



# The looming crisis in French public transit<sup>☆</sup>



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## ABSTRACT

The purpose of this paper is to present the problems of French public transit, facing a funding crisis. The prominent features of the French transit are presented. First, we describe the complex and opaque bidding process which is for the entire network. Then we evoke a payroll tax especially devoted to the transit and underline the fact that the system is heavily subsidised. As competing for the entire network might find its rationale in the scale and scope economies, we test some very simple models devoted to this issue. We found no evidence of economies of scale for bus networks. This, given the funding crisis of transit authorities, leads us to recommend a gradual reform of French transit competitive tendering process. This reform should lead to a slowdown in the upward trend of transit employee's salaries. Some smaller parts of the networks would be submitted to bidding processes. The contracts might be improved as well.

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## 1. Introduction

French Passenger Transport Authorities (PTAs) are facing a looming funding crisis. This crisis is explained by many factors. Among them we can observe a tendency of the costs to increase. During the recent decades, the fare box revenue did not increase sufficiently to meet this cost increase. It follows that the fare box recovery ratio has dramatically fallen in the recent decades. French passenger transport authorities are facing a dilemma: increasing fares, increasing taxes or reducing costs. Reducing costs could have been achieved through competitive tendering (CT). Indeed, CT has proved to reduce transit operating costs in many countries (Hensher and Wallis 2005; Hensher and Stanley 2010; Iseki 2010; Sakai and Takahashi, 2013; Van de Velde et al., 2008; Van de Velde and Wallis 2013) the British case is more complex as it combines both deregulation and tendering. However tendering, per se, seems to be beneficial (Preston and Almutairi, 2013; Kennedy, 1995). So, with the London's case, CT is generally supposed to reduce costs. But for the French competitive regime it does not seem to have been the case. One of the reasons for this poor performance of French CT could be found in one of its main feature: the Entire Network Tendering (hereafter ENT). There is a quasi-consensus that CT must be simple and transparent (Hensher and Wallis, 2005). And, with this bidding process for the entire network, French CT is too complex, at least in the large cities. We

will see that ENT is not transparent either.

Being for the entire network French CT creates barriers to entry for new entrants and an advantage for the incumbent (Amaral et al., 2009). In several countries (e.g. Mathisen and Solvoll, 2008) a market concentration has been observed. At a slow pace, this has been observed in France as well. Apart from the small urban areas, the market is dominated by very few operators. There were three main operators but the withdrawal of Veolia could create a quasi-duopoly. Thus the existence of a genuine competition is questionable. This can be seen in another aspect of French transit CT. One of the effects of CT, documented in the literature, is to lead to wages reduction (Buehler and Pucher, 2010; Hensher and Wallis, 2005; Peoples et al., 2008), with a new entrant imposing lower salaries or requiring longer working hours. This did not happen in France. This downward wage rigidity which has probably to be linked to ENT, is one of the causes of the cost increase observed during the last decades. This wage rigidity is also linked to French legal framework.

Would it be more cost-efficient to split the urban transit network into different parts and to submit them to different bidding processes? Discussing CT for some small parts of the network raises the question of scale economies and scope economies. We have no recent and reliable data to address this important topic but some very simple models will be presented. The results indicate that for the large networks, the empirical evidence is not consistent with significant economies of scale for bus industry.

The purpose of this paper is to present and analyse the French tendering system in the light of the funding crisis affecting the PTAs. The remainder of the article is organised as follows. First a

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brief overview of the French public transit sector will be presented. A second section will be devoted to the deep-rooted funding crisis affecting French PTA. The next section will address the question of the scale and scope economies. Then we will analyse the market structure. Finally we will try to explore what could be the outlook of French transit CT, if a cost efficiency approach is favoured.

## 2. Brief overview of French urban public transport

The Parisian urban area is not concerned by the general regulatory framework and will not be considered in this article. French transit might be characterised by the following distinctive features:

1. A tax devoted to transit : the VT (Section 2.1).
2. A tendering process for the entire network (Section 2.2).
3. This tendering process is complex and opaque (Sections 2.3 and 2.4).
4. The public transit operators are heavily subsidised (Section 2.5).

