming to an end. The alternatives are between removing the cordons altogether (probably the most popular alternative amongst the motorists), continue collecting tolls as today or in a slightly different form, and or to convert the toll cordons into congestion pricing schemes. Norwegian politicians have to make decisions in the years ahead on how to handle present and future transport challenges in the Norwegian large cities.

Because of high level of traffic growth, large parts of the national trunk road system<sup>i</sup> today cannot handle traffic efficiently. In addition to the need for better traffic safety, this indicates that there is a need for a grand scale development of the national trunk road system. The Norwegian Public Roads Administration (NPRA) has estimated that it will take approximately 30 years to develop the national trunk road system to an adequate standard. The rural bias in the Norwegian Parliament also makes it less likely that public funds for road projects in the rural parts of the country will be cut in order to increase the level of investment in the national trunk road system. Norway is therefore forced to consider other means of financing road infrastructure than public funds.

The most obvious alternative left is to expand the use of toll financing. Norway with its long tradition for toll financing has a strong and well-established organisational

framework for toll financing. Thus, it is currently being considered to use this tool more actively to improve the national trunk road system. This however, could turn out to be politically challenging. The opposition against road tolling is extensive in some areas, and even if road tolling is politically acceptable one can hardly say that a majority of Norwegian motorists are in favour of road tolling [see for instance Odeck et al AET, 2003].

In the present political climate, Public Private Partnership (PPP) appears as a feasible alternative. Norway is currently exploring PPP-financing in three pilot cases and the government is also considering using PPP projects on the rail network. The results of these pilot cases will be carefully evaluated, but if one chooses to use PPP for future construction of the Norwegian road network, a combination of toll financing and PPP is a possibility.

The focus of this paper is how the advantages of Norwegian toll financing can be combined with PPP in order to solve future needs for road financing. We proceed as follows: Section 2 discusses in brief the background and organisational framework of Norwegian toll financing and section 3 gives an overview of experiences with it. In section 4 we discuss the PPP and the opportunities it offers in the Norwegian road sector. Section 5 proceeds with an assessment on how to combine the experiences from toll financing with PPP. Section 6 offers some conclusions.

## **2. Background**

Toll financing has been used in Norway as a supplement to public funding for more than 70 years. While bridges often were subject to tolls hundreds of years ago, the first modern road tolling project was the Vrengen bridge, situated near the town of Tønsberg, in the early 1930s. Since then, over 100 toll projects have been realised successfully and only one has been declared as bankrupt.

Until the late 1980s toll financing was mainly used to finance bridges and tunnels. As good as all the projects were rural projects. Since then the number of tolled roads and the amount of tolls paid have increased, and today some 25 percent of the total annual budget for road construction comes from toll financing.

The increased use of toll financing is due to a number of factors, but traffic growth has nevertheless increased the need to invest in new and better roads. In the largest cities Oslo, Bergen and Trondheim congestion led to the implementation of toll cordons in the years 1986 to 1991. The purpose of these cordons was, and still is, purely financial and is not meant to reduce traffic even if there is a slight difference between peak and off-peak charges in Trondheim.

Today there are 45 toll projects and the number is increasing. Norwegian motorists used 400 million euros on road tolls in 2002, implying some 165 euros per vehicle per year.

The revenues from the toll cordons make up the main part of the tolls collected. Smaller projects in the rural parts of the country, however, still make the majority of the number of toll projects. The NPRA now wants to use road tolls strategically to upgrade the national trunk road system.

