

STUDY ON INTERCITY BUS PASSENGER TRANSPORT IN SPAIN

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STUDY ON INTERCITY BUS PASSENGER TRANSPORT E/CNMC/006/19

SUMMARY:

This study analyses intercity bus passenger transport services from the perspective of competition and the principles of efficient economic regulation. In particular, the aim of this study is to analyse the concession system in Spain, as well as European liberalisation experiences, in order to propose recommendations to the relevant authorities to improve competition conditions in the bus sector and consumer welfare.

KEYWORDS: intercity buses; passenger transport; regulation; competition.

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EXECUTIVE SUMMARY

Bus transport is the most widely used means of regular, collective, inter-city passenger transport in Spain. It also represents an important tool for social and territorial cohesion, given its relevance for low-income users and the connectivity of regions with low population density. Traditionally, these characteristics have justified public intervention in the bus sector, in order to ensure a public transport service of sufficient quality for these groups and areas.

In Spain, this intervention has been carried out through a concession system, by which private bus companies provide transport services as a legal monopoly after obtaining an administrative concession that grants them exclusive operation rights over certain routes. An essential aspect of this system is that in principle it allows operators to compete for the market, through the tendering of concessions, so contracts are awarded to the company offering the best terms for users and public administrations.

In recent years, many European countries have liberalized medium and long-distance intercity bus transport services, bringing positive results for users in terms of lower prices, increased connectivity and frequency, and higher quality of service. Spain remains as the largest European market with a concession system. Considering the European liberalization experiences, the European Commission has adopted a proposal to amend Regulation No 1073/2009, which would liberalise national journeys over 100 kilometres. This proposal has been approved by the European Parliament and is pending approval by the EU Council.

The aim of this study is to analyse the concession system in Spain, as well as European liberalisation experiences, in order to propose recommendations to the relevant authorities to improve competition conditions in the bus sector and consumer welfare¹.

The analysis carried out concludes that there is room for improvement in the Spanish concession system from the point of view of competition and efficient regulation.

Firstly, tender specifications have not been typically conducive to adequate competition conditions. Tenders fail to divide contracts into lots. Rather the opposite, large concessions resulting from the unification of previous contracts

¹This analysis has been carried out largely thanks to the information provided, in an exercise of transparency and collaboration, by the Ministry of Transport, Mobility and Urban Agenda (MITMA in Spanish) and all the autonomous communities, except Andalusia and Aragón, which have not responded to the CNMC's request for information, whereas Castilla-La Mancha has only been able to provide information regarding the last quarter of 2019.

are put out to tender. Contract durations are set independently of the operating conditions of the concessions, reducing frequency of tenders. Tender specifications often require the new contractor to assign a minimum number of vehicles and staff to the concession, thus reducing its autonomy to achieve efficiency gains. The specifications impose excessive technical ability criteria, which may exclude new entrants, be discriminatory and hinder companies' growth. Finally, the study found a low weighting of financial bids, with formulas that discourage the most competitive bids, and abnormality thresholds that are conservative in relation to the usual practices in the sector.

Secondly, there is a general, considerable delay in the calls for tenders. As a consequence, most of the bus transport services sector in Spain has been shielded from competition for several decades, either *for* or *in* the market. The state administration extended all existing contracts in the early 1990s, after which numerous autonomous communities (Spanish sub-national regions) adopted subsequent extensions that have closed most of the regional market to competition up to the present day. Meanwhile, the Ministry of Transport, Mobility and Urban Agenda (MITMA) has encountered difficulties that have delayed the tendering process for state concessions, most of which have expired. This study presents a quantitative analysis showing evidence of the significant cost of non-tendering and contract expiry on the efficiency of operators

Thirdly, some limitations are inherent to the concession system, but their incidence could be mitigated through certain improvements. Inherent limitations include information asymmetries between the public administration and concessionaires, and between concessionaires and potential bidders, which hinder the planning and regulation of the sector and confer competitive advantages to the incumbent. Also, the administrative planning of the network may be inefficient and not demand-driven. Furthermore, the concession system is based on the cross-subsidisation of unprofitable routes by users of profitable routes, in a non-transparent amount, which may discourage bus transport and have implications in terms of equity. At the same time, the concession system may distort related markets, such as international or discretionary transport, which are segmented by regulation to protect regular concessions from competition. Finally, the concession system itself could encourage litigation over tender specifications and impose additional costs for public administrations and operators linked to the tendering process, the management and supervision of concessions, or their representation before public authorities or the courts.

The shortcomings of the Spanish concession system suggest that the intercity passenger bus sector could benefit from liberalisation along the lines proposed by the European Commission. This could bring significant benefits to consumers

in terms of lower fares, higher frequencies and quality of service, as well as a more efficient and multimodal design of the public transport network. Liberalisation would require rethinking the financing of the service on loss-making lines and would pose challenges in the management of conflicts between commercial services and the remaining concessions, so as to ensure that the compensation received by the latter does not distort competition in the liberalised market. Lastly, it is also necessary to guarantee equal access to bus station infrastructure and to promote the competitiveness of smaller operators, so that they continue to exert competitive pressure on the market and on prospective bus mobility platform operators that could potentially enter the market.

The assessment carried out by the CNMC of the intercity bus passenger transport sector in Spain concludes with the following recommendations. These are aimed at improving competition conditions in the sector and increasing the efficiency of service provision. The proposed measures are complementary, so it would be advisable to implement them as a whole:

- 1. Liberalising bus passenger transport services for distances of over 100 kilometres.** Likewise, the CNMC proposes the establishment of an independent regulatory body to oversee the liberalisation process. The regulator would be responsible for monitoring the conditions of access to bus stations under a new access procedure and for solving conflicts between commercial services and other concessions through the implementation of an economic equilibrium test. Also, for the efficiency gains to materialise after liberalisation, the CNMC recommends re-evaluating the current coverage of the concession network, guaranteeing those connections not covered by the liberalised market — and which are considered to be of general interest — and securing sufficient financing for these services. To avoid the appearance of cross-subsidies between concessions and commercial services, it would be necessary to ensure that the remaining concessions are operated following the principles of transparency and accounting separation, and that the contracts are put out to tender. Lastly, in order to promote the competitiveness of smaller operators, the CNMC recommends that platform operators allow access to the operation data generated by subcontracted operators and that they refrain from prohibiting them from contracting with other platform operators.
- 2. Improving the design of tender requirements,** to remove barriers to competition and ensure the efficient management of the remaining concessions. The CNMC recommends favouring the division into lots and a shorter duration of contracts, wherever possible, and eliminating the obligations of assigning fleet and staff to concessions. Only the staff linked to

the concession should be eligible for subrogation. At the same time, the CNMC recommends easing technical ability and economic capacity requirements to the minimum necessary, so that they can be met by new entrants. Relevant experience should be quantified in terms of service output, and authorities should avoid imposing requirements that discriminate against operators in related markets or against smaller operators in joint ventures. With regard to the financial bid, it should be decisive for the award of the contract, as opposed to the technical bid, whose evaluation should prioritise objective criteria that can be scored automatically. Finally, the CNMC recommends reinforcing inter-territorial cooperation in the design of tender specifications, with collaboration to establish a standard tender specification, to reinforce legal certainty for operators and promote adequate competition conditions in tenders.

3. **Ensuring adequate management of the remaining concessions** by public administrations. In particular, the CNMC recommends tendering expired concessions according to a pre-planned tendering schedule that respects the order of expiry. Public administrations should space out tenders to encourage bidding by smaller operators, thus avoiding the simultaneous tendering of the entire route map. It is also desirable that public administrations tender their currently expired concessions as soon as possible, to avoid overlaps with other administrations' tendering processes. To encourage proper planning, the CNMC recommends amending the Land Transport Management Act (LOTT in Spanish) so that services are declared liberalised two years after their expiry in the absence of a new call for tenders. Finally, the CNMC proposes reforming the LOTT and regional regulations to reinforce the limits to the substantial modification of ongoing contracts and to respect the exceptional nature of contract extensions.
4. **Mitigating inefficiencies associated with the concession system.** The CNMC recommends that public administrations strengthen the transparency obligations of concessionaires to improve network planning and management supervision. Public administrations should guarantee free and transparent access to concession operation data to allow potential bidders to plan their bids in advance. Moreover, the CNMC proposes a review of the current institutional framework to ensure a balanced representation of all stakeholders, including associations of users and small operators. The CNMC also proposes improvements in the design of contracts, such as introducing contractual terms that promote quality of service, and of the public transport network, by encouraging private initiative in its planning. In order to optimise public spending on transportation, the CNMC recommends that public

administrations strengthen inter-territorial cooperation, approaching the design of the public transport network from a comprehensive and multimodal perspective. Finally, the CNMC proposes the elimination of the artificial segmentation of related markets, allowing the free provision of services, subject to prior notice for recurring services to safeguard the economic equilibrium of the remaining concessions.

1. INTRODUCTION

Buses are the most widely used means of scheduled collective transport by passengers in Spain, being chosen for 53% of intercity journeys made in 2020. At the same time, they represent an important tool for social and territorial cohesion in the country, due to their importance for the mobility of lower-income users and inhabitants of areas with lower population densities that are not connected by other means of transport.

These characteristics have motivated public intervention in the sector, in order to guarantee a public transport service of sufficient quality for these groups and areas. Since 1924, this intervention has involved a concession system, under which private bus companies provide transport services as a monopoly after obtaining an administrative concession that grants them exclusive operation rights on certain routes.

Since the early 1990s, the government began to encourage a certain degree of liberalisation of the sector, which intensified from 2007 onwards, tendering contracts under the General State Administration in accordance with a market competition system. Furthermore, in the same year, *Regulation 1370/2007 of the European Parliament and of the Council of 23 October, on public passenger transport services by rail and road* was approved, which standardised the regulation of national public services, limiting the duration of concessions and establishing a system of market access through tendering. Two years later, *Regulation 1073/2009 of the European Parliament and of the Council of 21 October, on common rules for access to the international market for coach and bus services* liberalised international bus passenger transport, opening up the international transport market to carriers from all Member States.

Despite the above initiatives, at present, the majority of the sector in Spain has not been exposed to competition, either *in-the-market* or *for-the-market*. On the one hand, the Ministry of Transport, Mobility and Urban Agenda (MITMA) has encountered difficulties that have delayed the tendering process for state concessions, some of which have not been tendered at all in the last thirty years. On the other hand, most of the Autonomous Communities (AC) extended the concessions under their jurisdiction before the entry into force of Regulation 1370/2007, so that most of the regional concessions market has been closed to competition.

In recent years, several European countries have liberalised their national intercity bus services, introducing a number of rules aimed at safeguarding local and suburban public transport services. In these countries, liberalisation has been accompanied by reduced fares and increased frequencies, better

connections and more demand for services. These positive experiences have motivated the European Commission to adopt a proposal to amend Regulation 1073/2009², which would liberalise national routes of more than 100 km, with the aim of strengthening the internal market for road passenger transport by bus.

The sector is currently facing several challenges. The mobility restrictions adopted during 2020 to contain the advance of the pandemic have significantly affected operators, causing a considerable drop in demand, which has led to the intervention of the public authorities through the granting of aid and supply reductions. At the same time, Spain is immersed in the process of liberalising passenger rail, the main intermodal competitor of buses, which will require a supply reorganisation that takes into account the benefits of competition and complementarity between the two modes of transport. Looking ahead, the sector will have to face a dual shift: the digital transition, which will take advantage of the benefits of new technologies for consumers; and the energy transition, which will reduce vehicle emissions.

In the current context, the CNMC considers that it is necessary to re-evaluate the concession model for the provision of scheduled bus transport services, analysing its possibilities for improvement and the benefits of eventual liberalisation in line with the aforementioned European proposal. Through this study, the CNMC seeks to assist in the design of an appropriate economic and legal framework for passenger transport that successfully addresses the challenges posed.

The study has been developed through an intensive analysis of the relevant regulation and academic literature, a comparative analysis with other countries, the information provided by all the participants in the public consultation carried out between December 2019 and February 2020, to which 234 responses were received, and the information provided, in response to requests for information from the CNMC, by MITMA and the majority of the Autonomous Communities, as well as by several transport associations and companies. It should be noted that Andalusia and Aragon have not replied to the CNMC's requests for information, while Castile-La Mancha has only provided information referring to the last quarter of 2019, which has limited the possibilities of making valid cross-regional comparisons.

This document comprises 8 sections, including the introduction, structured as follows: Section 2 presents the background to the CNMC's actions in the scheduled bus passenger transport sector. Section 3 characterises the market

² Draft Regulation of the European Parliament and of the Council amending Regulation (EC) No. 1073/2009 on common rules for access to the international market for coach and bus services.

for intercity bus services in Spain from a historical, legal and economic perspective. Section 4 analyses the current concession system from the perspective of competition and efficient economic regulation. Section 5 contains a quantitative analysis of the efficiency of state bus concessions. Section 6 analyses European liberalisation experiences, identifying the benefits and risks for competition encountered, and assesses the introduction of competition in the Spanish market. Section 7 presents the main conclusions drawn from the above analyses. Finally, Section 8 sets out the main recommendations that, in the CNMC's opinion, should be adopted to improve the competitive functioning of the sector.

2. BACKGROUND

The intercity bus passenger transport sector has been analysed by the CNMC and its predecessors on numerous occasions, through studies, reports on draft regulations, files and resolutions, linked to competences in the promotion and defence of competition.

One of the first analyses of the sector was contained in the report of Spain's former competition tribunal (Tribunal de Defensa de la Competencia; TDC) "Remedios políticos que pueden favorecer la libre competencia en los servicios y atajar el daño causado por los monopolios" [Political remedies that may favour free competition in the services and stop the damage caused by monopolies], from 1993³. This report advocated maintaining the system of administrative concessions for scheduled passenger transport, but ensuring competition for contracts, limiting their duration to ten years and allowing greater flexibility in the provision of the service⁴, proposing the introduction of competition in the market on an experimental basis for some of the routes.

The TDC delved further into the analysis of scheduled transport on the occasion of the merger between Alianza Bus and ENATCAR⁵, whereby the latter, at the time the sector's leading company, was privatised and acquired by a consortium in which ALSA, the second largest competitor, held a 75% stake. In its report, the TDC found that the current legislation restricted competition, favouring the incumbent operators⁶, and it approved the merger, subject to conditions⁷.

The findings of this and other merger cases served as the basis for the Spanish National Competition Commission (Comisión Nacional de Competencia; CNC) report "La competencia en el transporte interurbano de viajeros en autobús en España"⁸ [Competition in intercity bus passenger transport in Spain], published in 2008, which for the first time analysed the regional concessions, as well as the

³ TDC (1993), p. 110-115.

⁴The report called for greater flexibility in terms of frequencies, stops, timetables and vehicles used in the service, allowing operators to take passengers along the route.

⁵ TDC (1999).

⁶In particular, the report highlighted the excessive duration of concessions, the sharp increase in the concession period in cases of route unification, the preference for the former contractor in tenders, and the weak weighting of fares, as possible indicators of regulatory capture in scheduled passenger transport (TDC, 1999, p. 35).

⁷The TDC imposed the following conditions: (i) ENATCAR to waive the existing terms of all its concessions so that they would end in 2005; (ii) the resulting group to waive the acquisition of new concessions; and (iii) ALSA to transfer its shares in the company ANSA, which is jointly controlled together with the third largest competitor. These conditions were relaxed by the Agreement of the Council of Ministers of 14 April, 2000.

⁸ CNC (2008).

conditions applied to the tender specifications of state concessions, which had begun their renewal process in 2007. The report highlighted the need to improve the competition conditions in the tenders, particularly with regard to the duration of the concessions, the experience requirements, the reduced weight of the fare and dispatches in the tenders and the right of preference of the former holder, among other aspects.

