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POLICY DEPARTMENT A
ECONOMIC AND SCIENTIFIC POLICY

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An Economic Analysis of the Closure of Markets and other Dysfunctions in the Awarding of Concession Contracts

NOTE

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Abstract

As concession contracts are long-term agreements that are inherently incomplete, the economic literature suggests that rigid award rules are inadequate. We suggest that the Directive for the awarding of concession contracts should contain a balanced mix of flexible and rigid rules, as well as procedures to increase the transparency and accountability of contracting parties. This briefing note provides suggestions in order to avoid the closure of markets and other dysfunctions in the awarding of concession contracts.

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LIST OF ABBREVIATIONS

LPVR Least Present Value of Revenue

NAO National Audit Office

PFI Private Finance Initiative

PPP Public Private Partnerships

PVR Present Value of Revenue

EXECUTIVE SUMMARY

By setting up “rules of the game” for the awarding of concession contracts, the proposal for a Directive of the European Parliament and of the Council for the award of concession contracts (further referred to as "the Directive") aims at increasing competition and, in the end, the efficiency of public services organised through concession contracts.

To achieve such a goal, we insist on the fact that the efficiency of concession contracts should be considered throughout their entire binding period, that is to say **focusing on the award process and their ex-post enforcement**. In our opinion, this enforcement stage is not sufficiently taken into account in the actual proposal of the Directive. By eluding the fact that 1) all concession contracts need to be renegotiated; and 2) complex award rules do not secure the selection of an efficient private firm, too much emphasis is put on rigid rules.

The economic literature on concession contracts suggests that rigid award rules would not resolve important issues and is therefore not a good solution. Rigid rules would not solve strategic behaviours put in place by firms in order to avoid competition (i.e. low-balling strategies; collusive agreements) as well as errors made in offers by optimistic bidders (i.e. winner’s curse effect). In addition, empirical studies suggest that concession contracts are very often, if not always renegotiated (J.-L. Guasch 2004; Athias & Stéphane Saussier 2007; Brux et al. 2011; Engel et al. 2011). **Renegotiations are the rule, not the exception and this should be taken into account in the Directive**.

What the theory and facts suggest is that there is no point establishing rigid rules for award procedures. This would not ensure fair competition between competitors and this would not favour efficiency in concession contracts because actors anticipate that such contracts are generally renegotiated ex post. Rigidifying renegotiations ex post would not be a solution either. It would bind partners in bad deals when contracts are misaligned with their environment, as would invariably occur (because they are incomplete long-term agreements).

Instead, **the theory and facts recommend establishing light rules for award procedures that, to a certain extent, would permit the use of the public authority’s discretionary power**. It must be kept in mind that concession contracts are long-term agreements that need a partnership between the public entity and the private partner in order to be established. It would thus be reasonable to allow a more broad set of criteria at the award stage (e.g. reputation criteria) and to allow the public authority to disqualify offers that are clearly not suitable for establishing a long-term partnership.

However, such a flexible framework should be coupled with greater transparency in order to avoid corruption and favouritism. When a large set of criteria as well as a part of the discretionary power for the public authority should be accepted at the award stage and renegotiations should be avoided as much as possible but also widely accepted when necessary at the execution stage, this should be made as transparent as possible. In our view, the main road to follow is to implement a transparent and fair renegotiation process *within* the contractual agreement, involving all stakeholders. We also suggest that more transparency can be obtained with mandatory annual reports for every public service, regardless of how they are provided to citizen (i.e. independently of the fact that they are provided by a public or a private entity). Such transparency would generate pressure on the public authority as well as on private operators to increase their accountability. It would

also frame clear rules of the game. Those points are crucial to benchmark results obtained in European countries more easily than it is the case now, to give incentives to European firms to bid outside of their own country. This would help to reduce national favouritism and to increase the number of offers received when public authorities are organising call for tenders for their concessions.

To conclude, looking at empirical and theoretical studies on concession contracts, we believe that the Directive should:

- Incorporate a larger set of criteria for award procedures (e.g. reputation criteria).
- Be more flexible concerning the award stage (e.g. criteria should not be automatically weighted).
- Be more flexible concerning the execution stage (e.g. renegotiations should be largely allowed).
- Seek greater transparency at all stages in order to make public authorities more accountable. This would generate:
  - Greater confidence and incentives for European firms to bid for concessions outside of their own country;
  - More competition (i.e. more bids received) for public authorities when they organise call for tenders.
- Achieve greater transparency and accountability for example through:
  - The framing of the internal structure of the public works authority of state and local governments in order to split decision rights between a unit responsible for planning, project selection, and awarding projects, and an independent unit responsible for contract enforcement and the supervision of contract renegotiations.
  - Contractual provisions within concessions contracts specifying that stakeholders will be represented at the renegotiation stages and will be informed.
  - Mandatory public annual reports giving information about the price and quality of the service, with specific information on work done, underway or planned, as well as on debt.

Examples, theoretical arguments as well as empirical feedbacks are provided in the report in order to feed this position.

KEY RECOMMENDATIONS

The Directive should:

- **Incorporate a larger set of criteria for award procedures (e.g. reputation criteria).**
- **Be more flexible concerning the award stage (e.g. criteria should not be automatically weighted).**
- **Be more flexible concerning the execution stage (e.g. renegotiations should be largely allowed).**
- **Seek greater transparency at all stages in order to make public authorities more accountable. This would generate:**
  1. Greater confidence and incentives for European firms to bid for concessions outside of their own country;
  2. More competition (i.e. more bids received) for public authorities when they organise call for tenders.
- **Achieve greater transparency and accountability, for example through:**
  1. The framing of the internal structure of the public works authority of state and local governments in order to split decision rights between a unit responsible for planning, project selection, and awarding projects, and an independent unit responsible for contract enforcement and the supervision of contract renegotiations;
  2. Contractual provisions within concessions contracts specifying that stakeholders will be represented at the renegotiation stages and will be informed;
  3. Mandatory public annual reports giving information about the price and quality of the service, with specific information on work done, underway or planned, as well as on debt.

1. INTRODUCTION

Community law does not provide a general definition of concessions nor does it lay down specific rules to apply to this form of public-private partnership (with the exception of work concessions, to which certain rules of Directive 2004/18/EC on public procurement apply). Furthermore, Member States regulate the awarding of concessions contracts in a variety of ways, ranging from an absence of regulation to the application of detailed public procurement rules. This situation has led to some fragmentation and uncertainty about the scope of the application of the rules in this field. The perceived lack of transparency of concession markets across the EU is expected to result in significant inefficiencies and market dysfunction (e.g., corruption, collusion, closure of markets).