## 2.1 The organisational framework of Norwegian toll projects

The organisational framework of Norwegian toll projects has remained almost the same. Each toll project is based on local initiatives. This initiative is usually taken by the business community, local authorities or even by an individual in the community. Based on this initiative, a toll company is founded, usually organised as a limited liability company. This company must be jointly owned by local authorities affected by the proposed road project and must be organised as a non-profit enterprise. The toll company acts as an enthusiast and works to establish a political acceptance for the project. This process may take years and often includes lobbying both locally and nationally. As the company has no source of income, this work will have to be financed through its own capital. The business community in the area usually contributes with funding, hence contributing to the realisation of the project. This is especially common in projects supported by a majority of the local community, especially bridges and tunnels replacing ferry services. When a majority of the local municipalities and the county municipalities supports the project, it is then recommended to the NPRA. If the NPRA supports the project after a careful impact assessment, it is proposed for implementation and then presented to Parliament<sup>ii</sup>. As all toll projects must be based on both a political consensus on a local level and a recommendation from the NPRA, the Parliament will in most cases, if not all, approve the project. If different alternatives are being presented, the Parliament can choose between these. The broad consensus, both within the public administration and among politicians on a local and national level helps to explain the success and long tradition of Norwegian toll financing.

Even if toll financing involves a strong public complicity through political acceptance and normally a conditional reimbursement for the loans the toll company has to raise, private financing and acceptance will often be decisive for the realisation of a project. The conditional reimbursement procedure for reducing financial risk is discussed in Bråthen and Odeck (1998). Private financing takes place both as share capital and, in some cases, as investment capital for the road construction. The shareholders will not get any return on the capital employed. The willingness to raise private funds may in some cases generate additional public funds for the region.

As the business community often will be heavily affected by toll financing in an area, their attitude towards a project will be greatly emphasised by the political decision makers. These attitudes will however often be in accordance with the public opinion.

After the Parliaments approval of the project, it's the NPRA who has the responsibility for technical and economical feasibility studies. The NPRA is also responsible for the implementation of the project, which is done by means of contractors after a competitive tendering process. The toll company shall only put the necessary funds at the NPRAs disposal through loan capital and has, in principle, no formal role in carrying out the project. Even if tolls sometimes are collected before the new road is open for traffic, the basic principle is toll collection from the new road is open. The loan is usually paid off over a period of 15 years.

The toll company is responsible for the collection of tolls. However, there has been more and more cases of contracting out the toll collection to commercial toll collection

companies. The toll company remains responsible for the collection and remains the contracting party towards the NPRA. The ownership of the road during the collection period remains with the NPRA and the role of the toll company, aside from the political process ahead, can easily be described as to raise the loan and pay it off. If the economy of the project develops in a favourable way, the toll collection will end faster than planned. The toll company shall be dissolved when the toll collection period is over.

The NPRA has an active role in following up the economy of the toll projects. It shall approve of the tolls and the discount systems and all changes in these systems. Furthermore; each toll company shall compile an annual financial statement on the development of the toll collection. The NPRA has a leading role in the development of new technological and organisational solutions for toll collection. This work has, among other things, lead to the development of technological standards available to anyone who wishes to use them.

### **3. Experiences from Norwegian toll road projects**

Even though a large number of Norwegian roads have been fully or partly financed with road tolls during the last decades, the Norwegian way of organizing and carrying out toll road projects has been criticised. In a report in 1999 The Office of the Auditor General of Norway pointed out several weaknesses, such as financial management and the organization of the toll companies, and the apportionment of liability between the toll road companies and the authorities. Based on this report the NPRA worked out a report with the same conclusion and proposing changes in the current organisation.

There is a one to one relationship between a toll road project and a toll company, and the company is responsible for the economy in that particular project. This prevents that a good economic situation in one project can cover up a deficit in another, but it is not necessarily the most efficient way of collecting tolls. Similarly; higher revenue than expected, due to an increase in traffic and efficient management, will lead to a stop in the toll collection and a discontinuation of activities for the company. Conditions like these do not automatically give the right incentives for a more efficient management.

A number of different toll companies causes differences with respect to the projects toll collection efficiency. The operating charges' part of the revenue varies from 5 percent to over 35 percent, and the cost per trip fluctuates from ca 0,13 euros to 3,75 euros. These circumstances do not necessarily tell us anything about the efficiency of a particular project, but it nevertheless illustrates that there are needless differences in how the motorists' money is spent.