Subsequently, the CNC and the CNMC have prepared several follow-up reports on the renewal of state concessions, analysing the competition restrictions included in the specifications⁹, as well as the modifications introduced in the sectorial regulations¹⁰. In 2010, the CNMC published a report criticising the extension of regional concessions¹¹, and subsequently challenged the extensions approved in Galicia and the Valencian Community.¹² In 2018, the CNMC issued a preliminary injunction to the Ministry of Development requesting that certain aspects of the tender specifications for the public service concession of scheduled passenger transport for general use by road between Madrid, Toledo and Piedrabuena be annulled.¹³ Finally, in an area other than that addressed in this study, it is worth recalling that in 2020, the CNMC published a report on tenders for regular transport services in the school, work and health sectors.¹⁴

Moreover, both the CNMC and its predecessors have analysed several merger cases in the sector, in addition to the aforementioned Alianza Bus/ENATCAR merger.¹⁵ With regard to prohibited conduct, sanctions were imposed for the distribution of tenders and services in the related markets of school transport and occasional passenger transport in the Balearic Islands, Murcia, Navarre and

⁹ CNC (2010a), CNMC (2014).

¹⁰ CNC (2012), CNMC (2017).

¹¹ CNC (2010b).

¹² See files [LA/01/2010](#) (Valencian Community) and [LA/02/2010](#) (Galicia). In its judgments of 14 March, 2016 (STS 1067/2016 and STS 1068/2016), the Supreme Court upheld the CNMC's challenges in both cases.

¹³ See CNMC, Annual Report 2018, p. 63 and 64. Subsequently, the Directorate General for Land Transport of the Ministry of Development approved a Resolution whereby it withdrew the award procedures for a series of concession contracts for scheduled public road passenger transport services for general use, one of them relating to the route between Madrid, Toledo and Piedrabuena.

¹⁴ CNMC (2020a).

¹⁵ File N/06127 stands out: DOUGHTY HANSON / AVANZA, N-05091 NEG / GTI / TURYPRESS / DABILU, C-106/07 NATIONAL EXPRESS / CONTINENTAL AUTO / MOVELIA, C-0107/08 NATIONAL EXPRESS / TRANSPORTE COLECTIVOS and C/1043/19 AVANZA/GRUPO PESA.

Cantabria¹⁶, as well as for the abuse of a dominant position in access to services at Madrid's bus station, the Estación Sur de Autobuses.¹⁷

Finally, this study was initiated on 16 December, 2019,¹⁸ with a public consultation phase that was open until 7 February, 2020,¹⁹ in which 234 responses were received from consumers, bus operators and academics in the sector.

¹⁶See files S/DC/0512/14: Balearic passenger transport, SAMUR/02/18: school transport Murcia, SANAV/02/19: Navarre school passenger transport; and S/0011/19: Cantabrian passenger transport.

¹⁷TDC file 627/07: Estación Sur de Autobuses.

¹⁸The press release at the beginning of the study can be viewed [here](#).

¹⁹The original text of the consultation and the responses received can be downloaded [here](#).

3. MARKET CHARACTERISATION OF INTERCITY BUS SERVICES IN SPAIN

Intercity bus services connect towns located in different municipal districts. The bus is one of the most widely used modes of public transport in Spain, and is particularly important for groups with less access to a private vehicle, as well as being an important tool in the regional structuring of the country.

Within intercity bus services, we can differentiate between scheduled services, which are provided on a continuous basis subject to a timetable, and occasional services. Whereas the latter are already liberalised in Spain and can be provided by any operator with an authorisation for land passenger transport, the operation of scheduled passenger services requires an administrative concession.

This study deals with scheduled interurban passenger transport services by bus, which are subject to a concessionary regime in Spain. The analysis has been restricted to general use services, which are open to any user, as opposed to special services, which are aimed at specific groups, principally work and school transport. The latter are subject to a special authorisation from the Administration or, in some cases, a concession.²⁰

3.1. Sectoral regulation

Like other means of transport, intercity bus transport services have traditionally been subject to public intervention both in Spain and other Member States. Administrative intervention in the sector is justified by the need to ensure the mobility of citizens where services are not of commercial interest to the operators.

In the European Union there are various forms of administrative intervention in the sector, and a distinction can be made between regulations where the initiative for the provision of new services lies with the operators and those where the initiative lies with the authorities²¹:

- In *market-driven* states, operators propose new routes to the regulatory authorities. The regulator authorises the service after verifying compliance with certain conditions, ranging from simple administrative formalities to demanding requirements aimed at protecting existing services or rail transport services. This type of regulatory scheme is traditionally applied in countries

²⁰ See CNMC (2020a)

²¹ Van de Velde (2010), p. 14.

such as Germany or Sweden, and has recently been adopted by Italy and, partially, by France.²²

- In States with *public initiatives*, the responsibility for establishing new intercity bus services lies with the authorities. In these countries, the authorities decide on the main parameters of the service, including the route, frequency and price, and decide whether to provide it directly or to entrust its provision to private operators through administrative concessions. This is the regulation in force in Spain and Greece.

Below is a description of the European regulatory framework for intercity bus services, as well as the organisation of the activity in Spain and its Autonomous Communities.

3.1.1. The European legal framework

At the European level, **national intercity bus services** are covered by Regulation 1370/2007 of the European Parliament and of the Council of 23 October, on public passenger transport services by rail and by road.

This Regulation establishes a very broad regulatory framework which accommodates the disparity of national laws in force in the different Member States, but imposes certain restrictions on administrative intervention in the sector. In particular, the Regulation allows administrative intervention in the market only for the purpose of ensuring "*more frequent, safer, higher quality and cheaper services than those which the market alone would have made possible*".²³

The forms of administrative intervention provided for by the Regulation include both the establishment of general rules for service provision and the direct or indirect provision of services by the authorities. In the latter case, the Regulation requires that services be awarded to operators on the basis of a **fair tendering procedure**²⁴, with certain exceptions for small contracts or in emergency situations.²⁵

²²In France, services with a distance between stops of more than 100 kilometres are unregulated and do not require administrative authorisation.

²³ Article 1 of Regulation 1370/2007.

²⁴ Article 5.3 of Regulation 1370/2007.

²⁵ Article 5.5 of Regulation 1370/2007 provides for the possibility of extending or directly awarding the contract in the event of service interruption or the imminent risk of interruption, for a period of less than two years.

In turn, the Regulation sets out a number of conditions in the event that the authority entrusts the provision of the service to an operator in return for compensation, or an exclusive right to operate, as is the case in Spain.

- Firstly, a **public service contract**²⁶ must be signed, specifying the obligations of the operator, the division of costs and revenues between the operator and the authority, and determining the compensation calculation in such a way that the compensation is not excessive.²⁷
- The **maximum duration of a public service contract** is set as ten years²⁸, extendable for a period not exceeding half of the original duration of the contract. In addition, the extension can only be granted when justified by the depreciation conditions of the assets provided by the operator and which are significant for the provision of the service²⁹.

Regulation 1370/2007 entered into force on December 3, 2009³⁰. However, the Regulation introduced a transitional period for fully implementing the obligation to put contracts out to tender, which ended on 3 December, 2019, in order to allow Member States to gradually introduce competition when awarding their public service contracts.³¹ With regard to contracts signed prior to the entry into force of the Regulation, the Regulation imposes certain limits on their duration depending on the date and award procedure used, establishing a transition period during which these contracts will coexist with those awarded after the entry into force of the Regulation.³²

Although European regulation allows for a wide range of measures in terms of national bus passenger transport services, **international services** have been liberalised since 4 December 2011, following the entry into force of Regulation

²⁶ Article 3.1 of Regulation 1370/2007.

²⁷ Articles 4.1 and 4.2 of Regulation 1370/2007.

²⁸ Article 4.3 of Regulation 1370/2007.

²⁹ Article 4.4 of Regulation 1370/2007.

³⁰ Article 12 of Regulation 1370/2007.

³¹ Article 8.2 of Regulation 1370/2007.

³² Specifically, Article 8.3 of Regulation 1370/2007 imposes the following limits on the duration of existing contracts:

- Contracts awarded through a tendering procedure may continue until they expire if they were awarded before 26 July, 2000, and for a maximum of 30 years if they were awarded between this date and 3 December, 2009.
- Contracts awarded by procedures other than a competitive tendering procedure may continue until they expire, up to a maximum duration of 30 years if they were awarded before 26 July, 2000, and with a duration similar to the durations foreseen in the Regulation if they were awarded between this date and 3 December, 2009.

1073/2009 of the European Parliament and of the Council of 21 October, on common rules for access to the international market for coach and bus services.

In this way, once they have obtained the necessary authorisation, bus operators with an EU licence can provide scheduled international passenger transport services by bus between Member States.³³ This authorisation allows international operators to provide "cabotage" services in a Member State, transporting passengers between different points within the country as part of a regular international route.

Recently, following the positive experiences of liberalisation of intercity bus services in some Member States, the European Union has initiated a proposal to amend Regulation 1073/2009³⁴, which extends liberalisation to domestic journeys of more than 100 km. This proposal has been partially approved by the European Parliament³⁵ and is pending approval by the EU Council.³⁶

3.1.2. The State legal framework

In Spain, the powers to regulate and plan intercity bus services are divided between the State and the Autonomous Communities, depending on the route in question. In accordance with the constitutional distribution of land transport, the Autonomous Communities are competent to organise land transport within their borders³⁷, while the State is empowered to organise land transport within the territory of more than one Community.³⁸

³³ Regulation 1073/2009 relaxes the conditions for obtaining the authorisation provided for in Regulation 684/92, which it repeals, and allows authorisation to be refused only when the new service would compromise the viability of a public service contract on the direct sections concerned, or when its main purpose is not to carry passengers between points located in different Member States.

³⁴ Draft Regulation of the European Parliament and of the Council amending Regulation (EC) No. 1073/2009 on common rules for access to the international market for coach and bus services.

³⁵ The European Parliament has approved the Commission's opening-up proposal at first reading, although it has introduced some amendments aimed at protecting services subject to Public Service Obligations (PSOs). The amendments limit liberalisation to intercity routes, excluding urban and suburban routes, and introduce the option to refuse authorisation to new commercial services in two situations: where the new service would compromise the economic equilibrium of an existing PSO; and where the independent regulator appreciates that the applicant plans to offer its services below their normal value over a long period of time, and that this conduct may lead to a distortion of fair competition. The approved text can be viewed [here](#).

³⁶The processing status of the document can be consulted [here](#).

³⁷Article 148.1.5^a of the Spanish Constitution.

³⁸Article 149.1.21^a of the Spanish Constitution.

The State has exercised its land transport powers through Law 16/1987, of 30 July, on the Organisation of Land Transport (Ley de Ordenación de los Transportes Terrestres; LOTT) and Royal Decree 1211/1990, of 28 September, approving the Regulations of the Law on the Organisation of Land Transport (Reglamento de la Ley de Ordenación de los Transportes Terrestres; ROTT).

The LOTT includes the principle of public initiative by declaring that intercity bus services are public services in the hands of the Administration³⁹. Within the General State Administration (Administración General del Estado; AGE), the Ministry of Transport, Mobility and Urban Agenda (Ministerio de Transportes, Movilidad y Agenda Urbana; MITMA) is the body responsible for exercising state powers in the field of transport.⁴⁰ It is therefore responsible for planning scheduled intercity passenger transport by bus for general use between Autonomous Communities, establishing the services by means of an administrative resolution.⁴¹

The LOTT establishes the concession system by stipulating, in general, that services are to be provided by private companies that obtain an exclusive administrative concession contract^{42,43}. Under this system, the company awarded the concession obtains the right to operate a route in the form of a monopoly, without the Administration being able to establish a new concession on overlapping traffic.⁴⁴

In this way, the concession system excludes "in-the-market" competition and adopts a "for-the-market" approach, whereby companies compete for concessions in public tenders called by the Administration.

³⁹Article 71 of Law 16/1987, of July 30, on Land Transport Planning.

⁴⁰Article 8 of Law 16/1987, of July 30, on the Land Transport Planning.

The LOTT allows private individuals to propose the creation or implementation of a new service, although it is the Ministry of Transport which ultimately decides whether or not it should be established (Article 70 of Law 16/1987 of 30 July, 1987 on the organisation of land transport).⁴¹

⁴² Articles 71 and 72 of Law 16/1987, of July 30, on Land Transport Planning.

⁴³ The direct management of the service by the authorities is allowed when it is more aligned with the general interest (Art. 71 LOTT).

⁴⁴ The creation of a new service with overlapping traffic is only permitted for justified reasons of general interest in the areas of influence of some urban centres, and when the owner of the pre-existing service does not show an interest in meeting the increased demand for its services (Art. 72 LOTT and Art. 65 ROTT).

The [Draft Bill on Sustainable Mobility](#) contemplates the modification of Art. 72 of the LOTT to exempt, from the prohibition of creating a new service with overlapping traffic, those services which are authorised by the Council of Ministers to be provided under a free competition regime, in accordance with Art. 48 of the Draft Bill.

This exclusive arrangement aims to ensure regional cohesion because it allows the Administration to guarantee transport at stops or on routes at prices that would not be attractive to companies in a competitive market, by grouping these together with other profitable routes as part of the same concession. The absence of competition on profitable routes allows the successful bidder to obtain a higher profit margin on these, and enables them to use these profits to cover the costs of services provided on loss-making routes. In this way, the temporary monopoly and the implicit cross-subsidy between profitable and unprofitable routes constitute the basic cornerstones of the concession system.

To make sure that users receive adequate service conditions, it is necessary to ensure that bidders compete effectively for the concession. The LOTT generally requires contracts to be awarded *"by means of an open procedure in which (...) any entrepreneur may submit a proposal"*.⁴⁵ Direct awards are only contemplated for small contracts, or in emergency situations.⁴⁶

In order to bid for the concession, operators must be authorised to transport passengers by land.⁴⁷ In this way, the concession is awarded to the company that makes the most advantageous offer for users in terms of fares, frequency, quality of service and other parameters assessed in the specifications.⁴⁸

These conditions are reflected in a concession contract that regulates the rights and obligations of the concession holder and the administration with regard to the service.⁴⁹ The conditions of the contract may not be modified unless this possibility is provided for in the specifications, in the event of unforeseen circumstances affecting the potential demand for the service, or when the need arises to cover new traffic in the vicinity.⁵⁰ In any case, the supervening

⁴⁵ Article 73.1 of Law 16/1987 of 30 July, on the Organisation of Land Transport.

⁴⁶ The public authorities may opt to directly award the contract when its average annual value is less than 100,000 euros per year, subject to prior justification (Art. 73.1 LOTT). On the other hand, the direct awarding of contracts is permitted in the event that the service is interrupted or at risk of being interrupted, provided that the duration of the awarded contract does not exceed two years (Art. 85 LOTT).

⁴⁷ Articles 42.1 and 74.2 of Law 16/1987, of July 30, on the Organisation of Land Transport.

⁴⁸ Article 85.1 of Royal Decree 1211/1990, of September 28, approving the Regulations of the Law on the Organisation of Land Transport.

⁴⁹ Article 75.1 of Law 16/1987, of 30 July, on the Organisation of Land Transport.

⁵⁰ Article 75.3 of Law 16/1987, of July 30, on the Organisation of Land Transport.

modifications must not substantially alter the essential provisions of the contract, as in that case the administration will have to launch a new award procedure.⁵¹

Currently, in line with European regulations, the LOTT links the duration of the concession to the amortisation period of the assets necessary for its provision and which must be provided by the contractor, imposing a general limit of ten years.⁵² This period may be extended for a period not exceeding half of the original period, provided that the amortisation conditions of the assets provided by the contractor justify this.