This note provides a comprehensive framework, specifying the strengths and pitfalls of public private partnerships (PPPs), focusing more specifically on concession contracts. We will build on theoretical developments of contract theories, and more specifically of transaction cost economics (Williamson 1985), that provides a lens through which advantages and drawbacks of PPPs can be assessed.

We will not discuss extensively what is or should be the definition of a concession contract or a PPP. The notion of PPP is multifaceted and covers a wide diversity of contractual agreements characterised by different risk-sharing and financing schemes, as well as different organisational forms from Management contracts to Private Finance Initiatives (OECD 2008). A broad definition of PPPs now widely accepted is that they are long-term contractual agreements between a private operator / company (or a consortium) and a public entity (both at the central or local level) under which a service is provided, generally with related investments (Saussier et al. 2009). **Concession contracts are also generally characterised by the fact that the private operator bears the demand risk.** This is a crucial point, as will become clear in this note.

In this note, we will highlight the problems associated with the awarding of concession contracts (section 2). We will argue that complex long-term contracts, such as concessions contracts, are inherently incomplete leading to contractual difficulties that are referred to “transaction costs” in the economic literature. Those transaction costs are sometimes important enough to offset the benefits of concession contracts and should not be considered as minor costs. Especially when considering that setting up effective “rules of the game” for those contracts as the Directive seeks. Then we will turn to potential solutions identified by the economic literature in order to limit transaction costs (section 3). As we will see, different award procedures are possible and solutions exist. However, this is not a free lunch as the economic literature suggests flexible rules and increased transparency as well as ex post monitoring. Finally, we discuss the implications of the Directive (Section 4) before concluding (section 5).

2. PROBLEMS ASSOCIATED WITH THE AWARDING OF CONCESSION CONTRACTS

Concession contracts are complex long-term agreements. Because economic actors are supposed to be characterised by private agendas and bounded rationality, these contracts are inherently incomplete in the sense that they do not specify what the contracting parties should do in every future situation. This characteristic is not specific to concession contracts. Complex agreements also exist in traditional procurement. But long-term complex agreements are more the exception than the rule in traditional public procurements. Because of their complexity and their duration, concession contracts are clearly more prone to uncertainty and contractual incompleteness. This contractual incompleteness generates transaction costs – i.e. difficulties in implementing and enforcing these contracts. The magnitude of the transaction costs differs, depending on how the concessions are awarded.

2.1. Uncertainty and Cost of Participation in Call for Tenders

The normal manner of awarding a concession contract is through a call for tenders in order to promote competition. The efficiency of the competitive bidding process depends primarily on the ability of the buyer to accurately specify his needs. Indeed, if the buyer does not succeed, the potential bidders may be discouraged from participating in the call for tenders because of the costs of searching for information that should be borne to respond. Because of the complexity and long-term duration of many concession contracts – especially when specific investments[1] are needed – the public authorities' task is not easy. Indeed, they must usually consider not only the quantitative criteria, such as the proposed price, but also the more qualitative criteria such as durability, safety, environmental impact, aesthetics, social criteria and so on. Many questions arise for public authorities: what criteria should we use in order to award contracts? How do we order them if necessary? How do we compare bids incorporating both quantitative and qualitative dimensions? Thus, the specifications of the contract, or the determination of what is expected of the selected operator, are not easy, which can result in a prohibitive cost carrier selection for public authorities, and prohibitive cost participation for operators.

Just to give few examples of the magnitude of these costs:

- in their work on the reform of British Rail, (Preston et al. 2000) estimated that the median cost for the candidates to respond to a tender was GBP 0.75 million.
- In France, in the urban public transport sector, the fund to promote competition that was recently established in consideration of the acceptance of the merger between two major operators (Veolia and Transdev in March 2011) provides for compensation of unsuccessful applicants between EUR 50,000 and EUR 300,000, depending on the turnover of the candidate.
- Furthermore, a study of the UK National Audit Office (NAO 2003) indicates that: "*The procurement of PFI deals is inherently more complex than the procurement of conventional deals and can involve departments and bidders in heavy administrative costs. For example, on the Newcastle Estate deal (19th Report, Session 1999-2000), the cost of the procurement to the Department of Social Security rose from an initial estimate of GBP 0.4 million to GBP 4.4 million [about*

[1] Asset specificity is the extent to which the investments made to support a particular transaction have a higher value to that transaction than they would have if they were redeployed for any other purpose (Williamson 1985). One consequence of specific investment is that contracting partners are in a lock-in relationship that usually impedes the use of short-term contractual agreements.

2 percent of the discounted contract value], an eleven-fold increase, reflecting the complexity of this type of procurement and the Department's inability to undertake many of the tasks required to negotiate the deal. On the Prime deal to transfer the Department of Social Security estate to the private sector (41st Report, Session 1998-99), the Department's costs totalled GBP 10.9 million, compared with an initial budget of GBP 1.7 million, and the final three bidders spent around GBP 27 million in preparing their bids." (UK National Audit Office, Delivering better value for money from the Private Finance Initiative, June 2003).

- In the same line, the English National Audit Office (NAO) stated in June 2004: *"London Underground had always understood that it would be expensive to negotiate such large and complex deals and in February 1999 budgeted to spend GBP 150 million. The outturn was GBP 180 million (GBP 170 million in 1999 prices). In addition, having decided to reimburse bidders' costs, London Underground agreed to add GBP 57 million to the total deal to cover bidders' costs up to the point of selecting preferred bidders. London Underground required the preferred bidders to disclose the level of bid costs they intended to recover from the service charge. After prolonged negotiations the accepted level amounted to a further GBP 218 million of bidders' costs and fees. In total GBP 275 million of bidders' costs are reimbursed. As they were based mainly on output specifications rather than inputs, the costs of the program could only be known when firm bids came in. It was then that the Department came to realise that the total costs falling on the taxpayer were far more than those considered affordable. There followed a review of the specification to reduce the total cost of the program. The review and the subsequent re-bidding added some five months to the process therefore increasing costs."* (UK National Audit Office, London Underground PPP: Were they good deals? June 2004).[2]

Inaccurate specification of what the public authority is expecting, that is to say of the terms of the contract, may also deter potential candidates from participating in the auction because of the fear of the contract being renegotiated by an opportunistic public authority (Zupan 1989a; Zupan 1989b).

Uncertainties may, therefore, affect the expected benefits of the competitive tendering, firstly, because it reduces the number of bidders and, secondly, because this may lead applicants to include high risk premiums in their bids.

[2] It should be noted that technology may contribute to lowering transaction costs through electronic award procedures. E-procurement can be encouraged through the mandatory electronic transmission of notices and electronic availability of concession documents (like it is suggested in article 30 of the Directive).