### 2.1. A tax devoted to public transit: the VT

In France there is a payroll tax devoted to urban transport. It is levied in each municipality of the PTU (Urban transit perimeter) by French administration. The rate varies with PTA's size. The upper limits of the rates are given in Table 1.

In 2010, the VT's share of total funding of the PTAs was 48% (for PTAs between 100 000 and 200 000 it was 61%). All the urban areas with TCSPs (20 PTAs) have reached the upper limits of the VT's rate.

### 2.2. A recurrent bidding process for the entire network

As compared to other bidding system in Europe, the distinctive feature of the French tendering is that the entire network is submitted to the bidding process.

The rationale for this Entire Network Tendering (ENT) can be outlined by the following arguments:

1. the scale and scope economies;
2. fewer transaction costs;
3. an easier monitoring of the operator;
4. better co-operation between different parts of the network;
5. managerial economies (may be partly included in scale and scope economies);
6. a steady quality across the different parts of the network;
7. marketing efficiency.

The next section (Section 3) is devoted to the scale and scope economies. It is certainly a key issue regarding ENT. Besides the scale and scope economies, we should address the issue of the transaction costs. But, we will not expand on this topic because transaction costs are difficult to quantify. Moreover, the French ENT entails very large transaction cost during the awarding of a contract (see Section 2.3) whereas tendering for small parts of the network causes monitoring and co-ordination costs. Thus, there could be a balance and it is difficult to determine which tendering system is preferable according to the transaction costs conceptual framework.

To assess the performance of ENT, it is necessary to outline the different types of contracts that could categorize the relationships between the PTAs and the operators. There are three main types of contracts (Roy and Yvrande-Billon, 2007). It is useful to note that in France, most of the PTAs actually own the rolling stock.

*Net costs contracts:* the operator anticipates both operating costs and revenue. The expected difference is paid by a subsidy of the PTA. The operator assumes all the consequences, positive or negative, of any changes compared to what was anticipated.

*Gross cost contracts:* the operator sells to the PTA a production level at a given price. The consequences of any changes in relation to this cost reference level are born by the operator. But the PTA assumes the consequences of variations in revenue.

*Management contracts:* the remuneration for the operator is independent of its productive and marketing effort. This is a risk-free contract.

Surprisingly, Roy and Yvrande-Billon (2007) found only slight differences between these three types of contracts, the operators under the gross costs contracts being the most technically efficient.

### 2.3. The bidding process is complex

We have data about the recent bidding process in Lyons, in 2010, which involved the three main operators. Table 2 reports these surprising figures. Admittedly, Lyons is the largest contact in France (about €2 billions over 6 years).

This bidding process would not have been possible without the help of numerous sub-contractors (cost born by the PTA: 1 M€). The bidders which did not obtain the market received by way of compensation an amount of 0.75 M€.

The tendering authority and the operators are strongly risk adverse. It follows that it is necessary to carefully detail both in the specifications and in the tenders:

1. the supply;
2. the reference traffic;
3. the incentives schemes;
4. the consequences of any event, even unexpected.

**Table 1**

The upper limits of the VT (%).  
Source: GART and UTP (2012) (data 2010).

Population of the PTA		Base rate	Including bonus for group of municipalities	Including bonus if one municipality of the PTA is of touristic interest
PTA > 100 000	With TCSP	1.75	1.8	2
	Without TCSP	1	1.05	1.25
100 000 > PTA > 50 000	With TCSP	0.85	0.9	1.1
	Without TCSP	0.55	0.6	0.8
50 000 > PTA > 10 000		0.55	0.6	0.8

Note: TCSPs are transit lines with right of way on an important share of their route. Mainly light rails with some metros, possibly BRT, investment in TCSPs can be subsidised by the central government.

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