3.1.3. The regional legal framework

As explained in the previous section, the Autonomous Communities are competent in land transport matters for routes within their regions.⁵³ However, this competence is modulated by the State competence in terms of basic legislation on administrative contracts and concessions.⁵⁴ As a consequence, the provisions of the LOTT which establish the basic aspects of the intercity bus concession system are fully applicable in the Autonomous Communities.⁵⁵

In the absence of an express declaration by the LOTT, the Constitutional Court, in its ruling 118/1996 of 27 June, includes a non-exhaustive list of aspects of the

⁵¹ The Court of Justice of the EU (CJEU) considers an amendment to be substantial if it introduces conditions which, had they been part of the original award procedure, would have allowed the admission of bidders other than those initially admitted or the acceptance of a bid other than the one initially accepted ([Commission Communication 2014/C 92/01](#) on Guidelines for interpreting Regulation (EC) No 1370/2007, Section 2.3.6). In turn, the ROTT stipulates that a new awarding procedure must be carried out when the modification entails an increase or decrease of more than twenty percent of the population served by the service (Art. 91.2 ROTT).

⁵² Article 72.4 of Law 16/1987, of July 30, on the Organisation of Land Transport. This article has been amended several times since the adoption of the LOTT in 1987, which has impacted the duration of the concessions tendered during this period. Initially, the expected term was between 8 and 20 years. The amendment of June 24, 2000, shortened this term from 6 to 15 years. Subsequently, the entry into force of Regulation 1370/2007 led to the reduction of the upper limit to ten years. The LOTT was amended again on 5 March, 2011, eliminating the lower limit, linking the duration of the contract to the characteristics and needs of the service and the amortisation periods for vehicles and facilities, with an upper limit of ten years.

⁵³Article 148.1.5^a of the Spanish Constitution.

⁵⁴Article 149.1.18 of the Spanish Constitution.

⁵⁵FJ 29 of the [judgment 118/1996](#) , of June 27, of the Constitutional Court. The purported general and supplementary nature of the LOTT with respect to regional law led to an appeal of unconstitutionality being lodged by the Parliament of Catalonia, which considered its constitutional powers in the field of land transport to have been violated.

concession system that should be considered basic and which are directly applicable in the Autonomous Communities:⁵⁶

- The general rule of providing the service through administrative concessions and the exceptions that allow the service to be managed directly by the Administration.⁵⁷
- The exclusive nature of the concession and its exceptions.⁵⁸
- The administrative power to modify the conditions of the concession.⁵⁹

Most of the Autonomous Communities have exercised their legislative powers in the field of intercity passenger transport by bus, replicating the main characteristics of the state concession system (Annex I presents a summary table of applicable regional regulations).⁶⁰ In turn, the LOTT is applied in a supplementary manner in those Autonomous Communities that do not have their own legislation on the matter.⁶¹ As a consequence, despite the dispersion of regulations, the sector is regulated in a relatively uniform manner throughout the country.

Lastly, the entry into force of Regulation 1370/2007 on 3 December, 2009 led to the standardisation of the maximum duration of contracts and extensions in all the Autonomous Communities. For this reason, regional contracts awarded after this date must have a maximum duration of ten years, extendable for half of the original term of the contract, taking into account the amortisation of the assets provided by the concession holder.

3.2. The evolution of the concession system

Although the regulatory framework goes back to 1987, many of the intercity bus concessions in force today date back to before then. To understand the current

⁵⁶ This list should not be considered exhaustive, as it only considers those precepts of the LOTT that were appealed by the Parliament of Catalonia.

⁵⁷ FJ 30 of the [STC 118/1996](#), of June 27.

⁵⁸ FJ 31 of the [STC 118/1996](#), of June 27.

⁵⁹ FJ 32 of the [STC 118/1996](#), of June 27.

⁶⁰ Asturias, the Balearic Islands, the Canary Islands, Cantabria, Castile-La Mancha, Castile and Leon, Catalonia, the Community of Madrid, the Basque Country, the Region of Murcia, La Rioja and the Community of Valencia have their own laws regulating the scheduled bus transport of passengers by road.

⁶¹ Andalusia, Aragon, Extremadura, Galicia and Navarre. These are Autonomous Communities without specific regulations or whose regulations govern certain aspects of intercity transport through cross-cutting regulations, such as metropolitan transport regulations, the coordination of competences between authorities or the approval of urgent measures.

configuration of the concession system, it is useful to be aware of its origins and evolution.

3.2.1. Background to the concession system

The first mechanical road transport services appeared in Spain in 1907.⁶² The sector expanded in the absence of regulation, so that in 1924, there were 456 scheduled services in Spain.⁶³ In that year, the Royal Decree of 4 July was approved, which laid the foundations for the concession system, declaring state ownership of the services and their exclusive management by private companies through concessions granted via public auction.⁶⁴ The duration of the concessions was set at 20 years. The regulation validated the scheduled service routes existing at the time of its entry into force, granting their holders concessions in line with the new system.

The concession regime was modified again in 1947⁶⁵, eliminating the expiration period for new concessions, in order to encourage investment and avoid abandonment of the service when the concession was about to expire, in the historical context of the post-war period.⁶⁶ In addition, the system for awarding concessions was reformed, establishing rights of first refusal⁶⁷ in public tenders⁶⁸,

⁶² Initially, these services were provided by steam-powered vehicles. The adoption of the internal combustion engine would be delayed until the end of the second decade of the 20th century.

⁶³ Marañón (1933), cited by Coronado et al. (2013, p. 114).

⁶⁴ The Royal Decree justified administrative intervention in the market in order to avoid "useless and ruinous competition", to ensure the transport of correspondence (introducing a right of first refusal in concessions in favour of postal concession holders), and to collect a fee for road maintenance.

⁶⁵ Laws on the Organisation of Mechanical Road Transport and Coordination of Mechanical Land Transport of 27 December, 1947, and their implementing regulations (Decrees of 9 and 16 December, 1949, respectively).

⁶⁶ The regulations empowered the Ministry of Public Works to rescind the concession, once the first twenty-five years had elapsed since it was granted, by returning to the contractor the undepreciated value of the fleet and fixed installations assigned to the concession (Art. 31 of the Law of 27 December 1947 on the Regulation of Mechanical Road Transport).

⁶⁷ The right of first refusal allows the concession holder to subrogate the position of the successful bidder for the concession, replacing them in the contract under the same conditions as the successful bidder.

⁶⁸ In public tenders for scheduled bus services, the following rights of first refusal were established, in order: i) in favour of the holders of railway services coinciding with the new service; ii) in favour of the holders of concessions for scheduled bus services coinciding with the new service; and iii) in favour of the individual or company that had requested that the service was established (Art. 6 of the Law of 27 December, 1947, on the Coordination of Mechanical Land Transport, and Art. 12 of the Decree of 9 December, 1949, approving the Regulations for the application of the Law of 27 December, 1947, on the Regulation of Mechanical Road Transport).

with the aim of encouraging private initiatives and protecting the railway services affected by the new concessions.⁶⁹ The new regulations did not extend the duration of existing concessions at the time of their entry into force, but granted their holders a right of first refusal in new tenders to be announced after the expiry of the concessions. Subsequently, the Supreme Court ruling of 4 April, 1964, reintroduced a limit on the duration of new concessions, in accordance with the public procurement regulations in force, setting a term of 99 years.

The period between 1947 and the approval of the LOTT in 1987 was characterised by the expansion of the sector, especially after the implementation of the Economic and Social Development Plans for the period 1964-1967. These streamlined the processing of projects for new scheduled service concessions and promoted mergers to counteract the atomisation of the sector.⁷⁰ During this period, demand increased by 900%, the number of routes more than doubled and the network expanded by 210%.⁷¹

In 1978, the Spanish Constitution was approved, dividing competences in land transport between the State and the Autonomous Communities. All the Autonomous Communities assumed land transport powers through their Statutes of Autonomy. This attribution of competences involved transferring the former State concessions that ran within their regions to the Autonomous Communities. As a result, 2,300 concessions were transferred to the Autonomous Communities, in a process that culminated in 1982.

Most of the concessions existing in Spain in 1987, the year in which the LOTT was passed, were either from the original concessions created under the Royal Decree of 1924, renewed by the Law of 1947, or from those granted during the decade of developmentalism. The entry into force of the LOTT meant adapting the concession system to the new constitutional framework, introducing a legal limit to concession duration, while at the same time validating existing concessions, postponing their tendering in accordance with a competitive bidding process.

⁶⁹ Exercising the right of first refusal meant that railway companies, and especially RENFE, through its subsidiary ATCAR, acquired a large share in scheduled road passenger transport (Gaya, 2003, p. 72). These measures to protect the railways were maintained until the approval of the LOTT and the creation of the public company ENATCAR, which took over the concessions and material acquired by RENFE and FEVE in relation to road transport (Carbonell Porrás, 1994, p. 467).

⁷⁰ Gómez Puente (2011), p. 239.

⁷¹ Instituto Nacional de Estadística, *Estadística del Transporte de Viajeros por Carretera (1947-1987)*.

Thus, the LOTT offered the holders of concessions in force at the time of its entry into force the possibility of continuing to operate under the original contracts, with a maximum duration of twenty-five years from the date on which they were granted, or of exchanging their contracts for new twenty-year concessions.⁷² Subsequently, Law 13/1996 granted concession holders the possibility of extending the duration of their contracts for a further five years, in exchange for refraining from fare increases and renewing their fleet.⁷³

As a result of the above provisions, the nearly 2,500⁷⁴ state and regional concessions⁷⁵ operative at the time the LOTT came into force were validated with expiry dates varying between 2007 and 2013.

The following sections describe the evolution of the state and regional concession system since the entry into force of the LOTT.

3.2.2. State concessions after the approval of the LOTT

Two stages can be distinguished in the evolution of state concessions from the approval of the LOTT to the present day. The first stage, from 1987 to 2006, was characterised by the consolidation of the map of state concessions. This process involved the validation of concessions inherited from the previous period, and a small number of new tenders. The second stage began in 2007 with the tendering process for concessions validated by the LOTT, which continues today.

3.2.2.1. 1987-2006

From the approval of the LOTT until the end of the 1990s, the Ministry of Transport issued calls for tenders for 26 newly created state concessions ⁷⁶(see Table 1). These new concessions accounted for 24% of the total number in force

⁷² Second transitional provision of Law 16/1987, of July 30, on the Organisation of Land Transport. For those concessions granted after 1962, the exchange was carried out from the year following the entry into force of the LOTT, which meant an extension of twenty-one years.

⁷³ Article 167 of Law 13/1996 of 30 December 1996 on Fiscal, Administrative and Social Order Measures.

⁷⁴ TDC (1993), p. 112.

⁷⁵ The absence of specific regulations on road passenger transport in the Autonomous Communities (with the exception of Catalonia) allowed the LOTT and Law 13/1996 to extend the concessions held by the Autonomous Communities (Annexes I and II give more details on the applicable regional regulations and on the regional extensions of concessions, respectively). The Catalan concessions were extended for twenty years by Regional Law 12/1987 of 28 May, 1987, on the regulation of road passenger transport by motor vehicles.

⁷⁶ TDC (1999), p. 18.

at the end of 2006. The prohibition of traffic concurrency and the density of the transport network inherited from the previous period prevented the creation of a greater number of concessions.

During this first stage, there was a reduction in the total number of state concessions, as a result of both the transfer of routes to the Autonomous Communities and the unification of concessions, as well as the termination of concessions that were not renewed by the Ministry. Table 1 shows the evolution of the total number of concessions during this period, although the number of concessions existing in 1987 is an estimate based on the available information.⁷⁷

Table 1. Evolution of state concessions from 1987 to 2006

EVOLUTION OF THE NUMBER OF STATE CONCESSIONS BETWEEN 1987-2006	
Period	1987-2006
Initial concessions (*)	191 (e)
1. Created or renewed concessions	50
<i>1.a Created or renewed through tender</i>	26
<i>1.b Created by unification</i>	24
<i>1.c Created by segregation</i>	0
2. Validated concessions	119
3. Terminated concessions due to expiration or substitution (*)	177 (e)
<i>3.a Terminated concessions due to unification</i>	58
<i>3.b Terminated concessions due to validation</i>	119
<i>3.c Terminated concessions due to expiration or renewal</i>	0
4. Concessions transferred to Autonomous Communities (*)	75 (e)
Final concessions (1 + 2 - 3 - 4)	108

Source: Compiled by author with data from the Official State Gazette (BOE), the TDC(1999) and MITMA(2003-2020).

Note (*): data on terminations and transfers not available for the period 1987-1990. Estimate of the total number of initial concessions based on the available information.

In terms of unifications, this figure allows several pre-existing concessions to be grouped together under a single concession, reducing the number in force. The LOTT permits this, as long as it is justified by reasons of general interest and it is

⁷⁷ No data is available on the number of concessions terminated or transferred to the Autonomous Communities between 1987 and 1990, so the initial number of concessions could have been higher.

not possible to create a new concession that is independent of the existing ones.⁷⁸

Through unification, the authorities are able to rebalance concessions with profitability problems and take advantage of economies of scale resulting from the joint operation of several routes. However, they are detrimental to market competition as they reduce the total number of concessions that can be put out to tender and increase the size of these. Moreover, during this phase, the regulations permitted the term of the resulting concessions to be extended.⁷⁹ Between 1987 and 2006, the Ministry of Transport unified 24 state concessions, affecting a total of 58 contracts, including some of the recently tendered concessions. This resulted in the length of the resulting concessions being increased beyond the original terms.⁸⁰⁸¹

On the other hand, after the entry into force of the LOTT, the Ministry of Transport restructured some of the state concessions, segregating the traffic within a single Autonomous Community in order to transfer these to the Communities themselves. In total, between 1993 and 2006, 75 concessions were transferred to the Autonomous Communities.

As a result of the above operations, the total number of state concessions in force decreased by more than 40% between 1987 and 2006, without reducing the supply, which actually increased by 79% between 1991 and 2006, in terms of vehicle-kilometres.⁸²

3.2.2.2. 2007 to the present

The second stage of the LOTT came into force in 2007, when the Ministry began calling for tenders to renew state concessions as these approached their expiry date. This led to a series of bidding rounds, with each round grouping together concessions tendered according to a standard set of specifications.

⁷⁸ Article 81 of Law 16/1987 of 30 July 1987 on the Organisation of Land Transport.

⁷⁹ Article 92.4 of the former Royal Decree 1211/1990, of 28 September, approving the Regulations of the Law on the Organisation of Land Transport. The amendment of the ROTT in 2006 introduced certain limits to the use of this figure, while Article 103 of the current Regulation, introduced by Article 2.83 of Royal Decree 70/2019 of 15 February, eliminates the possibility of extending the term, establishing objective rules for calculating the duration of the resulting concession.

⁸⁰Data from the TDC (1999, pp. 24-26) and publications of the Official State Gazette.

⁸¹ TDC (1999), p. 24-26.

⁸² MITMA, Observatorio del Transporte de Viajeros por Carretera (2003-2020).

During this period, seven bidding rounds were held, under which 62 calls for tenders were held and 47 concessions were awarded, in a process marked by the judicialisation of the calls for tenders. Table 2, below, summarises what happened in each round:

- First round (2007): the conditions of the tender specifications were determined according to a protocol agreed with the operators in the sector, but these were criticised in a report by the CNC (Comisión Nacional de la Competencia, predecessor of the CNMC).⁸³ The report pointed out that certain aspects of the tender specifications reduced the incentives for companies to compete for concessions and favoured the renewal of the contract by the previous contractor.⁸⁴ Nine tenders were announced and awarded (the previous contractors successfully won 5 out of the 9 contracts tendered).⁸⁵
- Second round (2008-2010): the Protocol was amended to introduce some of the CNC's⁸⁶ recommendations and ten tenders were called, of which nine were awarded, leaving one void (of the nine tenders awarded, six went to the former contractors).⁸⁷ These specifications were again criticised by the CNC, and appealed by operators in the sector.⁸⁸ As a result, eight of them were annulled by the courts⁸⁹, despite which the successful bidders continued to operate the concessions without the necessary authorisation.⁹⁰
- Third round (2011): the Ministry of Transport reformed the specifications and sent out a call for seven new tenders, of which only two were awarded (in one

⁸³ CNC (2008).