2.2. Uncertainty and Adverse Selection

Award procedures are supposed to be framed in order to select the best offer and hence the best partner for providing the public service. However, award procedures are also subject to adverse selection problems that can lead the public authority to selecting a bad partner.

2.2.1. Low-balling Strategy

Firstly, once the operator is selected and the concession contract is signed, the relationship between the public authority and the incumbent is a one of bilateral monopoly. There is no longer any competition. This bilateral dependence creates hold-up opportunities for both contracting parties that may be reflected in costly renegotiations that are unjustified from a social perspective. Since concession contracts are incomplete, there is always room for renegotiations and thus, they cannot be excluded. As we will argue later, **renegotiations in concession contracts are the rule, not the exception**. The important point is that these potential opportunistic renegotiations may affect the effectiveness of the competitive bidding ex ante. Indeed, if the suppliers anticipate such renegotiations that allow them to avoid *ex post* losses, they are encouraged to submit abnormally low offers through low-balling strategies – *i.e.* offers containing promises that will be difficult to keep, for the sole purpose of winning the contract. Thus, the operator who has the best capacity to lobby and to renegotiate the contract will probably win the tender even though he is not the most efficient candidate (Engel et al. 2009). As a result, this possibility would not place the public authority in a comfortable *ex post* situation.

Both newspaper articles and academic empirical studies suggest that this is a common phenomenon in developed countries and in developing countries. For example, the French newspaper Le Monde of November 9, 2011 stated that: "Low-balling strategies take the lead in the wing" on the occasion of the signature of a charter between the French Building Federation and the Association of French Mayors in order to detect and treat abnormally low tenders in public procurement. The charter follows the observation that "the abnormally low tenders have become legion in the construction industry" and recommends a mathematical method to attempt to detect them from the average of the bids received. It is recommended to reject tenders 20% higher than this average".[3]

Guasch suggests that this phenomenon is also very common in developing countries (J.-L. Guasch 2004). Looking at 1,300 infrastructure concessions contracts signed between 1985 and 2000 in Latin America, he noted that 50% of road concessions and 70% of water contracts are renegotiated on average two years after their signature. This is a strong signal to the author that offers made by the operators are not real commitments. (See Box 1).

[3] As already stressed, many problems associated with concession contracts may also exist in traditional procurement processes. However, these problems are more important and difficult to fix for concession contracts because of the fact that such contracts are usually long-term agreements.

Box 1: Renegotiations in concessions are the rule not the exception

The study by J-L Guasch is based on the analysis of 1,300 infrastructure concessions signed between 1980 and 2003 in Latin American countries and the Caribbean (Guasch (2004)). To our knowledge, this study is the one that is based on the largest number of concessions.

	% of renegotiated contracts	Average time before renegotiation (in years)
All sectors combined	42%	2.1
Electricity	10%	2.3
Transport	57%	3.1
Water	75%	1.7

In addition to the frequency, the dimensions of the contracts impacted by renegotiations were also analysed.

	% of renegotiated contracts
Relaxation of the time frame	69%
Reduction of the time frame	18%
Increase of charges	62%
Reduction of charges	19%
Increase in the number of components with automatic "pass-through" by increasing charges	59%
Extension of the concession period	38%

Other less exhaustive studies showed that renegotiations are also the rule in industrialised countries. In a recent report, (Engel et al. 2011) note that in the case of transport concessions signed since 1991 in the United States "*six out of twenty projects have undergone a major change in the initial contractual agreement, favouring the concessionaire, and two additional projects have pending renegotiations*" (Engel and al (2011), page 11).

With regard to France, the study by (Athias & Stéphane Saussier 2007) found that approximately 50% of the French motorway concession contracts experienced substantial renegotiations. A more recent study, on parking concessions in France concludes that contracts are renegotiated about once every two and a half years (Brux et al. 2011). An important conclusion of this last study is that the frequency of renegotiations does not seem to reflect disagreements between the contracting parties since it does not affect the probability of the contracts to be renewed once they have ended.

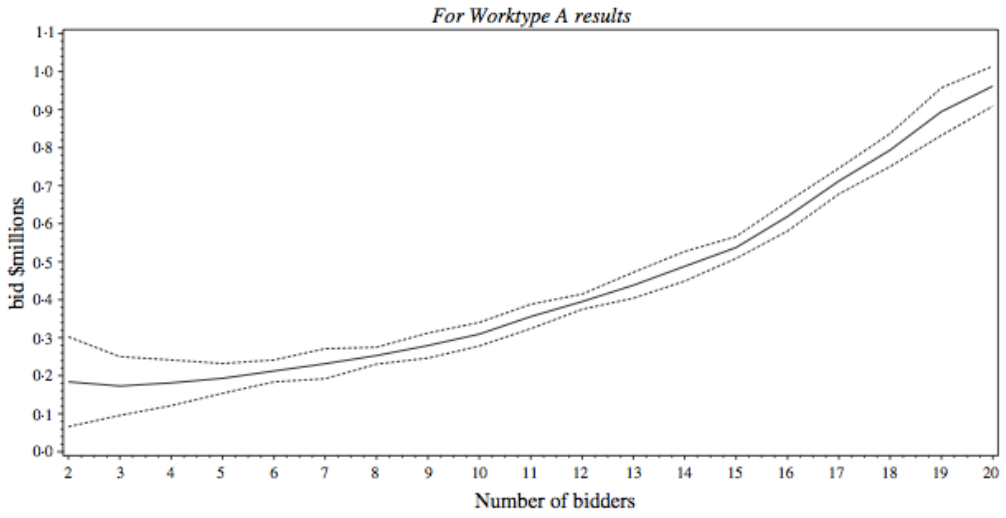
This suggests that if renegotiation is the rule in concession contracts, they should not always be considered bad news (*i.e.* the result of opportunistic behaviours) and can also be good news (*i.e.* the partnership nature of the contract leading parties to adapt their cooperation as soon as uncertainties are resolved). However, the problem with renegotiations is that they potentially undo the advantages of competitive bidding for awarding contracts.

2.2.2. Winner's Curse

The award process may also be subject to another problem of adverse selection when the uncertainty about future demand or future operating conditions (even when expectations of the public authorities are clearly defined) is high. Indeed, this uncertainty is not usually evaluated in the same way by the participants in the tender (Common Value Auctions). It is then possible that the introduction of competition through competitive tendering will lead to retaining the most optimistic candidate, not the most effective one. This is the so-called "winner's curse effect" because the selected operator is the one that will probably go bankrupt *ex post*, placing the public authority in difficulty.