The toll companies perform tasks for the public authorities, and the NPRA often advice the companies, for example in choosing a particular fare structure or how they should manage the toll collection. However, since the toll companies are private limited companies, this has often proved difficult. The toll companies, both the individual company and the company form, have developed an autonomy, which, in many ways, have become protected for competition. The NPRA has now acknowledged that it doesn't have the right control and regulation instruments to

direct the companies, and that the existing instruments have not been used sufficiently.

Efficient management and good solutions demands a high level of competence in all parts of the organization. Organizing based on small, limited and time-bonded toll companies makes it difficult to create a good sphere of authority. Such an environment makes it difficult to build up, train and retain competent personnel. If toll companies as we have today shall continue to be the chosen way of collecting tolls and financing new roads, there has to be a change in the way road management is organized.

As a result, the NPRA has suggested that a public toll company should handle all toll projects on national trunk roads in the future. This could make it easier to finance extended parts of the roads, as opposed to today when individual and isolated projects lead to great variation in the standard of the road. It is suggested that the NPRA can initiate projects on the national trunk roads and that the present requirement for political consensus will be omitted. It is expected that this arrangement will provide large-scale advantages and therefore more efficient management. Toll projects on secondary roads will still be organized as today.

The NPRAs proposal will be put before the Parliament in the spring of 2004. An approval of such a scheme by the Parliament will probably lead to a raise in the total amount of tolls collected.

In 2000 the Parliament decided that three new road projects would be carried out through the use of Public Private Partnerships (PPP). One project has started and the other two will be agreed upon at some point this year. These three projects will be evaluated thoroughly before more PPP-projects will be actuated. If, however, it is decided that more PPP-projects has a positive value as compared to the conventional financing regime, it is important to take a closer look at the way toll financing is handled and consider how those experiences can be used in combination with PPP-projects.

#### **4. Public Private Partnership - opportunities and experiences**

In the 1970s, a drop in public budgets and an increased need for new investments led to a search for alternative methods of financing in most countries. In many countries this made way for private involvement, through contracting out or privatisation. Methods of private financing, building and management of public infrastructure made a break-through in the 1990s.

PPP describes different ways of public-private co-operations for development of different types of infrastructure. This implies that a private consortium builds, maintains and operates a road project. The payment consists of public funding, tolls or shadow tolls. A combination of public funding and road tolls is the usual payment. A shadow toll means that the company gets paid according to how many motorists who use the road.

A characteristic of PPP is that the financial risk is transferred from the public authorities to a private consortium for a period of 20 to 30 years. The consortium can

get ownership in this period, but this will subsequently be transferred to the public authorities. This means that the authorities part in PPP-project is limited to making the order, land acquisition and to supervise how the projects should be carried out. It is usual that the authorities take the political risk and possibly the income risk. These elements are parts of the systematic (macroeconomic) risk inherent in the project, which means that these risk elements are beyond the contractors' control.

#### **4.1 OPS – advantages and disadvantages**

PPP is considered to have two main advantages compared to traditional project financing (van Herpen, 2002):

- Value for money/increased efficiency
- Unloading public budgets

PPP can contribute to increased efficiency in several parts of the carrying out of a project and thus delivering a project with the same quality as under conventional procurement for less money, or delivering a project with a superior quality for the same amount of money. Efficiency gains are linked to several aspects of the project.

One of the main reasons why PPP once was introduced was continuous cost overruns in public road construction and the fact that many projects were not being completed in time. In Norway a study of the years 1992-1995 showed a mean cost overrun of 7,9 percent ranging from -59 to +183 percent (Odeck, 2003). By giving a private consortium the responsibility for both financing and the carrying out of a project, this will lead to better incentives for a fast delivery of the project than under traditional procurement. The revenues of the private consortium are based on the completion of the project. The costs of a lengthy construction process will, as opposed to the public sector, be highly visible through the interest rates. In order to generate revenue as soon as possible, the consortium must focus on a fast and cost-efficient construction process. One will therefore rarely see examples of PPP projects being half finished for years.