⁸⁴ Among the aspects to be improved, the report pointed to the excessive duration of the contracts, the reduced weight of fares and frequencies with respect to other evaluation criteria, the shortcomings of the scoring mechanism for the fares and frequencies offered, the demanding technical solvency requirements, and the right of first refusal granted to the current concession holder.

⁸⁵ Of the rest, in two tenders it was excluded, in one it lost and in another it did not present itself.

⁸⁶ The Protocol reform relaxes some of the technical solvency and previous experience requirements, increases the points awarded to the evaluation criteria for fares and frequencies, and reduces the points awarded to the commitment to take on the workforce of the former concession holder as an evaluation criterion.

⁸⁷ Of the rest, in one it is excluded, in one it loses, and in another it is not presented.

⁸⁸ CNC (2010a). The report highlights the inadequacy of the reforms introduced and the limited real scope for competition in the tenders launched.

⁸⁹ The contracts for VAC-210, VAC-211, VAC-212, VAC-213, VAC-214, VAC-215 and VAC-216 were annulled by Supreme Court rulings between January 2013 and February 2015. VAC-217 was annulled by the Madrid High Court of Justice on 29 January, 2014, which was not appealed and is therefore final.

⁹⁰ Of the eight annulled concessions, six are still in operation today, while the other two were voluntarily discontinued by their owners in 2014 and 2019.

of these the previous contractor retained the contract⁹¹, the other was annulled in court).⁹² Of the others, one was declared void, two others were annulled in administrative proceedings, and the Ministry withdrew the remaining tender specifications as they were identical to the annulled ones.⁹³

- Fourth round (2014-2016): the Ministry of Transport announced 23 new calls for tenders, in accordance with a specification model that was the subject of a report by the CNMC⁹⁴. Of these, 21 were awarded, of which 12 went to the former contractor, with two being void.
- Fifth round (2016-2017): six tenders were called, all of which were awarded. Previous concession holders retained two of the contracts.
- Sixth round (2018): five new tenders were launched, with amended specifications introducing new criteria for evaluating the bids.⁹⁵ One of the tenders was declared void and two were annulled by the Central Administrative Court of Contract Appeals (Tribunal Administrativo Central de Recursos Contractuales; TACRC), which led to the Ministry withdrawing the remaining tenders.⁹⁶
- Seventh round (2019): two new tenders were called, which were appealed and annulled by the TACRC. The Ministry relaunched these tenders at the end of 2019, but withdrew them after the health crisis⁹⁷.

⁹¹ The specifications of this concession were appealed, but the claim was dismissed due to a formal defect.

⁹² The tender specifications for the VAC-081 concession were annulled by the Supreme Court on 16 March, 2015, despite which the concession continues to be operated by the awardee of the annulled tender.

⁹³ The tender specifications for concessions VAC-092 and VAC-133 were annulled by TACRC resolution no. 134/2013 of 5 April, 2013.

⁹⁴ CNMC (2014). The report opposes the general closure of the intercity bus market to competition, irrespective of the profitability of the services. It also criticises, among other things, the duration of the contracts, the obligation to subrogate the staff assigned to the concession, the assignment of a minimum number of vehicles, the establishment of a fee and a provisional guarantee, the criteria for assessing fares and service frequencies, as well as the excessive discretion involved in scoring criteria assessable by value judgement, the possibility of unexpected modifications to the contract, and the requirements for technical and professional solvency.

⁹⁵ Several criteria are introduced that assess the tenderers' submission of plans for reconciling work and family life, gender-based violence, contingency plans and resource organisation.

⁹⁶ One of these, corresponding to the tender for the Madrid-Toledo-Piedrabuena line, had been the subject of a prior requirement by the CNMC due to its anti-competitive nature (see CNMC, 2018 Report, pp. 63 and 64).

⁹⁷ The Ministry of Transport, Mobility and Urban Agenda argued that the concessions were not economically viable under the terms in which they had been put out to tender after the fall in demand caused by the health crisis, which led it to reject the tender in both cases.

Table 2. Evolution of tenders called by the Ministry of Transport (2007-2019)

TENDERS CALLED BY THE MINISTRY OF TRANSPORT 2007-2019								
Ronda	First group	Second group	Third group	Fourth group	Fifth group	Sixth group	Seventh group	Total
	2007	2008-2010	2011	2014-2016	2016-2017	2018	2019	2007-2019
Called tenders	9	10	7	23	6	5	4	64
<i>Void tender</i>	0	1	1	2	0	1	0	5
<i>Annulled tenders</i>	0	8	3	0	0	2	2	15
<i>Withdrawn tenders</i>	0	0	2	0	0	2	2	6
Awarded contracts	9	9	2	21	6	0	0	47
<i>Contracts renewed by the previous concessionaire</i>	5	6	1	12	2	0	0	26
<i>Active contracts by the end of the period</i>	103	101	100	83	82	82	80	80
<i>% Awarded contracts over total by the end of the period</i>	9%	9%	2%	25%	7%	0%	0%	59%

Source: Compiled by author with data from MITMA and Asensio et al. (2016).

Note: the table only shows data relating to tenders called between 2007 and 2019.

In conclusion, this stage was characterised by the judicialisation of tenders, as well as by the delay in the call for new tenders by the Ministry of Transport. This has prevented the periodic tendering and renewal of concessions as their expiry date approached.

Table 3 summarises the status of operating State concessions at the end of 2019:

Table 3. Status of operating State concessions as of December 31, 2019.

STATUS OF STATE CONCESSIONS ACTIVE AS OF 31/12/2019				
Current status	Last tender		Total	
	Unknown	After 2006	Nº	%
In force	1	34	35	44%
Expired	35	2	37	46%
Annulled	0	8	8	10%
Total	36	44	80	100%

Source: Compiled by author based on MITMA data.

As shown in Table 3, of the 80 state concessions operating at the end of 2019:

- the concession awards of 35 (44% of the total) were currently valid, of which 34 had been tendered in accordance with the LOTT and one awarded in accordance with a negotiated procedure.
- 37 (46%) had expired, of which only two had been tendered since 2006.
- 8 (10%) had been annulled in court.

3.2.3. Regional concessions after the passing of the LOTT

As explained in the previous sections, following the enactment of the Spanish Constitution, the Autonomous Communities assumed responsibility for the former state concessions running within their borders. These concessions were joined by others arising from the regional segregation of sections from some of the State concessions. In addition, these concessions were validated by the LOTT and, subsequently, by Law 13/1996, with expiry dates varying from 2007 to 2013.⁹⁸

In 2007, in view of the forthcoming expiry of their concessions, most Autonomous Communities⁹⁹ initiated a process to extend these concessions until the end of 2009. The extensions were implemented through legal regulations, making it possible to avoid applying the limits set in the LOTT and the rest of the sectoral regulations in force with regard to the duration of the concessions. In turn, as they were approved before the entry into force of Regulation 1370/2007 on 3 December, 2009, these extensions were not subject to the restrictions contained in the Regulation. The extensions were approved across the board for most of the concessions in force (see Annex II for more details on the regional concession extensions). This was justified either for the purpose of improving and modernising the service or because of the need to reorganise the concession routes (the *concession map*) to adapt them to the demand for services.

In a 2010 report¹⁰⁰, the CNC highlighted the negative effects the regional extensions would have on both competition and the end users of the service, and exercised its standing to challenge the extensions in the Valencian Community

⁹⁸ In 1987, the majority of the Autonomous Communities did not have their own transport legislation, with the exception of Catalonia, which meant that the LOTT and Law 13/1996 were applied on a supplementary basis in these Autonomous Communities.

⁹⁹ This is the case of Catalonia in 2003; Aragon, La Rioja and Castile-La Mancha in 2006; the Canary Islands in 2007; Asturias and Valencia in 2008; and Madrid, Murcia, Extremadura, the Balearic Islands, Castile-Leon and Galicia in 2009. Navarre extended its concessions in 2012 for two years in order to reorganise the concession map, starting the tendering process in 2019. Andalusia and Cantabria have not extended their concessions, but the absence of tenders has meant that the former concession holders have continued to operate their expired concessions. The Basque Country is the only Autonomous Communities that did not extend its road passenger transport concessions, putting them out to tender as of 2014.

¹⁰⁰ CNC (2010b), p. 4: "It is considered that this procedure for extending concession periods, used by the vast majority of Autonomous Communities (...), represents a veritable extension of the term of the concession (...) with highly detrimental effects on competition, by making competitive access to the concessions impossible, to the detriment of the end users of the service. (...) The various regional authorities could and should have opted for less anti-competitive measures, such as the use of calls for tenders to award the concessions, which make it possible to achieve the general interest objectives allegedly pursued. The general extension of concessions, (...) violates the principles of EU Regulation 1370/2007, once it has been adopted, even if the measure was adopted before its entry into force."

and Galicia.¹⁰¹ In both cases, the courts ruled in favour of the CNC, annulling the concession extensions.¹⁰²

Despite the above, most regional concessions were extended, with expiry dates varying between 2017 and 2028 (see Table 4). During this time, most of the tenders issued in these Autonomous Communities were limited to new services created to meet the demand not covered by current concessions, insofar as the existing routes did not coincide with this demand.

¹⁰¹ See files [LA/01/2010](#) (Valencian Community) and [LA/02/2010](#) (Galicia).

¹⁰² Judgment of the Valencian High Court of Justice of [22 October, 2012](#), confirmed by Supreme Court Judgment of [14 March, 2016](#); and Judgment of the Galician High Court of Justice of [24 May, 2012](#), confirmed by Supreme Court Judgment of [14 March, 2016](#). The extensions were annulled as they were considered contrary to Regulation 1370/2007, and were granted after its entry into force.

Table 4. Extensions and current situation of regional concessions

EXTENSIONS AND CURRENT STATUS OF REGIONAL CONCESSIONS			
CC.AA.	Last extension	Extension duration	Current status
Andalusia	1997	2012-2013	Expired concessions. New map pending tender.
Aragon	2006	2017	Expired concessions. New map pending tender.
Asturias ¹	2019	2024	Concessions in force.
Balearic Islands	2009	2018	Tendered in 2019 (Mallorca). Expired concessions (Menorca, Ibiza, Formentera).
Canary Islands	2007	2022-2027	Concessions in force.
Cantabria	1997	2012-2013	Expired concessions.
Castile and Leon	2009	2019	Expired concessions. New map pending tender.
Castile-La Mancha	2006	2022-2023	Imminent expiration. Some services are tendered in 2018. Rest of the map pending tender.
Catalonia	2003	2028	Concessions in force.
Valencian Community ²	1997	2012-2013	Expired concessions. New map pending tender.
Extremadura	2009	2018	Emergency tender in 2018. Concessions in force.
Galicia ²	1997	2012-2013	Tendered in 2019. Concessions in force.
Community of Madrid	2019	2024	Concessions in force.
Murcia	2009	2019	Expired concessions. New map pending tender.
Navarre	2012	2014	Expired concessions. Ongoing tenders.
Basque Country	1997	2012-2013	Tendered in 2014-2015. Concessions in force.
La Rioja	2006	2028	Concessions in force.

Source: Compiled by author based on information reported by the General Directorates of Transport in the Autonomous Communities.

Note: ¹ Asturias approved an extension of the zonal concessions in 2019. ² The extensions in the Valencian Community and Galicia approved in 2010 were challenged by the CNC and annulled by the Supreme Court in the ruling of 14 March, 2016.

At this time, some Autonomous Communities have begun to put their road passenger transport concessions out to tender as they approach their expiry date. However, the tendering process has at times suffered further delays due to the need to update the concession map in line with the demand for services.

The health crisis has been the final obstacle in the Autonomous Communities' tendering plans, which have had to rework the operating plans for future concessions in view of the fall in demand for public transport, which is not expected to recover for several years.¹⁰³

As shown in Table 4, only the Basque Country, Mallorca and Galicia have completed the tendering of their routes, while the process is still ongoing in Aragon, Castile-La Mancha, Navarre and the Valencian Community. Extremadura, on the other hand, has concluded an emergency tendering process for its concessions, while work on updating the concession map is being completed.

Andalusia, Cantabria, Castile and Leon, Murcia and the rest of the Balearic Islands are in varying phases of updating their concession maps. In the meantime, these Autonomous Communities either have expired concessions, which are being operated by the former concession holders, or have approved emergency concession extensions.

Finally, the Autonomous Communities of Asturias and Madrid have opted to extend their concessions once again, with a new expiry date of 2024. Together with the Canary Islands, Catalonia and La Rioja, whose concessions remain in force after the last extension, these Autonomous Communities will be closed to for-the-market competition for the next few years.

3.3. Economic characterisation of intercity bus transport

3.3.1. The demand for intercity bus transport

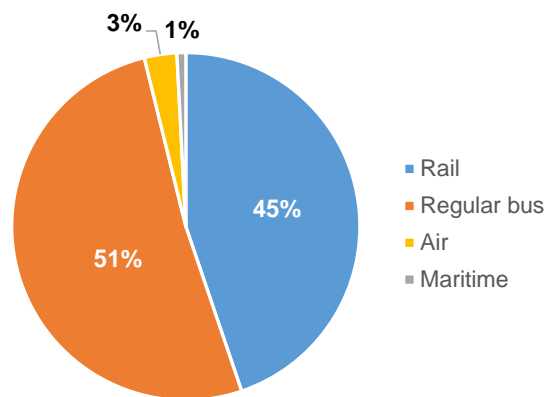
3.3.1.1. Current situation and modal share of intercity bus transport

Buses are the most commonly used means of public transport by passengers in Spain for their regular journeys. According to the Spanish National Statistics Institute (Instituto Nacional de Estadística; INE), nearly 730 million passengers used the bus to make intercity journeys in 2019, accounting for 51% of all

¹⁰³According to CONFEBUS (2020), 58% of entrepreneurs consider that their company's turnover will not recover until after 2022.

journeys of this type made by public transport, ahead of rail (45%), air (3%) and sea transport (1%) (see Figure 1).¹⁰⁴

Figure 1. Modal share of collective intercity transport in 2019



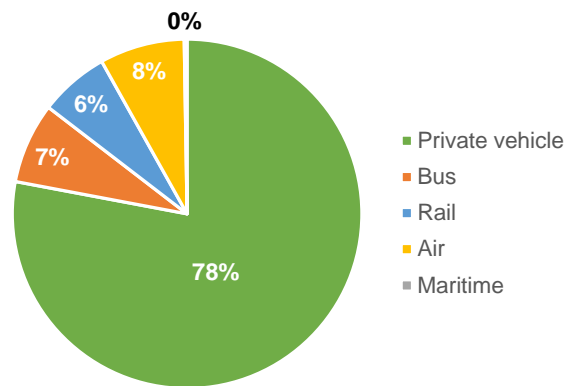
Source: INE (2021a).

Including private modes of transport and taking into account the kilometres travelled by each traveller, according to MITMA¹⁰⁵ data (see Figure 2), buses accounted for 7% of total passenger kilometres travelled in 2019. This was below the figure for air travel (8% of the total), but greater than the railways (6%). Private vehicles (cars and motorcycles) were the most used mode of transport, with a share of 78%.

¹⁰⁴ INE (2021a).

¹⁰⁵ MITMA (2021a).