Since competitors are usually smart enough to anticipate this problem, their interest is to internalise this winner's curse effect by bidding less aggressively when the number of competitors is increased. This is what is demonstrated in the study by (Hong & Shum 2002). Figure 1 below shows that for the highway work auctions, the average simulated winning bid is generally increasing in *n*, indicating that procurement costs would rise if the government invites more competitors.

Figure 1: Value of the bids and number of bidders for highway work auctions



Source: (Hong & Shum 2002), page 890.

(Athias & Nunez 2008) also highlight the internalisation of the winner's curse in a study of 49 contracts awarded in toll road concessions worldwide. The authors show, from the relative difference between the traffic forecasts included in the winning bids and actual traffic observed, that operators are bidding less aggressively when they expect strong competition (*i.e*, they incorporate a risk premium based on the number of bidders in order to avoid the winner's curse). However, they also show that this behaviour is less pronounced in countries with a weak institutional framework allowing easy renegotiation if the contracts. They therefore also highlight the opportunistic behaviour of suppliers.

Of course, for a project with no common value problems, the higher the number of competitors, the better it is (See Engel et al. 2011 and Amaral et al 2012).

Internalisation of the winner's curse thus challenges the interest of open competitive bidding to the extent that a limited number of suppliers or a bilateral negotiation, sometimes allow the public authority to obtain more interesting bids.

2.3. Collusion, Favouritism and Lack of Competition

Regardless of the difficulties associated with the complexity and uncertainty of the projects, the award procedures are not immune to the risks of agreements between competitors or between public authorities and applicants taking the form of favouritism. We briefly discuss these issues. However it should be noted that they are not specific to concession contracts. Indeed, many decisions from the national competition authorities regarding these issues concern traditional procurement contracts.[4]

2.3.1. Collusive Agreements

When a call for tenders is frequent, competitors may be tempted to agree on the price of their bids or proposals for their service specifications. The agreements may also cover the market shares of each candidate when the auction focuses on different objects. Competitors may also attempt to deter an operator from participating in the proceedings or to convince him to withdraw. In all cases, the development of cooperative agreements between competitors reduces the actual degree of competition in the bidding procedures, leading to higher prices for the public authority and hence for consumers.

2.3.2. Favouritism

The fact that public officials are not all benevolent and insensitive to corruption subjects the award procedures to the risks of capture and favouritism. This is true when public officials possess substantial discretion because there are no rules constraining award procedures. It is also true when procedures are enforced, because favouritism may then take the form of specific criteria put forward in order to select the right candidate. In any case, favouritism can also take the form of national protectionism. Such behaviour distorts competition. The opening of concession awards markets throughout EU can contribute to improving competition and is one challenge the Directive should address.

[4] This illustrates the fact that rigid award rules do not impede such behaviour

3. POTENTIAL SOLUTIONS

3.1. Thinking About the Award Criteria

Adverse selection appears as a recurring problem with which the public authorities are struggling to cope with. How to select the best competitor? Or, more modestly, an efficient and trusty one? One way may reside in the award criteria, that can be more complete and rigid, or that might incorporate other elements than purely economic ones.

3.1.1. Multi-Criteria Auctions

One intuitive solution, suggested by the literature, is to explicitly take into account quantitative and qualitative aspects in the evaluation of tenders; with the objective to define all criteria that are relevant as much as possible. Nevertheless, some empirical studies on the subject point out abuses to which it leads. From data on road and railway concessions in Latin America, (Estache et al. 2009) show that, firstly, the use of the multi-criteria auction significantly increases the risk of renegotiation of contracts and, secondly, this type of auction is often chosen for non-economic reasons, and is thus diverted from its original purpose. Moreover, when the criteria for selecting candidates to participate in an auction are numerous but are not clearly expressed, the adjudicator has a wide discretion and candidates can hardly anticipate the outcome of the selection process. To address this uncertainty, they may be tempted to bribe, influence or pressure the authorities to encourage them to use their discretionary margins in a manner favourable to them.

3.1.2. Reputation as a Criteria

Another possibility would be to recognise that completeness of criteria as well as complete contracting is not attainable, leading to the need to renegotiate *ex post*. It would then be natural to select bidders that would more likely behave as a fair partner when it is time to renegotiate. This would suggest that the reputation of the candidates must be considered in the procedure (this can be viewed as a particular type of multi-criteria auction), where the past performance of a company is used to evaluate its current offer.[5] If the legislation in the United States encourages the establishment of databases on the evaluation of past performance of companies in public contracts and the sharing of this information, the EU Directives, in contrast, go in the opposite direction as it is noted by (Spagnolo 2012).

Pacini and Spagnolo (2011) studied the effect of introducing a rating system of the past performance of providers, prices of public services provided by private operators, as well as more qualitative dimension offers. They analyzed an Italian public company that manages both the sales and distribution of energy, water services as well as public lighting; it outsources about EUR 300 million / year of its activity. In September 2007, a scoring system that rewards past performance by the granting of a bonus when awarding a new contract was introduced. The mechanism was announced and presented several times in order to inform potential operators.

[5] People reluctant to accepting the idea of introducing reputation criteria in the call for tenders often argue that it would close the market to the happy few already in. However, such criteria could be introduced giving a maximum reputation score to newcomers instead of considering a process where companies have to show a good track record before being considered reliable.

The results found by the authors suggest that if the mechanism is neutral on prices, it still allows to increase the quality and safety of services (which are valued at the total of 134 criteria by auditors).

(Bajari et al. 2009) reach the same kind of conclusions. Using a data set of contracts awarded in the building construction industry in Northern California from 1995-2001 by private authorities, they found that more complex projects – for which ex ante design is hard to complete and ex post adaptations are expected – are more likely to be negotiated, while simpler projects are awarded through competitive bidding. Furthermore, buyers rely on past performance and reputation to select a contractor when they decide to award the contract through direct negotiations. This suggests leaving open the possibility to negotiate to a certain extent especially for concessions that are complex and may not rely automatically on weighted criteria to define the best economic offer.

3.1.3. Finding the Optimal Level of Transparency

It seems that when combined with increased transparency, the contracting authorities' discretionary margins are more used to providing economic efficiency. It is not surprising. As transparency increases, economic actors have access to information, enabling them to achieve better control of the probity of the process. The virtues of transparency have also been demonstrated on other dimensions of the competitive bidding: one study shows that disclosure of the estimated project cost would reduce the prediction error and would provide better calibrated offers.

- On the one hand, the bids received, after communication to the candidates of the estimated price, would reduce the average value of offers (De Silva et al. 2009).
- On the other hand, it would improve the survival of new entrants, more exposed, reducing the problems of winner's curse that they are more specifically exposed to. New entrants benefit primarily from the effects of diffusion of the estimated price, as it reduces information asymmetries between experienced and inexperienced candidates (De Silva et al. 2009).