Public funds can, on the other hand, be unpredictable. A private consortium can arrange for an ideal supply of capital in correlation with a rational construction phase. One of the reasons why public lead projects have experienced cost overruns is alteration of the project during the construction, often as a result of political interference. With PPP a significant amount of responsibility will be transferred to the private sector. The authorities will be forced to specify the contents of the contract, both the infrastructure and the quality, before the tendering process. On the other hand, PPP may imply reduced flexibility with respect to the possibility of making benefits from e.g. technical innovations and additional information on e.g. environmental issues.

In traditional projects, the building and maintenance of the road will normally be separated into two different contracts. This implies that the one responsible for the maintenance will have no opportunity to influence the design of the road. PPP, on the other hand, is based on the same entity being responsible for both the construction and the maintenance. The revenues are based on the consortium complying with a

certain level of service and hence having no incentives to reduce the level of service provided. The consortium must consider which technical solutions that will give the lowest life time costs. This contractual structure will reduce incentives to overrun costs or to choose an inefficient technology, since the operator's future revenue depends on a flow of suitable quality services from the asset (Debande, 2002).

What in many ways characterises PPP projects is greater responsibility and more freedom to choose new solutions, hence triggering new and cost efficient solutions. To achieve this, the public authorities must establish tender documents based on an overall specification rather than a detailed description.

Several aspects of PPP can however lead to higher total costs than traditional projects and thus giving poor value for money. PPP projects are extensive and the transaction costs will normally be higher than under traditional procurement. Furthermore will the private consortium need to raise a loan to finance the entire construction and pay off this loan over a longer period. Compared to public funding over a short period, a financing such as this could imply higher total costs unless the advantages of PPP outweighs the disadvantages.

A private consortium will also need to be compensated for handling the risk, that is; it will calculate a risk premium in the estimated price of the contract. This could in term prove to be more expensive for the public authorities than a traditional project where the different parts of the project are handled by different sub-suppliers.

The length PPP-contracts will normally be between 20 and 30 years. This means that there so far has been few, if any, opportunities to evaluate the projects at the end of the contract period. In Great Britain five projects have been evaluated by the Institute for Public Policy Research at the signing of the contract. The savings compared to traditional projects varies from + 31 to a loss of -21 percent (Aas, 2003). According to the institute, the gains are uncertain and it is too early to conclude whether PPP will give value for money compared to traditional projects.

There are a number of circumstances that may affect the functionality of the PPP contracts. First, total contract costs may increase in the future as a result of strategic behaviour. One thinkable example may be that the contractor attempts to replace investment costs with future more expensive maintenance costs. Maintenance costs (e.g. replacement of vital technical equipment) can often not be neglected, and the authorities may thus be forced to renegotiate the contract. Another uncertainty is connected to the stability of the private contractors under long-term contracts. Bankruptcy, M&A and flagging-out are factors that may cause regulatory problems.

Large and extensive PPP projects demands a competent organisation and a solid financial basis. When a private company enters a tendering process, it has to consider the possibilities for not being granted the concession and have no options for covering the tendering costs. Because of insecurities such as this, the number of bidders may be limited and thereby reducing the competitiveness of the tender process. Regardless of the number of bidders, PPP in itself can lead to reduced competition, since the company who gets the contract will basically have a monopoly during the contract-period. The authorities are bound by the contract, and will hardly

profit by efficiency-gains unless there is a clause in the contract on sharing possible efficiency gains.

PPP leads to a new way of thinking for the public authorities as compared to traditional projects. PPP demands that the authorities cultivate their way of ordering through functional requirements and to follow up on these in the contract-period. The authorities has to take a different approach than they are used to, but this kind of contracting will in all likelihood be more common in the future. Such a change in tasks may, however, lead to an increase in costs because the contracts need to be followed up.