Figure 2. Modal share of the different modes of transport in 2019



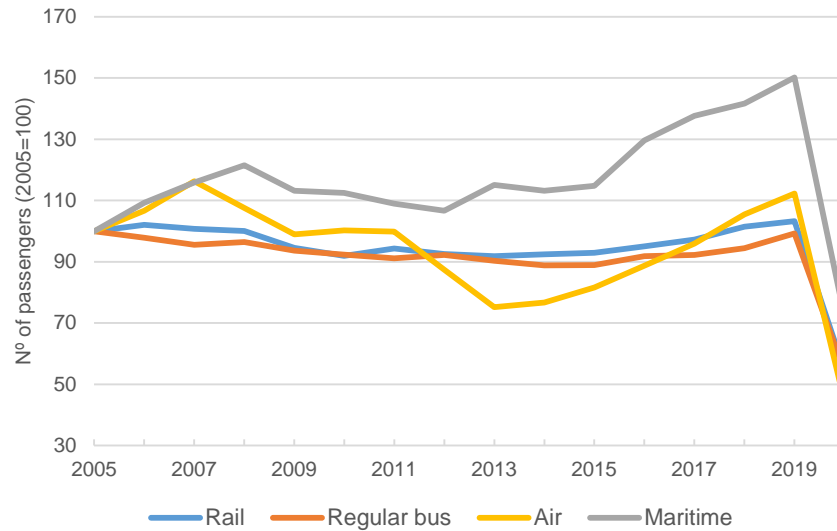
Source: MITMA(2021a).

Since the start of the INE series in 2005, demand for bus transport has been affected by changes in economic activity (see Figure 3). By 2019, the number of passengers had almost fully recovered the levels reached prior to the financial crisis that began in 2008. However, during 2020 the health crisis had a notable impact on scheduled bus transport, with a drop of 46% of passengers reported as a result of the mobility restrictions adopted, the increase in remote work, and greater use of private vehicles.¹⁰⁶

In terms of modal split, the crisis has had a comparatively lower impact on buses than on other modes of public transport, allowing them to increase their modal share to 53% in 2020, at the expense of a decrease in the share of rail (-1 p.p., to 44%) and air (-1 p.p., to 2%) travel.

¹⁰⁶Early research indicates that demand for private transport has recovered to a greater extent than demand for public transport: Marsden et al. (2021) report falls of between 50-70% in public transport use in the UK, with data from July to December 2020, contrasting with a 30% reduction in private car use. Based on data up to May 2020 for Barcelona, Asensio and Matas (2020) put the drop in private transport at between 40% and 50% compared to the previous year, below the 80% drop in public transport use. Both documents cite the rise of teleworking and distrust of public transport as possible causes of this behaviour.

Figure 3. Evolution of the number of intercity transport passengers (index 2005=100)

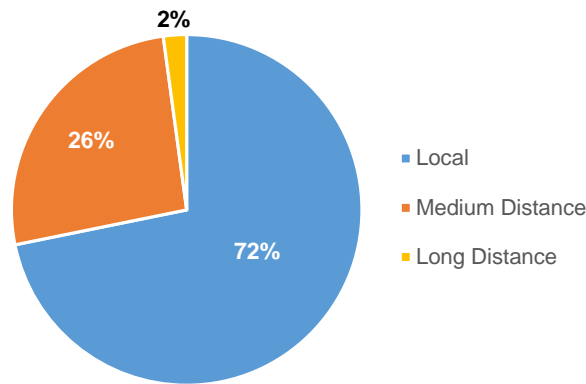


Source: INE (2021a).

If trips are classified according to the length of the journey, it is possible to differentiate between: i) local routes, which connect urban centres and their metropolitan areas of influence at a distance of less than 50 km; ii) medium-distance routes, between 50 and 300 km; and iii) long-distance routes, which connect towns located more than 300 km from one another.

As Figure 4 shows, commuter routes are the most significant in terms of passenger numbers, carrying 72% of all intercity bus passengers, while medium and long-distance services account for 26% and 2% of the total, respectively.

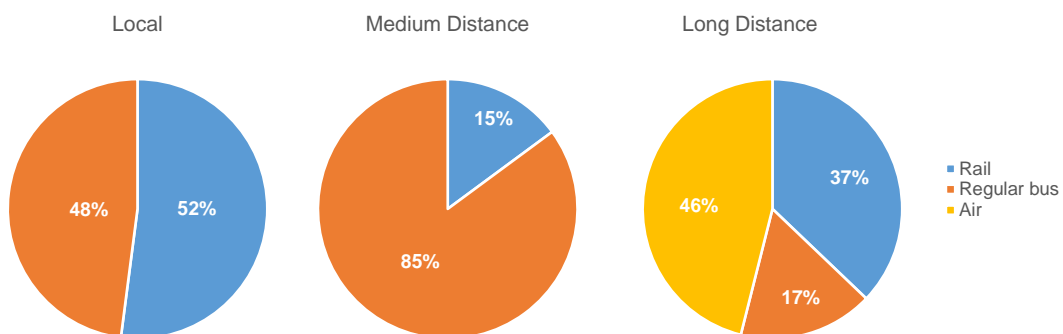
Figure 4. Share of passengers transported by bus, by distance travelled



Source: INE (2021a).

The relative importance of the intercity bus as a mode of transport hides significant variations depending on the distance travelled. On local journeys, the modal share of the bus compared to its main competitor, the railways, was 48% in 2019, rising to 85% for medium-distance journeys (see Figure 5). These shares have remained virtually unchanged over the last ten years. In contrast, the bus is less competitive than the other modes of transport over long distances: If air travel is taken into account, the bus has a modal share of just 17% in 2019, which has decreased by 8 p.p. since 2009.

Figure 5. Bus modal share in 2019, by trip distance

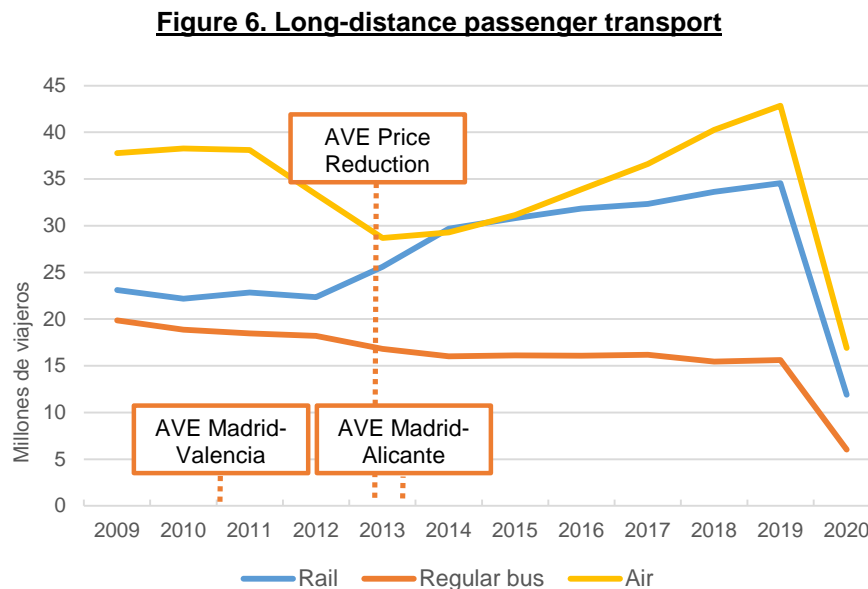


Source: INE (2021a).

Note: no distance classification is available for air transport. Air transport is shown together with long-distance bus and rail for comparative purposes.

Figure 6 illustrates the decline in demand for long-distance bus journeys, which is striking in comparison with the increases recorded by other modes of transport, particularly rail transport. The successive opening of new high-speed lines and the generalised reduction in AVE fares implemented by Renfe Viajeros in early 2013¹⁰⁷ appear to have negatively impacted demand for bus and air travel. However, whereas air transport recovered from 2014 onwards, bus transport continued to show a downward trend.

Finally, the health crisis has had a greater effect on the railways, whose long-distance share has fallen to 34%, to the benefit of air transport, which has increased its share to 49%, while the share of scheduled bus services has remained constant.



Source: INE (2021a).

3.3.1.2. Profile of the average intercity bus user

Due to its characteristics, the bus is an economical means of collective transport, which is able to connect a large number of towns and cities thanks to the capillarity of the road infrastructure. For these reasons, bus transport services are particularly important for the mobility of lower-income users and inhabitants of areas with lower population densities that are not connected by other modes of transport.

¹⁰⁷ CNMC (2019a), p. 28.

According to the latest MITMA quality study, most of the users of state concessions are women (58.5%), young people aged between 16 and 24 (31.3%), and workers (45.5%).¹⁰⁸ Users tend to take the bus occasionally (27.3%), to conduct errands or make visits (32.8%).

Table 5. Average user profile of state concessions 2019

AVERAGE USER PROFILE OF STATE CONCESSIONS				
Gender	Age	Occupation	Reason for travel	Frequency of use
Female	16-24	Worker	Run errands/ Visit	Occasional
58.5%	31.3%	45.4%	32.8%	27.3%

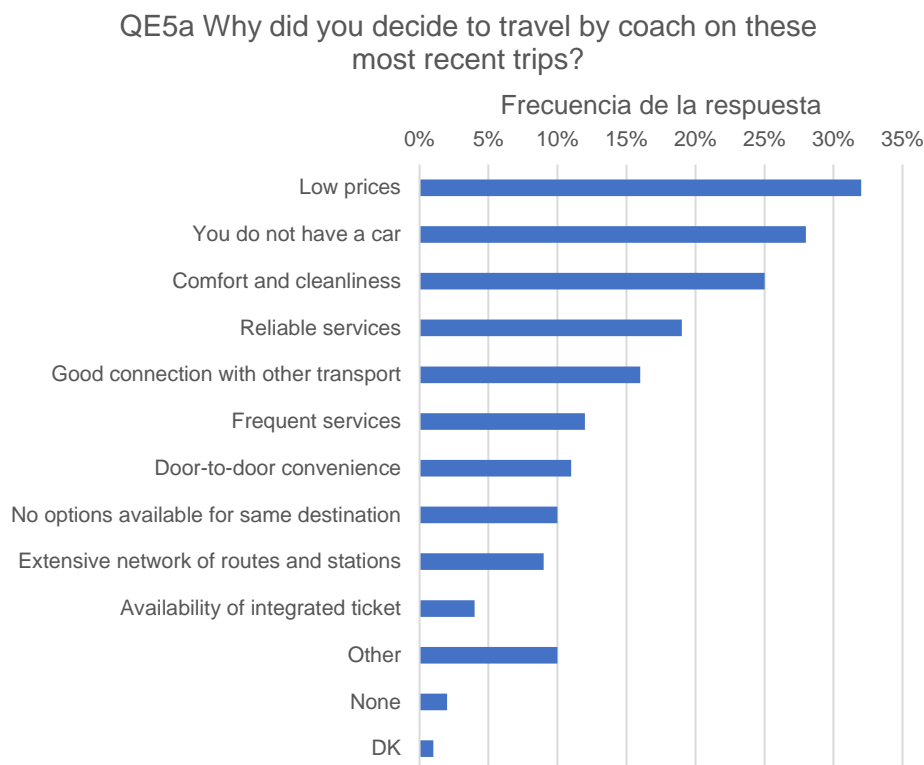
Source: MITMA (2019).

Furthermore, according to the European Commission's Special Eurobarometer on coaches¹⁰⁹, the main reasons why Spanish users choose this type of transport are its low price (32% of those surveyed) and the lack of access to a private vehicle (28%) (see Figure 7). These results highlight the importance of the bus as a means of transport for the most price-sensitive segments of the population without access to alternative transportation options.

¹⁰⁸ MITMA (2019).

¹⁰⁹European Commission (2017).

Figure 7. Reasons for choosing the bus as a means of transport



Source: European Commission (2017).

3.3.2. Determinants of intercity bus transport supply

3.3.2.1. Infrastructure

As with other means of transport, the supply of intercity transport services is conditioned by the existence of an infrastructure that allows the fleet to circulate. In Spain, the capillarity of the road network, with a total length of 165,685 km¹¹⁰, allows buses to achieve greater service coverage and greater flexibility than rail and air transport, which depend on infrastructures that are more dispersed over the country.¹¹¹

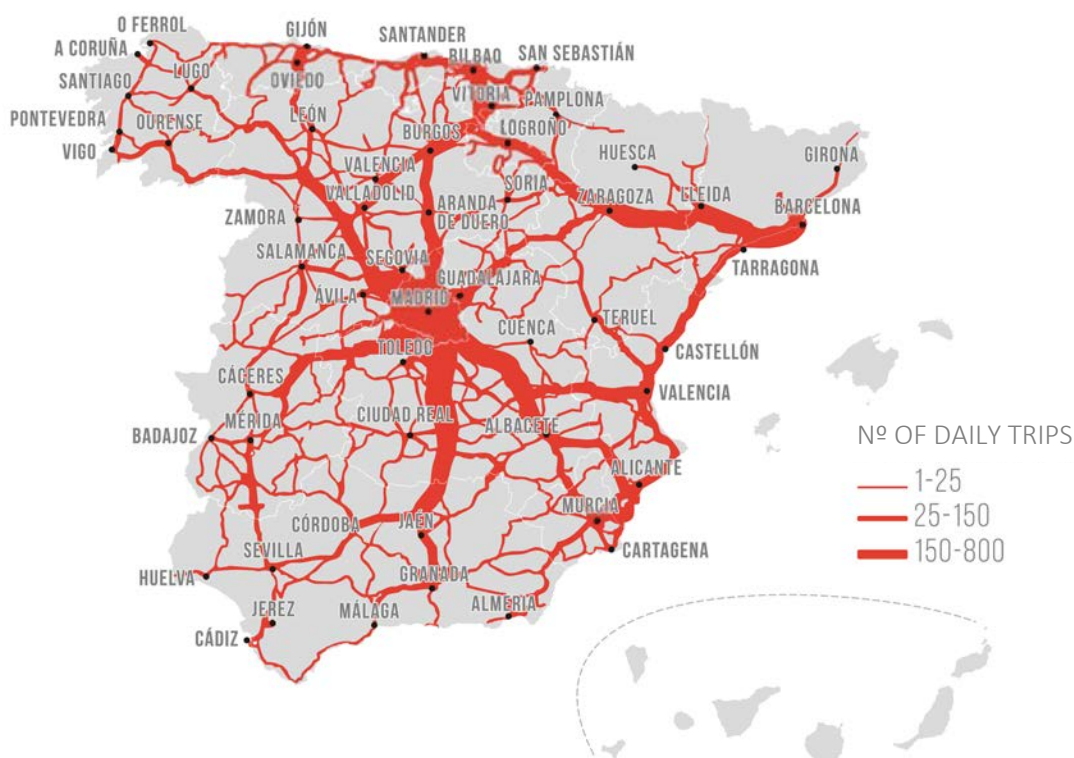
As a result, at the end of 2019, intercity bus services under the General State Administration had stops in 1,675 municipalities and 536 minor local entities. Figure 8 shows the extent of the interregional bus transport network with the latest

¹¹⁰ MITMA (2021a).

¹¹¹ In comparison, the General Interest Rail Network was a total of 15,290 km long in 2018 (MITMA, 2021a).

information available for 2014¹¹², excluding services between cities within a single Autonomous Community.

Figure 8. Interregional bus transport network in Spain



Source: CONFEBUS (2014), p. 33.

In turn, the provision of intercity transport services by bus requires access to stations, where passengers can board and alight, the regulation and management of which is the responsibility of the municipalities where they are located.¹¹³ Local councils have a wide margin of discretion regarding the operating regime of the station, with some stations being operated directly by the

¹¹² CONFEBUS (2014).

¹¹³ Station construction is subject to compliance with town planning and road safety legislation, which is the responsibility of the municipality (Article 128 of the LOTT).

council or a municipal transport company, while others are operated indirectly by private companies.¹¹⁴

To analyse the current situation of intercity bus stations, the CNMC requested information from the managers of bus stations in the 19 Spanish provincial capitals with more than 200,000 inhabitants.¹¹⁵ Table 6 shows the management regime in force in these stations, as well as their market share in terms of passenger traffic¹¹⁶ during 2019.

¹¹⁴ Initially, the LOTT established an indirect management regime, reserving direct management by the local council for those cases in which the tender was unsuccessful, or when justified for economic or social reasons (Article 129 of the LOTT, repealed by Article 21.7 of Law 25/2009, of 22 December, amending various laws to adapt them to the Law on free access to service activities and their use).