However, more transparency is not always safe. This might be seen as a paradox. To understand why, it must be kept in mind that the award of concession contracts is generally concerning few – potential – competitors[6]. This is because, as previously noted, such contracts generally involve high investments. Therefore, because we are talking about concentrated markets, collusion can be easier when more information is provided to competitors. As noted by the French Competition Authority (2000), "the publication of a priori selection criteria and prioritisation [...] may have anti-competitive effects. [...] Having to inform bidders about the selection criteria is particularly likely to facilitate agreements [because] precise "rules of the game" known in advance by bidders makes the conditions under which the contract will be award readable for them" (Competition Council [2000], p. 7). Clear rules of the games, where the public authority would specify their criteria, their weight, and the way they will evaluate tenders ex ante, could promote collusion.

[6] Making the award of concessions truly accessible to European competition (eg. through electronically operated bidding systems) is a way to diffuse ex ante information that may increase the number of bidders – by opening European markets to foreign competitors – and reduce this transparency paradox.

3.2. Thinking about Contractual Choices

As highlighted in the discussion above, while there is a clear need for maintaining flexibility in the award procedure, making room for the public authorities' discretion, there is also a clear need to structure this flexibility so as to limit as much as possible the potentially, very high costs it may imply, particularly if abused.

3.2.1. Ex post Renegotiations

As a general principle, post-award contractual changes should be avoided as much as possible; they should be rare and exceptional events.

One general and somewhat obvious principle of contract design that may help soften this trade-off is trying to include clauses for all anticipated potential changes in the original contract. In summary, it tries to 'make the contract as complete as possible', taking into account the cost of writing a complex contract that details many possible contingencies from which only few will effectively be realised.

Although investments in contract design that regulate potential changes are welcome, a complete contract is not something that is attainable in a 50-year long contractual relationship. The complexity and long-term horizon typical of concession contracts are bound to make any such contract incomplete and subject to requests for changes linked to unanticipated events. Moreover, the contractual provisions for anticipated changes may easily become obsolete over time, and their adaptation may become necessary in the light of unexpected major technological changes. In other terms, trying to build a complete and rigid contract might lead, in reality, to trapping the contracting parties in a bad and rigid contract, which should be renegotiated.[7] In this context, post-award contract changes, renegotiation, and contract completion can be efficient means to address issues arising from contract incompleteness, and so they should not be ruled out. The challenge for contract design is then to identify and support efficiency-improving contract revisions.

Since a revision may lead to ex ante undesirable outcomes, such as rent shifting and politically-motivated investments, the contracts may be designed to establish principles and procedures to rule the revisions if the parties call for them. The literature provides useful insights on how contract design can ensure that future renegotiations will contribute to achieving the initial contractual objectives. Contract design can have much to do with renegotiation (influencing its occurrence and outcomes) not only because it can directly affect the contract characteristics determining the degree of incompleteness and the likelihood of revisions (as documented by J. L. Guasch et al. 2008), but also because it can require compulsory and structured renegotiation processes, involving many people and not only the contracting parties, that limit the scope for abuse.

In this regard, the initial contract should address as clearly as possible:

- The circumstances that justify tariff and output adjustments;
- When and how to implement benchmarking and market testing to test the value for money of the proposed changes;
- The circumstances under which the contracting parties are entitled to call for a more general contract renegotiation;
- Specific principles and procedures to rule the revision.

[7] A recent report states that many PFI contracts signed in the UK are now renegotiated because initial agreements are too rigid (House of Commons 2011).

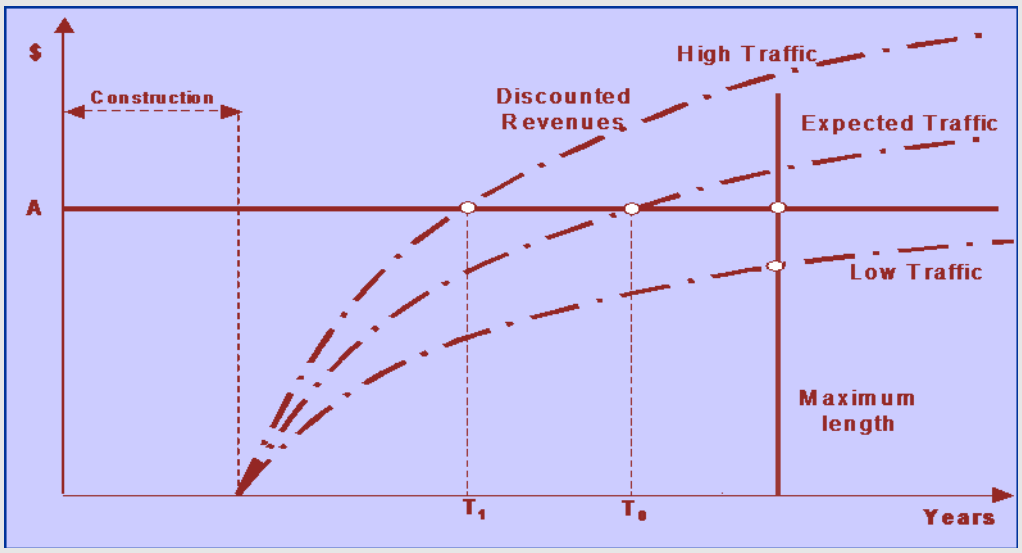
One also has to be sure that the shock that is justifying the amendment of the initial contract is really unanticipated, exceptional, and independent of the private partner's efforts before moving to a costly renegotiation. The risk disrupts the entire procurement process by favouring private partners that are unable to anticipate shocks or act so as to minimise their impact, *i.e.* less able private partners, and by selecting their overly aggressive offers – which are probably cheap because they do not efficiently anticipate the possible shocks – rather than more appropriate and expensive ones.

3.2.2. Contract Duration

Contractual innovations may also be used in order to limit the need for renegotiation linked to optimistic offers (Winner's curse) and to facilitate renegotiations and eventual breach of contracts. One potential innovation, already tested in several contracts, consists in organising a call for tenders based on the least present value of revenue necessary for competitors over the duration of the contract (Engel et al. 1997). Such an award mechanism based on bids for the least present value of revenue (LPVR) eliminates the risk of demand and simplifies renegotiations. It provides a means to ensure the provider against commercial risks because the duration of the contract continuously adapts to future demand faced by the operator (i.e. if demand is low, the duration of the contract will increase). (See Box 2 below).