As for toll financing, PPP will contribute to relieve public budgets. This is important for countries with limited resources or for countries like Norway who has little possibilities of changing the public budgets since the economy is close to the limit of capacity. A discharge of public budgets will also release capital to other purposes than transportation. On the other hand, PPP-financing will commit future Parliaments and reduce their possibilities of realizing their own political agendas. In Norway, the three PPP-projects are expected to bind about 10 percent of the road-investment budget for the years 2006-2012. An increase in the number of PPP-projects now can therefore add power to today's Parliament on expense of future Parliaments.

The realization of a project is often a question of "can it be PPP-financed or not". It has been created an image that PPP adds more money to the transportation sector. This is hardly true. In reality, the authorities pay off the project over a longer period. The total supply of resources is constant unless PPP involves better value for money than traditional projects. PPP is just another way of financing road-projects, and has not revolutionized this type of projects.

## **5. Combining the experiences from toll financing with Public Private Partnerships**

In Norway PPP projects is a new way of financing road-projects. Even so, this way of financing has obvious similarities with traditional toll financing. Toll financing has proven to be successful as over a hundred projects have been financed using tolls. Nevertheless, there are a few problems which need to be addressed. Combining PPP and toll financing will require a combination of these two schemes of financing.

PPP-projects do not necessarily need to be financed using road tolls; they can very well be financed using public funding or shadow tolls. The purpose of toll financing in PPP-projects is the same as in traditional toll projects: to relieve public budgets. PPP will relieve public budget in the short run, but they will contribute to the dispersal of payment over a longer period. Tolls will, on the other hand, unload the public budgets over the entire contract period since one fixed share is paid by the motorists. From a socio-economic point of view, tolls could lead to less efficiency due to traffic-deterrence and costs of collecting the tolls. If these costs are higher than the cost of collecting taxes (in Norway estimated to 20 percent) it is more efficient to finance the project through public funds.

## 5.1 Risk management

A main objective with PPP is to transfer parts of the economic responsibility (risk) from the public authorities to a private consortium.

The authorities do not have an economic profit motive. It is a common assumption that participants with non-profit motives have better chances to reduce costs and/or maximise the revenue. This only applies when the private consortium have an opportunity to influencing the risk. Hence the important thing for the authorities is therefore to identify the risk-elements and to determinate who is more qualified to handle them.

A transfer of risk means that the private consortium has to finance the project itself. The finance costs are normally higher for a private company than for the public authorities. Therefore, the efficiency improvement that a private company can carry out has to be measured against the company's higher finance costs.

However, it is important to have in mind that the finance costs of the public authorities is not zero, they tie up capital the same way as a private company does. The difference is that the public authorities is looked upon as a secure payer who can borrow, for example from itself through an advance of future income, to a nearly risk free interest rate. This is particularly interesting for countries like Norway, which budgets profit on the State budget every year. It gives a better scope of manoeuvre than countries with deficiency on their central government finance.

In comparison, the private company has to calculate a risk premium in order to take responsibility for the risk through the contract period. The risk and risk premium will increase if the private company has to handle both the cost and the income risk. If the private consortium is to handle the income risk, it has to collect the tolls and take the risk of negative traffic development. A main argument for transferring the income risk to the private company is that this will give them an incitement to give the motorists a good offer through good roads and a customer-friendly solution. On the other hand, the private consortium usually has little or no influence on the traffic development which generally depends on the macro economic development and other circumstances outside the company's control e.g. projects in adjacent areas that may affect the traffic flows. This may be a common case in urban transport, where both road and public transport projects may influence the traffic flow.

One possible solution is that neither the company nor the public authorities take the income risk. This can instead be left to the motorists. One way of doing this is to define some percentage of the project to be financed by tolls, and thereafter let the market to decide the total costs of the project. When the contract is signed the company's total income is defined.