¹¹⁵ Population data as of January 1, 2019, from the INE(2020).

¹¹⁶ Passenger numbers are measured on the basis of the total number of passengers who have boarded or alighted from an intercity bus at the respective station.

Table 6. Management regime of the main bus stations in Spain

OPERATING REGIME OF THE MAIN INTERCITY BUS STATIONS IN SPAIN						
Municipality	Station	Operating regime ¹	Operator	The operator also provides intercity bus services	The operator uses the station to provide its own services	Passenger quota ² in 2019 (%)
Madrid	Méndez Álvaro	IP (OP)	AVANZA	YES	YES	4%
	Avenida de América	IP (OP)	Intercambiador Avenida de América	NO	NO	7%
	Príncipe Pío	IP (OP)	Intercambiador Príncipe Pío ³	YES	YES	13%
	Moncloa	IP (OP)	SACYR	NO	NO	19%
	Plaza Elíptica	IP (OP)	SACYR	NO	NO	6%
Barcelona	Sants	IP (DA)	MONBUS	YES	YES	0%
	Barcelona Nord	DP	Barcelona de Serveis Municipals	NO	NO	1%
	Fabra i Puig	DP	Barcelona de Serveis Municipals	NO	NO	2%
Valencia	Estación de Valencia	IP (OP)	ALSA	YES	YES	1%
Sevilla	Estación Plaza de Armas	IP (OP)	ALSA	YES	YES	4%
Zaragoza	Estación Central	IP (OP)	ALSA	YES	YES	2%
Málaga	Estación de Málaga	DP	Empresa Malagueña de Transportes	NO	NO	2%
Murcia	Estación de San Andrés	IP (OP)	ALSA	YES	YES	3%
Palma de Mallorca	Estación Intermodal	DP	Consorcio de Transportes de Mallorca	NO	NO	2%
Las Palmas de Gran Canaria	Estación de San Telmo	IP (DA)	GLOBAL SU	YES	YES	6%
Bilbao ⁴	Estación Intermodal	IP (NP)	Construcciones Amenábar	NO	NO	2%
Alicante	Estación de Alicante	IP (OP)	VECTALIA	YES	YES	1%
Córdoba	Estación de Córdoba	IP (OP)	ALSA	YES	YES	1%
Valladolid	Estación de Valladolid	IP (OP)	LINECAR	YES	YES	2%
Vitoria-Gasteiz	Estación de Vitoria-Gasteiz	DP	Ayuntamiento de Vitoria-Gasteiz	NO	NO	2%
A Coruña	Estación de A Coruña	DP	Ayuntamiento de A Coruña	NO	NO	4%
Granada	Estación de Granada	IP (OP)	ALSA	YES	YES	3%
Oviedo	Estación de Oviedo	IP (DA)	COFINEX	NO	NO	2%
Santa Cruz de Tenerife	Intercambiador	DP	TITSA	YES	YES	9%
Pamplona	Estación de Pamplona	IP (OP)	VECTALIA	YES	NO	1%

Source: request for information from bus station managers in Spanish provincial capitals with more than 200,000 inhabitants, as of 1 January 2019. ¹ Management regime: direct provision by the authority (DP) or indirect provision via a private company (IP), differentiating in the latter case whether the award was made through an open procedure (OP), negotiated (NP) or direct award (DA). ² Market share in terms of passenger traffic over the total sample, measured as the total number of passengers who boarded or alighted from an intercity bus at the corresponding station. ³ The company Intercambiador de Transportes Príncipe Pío, S.A. is 30% owned by Empresa De Blas y Compañía S.A., part of the Arriva Group. ⁴ Passenger data for Bilbao Intermodal Station in 2020, the year the station was inaugurated.

The table above shows that the most common operating regime is indirect management, which is in place in 18 of the 25 stations analysed, representing 77% of the total number of passengers in the sample. Within these, the most common way of awarding contracts is the open procedure (in 14 out of 18 stations, with a share of 66% of the total). However, 3 stations are still managed by direct award: San Telmo station in Gran Canaria, Oviedo station, and Sants station in Barcelona.

Finally, of the 18 stations managed by private companies, 14 are managed by bus operators, of which 13 use the station to run their national and international services. The remaining 4 stations are large interchanges in Madrid and Bilbao, managed by consortia of construction companies, which are responsible for both the construction and administration of the station.

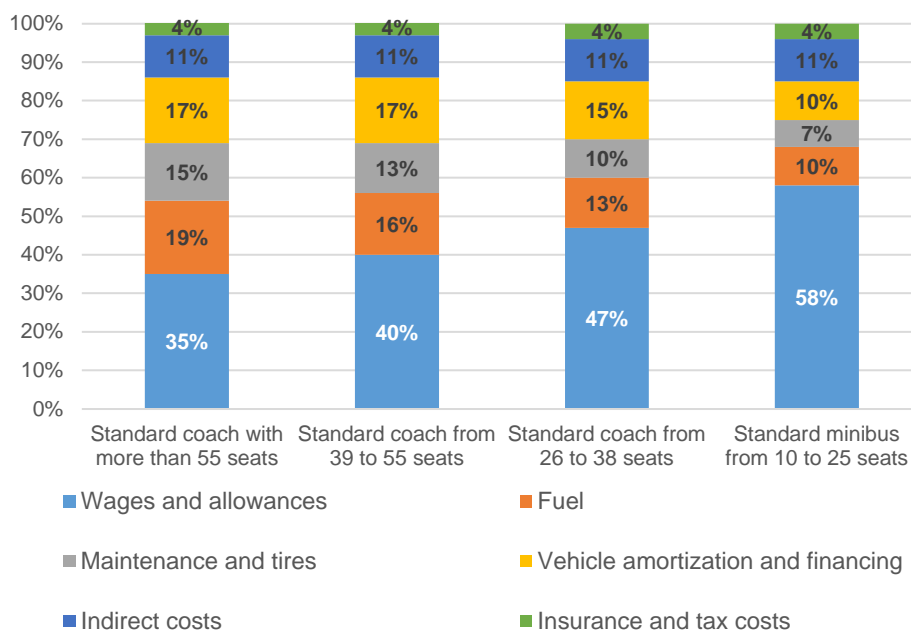
3.3.2.2. Bus operator cost structure

In addition to access to infrastructure, the supply of bus transport is conditioned by the cost structure within the sector. Figure 9 shows the bus passenger transport operators' cost structure for the year 2020, as published in the Observatory of coach passenger transport costs¹¹⁷ [Observatorio de costes del transporte de viajeros en autocar], drawn up by MITMA in conjunction with the sector's business associations.¹¹⁸ This publication shows the average costs that a company would incur for operating a vehicle, differentiating between four types of vehicles according to their size. The cost structure remained stable during 2020, despite the events associated with the health crisis.

¹¹⁷ MITMA (2021b).

¹¹⁸ The Coach Passenger Transport Cost Observatory is developed by the Ministry in collaboration with the National Road Transport Committee, a body that includes the main bus passenger transport associations in all segments.

Figure 9. Cost structure of passenger transport by bus in 2020



Source: MITMA (2021b).

As can be seen from the figure above, personnel expenses account for the bulk of the costs incurred by operators, representing between 35% and 58% of the total costs, with a decreasing weight according to the size of the bus. This is followed by fuel costs (10%-19%) and vehicle-related costs, both maintenance (7%-15%) and amortisation and financing (10%-17%), all of which have an increasing weight depending on the size of the bus. Indirect expenses, insurance and fiscal costs represent a stable percentage of the total costs for all types of buses, according to the Observatory's estimates.

Certain aspects of the concession system have a considerable impact on an operators' costs. In terms of personnel costs, it is important to note the importance of the obligation of subrogation of personnel linked to the concession by the successful bidder, as set out in the applicable labour legislation.¹¹⁹ This obligation

¹¹⁹ The subrogation obligation is set out in Chapter IV of the Directorate General for Employment Resolution of 13 February, 2015, by which the State Framework Agreement on road passenger transport, by means of mechanically powered vehicles with more than nine seats, including the driver, is registered and published (hereinafter, the Framework Agreement). The regulation establishes its application to bus transport services under administrative concession, both urban and intercity (Art. 19:1 of the Framework Agreement), throughout Spain (Art. 1 of the Framework Agreement). Due to its binding nature in the labour sphere, the content of the agreement is applicable regardless of whether or not this obligation is included in the corresponding administrative specifications (Art. 20 of the Framework Agreement).

applies both to drivers who dedicate at least 80% of their annual working day to the concession¹²⁰, and to other administrative staff, regardless of how much time they dedicate to the concession.¹²¹ In this way, the staff is not renewed along with the concession, but is transferred to the next operator, who is subrogated to all the employment rights and obligations of the previous operator.

The importance of vehicle maintenance and depreciation costs depends on the age of the bus, with older buses being associated with higher maintenance costs and lower depreciation costs.¹²² Tender specifications tend to influence this parameter in two ways: on the one hand, by establishing maximum limits on the age of the fleet, obliging the renewal of older vehicles¹²³; and, on the other hand, by awarding a higher score to operators who offer newer equipment, which encourages fleet renewal.

In Spain, the average age of the bus fleet, which includes both general scheduled transport buses and buses in other segments¹²⁴, is relatively high at 13.9 years, and the percentage of buses that are 10 years old or older has been increasing steadily since 2005.¹²⁵

Finally, other external factors can significantly affect operators' costs, such as fuel prices or financial conditions, which can facilitate the purchase of new vehicles.

3.3.2.3. Intermodal competition

Another important determinant of competition in bus transport services is competition from other modes of transport. In this way, although the concession system itself limits intra-modal competition¹²⁶, the concurrence of other modes of transport on the same route can represent competition for bus service operators.

¹²⁰Art. 19:4 of the Framework Agreement.

¹²¹Art. 19:5 of the Framework Agreement.

¹²² By way of example, the amortisation model used by the MITMA in the Coach Passenger Transport Cost Observatory assumes a useful life of a bus of 12 years, after which the vehicle would be fully amortised.

¹²³ In this regard, the tender specifications for state concessions usually establish maximum ages of between 4 and 10 years, depending on the demand for the route, while the Autonomous Communities allow older vehicles. For example, the tender specifications for intercity bus transport services published by the Consorcio de Transportes de Mallorca on 25 September, 2018, permitted a maximum age of 16 years.

¹²⁴ The market share in terms of passengers carried by occasional and special-purpose transport was 39% during 2020, according to INE data.(2021a)

¹²⁵ MITMA (2021c).

¹²⁶ With some exceptions where there is an overlap of routes belonging to different concessions. For a detailed analysis, see Crespo (2009).

From the supply perspective, intercity transport services have certain advantages over other modes of public transport, both because of the capillarity of the network and the low direct cost of infrastructure use for the operator, and because of the lower costs associated with operating the service, especially with regard to the costs of purchasing and maintaining the fleet.¹²⁷ This is a competitive advantage for the bus as a potentially very economical means of transport for the user.

As shown in table 7, the operating cost of a bus per kilometre travelled varies very little with the size of the bus. This implies that the cost of providing the service per seat offered and kilometre travelled decreases significantly with bus size, indicating the existence of economies of scale in the use of larger buses, which substantially reduce operating costs per seat and kilometre (assuming the same occupancy ratio). As can also be seen in the table, the bus unit operating costs per seat and kilometre offered are lower than those of trains for all bus sizes, with the exception of minibuses, and can be between two and three times lower in the case of larger buses. It should be noted that, in the case of the railways, according to the annual accounts of Renfe Viajeros (2019), the cost of infrastructure accounts for around 35% of the costs declared by RENFE Viajeros for passenger transport.

Table 7. Operating cost per seat-kilometre of buses and trains in 2019

COMPARISON OF UNIT OPERATING COSTS						
Transport mode	Bus				Rail (RENFE)	
Service type	Minibus 10 to 25 seats	Bus 26 to 38 seats	Bus 39 to 55 seats	Bus > 55 seats	Commercial services	PSO services
€/veh-km	1.34	1.38	1.40	1.38	23.42	19.60
cent.€/seat-km	7.900	4.320	3.040	2.310	6.819	6.072

Source: Compiled by author with data from MITMA(2021a) and Renfe Viajeros (2019).

However, the realisation of these potentially lower operating costs ultimately depends on the occupancy rate of the vehicle and thus on the demand for the journey.

¹²⁷ According to the MITMA (2021b), the acquisition cost of a standard coach with more than 55 seats is 234,999.52€. In comparison, a high-speed train costs between 20 and 30 million euros (Comisión Nacional de los Mercados y la Competencia, CNMC, 2019a, p. 63), somewhat more than the 17 million of a conventional long-distance train (in this recent operation by [Talgo](#)), while the best-selling aircraft models for short- and medium-range transport cost just over 80 million euros (see [Boeing](#) and [Airbus](#) price lists).

When choosing between different modes of transport for a given journey, the user takes into consideration various factors, including price, journey time, availability of frequencies, interconnection possibilities with other transport services, station locations and travel comfort.

Given the cost advantage of intercity buses, their competitiveness depends to a large extent on the distance travelled. As shown in Figure 4 in Section 3.3.1, intercity buses are, on average, more competitive on commuter routes, where they compete with trains in terms of frequency and connections, and for medium distances, where they are often the only public transport option, given the lower capillarity of the railway network.

For medium distances, an alternative to the bus for certain users may be *carpooling* or shared vehicle services¹²⁸, offered through technological platforms. These services allow users to rent a private vehicle with other users that have the same origin and destination, thereby sharing the costs of the journey.

For long-distance journeys, the longer travel time by bus compared to rail is a disincentive for users, who may be willing to pay higher prices if faster alternatives such as high-speed rail or air travel are available.¹²⁹

In practice, some studies have found that, in the face of competition from the railways, bus operators tend to reduce their prices to compensate for the longer travel time.¹³⁰ In this way, the train fare acts as a price ceiling for the bus¹³¹, which may be below the fare agreed in the concession contract, limiting the operator's revenue on that route.

Some studies on the Spanish situation suggest that the development of high-speed rail and the flexible fare systems implemented by Renfe Viajeros have significantly impacted buses. These studies conclude that the launch of overlapping high-speed services is associated on average with a 21% lower bus

¹²⁸ In 2019, the Provincial Court of Madrid dismissed a lawsuit brought by the association of bus operators CONFEBUS against the BlaBlaCar platform for unfair competition, considering that it performs an intermediation service in passenger transport without administrative authorisation and specific licensing, as required by Articles 22 and 53 of the LOTT (Ruling no. 86/2019 of 18 February, 2019).

¹²⁹ In transport economics, these non-monetary costs borne by the user as a result of the longer journey time are taken into account through the concept of "generalised cost of the journey", which would include both monetary and non-monetary costs.

¹³⁰ Beria et al. (2018) found reductions of up to 7% in concurrence with high speed rail, and 5% in the case of PSO services, for the 100 most in-demand routes in Italy. Meanwhile, Fageda and Sansano (2018) reported reductions of between 14% and 17% for connections between the ten largest cities in the UK, Germany, Italy, France, Sweden and Spain.

¹³¹ Beria et al. (2018).

fare¹³² and an 11% drop in demand for this service.¹³³ For the case of Spain, a 2017 study found that, despite the drop in fares, bus fares were often above the advance purchase fares offered by Renfe Viajeros for the same route¹³⁴, a fact that could be exacerbated by ongoing rail deregulation. For these routes, the bus would fulfil a niche function, intended to cover last-minute journeys for more price-sensitive market segments.¹³⁵

3.3.3. Current situation of intercity bus concessions

In view of the lack of publicly available information on intercity bus concessions, the CNMC has requested information from the Directorates-General for Transport of the Autonomous Communities and the MITMA. What follows is an analysis of the characteristics of state and regional scheduled bus concessions, based on the information obtained through the aforementioned requests. It should be noted that no data is available for Andalusia, Aragon and Castile-La Mancha, which limits the representativeness of the available information.¹³⁶

3.3.3.1. Description of the information available. Concession operating data

Table 8 summarises the information available for the different supply and demand variables in the concessions, according to their geographical scope. The information presented corresponds to 2019, the latest available data. It should be noted that the health crisis caused by COVID-19 caused distortions in the market during 2020 and 2021.