Box 2: Flexible-term contracts

In a LPVR auction, the duration of the contract is not fixed from the outset, although a maximum duration may be specified by contract: the contract is awarded to the firm that asks for the smallest accumulated user fee revenue in discounted value, or what the authors call the Present-Value-of Revenue (PVR). The contract stops when the PVR the parties contracted on is reached. Thus, in the example illustrated by the graph below, concerning a project that requires a construction phase (which is not necessarily always the case), depending on whether the service provided by the operator meets high, average or low demand, discounted revenues differ. The duration of the contract fits this situation with an end in T_1, T_0 or the maximum length of contract as appropriate. By tying the length of the concession to the demand associated with the project, this type of contract compensates for the risk. If there is a high demand, user fee revenue would accrue rapidly and the duration of the concession would be shorter than if the demand is lower. This clearly reduces the risk of the project and the required risk premium. This would also reduce opportunistic behaviours – leading to opportunistic renegotiations.



Those contracts also have other advantages. As noted by (Kaufmann et al. 2010), "*it is easier to buy back the project if it becomes necessary to do so, because the uncollected revenue (minus reasonable expenses for operations and maintenance) define a fair compensation*". The authors note that such flexible-term contracts using PVR auctions became the standard since 2008, in Chile, to auction highway contracts.

Such a way of awarding a contract has been used to a certain extent in the Viaduc de Millau concession in France. The concession contract signed in 2001 was supposed to remain in effect for a period of 78 years and 2 months. The parties implemented a system of early termination of the concession: The State can therefore request the end of the concession without any compensation after 2045, if the actual discounted cumulative turnover is over EUR 375 million.

This procedure was also used in the case of the Lusoponte concession contract awarded by the Portuguese Government to finance, design, build and operate two bridges over the Tagus in Lisbon, Portugal (de Lemos et al. 2004). The Lusoponte contract was signed in 1994. The concession was originally to expire at the earliest on 24 March 2028 or at a total cumulative traffic flow of 2250 million vehicles.

It is important to note that such a contractual provision is problematic in the sense that, implicitly, it is simply a move from traffic-based concessions towards "availability-based concessions". In availability-based contracts, the public authority retains the commercial risk: it perceives commercial revenue but makes payments to the concessionaire based on performance indicators. In traffic-based concessions, the concessionaire bears the commercial risk and does not receive payments from the public authority during the operating years. Depending on the definition of a concession contract retained by the Directive, such contractual agreements, shifting the commercial risk to the hands of the public authority might be considered as public private partnerships instead of concessions.

3.3. Thinking about Ex Post Regulation

Another basic principle is that, given their potential negative effects on governance and efficiency, renegotiations should be extremely open and transparent procedures. There is no doubt that renegotiations lead to a win-win game between contracting parties. However, one party is usually not invited during the renegotiation process: the consumers of the public service concerned by the contract. To improve on transparency, the contract may envisage calling a third party, *e.g.* an arbitrator, an independent commission, or a group of experts, to evaluate the case and try to conciliate the needs of both parties without inflicting too much harm on the consumers. This point was already highlighted in section 3.1., suggesting that the contractual agreements should frame how and when parties will renegotiate, involving all the concerned parties. To limit discretion and disagreement, the contract may also provide a limit as to the amount that can be renegotiated without calling for a new tendering process as suggested in the Directive. However this is a risky strategy for long-term concession contracts that might be significantly impacted by uncertainty during the duration of their life. However, in order to be effective such contractual principles should be enforced.

On the one hand, it is hard to believe that such principles, once suggested by the Directive would be automatically put in place. Box 3 below shows that European countries are not on an equal line. We suggest that considering only an ex post contractual governance is a risky strategy (i.e. letting the public authority solely regulate ex post adaptations).

Box 3: Control of corruption: a comparison between European countries

The graph below shows how widespread the control of corruption in European countries is. This indicator, developed by the World Bank, captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

Country	Year	Percentile Rank (0-100)	Governance Score (-2.5 to +2.5)	Standard Error
DENMARK	2010	100.0	+2.37	0.19
SWEDEN	2010	99.0	+2.25	0.19
FINLAND	2010	98.1	+2.15	0.19
NETHERLANDS	2010	97.6	+2.15	0.19
LUXEMBOURG	2010	95.2	+2.06	0.20
GERMANY	2010	93.3	+1.70	0.19
IRELAND	2010	92.8	+1.67	0.19
AUSTRIA	2010	92.3	+1.64	0.19
BELGIUM	2010	90.4	+1.50	0.19
UNITED KINGDOM	2010	90.0	+1.48	0.19
FRANCE	2010	89.0	+1.39	0.19
CYPRUS	2010	82.8	+1.07	0.20
PORTUGAL	2010	81.3	+1.03	0.19
SPAIN	2010	80.9	+1.01	0.19
MALTA	2010	79.4	+0.92	0.20
ESTONIA	2010	78.9	+0.91	0.14
SLOVENIA	2010	75.6	+0.84	0.14
POLAND	2010	70.3	+0.45	0.13
HUNGARY	2010	66.5	+0.33	0.14
LITHUANIA	2010	66.0	+0.32	0.14
CZECH REPUBLIC	2010	65.6	+0.31	0.14
SLOVAKIA	2010	64.6	+0.27	0.14
LATVIA	2010	63.2	+0.21	0.14
ITALY	2010	57.4	-0.04	0.18
GREECE	2010	55.5	-0.12	0.18
ROMANIA	2010	53.6	-0.16	0.13
BULGARIA	2010	52.2	-0.18	0.13

Source: (Kaufmann et al. 2010)

Note: *The governance indicators presented here aggregate the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organisations, and international organisations. The WGI do not reflect the official views of the World Bank, its Executive Directors, or the countries they represent. The WGI are not used by the World Bank Group to allocate resources.*

However, there is no reason to think that a regulatory body would automatically improve contractual habits and reduce the overall risk of corruption that is an issue more directly connected to police and rules of law. The cost of running such structure would also be very high.

An intermediate way would be to consider an ex post contractual governance with the obligation for the parties to inform citizens every year about information such as renegotiations, price evolution, investments, quality of the services … This could take the form of an annual mandatory report providing information on how public services have been awarded and how they are managed and with what results. Such a way of doing would allow citizens to access data, may be electronically, and put pressure on public authorities increasing their accountability.[8] An annual report to the European commission could also be envisaged in order to follow improvements that are made by the Union. Such ex post information would complete ex ante information envisioned by the Directive (i.e. Electronic e-procurement bidding systems and award results – Annex 5 of the Directive). Those points are crucial to benchmark results obtained more easily than it is the case now.

