

Essays on urban bus service contracts: developments on governance, management, and performance

Summary

This thesis aims to contribute to overcoming some of these pressing issues in the urban bus sector. The starting point of this research was the search for pressing issues in the urban bus market worldwide, mainly in Brazil, Portugal and the United States. It was concluded that bus concession contracts are incomplete, and ex-post negotiations must be conducted in a trustful environment between the Contracting Authority and the private partner. Sunshine regulation arises as a powerful instrument to raise awareness regarding public services among all stakeholders, and the benchmarking approach can incentivise operators to deliver a service with adequate quality. A simplified template to apply sunshine regulation in the urban bus sector was presented predicated on straightforward KPIs that can be easily generated by the ticketing and AVL systems.

This research also investigated two risk-mitigation mechanisms driven by revenue data that the ticketing system can easily collect: the Collar Option and term extension. Both mechanisms can smooth the renegotiation process since the trigger to alter the contract is only the monitored revenue. The Contracting Authority and the private operator have access to the same data generated by the ticketing system; therefore, information asymmetry is almost inexistent. The real case analysed was the bus contracts from the Lisbon Metro Area. For this case, the results showed that the Collar Option reduced the total cost of the contract for the government while keeping the contract attractive to the private sector, as the probability of having a negative NPV was reduced. In addition, the Collar Option reduces the need for renegotiations since it automatically adjusts the contract in the case of abrupt fluctuations of ridership. Term extension, due to the negative trend of historical ridership data, is not recommend as it increases the cost of the contract to the government while keeping an unattractive return to the private partner.

Concerning the impact of behavioural changes caused by the pandemic, the Collar Option can be a powerful instrument to overcome ridership uncertainty in the upcoming years and establish a more trustful partnership between the Contracting Authority and the private operator. In sum, this structure can redistribute downside losses and upside profits to fulfil the needs of both sides and thus improve the effectiveness of risk management.

Keywords

Public procurement, concession contracts; urban bus services, real options, sunshine regulation, Covid-19.



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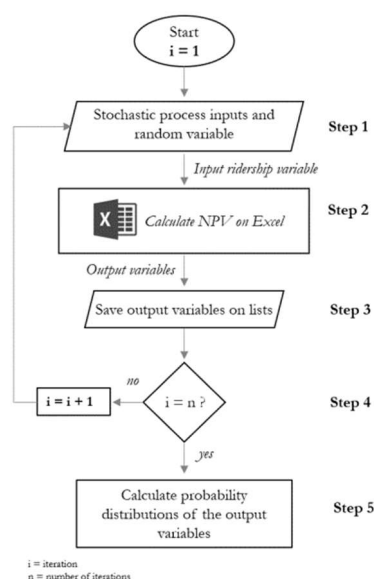
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Period

2018-2022

Funding

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Algorithm flowchart.