Data was collected for a total of 914 concessions in Spain and from all Autonomous Communities except Andalusia, Aragon and Castile-La Mancha.

¹³² Crespo (2009), p. 18.

¹³³ KPMG (2021), p. 95.

¹³⁴ Following the modification of RENFE's pricing system in 2013, a study by Analistas Financieros Internacionales (2014) compared the minimum fares per kilometre for bus and long-distance and high-speed rail for a sample of 22 routes between the main Spanish cities. Of all the routes analysed, on only 6 occasions was the bus fare lower than the train fare: it was below that of the AVE on 3 routes (Barcelona-Zaragoza, Madrid-Córdoba and Madrid-Sevilla), and on 3 of the conventional long-distance lines (Barcelona-Valencia, Madrid-Cádiz and Madrid-Toledo).

¹³⁵ Beria et al. (2018).

¹³⁶ Andalusia and Aragon did not reply to the CNMC's request, while Castile-La Mancha was only able to provide information for the last quarter of 2019. According to CNC (2008, p. 16), these Autonomous Communities accounted for 15% of the total revenue and 19% of the passenger-kilometres (kilometres travelled by passengers transported) of the state and regional concessions in 2006.

The number of observations available for each variable is lower than this figure, due to the existence of gaps in the information collected. A column ("% Observ.") has been included that indicates the number of observations available for each variable as a percentage of the total number of concessions in each geographical area, so that the representativeness and quality of the information can be assessed.

Passenger data has therefore been obtained for 811 concessions, which transported around 547 million passengers in 2019 (representing 75% of the total 729 million passengers who travelled by scheduled intercity bus in Spain that year, according to the INE).¹³⁷ The size of the available information is reduced when considering another demand variable, passenger-kilometres¹³⁸, for which information is only available for 501 concessions, due to the absence of information for some Autonomous Communities.¹³⁹ Finally, a high degree of representativeness has been obtained for both the number of vehicle-kilometres¹⁴⁰ offered by the concessions and their total revenue.

¹³⁷ INE, (2021a).

¹³⁸ The passenger-kilometre is a unit for measuring passenger traffic corresponding to the transport of one passenger over a distance of one kilometre. The number of passenger-kilometres covered by a concession therefore represents the total number of kilometres travelled by all passengers on that concession over a one-year period.

¹³⁹ Some Autonomous Communities, such as Asturias, Madrid and Extremadura, and provinces, including Barcelona, Tarragona, Álava and Gipuzkoa, have stopped calculating this figure due to the characteristics of their fare system.

¹⁴⁰ The vehicle-kilometre represents the total number of kilometres travelled by all the vehicles in the concession over a one-year period.

Table 8. Representativeness of available information. Concession operating data (2019)

REPRESENTATIVENESS OF AVAILABLE INFORMATION. CONCESSION OPERATING DATA									
Authority	Nº concessions	Passengers		Passenger-km		Vehicles-km		Total revenues ¹	
		Total	% Observ.	Total	% Observ.	Total	% Observ.	Total	% Observ.
Andalusia ²	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Aragon ²	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Asturias	55	14,871,618	98%	n.d.	n.d.	n.d.	n.d.	50,211,825	100%
Balearic Islands ³	29	18,250,651	100%	278,977,809	90%	20,719,505	100%	45,389,276	100%
Canary Islands	11	37,156,581	100%	696,648,345	100%	43,885,392	100%	99,682,017	100%
Cantabria	28	5,983,014	100%	96,995,761	100%	9,139,554	100%	10,004,548	100%
Castile and Leon	223	15,807,104	65%	403,269,888	65%	37,127,038	65%	48,222,068	100%
Castile-La Mancha ²	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Catalonia ⁴	161	64,725,547	99%	206,039,422	19%	96,384,867	100%	214,573,077	83%
Community of Madrid	36	243,694,366	100%	n.d.	n.d.	179,110,086	100%	557,941,622	100%
Valencian Community	70	28,175,890	100%	372,985,557	99%	25,086,686	100%	44,137,332	100%
Extremadura	49	1,366,979	100%	n.d.	n.d.	7,315,725	100%	8,412,496	100%
Galicia ⁵	65	8,838,361	65%	104,248,638	31%	31,157,586	95%	12,123,313	34%
La Rioja	16	1,218,368	100%	35,570,930	100%	4,047,989	100%	4,914,070	100%
Murcia ⁶	31	16,206,399	100%	255,214,830	100%	16,615,830	100%	21,840,646	100%
Navarre	36	2,661,991	100%	148,999,158	100%	8,729,172	100%	15,534,391	100%
Basque Country ⁷	22	57,314,517	100%	727,977,525	32%	40,554,229	77%	129,221,370	50%
GSA	82	30,715,338	100%	5,753,824,143	100%	234,390,550	100%	345,791,637	100%

Source: Compiled by author with data from the MITMA and the General Directorates of Transport of the Autonomous Communities.

Note: ¹ Total revenue includes revenue received by concession holders, as well as transfers from the public authorities, excluding VAT. ² Andalusia and Aragon did not reply to the CNMC's request. No annual data is available for Castille-La Mancha. ³ To calculate the data for the Balearic Islands, the data for Mallorca for 2018 and for Ibiza, Menorca and Formentera for 2019 have been used. ⁴ There is no passenger-km data for Barcelona and Tarragona. There is no revenue data for Tarragona. ⁵ The data for Galicia does not include concessions tendered in 2017 (XG 500-549), so market shares are not representative. Galicia has also not reported information on subsidies and compensation granted to concession holders. ⁶ Murcia has not reported information on subsidies and compensation granted to concession holders. ⁷ There is no passenger-km data for Álava and Gipuzkoa. The Gipuzkoa Provincial Council has not reported information on its total revenue.

3.3.3.2. Heterogeneity and profitability of concessions

The analysis of the available information points to the existence of significant differences between the concession systems in the Autonomous Communities, as a result of both the different market conditions in each autonomous region and administrative discretion in terms of organising services. It should also be noted that these differences are influenced by the fact that Autonomous Community conditions are very different from one another in many essential aspects, such as population and demographic structure, geography, *per capita* income, wage

levels, infrastructure, transport alternatives, and so forth. All this must be taken into account when putting the information into context and properly interpreting the data from the General State Administration and the Autonomous Communities.

Table 9 shows the average values of the different operating variables per concession at each territorial level, with the available data.¹⁴¹ When it comes to average size in terms of revenue, in unit terms, the Community of Madrid stands out as having the largest concessions, with an average of 15.5 million euros of revenue per concession, followed by the Basque Country and the Canary Islands.

Table 9. Operating data by concession (2019)

OPERATING DATA BY CONCESSION (2019) ¹					
Authority	Passengers/ Concession	Passenger- km/ Concession	Vehicle-km/ Concession	Total revenues ² / Concession	Average length traveled ³
	Miles	Miles	Miles	Miles €	Km
Andalusia ⁴	n.d.	n.d.	n.d.	n.d.	n.d.
Aragon ⁴	n.d.	n.d.	n.d.	n.d.	n.d.
Asturias	275.4	n.d.	n.d.	912.9	n.d.
Balearic Islands ⁵	629.3	10,729.9	714.5	1,565.1	18.0
Canary Islands	3,377.9	63,331.7	3,989.6	9,062.0	18.7
Cantabria	213.7	3,464.1	326.4	357.3	16.2
Castile and Leon	109.0	2,781.2	256.0	216.2	25.5
Castile-La Mancha ⁴	n.d.	n.d.	n.d.	n.d.	n.d.
Catalonia ⁶	404.5	6,868.0	598.7	1,613.3	17.3
Community of Madrid	6,769.3	n.d.	4,975.3	15,498.4	n.d.
Valencian Community	402.5	5,405.6	358.4	630.5	18.0
Extremadura	27.9	n.d.	149.3	171.7	n.d.
Galicia ⁷	210.4	5,212.4	502.5	551.1	21.7
La Rioja	76.1	2,223.2	253.0	307.1	29.2
Murcia ⁷	522.8	8,232.7	536.0	704.5	15.7
Navarre	73.9	4,138.9	242.5	431.5	56.0
Basque Country ⁸	2,605.2	103,996.8	2,385.5	11,747.4	23.9
GSA	374.6	70,168.6	2,858.4	4,217.0	187.3

Source: Compiled by author with data from the MITMA and the General Directorates of Transport of the Autonomous Communities.

¹⁴¹ When preparing the ratios, only those concessions for which there are data for both the numerator and denominator have been taken into account.

Note: ¹ To calculate the average values per concession shown in the table, only those concessions for which there is data for the numerator variable have been counted. The representativeness of the information shown therefore corresponds to the percentages indicated in Table 8, for each public authority and each variable considered. ² Total revenues include income received by the concession holders, as well as transfers from the public authorities, excluding VAT. ³ Average distance travelled by passengers in the corresponding public authorities, calculated as the quotient between the number of passenger-kilometres and the number of passengers transported, for concessions where both data are available. ⁴ Andalusia and Aragon did not respond to the CNMC's request. No annual data is available for Castilla-La Mancha. ⁵ To calculate the data for the Balearic Islands, the data for Mallorca corresponding to the year 2018 and for Ibiza, Menorca and Formentera for the year 2019 have been taken. Passenger-kms not available of Ibiza. ⁶ Passenger-km not available for Barcelona and Tarragona. Tarragona collection data not available. ⁷ Galicia and Murcia did not report information on subsidies and compensation granted to concession holders. ⁸ Passenger-kms from Álava and Gipuzkoa not available. Total revenue from Gipuzkoa not available.

The larger size of the concessions in these Autonomous Communities is due, among other factors, to the actions of the competent Authorities, which have consolidated the existing services since the entry into force of the LOTT.

Therefore, in the Community of Madrid, 17 of the 36 existing concessions in 2019 are the result of unifications of previous services, representing 72% of the total revenue of the concessions in that community. The situation is similar in the Basque Country, where the authorities reduced the number of existing concessions prior to their tendering between 2014 and 2015, and in the Canary Islands, where the existing concessions were gradually expanded or unified, so that currently seven large concessions exclusively, or almost exclusively, operate intercity transport on each island.¹⁴²

State concessions generally show a higher average revenue and transport a greater number of passenger-kilometres. However, they carry a proportionally lower number of passengers, indicating that they tend to cover longer distances (187 km on average).

The larger dimensions of the state concessions are due to the characteristics of the medium and long distance intercity market, which involves routes of greater average lengths, a greater demand experienced by these concessions on average, and the unification process undertaken by the Ministry of Transport after the approval of the LOTT, as described in Section 3.2.2.

¹⁴² In Gran Canaria there are 5 different concessions, although the AUTGC-1 concession accounts for 90% of the turnover and 98% of the passengers. This concession, which encompasses most of the services on the island of Gran Canaria, was formed following the unification of the two large concessions into which the island was divided, through the merger of their operators, Salcai and Utinsa.

It is important to analyse the extent to which these differences in the average size of the concessions are reflected in their profitability. Table 10 shows the behaviour of three indicators of state and regional concessions: occupancy per vehicle-kilometre, revenue per passenger-kilometre, and revenue per vehicle-kilometre, with data from 2019. To calculate the average ratios, only those concessions for which information was available for both the numerator and the denominator were taken into account. An additional column is included indicating the representativeness of the available information used to calculate the ratio for each public authority.

Table 10. Concessions operation indices (2019)

CONCESSIONS KEY PERFORMANCE RATIOS ¹ (2019)						
Authority	Occupancy		Revenues ² / passenger-km		Revenues ² / vehicle-km	
	passenger-km/veh-km	% Observ.	€/pass-km	% Observ.	€/veh-km	% Observ.
Andalusia ³	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Aragon ³	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Asturias	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Balearic Islands ⁴	9.7	21%	0.21	21%	2.2	31%
Canary Islands	15.9	100%	0.14	100%	2.3	100%
Cantabria	10.6	100%	0.10	100%	1.1	100%
Castile and Leon	10.9	65%	0.12	65%	1.3	65%
Castile-La Mancha ³	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Catalonia ⁵	9.5	19%	0.15	19%	1.1	83%
Community of Madrid	n.d.	n.d.	n.d.	n.d.	3.1	100%
Valencian Community	16.3	99%	0.09	99%	1.8	100%
Extremadura	n.d.	n.d.	n.d.	n.d.	1.1	100%
Galicia ⁶	11.0	29%	0.11	31%	1.2	29%
La Rioja	8.8	100%	0.14	100%	1.2	100%
Murcia ⁶	15.4	100%	0.09	100%	1.3	100%
Navarre	17.1	100%	0.10	100%	1.8	100%
Basque Country ⁷	23.9	32%	0.17	32%	3.7	50%
GSA	24.5	100%	0.06	100%	1.5	100%

Source: Compiled by author with data from the MITMA and the General Directorates of Transport of the Autonomous Communities.

Note: ¹ Weighted average of the concession operating ratios for which information is available for both the numerator and the denominator. ² Total revenues include the revenue received by

concession holders, as well as transfers from the public authorities, excluding VAT.³ Andalusia and Aragon did not reply to the CNMC's request. No annual data is available for Castilla-La Mancha.⁴ No data available for Mallorca. Occupation data and revenue per passenger-km for Ibiza not available.⁵ Data for Tarragona not available. Occupancy and revenue per passenger-km data for Barcelona not available. Compensation and subsidy data not available.⁶ Galicia and Murcia did not report information on subsidies and compensation granted to concession holders.⁷ Gipuzkoa data not available. Occupancy and revenue per passenger-km data for Álava not available.

Occupancy per vehicle and kilometre¹⁴³, expressed in terms of passengers, provides an idea of the average occupancy of the bus throughout the service. *A priori*, insofar as the operation's revenue comes from passengers transported, a higher occupancy ratio would translate into greater profitability for a concession that covers the same number of kilometres with the same type of vehicle.

According to the available information, occupancy rates vary significantly between public authorities. These differences are a consequence, among other factors, of both the different demand for these services and the quantity and length of the services agreed in the concession contract. Thus, occupancy is higher in state concessions than in any of the regional concessions analysed.

In addition to occupancy, it is important to analyse the revenue received by the concessions for each passenger-kilometre transported, which is derived both from the fare paid by the passenger and from transfers made by the public authorities to compensate for a service's lack of profitability. As shown in Table 10, the regional concessions analysed receive higher revenue per passenger-kilometre than state concessions.

The total revenue per vehicle-kilometre of the concessions, which shows the concession holder's remuneration per unit of output offered, is also analysed. As can be seen in Table 10, the differences between regional and state concessions are mitigated when considering revenue per vehicle-kilometre. In turn, greater heterogeneity is observed between the Autonomous Communities.

Finally, it is interesting to analyse the degree of concession revenue concentrated in each public authority. Table 11 shows the number of concessions accounting for 50% and 75% of total revenue in each public authority, as well as the Herfindahl-Hirschman market concentration index (HHI)¹⁴⁴ calculated in terms of

¹⁴³ Occupancy represents the average number of passengers carried by each vehicle over one kilometre of the route, and is calculated by dividing the total number of passenger-kilometres travelled by the total number of vehicle-kilometres travelled over a year.

¹⁴⁴ The Herfindahl-Hirschman Index (HHI) measures the degree of concentration of market players, and is calculated as the sum of all market shares of the players squared, so that it ranges from 0 to 10,000, where the latter corresponds to a monopoly.

revenue for the concessions in each public authority.¹⁴⁵ Although the concession system prevents the existence of competition in the market between the different concession holders, this index enables us to analyse the extent to which revenues are concentrated per concession in each public authority.