[8] This idea is very similar to what has been in place in France since 1995, with the so-called *loi Barnier*. The 1995 Barnier Law set up the principle of an annual report to inform users. In each public service, whether it is run under direct public management or through concession, the mayor of the municipality or president of the inter-municipal structure must elaborate an annual report on the price and quality of the service, with specific information on work done, underway or planned, as well as on debt. The report is then presented to the deciding assembly, after which it is made available to the general public. In addition, if the service is delegated, the operator must also write up an annual report on how the contract has been met, including accounts for each of the operations linked to fulfilling the contract, an analysis of the quality of the service provided and the conditions for implementation of the public service.

4. IMPLICATIONS FOR THE DIRECTIVE

Many questions arise with regard to the idea to introduce a directive for concession contracts. Some answers can be given in the viewpoint of the economics of contracts and transaction cost economics as well as considering what we know from experience and existing empirical studies.

4.1. Do we need a directive for concession contracts?

Do we need a directive for concession contracts? The main effect of the directive would be to frame the "rules of the game" in order to avoid direct negotiations, corruption behaviours and to foster competition as much as possible. (See Box 4).

However, the theory also suggests that regulating such contracts is not a free ride because strategic behaviours might still exist with the directive.

4.2. Do we need a specific directive?

Do we need a specific directive for concession contracts, different from the one concerning traditional public procurement? I believe that the answer, looking at theoretical developments concerning public contracts, is clearly yes. The theory provides us with a wide range of arguments to justify different award procedures based on the idea that concession contracts are considered to be conceptually different from public contracts and so should not be subject to similar award rules. Concession contracts are more complex and characterised by a higher level of uncertainty especially because they are generally (very) long-term agreements. However, it is fair to say that there is a continuum between public contracts and concession contracts (or with other kind of PPPs) regarding their complexity and uncertainty. It can be argued that some public contracts are also very complex and uncertain. But while high level of complexity, uncertainty and contract duration is an exception for public contracts, it is the rule for concession contracts, and this justifies a specific directive for these agreements.

4.3. What kind of specific directive?

What kind of directive do we need? A light and flexible one? Or a heavy and rigid one? On the one hand, the need for the directive is clearly coming from the need to establish clear rules of the game in order to reduce the discretionary power of public authorities. On the other hand, concession contracts are complex and inherently incomplete, leading to many difficulties when organising calls for tenders.

The risk here is to consider only the visible iceberg part of concession contracts, focusing only on the award process. Such an error would lead to the conclusion that establishing rigid rules of the games for calls for tenders would fix many of the problems. Still, as already extensively discussed, rigid rules will not resolve important issues. In addition, the efficiency of concession contracts is to be considered looking at their entire life, that is to say focusing on the award process and their ex-post enforcement

Box 4: The French Sapin Law: What is the Impact?

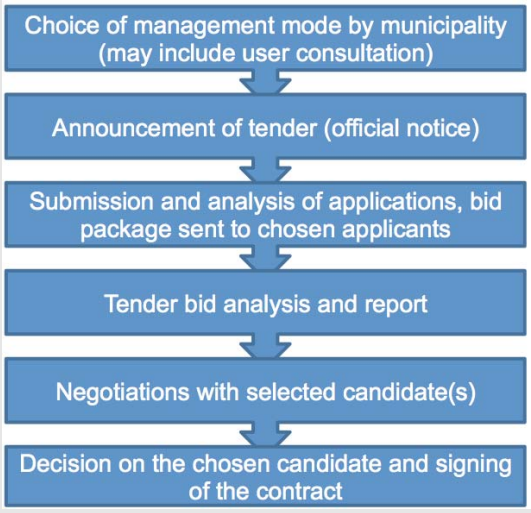
Since 1993, a new law in France regulates concession contracts («loi Sapin», January 29th, 1993).

This law reflects the willingness to reduce powers entitled and exerted by local authorities organising economic life. More precisely, this law restricts freedom of contracting for fear of forms of corruption. The main rules of the game implemented by this law are the following:

Local authorities decide to organise the public service through direct public management or not. This decision remains in their hands.

If they decide to use a concession contract, there is an obligation to organise a call for tenders
The announcement of criteria used in order to select offers is not an obligation. However, an announcement is widely given by local authorities when this is possible.

After offers are received, public authorities may negotiate with one or several selected bidders:



This law is mainly concerned with the award procedure and is not very far from what is proposed in the Directive. It would be interesting to evaluate its impact on concession contracts and their efficiency.

To our knowledge, only one study tried to assess the effect of this law, using data coming from the French water distribution services (Guérin-Schneider & al 2003). Considering the 1998-2001 period and focusing on new contracts signed, they found several interesting results:

- Prices decreased on average: -8%
- Prices decreased on average for big municipalities (>10 000): -15%
-

This suggests that organising calls for tenders fosters competition and decreases prices paid by the consumers. This effect seems to be higher for big municipalities, probably because they are more able to organise competition and they are considered more attractive compared to small ones by private operators.

However:

- The average number of offers is ~2,2
- The % of renewed incumbent: 90%

This suggests that even if the Sapin Law had positive effects on prices, competition could still be reinforced. One way to reinforce competition would be to elaborate common rules of the game at the European level, for foreign competitors to enter into the game. This is precisely what the Directive is seeking for.

The theory and facts suggest that there is no point establishing rigid rules for award procedures: it would not ensure fair competition between competitors and it would not favour efficiency of concession contracts because actors anticipate that such contracts are generally renegotiated ex post. Rigidifying renegotiations ex post is not a solution. It would stick partners in bad deals as soon as contracts are misaligned with their environment, as will invariably happen. In their study on construction contracts and maintenance of highways in California, show that candidates anticipate the fact that contracts are incomplete in their proposals (especially if they are rigid and framed in order to avoid renegotiations) and they found out that the risk premiums by applicants to cover potential costs of adapting contracts represent on average 10% of the total value of their offerings.

The theory and facts suggest that it is clever to establish light rules for award procedures, permitting the use, to a certain extent, of public authority's discretionary power. However, to avoid problems the Directive initially tries to mitigate, it is also necessary to recognise the need for ex post enforcement of these contracts. This does not mean that a rigid framework is needed at the enforcement stage (i.e. forbidding renegotiations) but that a flexible framework, coupled with a need for more transparency is needed to permit flexibility without strategic behaviours.

This position has one consequence: renegotiations should be avoided as much as possible but should also be widely accepted when necessary. All this should be framed ex ante and be as transparent as possible ex post. An independent authority implicated in the renegotiation process could ensure this. With a minimum level of transparency, this would ensure that the consumers' point of view is taken into account and would also reduce contracting parties ability to collude. This is the solution suggested by (Engel et al. 2011). More precisely, the authors suggest that "*The internal structure of the public works authority of state and local governments should be split between a unit responsible for planning, project selection, and awarding projects, and an independent unit responsible for contract enforcement and the supervision of contract renegotiations"* (page 7). Such a division of responsibilities would leave less possibility for corruption and avoid the temptation for governments to weaken the enforcement of contracts in exchange for better relationships with private firms.