Tolling in Norway is subjected to extensive regulations, something that limit the toll company's (or the PPP company's) possibilities to influence the revenue. If the economy of a toll project is worse than presupposed, the NPRA can increase the tolls up to 20 percent in addition to the general inflation. If this is not enough; the toll collection period can be extended with up to 5 years. Beyond this, there are no

remedies that can increase the revenue, except efficiency improvements. If a Norwegian PPP-project shall be partly financed through toll collecting, it has to follow the same regulations as the other toll projects. This gives the private consortium few opportunities to influence the revenues.

The arguments mentioned above indicate that the income risk in Norwegian PPP-projects should not be a part of the contract. Risk should only be transferred to the private consortium if it has a chance to influence the risk. The consortium should rather be paid directly from the public authorities. The toll collection should be organized in the same way as traditional toll projects. In this way one can concentrate on developing and improving today's system of toll financing instead of introducing new and untried solutions. This will lead to reduced risk in the PPP-contract and the private consortium will require a lower risk premium. The risk of toll collecting is left to the motorists. If the economy in the toll project develops worse than expected, it is the motorists who have to take the risk of higher tolls and longer period of toll collection.

Traditionally, toll projects in Norway have had a low level of risk. In the modern history of toll financing in Norway, there is only one project that has gone bankrupt, and most of the projects have been paid off quicker than expected. This decreases the toll company's need for equity. Besides, all toll companies shall be organized on a non-profit basis, which reduces the costs of toll financing. The owners, private or public, will not receive any investment earnings. They only get back their own capital, adjusted with 80 percent of the consumer price index during the tolling period. Non-profit organization is common in the field of transport funding in Norway, and could, if combined with PPP-financing, reduce PPP-contracts even more.

## **5.2 PPP and non-profit organization**

It might be difficult to understand why private companies and individuals want to spend time and money on toll projects without expecting any earnings. The answer lies in the considerable transport costs in Norway. While the costs of transportation for industry and merchandises in Europe are 2-2.5 percent of total sales, the corresponding numbers for Norway is 8 percent. The reason for this is partly due to long travel distances, but poor infrastructure and difficult external conditions is also a cause<sup>iii</sup>. The majority of Norwegian export comes from the coastal areas, areas with partly insufficient roads. However, one should be careful not to let the financing possibilities overrule the main economic decision-making criterion, namely whether the project is socio-economic profitable or not. The perceived lack of adequate infrastructure often make the Norwegian business community eager to contribute to road-investments that can reduce transport costs.

This fact, along with the tradition for involvement and investment without direct earnings, can be used in connection with PPP-projects. One can develop a Norwegian PPP-model based on Norwegian external conditions and Norwegian traditions. As a consequence, some parts of the business community in the western parts of Norway have taken the initiative to a new collaboration-model based on Regional Public Private Partnership (RPPP) for improvements along the coastal national trunk road, the E 39.

RPPP requires a regional consortium, owned by the regional public authorities and by private interests. The consortium will be a non-profit company and will get its concession from the NPRA to finance, collect tolls, project, build, conduct and maintain the project. The revenues of the consortium are based on public funding and toll financing. The public authorities would then be able to reduce the short-term financial strain, and to go through with road projects faster than they normally would. The NPRAs part in RPPP would be to organize the project through land acquisition and regulation plans, approve of contracts with the contractor and to supervise the project. This model will lead to more involvement for the authorities than traditional PPP-projects. RPPP will reduce the public authorities risk compared to traditional project financing. The authorities transfer the largest risk to the company, which can carry out the project itself or distribute it to sub contractors. The income risk will be on the motorists' side, as mentioned in chapter 5.1.

A regional PPP-model combines Norwegian and European models for building new infrastructure. The public budgets are unloaded and the public authorities are ensured control through part-ownership in the company. In this way the business community and the local authorities can create a partnership for faster building of the roads in the region, which can lead to future gains for all parties.