The main road to follow is to implement a transparent and fair renegotiation process within the contractual agreement. Transparency can be met by mandatory annual reports for every public service, regardless of how they are provided to the citizens (i.e. independently of the fact that they are provided by a public or a private entity). Such transparency would generate pressure on the public authority as well as on private operators increasing their accountability. An example can be provided by the case of newly renegotiated water contracts in France. Following many critics concerning the way water contracts are governed in France, contractual innovations are developed. Some of them can be through as an attempt to regulate the ex post enforcement of the contractual agreements. (See Box 5).

Box 5: New generation of contracts in the French water sector: the case of Dijon

In 2012, the Greater Dijon (a geographical area regrouping the city of Dijon and other municipalities) and Lyonnaise des Eaux renegotiated their initial water contracts. They developed a new governance system for water and confirmed their water and wastewater contracts until 2021.

At the press conference held on 6 January, François Rebsamen, Chairman of the Greater Dijon Council, said: "We entered into productive negotiations with Lyonnaise des Eaux on the long-term water and wastewater contracts concluded in 1991 and renegotiated in 2001. We will continue our partnership until they end in 2021 on a "win-win" basis benefitting both the specialist water management operator and the local authority. The productivity gains will primarily enable us to set up a Water Solidarity Fund aimed at helping the most needy to pay their water bills as well as a Sustainable Development Fund to fund works primarily in the water sector."

The new contract specifies inter alia that:

- A mechanism will be set up to distribute productivity gains and contractual risks between the operator and the local authority.
- A Dijon Water Solidarity Fund will be specially set up in cooperation with community social organisations to guarantee water supply to financially vulnerable families.
- The creation of a Supervisory Board extends Dijon's means of control. Chaired by a representative of Greater Dijon, the Board will comprise five representatives of Greater Dijon and five representatives of Lyonnaise des Eaux. Its role is to monitor, at regular intervals, how the contracts are progressing.
- Greater Dijon will appoint an auditor for each reporting period, to review the technical and financial data required for preparing annual reports. The auditor will have access to all contractual data, especially financial data.
- Greater Dijon's water utility will be operated under a specific brand name to promote and highlight local governance. Innovating for healthy water and measuring its efficiency

5. CONCLUSION

In this note, we stressed problems associated with the awarding of concession contracts. Since they are complex long-term contracts, they are also inherently incomplete agreements leading to award difficulties. This justifies the need for a specific directive for concession contracts, different from the one concerning traditional public procurement.

By setting up "rules of the game" for the awarding of concession contracts, the Directive aims at increasing competition and, in the end, the efficiency of public services organised through concession contracts.

To achieve such a goal, we insist on the fact that the efficiency of concession contracts should be considered throughout their entire biding period, that is to say **focusing on the award process and their ex-post enforcement**. In our opinion, this enforcement stage is not sufficiently taken into account in the actual proposal of the Directive. By eluding the fact that 1) all concession contracts need to be renegotiated and 2) complex award rules do not secure the selection of an efficient private firm, too much emphasis is put on rigid rules.

The economic literature on concession contracts suggests that rigid award rules would not resolve important issues and is therefore not a good solution. Rigid rules would not solve strategic behaviours put in place by firms in order to avoid competition (i.e. low-balling strategies; collusive agreements) as well as errors made in offers by optimistic bidders (i.e. winner's curse effect). In addition, empirical studies suggest that concession contracts are very often, if not always renegotiated (J.-L. Guasch 2004; Athias & Stéphane Saussier 2007; Brux et al. 2011; Engel et al. 2011). **Renegotiations are the rule, not the exception and this should be taken into account in the Directive**.

What the theory and facts suggest is that there is no point establishing rigid rules for award procedures: this would not ensure fair competition between competitors and this would not favour efficiency in concession contracts because actors anticipate that such contracts are generally renegotiated ex post. Rigidifying renegotiations ex post would not be a solution either. It would bind partners in bad deals when contracts are misaligned with their environment, as would invariably occur (because they are incomplete long-term agreements).

Instead, **the theory and facts recommend establishing light rules for award procedures that, to a certain extent, would permit the use of the public authority's discretionary power**. It must be kept in mind that concession contracts are long-term agreements that need a partnership between the public entity and the private partner in order to be established. It would thus be reasonable to allow a more broad set of criteria at the award stage (e.g. reputation criteria) and to allow the public authority to disqualify offers that are clearly not suitable for establishing a long-term partnership.

However, such a flexible framework should be coupled with greater transparency in order to avoid corruption and favouritism. When a large set of criteria as well as a part of the discretionary power for the public authority should be accepted at the award stage and renegotiations should be avoided as much as possible but also widely accepted when necessary at the execution stage, this should be made as transparent as possible.

In our view, the main road to follow is to implement a transparent and fair renegotiation process *within* the contractual agreement, involving all stakeholders. We also suggest that more transparency can be obtained with mandatory annual reports for every public service, regardless of how they are provided to citizen (i.e. independently of the fact that they are provided by a public or a private entity). Such transparency would generate pressure on the public authority as well as on private operators to increase their accountability. It would also frame clear rules of the game. Those points are crucial to benchmark results obtained in European countries more easily than it is the case now, to give incentives to European firms to bid outside of their own country. This would help to reduce national favouritism and to increase the number of offers received when public authorities are organising call for tenders for their concessions.

To conclude, looking at empirical and theoretical studies on concession contracts, we believe that the Directive should:

- Incorporate a larger set of criteria for award procedures (e.g. reputation criteria)
- Be more flexible concerning the award stage (e.g. criteria should not be automatically weighted)
- Be more flexible concerning the execution stage (e.g. renegotiations should be largely allowed)
- Seek greater transparency at all stages in order to make public authorities more accountable. This would generate:
  - Greater confidence and incentives for European firms to bid for concessions outside of their own country
  - More competition (i.e. more bids received) for public authorities when they organise call for tenders.
- Achieve greater transparency and accountability for example through:
  - The framing of the internal structure of the public works authority of state and local governments in order to split decision rights between a unit responsible for planning, project selection, and awarding projects, and an independent unit responsible for contract enforcement and the supervision of contract renegotiations
  - Contractual provisions within concessions contracts specifying that stakeholders will be represented at the renegotiation stages and will be informed
  - Mandatory public annual reports giving information about the price and quality of the service, with specific information on work done, underway or planned, as well as on debt.

Examples, theoretical arguments as well as empirical feedbacks are provided in this report in order to feed this position.

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An Economic Analysis of the Closure of Markets and other Dysfunctions in the Awarding of Concession Contracts