In an RPPP-model the public authorities leaves the risk to the consortium which will handle the risk itself or divide it on sub-contractors. If several sub-contractors carry out the project, the total risk can be reduced. In a traditional PPP-project the PPP-company will also leave some parts of the project to sub-contractors. Regardless of who has responsibility for the project, the risk has to be handled and this has a price for the buyer, in this case the public authorities. The difference between an RPPP-model and a traditional PPP-model is that the RPPP-company does not require profit.

As opposed to traditional PPP-models an RPPP-model will lead to less competition since the competitive bidding only will be on sub-contractor level. When the public authorities grant a concession to a regional consortium, which is willing to lead the project without a profit requirement, there will not be a rival company who has a lower price. An RPPP-model is therefore in some ways like a traditional toll project, and one can get the same incentive problems as with toll financing.

Whether a traditional or regional PPP-model is chosen, depends on whether the advantages with joint responsibility, shorter building period etc in a RPPP-project make up for the drawback of less competition. In any case, a RPPP solution will relieve the public budgets in the short run, and at the same time ensure public control through part ownership.

In Norway one project is started up based on a PPP-model and two more will be carried the way. The NPRA does not wish to start more PPP-projects before there has been a thorough evaluation of the three existing projects. Which model(s) that will be used in future PPP-projects is still not decided upon.

## **6 Conclusions**

Norway has a long tradition when it comes to toll financing in the road sector, which is proven to be mainly successful, even if a few regulatory problems have been

identified. To improve current practice, a toll company under the NPRAs jurisdiction is proposed that will have the liability for all the toll-financed projects that are a part of the national trunk road system.

PPP is a new regime in the Norwegian road sector, which are now tested in 3 selected projects. The main purpose is to stimulate competition when it comes to road construction and maintenance, and also to have a more distributed public financing over a period of 20 to 30 years, which reduces the pressure on scarce public budgets.

Obviously, there are pros and cons connected to PPP as compared to toll financing. One advantage is that PPP may enhance competition and give the contractor incentives to optimize technology and avoid cost overruns. On the other hand, the long-term contracts may become less flexible than desired from the society's point of view, and also possibly subjected to strategic behaviour from the contractor's side. Additionally, there is a fundamental uncertainty as to whether the Norwegian market for construction services combined with the magnitude of the road projects possesses the necessary properties for being efficient. If adequate competition exists, proper design of contracts and conditions for renegotiations are anyway vital elements to make PPP successful.

When it comes to PPP and efficiency as compared to the Norwegian toll-financing model, the results from the UK are ambiguous, and the experiences from Norway are far from rich enough to draw any conclusions. This has given reason to a stepwise progress in Norway, where 3 PPP projects are now being implemented. As the next step, a toll financing/PPP hybrid is suggested to take advantages of the local stakeholders' initiatives and willingness to pay for a faster road investment rate. This can be done through a non-profit regional PPP company (RPPP) regulated by the NPRAs. RPPP will be assigned the responsibility for building and operating projects in a specific region, with the revenues to be comprised of annual public grants and toll revenues. There are reasons to believe that the local stakeholders' engagement in an RPPP may be as strong as experienced from local toll companies. The incentive for this engagement is connected to reduced transport costs for the interest parties through a more flexible financing model that may speed up the investment activities. The public involvement will be a bit greater than in the conventional PPP model and the non-profit design may reduce the costs. However, a detailed design of RPPP remains to be done.

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<sup>i</sup> The Norwegian road network divided into between trunk roads and secondary roads. The trunk roads are roads that link together the different parts of the country and important roads within the each region.

<sup>ii</sup> This is a simplified presentation of the process leading to a toll project being presented to the Parliament. Even within a framework such as this there are often variations. Presentation to the parliament must of course go via the Ministry of Transport.

<sup>iii</sup> As an example; there are still over 100 ferry services in Norway. The motorists spend some 190 000 euros on ferry fares per year.