The available data show that most of the revenue tends to be concentrated in a relatively small number of concessions. Despite this, the degree of concentration remains at low or moderate levels in most of the public authorities.¹⁴⁶ Certain Autonomous Communities, however, show high levels of concentration.¹⁴⁷

¹⁴⁵ To calculate the index, each of the concessions in the various local authorities has been taken as the base. The index therefore corresponds to the level of market concentration that would result if each of the concessions were operated by a different operator, thus setting the lower limit of market concentration.

¹⁴⁶ For reference, the US Department of Justice considers that an HHI of less than 1,500 reflects a competitive market, an HHI of 1,500 to 2,500 corresponds to a moderately concentrated market, and an HHI of 2,500 or more is a highly concentrated market.

¹⁴⁷ It should be noted that, in the case of Galicia, no information is available for all the concessions in force, so the calculated index does not represent the situation of the entire market. Furthermore, in the case of both Galicia and Murcia, the concentration indices could be lower if revenues from compensation and settlements from the public authorities, for which the data is unavailable, were taken into account, as these tend to be paid to the smaller concessions.

Table 11. Concentration of concession revenues by Autonomous Communities (2019)

CONCENTRATION OF CONCESSION REVENUES, BY AUTHORITY (2019)				
2019	Nº concessions	Top 50% Revenues	Top 75% Revenues	HHI ¹
Andalusia ²	n.d.	n.d.	n.d.	n.d.
Aragon ²	n.d.	n.d.	n.d.	n.d.
Asturias	55	4	11	862
Balearic Islands ³	28	4	8	945
Canary Islands	11	1	2	4,778
Cantabria	28	3	4	1,768
Castile and Leon	223	13	36	310
Castile-La Mancha ²	n.d.	n.d.	n.d.	n.d.
Catalonia ⁴	132	9	22	473
Community of Madrid	36	8	16	516
Valencian Community	70	4	10	919
Extremadura	47	3	8	1,090
Galicia ⁵	22	2	3	2,905
La Rioja	16	2	5	2,193
Murcia ⁶	31	2	5	2,718
Navarre	36	4	9	998
Basque Country ⁷	11	2	4	1,838
GSA	82	8	17	453

Source: Compiled by author with data from the MITMA and the General Directorates of Transport of the Autonomous Communities.

Note: ¹ The Herfindahl-Hirschman Index (HHI) measures the concentration of operators (in this case, concessions) in the market, and is calculated as the sum of all operators' market shares squared. ² Andalusia and Aragon did not reply to the CNMC's request. No annual data is available for Castile-La Mancha. ³ No data for Mallorca for 2019. ⁴ The data for Catalonia does not include information on subsidies and compensation as this information is not available per concession. Revenue data for Tarragona not available. ⁵ The data for Galicia does not include concessions tendered in 2017 (XG 500-549). Galicia has also not reported information on subsidies and compensation granted to concession holders. ⁶ Murcia has not reported information on subsidies and compensation granted to concession holders. ⁷ Gipuzkoa data not available.

3.3.4. Public authority costs of the concession system and the impact of COVID-19

3.3.4.1. Compensation for the operating deficit and concession revenue structure

The previous section analysed the heterogeneity of the concessions in the national and regional systems. The diversity in terms of number of passengers carried, occupancy ratios, and revenue implies the coexistence of concessions with high levels of revenue and high profitability possibilities, together with other concessions with low demand and lower viability prospects.

In the latter case, the public authorities can guarantee the provision of the service by merging unprofitable concessions with others that are profitable, financing them through cross-subsidies. This is the situation for state concessions and some regional concessions. However, it is sometimes not possible to unify services without exceeding the logical territorial scope of the concession or the regional jurisdiction of the corresponding authorities. In these cases, after analysing the need to provide the corresponding service, the public authorities may establish a Public Service Obligation (PSO), entrusting an operator with the provision of the service in exchange for compensation. This is the current situation in a large number of Autonomous Communities, which must compensate the operators of loss-making concessions.

Compensating the operating deficits of loss-making concessions involves a cost for the public authorities that can represent a substantial fraction of the market. Table 12 shows the information available on the total compensation paid by public authorities to concession holders in 2019, as well as the fraction this represents of the concession holders' total revenue.

Table 12. Compensation for operating deficit, by Autonomous Communities (2019)

COMPENSATIONS AND TRANSFERS, BY AUTHORITY (2019)			
Authority	Compensations (€)	% Total revenues	Population density ¹
Andalusia ²	n.d.	n.d.	97
Aragon ²	n.d.	n.d.	28
Asturias	17,477,721	35%	96
Balearic Islands ³	7,653,381	17%	235
Canary Islands	25,519,968	26%	292
Cantabria	1,525,136	15%	110
Castile and Leon	12,481,667	26%	25
Castile-La Mancha ²	n.d.	n.d.	26
Catalonia ⁴	29,079,505	15%	242
Community of Madrid	0	0%	845
Valencian Community	3,310,874	8%	217
Extremadura	3,986,132	47%	26
Galicia ⁵	n.d.	n.d.	91
La Rioja	2,589,224	53%	63
Murcia ⁵	n.d.	n.d.	134
Navarre	2,322,207	15%	64
Basque Country ⁶	90,071,976	70%	307
GSA	0	0%	n.a.

Source: Compiled by author with data from the MITMA and the General Directorates of Transport of the Autonomous Communities.

Note: ¹ Population density data in terms of inhabitants per km². 2020 population data from INE(2021b) , surface area data from the National Geographic Institute(2021). ² Andalusia and Aragon did not reply to the CNMC's request. No annual data is available for Castille-La Mancha. ³ No data is available for Mallorca for 2019. ⁴ Collection data for Tarragona is not available, so the percentage of compensation over total revenue is overestimated for Catalonia. ⁵ Galicia and Murcia did not report information on subsidies and compensation granted to concession holders. ⁶ Gipuzkoa data not available.

On the other hand, it is useful to compare the collection obtained from travellers per vehicle-kilometre with the total income per vehicle-kilometre of the concession holders, once the transfers received from the Public authorities have been included. These transfers include both the compensation analysed in the

previous table and other income from the public authorities.¹⁴⁸ This allows us to see how much of the concession holder's revenue is paid by the users and how much by the public authorities. By expressing unit revenues in terms of vehicle-kilometres, it is possible to compare the revenues of the regional operators per unit of offer produced, regardless of vehicle occupancy. Table 13 shows these two ratios for the available public authority database, the representativeness of which corresponds to that indicated in Table 8.

¹⁴⁸ In addition to compensation for the provision of PSOs, total revenue includes compensation paid to contractors for participation in regional fare integration schemes, or for the application of discounts to user groups in line with the transport policies of the Autonomous Communities. In this way, the contractor is compensated for the lower revenue per passenger/km that it may receive as a result of these policies.

Table 13. Concession revenue structure (2019)

REVENUE STRUCTURE OF THE CONCESSIONS (2019)		
Authority	Fare revenues ¹ / vehicle-km	Total revenues ² / vehículo-km
	€/veh-km	€/veh-km
Andalusia ³	n.d.	n.d.
Aragon ³	n.d.	n.d.
Asturias	n.d.	n.d.
Balearic Islands ⁴	1.7	2.2
Canary Islands	1.5	2.3
Cantabria	0.9	1.1
Castile and Leon	1.0	1.3
Castile-La Mancha ³	n.d.	n.d.
Catalonia ⁵	1.1	n.d.
Community of Madrid	0.3	3.1
Valencian Community	1.6	1.8
Extremadura	0.6	1.1
Galicia ⁶	1.2	n.d.
La Rioja	0.5	1.2
Murcia ⁶	1.3	n.d.
Navarre	1.5	1.8
Basque Country ⁷	1.1	3.7
GSA	1.5	1.5

Source: Compiled by author with data from the MITMA and the General Directorates of Transport of the Autonomous Communities. When preparing the ratios, only those concessions for which there are data for both the numerator and denominator have been taken into account.

Note: ¹ Transport revenue received by the concession holder from direct ticket sales, excluding VAT. ² Total revenue includes income received by concession holders, as well as transfers from the public authorities, excluding VAT. ³ Andalusia and Aragon did not reply to the CNMC's request. No annual data is available for Castille-La Mancha. ⁴ No data is available for Mallorca for 2019. ⁵ Subsidies and compensation data not available per concession. Tarragona collection data not available. ⁶ Galicia and Murcia did not report information on subsidies and compensation granted to concession holders. ⁷ Gipuzkoa data not available.

As shown in Table 13, revenue from vehicle-kilometre collection from regional concessions is lower than that from state concessions in 9 of the 13 Autonomous Communities considered, and higher in the other 4.

When taking into account the inputs from the public authorities, the difference between regional and national unit revenues is reduced in some cases. In these situations, the intervention is justified by the reduced revenues that operators receive from direct ticket sales, as a consequence of the reduced demand in those concessions.

3.3.4.2. The administrative response to the COVID-19 crisis

In 2020, the health crisis and mobility restrictions drastically reduced demand for bus transport and aggravated the sector's need for funding. According to information provided by the INE¹⁴⁹, demand for scheduled bus transport fell by 46% in 2020, with year-on-year reductions of up to 91% in April, but it recovered during the year, ending with a year-on-year reduction of 36% in December.

One of the first measures adopted at state level to alleviate the effects of the restrictions enabled concession holders to obtain economic rebalancing of the contract, either through an extension of the contract for a maximum of 15% of its initial duration, or by modifying the economic clauses of the contract.¹⁵⁰

Despite the above, the response of the Ministry of Transport and the Autonomous Communities to the health crisis focused on two main actions: firstly, a reduction in service offers in order to adapt these to the new demand¹⁵¹; and, secondly, the provision of compensation funds for concession holders.

In this way, the State has distributed a fund of 14 million euros to rebalance state concessions, in accordance with the distribution criteria specified in Royal Decree-Law 26/2020, of 7 July, on economic reactivation measures to deal with the impact of COVID-19 in the areas of transport and housing. Among the Autonomous Communities, the State has distributed a fund of 800 million euros of aid for intercity and metropolitan transport, including trains, buses and the

¹⁴⁹ INE (2021a).

¹⁵⁰ Article 34.4 of [Royal Decree-Law 8/2020](#), of 17 March, on extraordinary urgent measures to address the economic and social impact of COVID-19.

¹⁵¹ Article 14.2c) of [Royal Decree 463/2020](#), of 14 March, declaring a state of alarm for the management of the situation of health crisis caused by COVID-19.

Regional Transport Consortium services in Madrid and the Barcelona Metropolitan Area¹⁵²¹⁵³ (hereafter, the COVID-19 Fund)¹⁵⁴.

Many Autonomous Communities also set up their own aid programmes for regional concession holders, in the form of direct subsidies to compensate them for the deficit incurred or the loss of revenue with respect to 2019.

Table 14 shows the quantities of aid granted or planned to rebalance State and Autonomous Community road passenger transport contracts due to the impact of COVID-19 in 2020. This includes both direct aid granted and compensation for the concession holders' deficit due to compliance with PSOs, which have contributed to mitigating the impact of the crisis. Some of the aid is still being processed, so the amount shown is an estimate of the total; this is indicated in the table by an (e) next to the corresponding amount.

With the available information, the amount of funds mobilised for rebalancing state and regional contracts suggests that the Public Authorities have assumed a large part of the drop in revenues caused by the decline in demand in 2020.

¹⁵² The fund has been distributed amongst all active state concessions, including lapsed or annulled concessions, in order to ensure service continuity. In the case of lapsed contracts, the amount of the subsidy has been reduced by the financial benefits obtained by the concession holder since the expiry of the contract (Article 24 of [Royal Decree-Law 26/2020](#), of 7 July, on economic reactivation measures to address the impact of COVID-19 in the fields of transport and housing).

¹⁵³ Article 24 of [Royal Decree-Law 26/2020](#) of 7 July on economic reactivation measures to address the impact of COVID-19 in the areas of transport and housing. The rebalancing is calculated taking into account the reduction in revenue compared to the previous year, the increase in costs due to the health measures adopted, and the reduction in operating costs due to lower traffic and labour costs.

¹⁵⁴ Article 2.d), Section 2 of [Royal Decree-Law 22/2020](#), of June 16, which regulates the creation of the COVID-19 Fund and establishes the rules regarding its distribution and disbursement.

Table 14. Amount of aid granted to rebalance concessions in 2020

AMOUNT OF AID SUPPORT GRANTED TO REBALANCE CONCESSION CONTRACTS (2020)				
Authority	Covid-19 Aid (€)	PSO Compensations (€)	Total (€)	% Total revenues 2019
Andalusia ¹	46,400,000	n.d.	46,400,000	n.d.
Aragon	9,271,990	n.d.	9,271,990	n.d.
Asturias	13,408,644	1,783,516	15,192,160	30%
Balearic Islands ²	12,004,694 (e)	3,059,823	15,064,517	21%
Canary Islands	27,881,000	27,769,001	55,650,000	56%
Cantabria ³	2,689,451 (e)	n.d.	2,689,451	27%
Castile and Leon	27,454,960	n.d.	27,454,960	57%
Castile-La Mancha	1,806,166	n.d.	1,806,166	n.d.
Catalonia ⁴	31,479,853	50,568,672	82,048,525	38%
Community of Madrid	4,560,000	402,200,000	406,760,000	73%
Valencian Community	16,810,114	5,605,564	22,415,678	51%
Extremadura	292,596	5,239,015	5,531,611	66%
Galicia ⁵	28,459,453	n.d.	28,459,453	235%
La Rioja	238,201	3,312,810	3,551,011	72%
Murcia ⁶	1,795,755	n.d.	1,795,755	8%
Navarre ⁷	1,363,969 (e)	818,190	818,190	5%
Basque Country ⁸	8,147,043	3,523,494	11,670,536	9%
GSA	14,000,000	0	14,000,000	4%

Source: Compiled by author with data from the MITMA and the General Directorates of Transport of the Autonomous Communities.

Note: ¹ Andalusia did not reply to the CNMC's request. Funds allocated. ² Funds allocated for Menorca, Ibiza and Formentera. Funds partially disbursed for Mallorca. To calculate the income in the Balearic Islands, the data of Mallorca for 2018 and of Ibiza, Menorca and Formentera for 2019 were used. ³ Estimated amount of aid corresponding to the second quarter. ⁴ Partially disbursed funds. No collection data is available for Tarragona to calculate 2019 revenues. ⁵ Galicia's 2019 revenue data does not include compensation or subsidies paid by the public authorities. ⁶ Murcia did not respond to the CNMC's request. Amount of aid granted during the state of emergency. No data on compensation or subsidies paid by the public authorities. ⁷ Partially disbursed funds. No estimates are available for PSO compensation for the second quarter. ⁸ Gipuzkoa data is not available. Data on compensation for PSO from the Provincial Council of Bizkaia not available.

3.3.5. The business structure of the sector

Traditionally, the intercity bus transport sector has had an atomised business structure, with a strong presence of family and local companies. The exclusive nature of the concessions, together with the small number of tenders issued since the entry into force of the LOTT, has reduced the expansion possibilities for operators in the sector.

Since the 1990s, the sector has undergone a concentration process marked by company acquisitions and the entry of foreign groups into the capital of the main operators.

One of the main milestones in the process was the acquisition by the ALSA Group of the public company ENATCAR in 1999.¹⁵⁵ ENATCAR was, at that time, the leading operator in the market, having inherited from RENFE the bus concessions that the railway operator had acquired thanks to its right of first refusal granted under the 1947 regulation. As a result of the merger, ALSA, then the second largest operator, became the leading group in the sector¹⁵⁶, a position it would consolidate after acquiring Continental Auto in 2007¹⁵⁷, which at that time was the second largest operator in the market.

In parallel, in 2002, the AVANZA Group emerged as a result of the merger of Auto Res, another of the sector's major operators, with Tuzsa and Vitrasa.¹⁵⁸

In these years, the sector also attracted the attention of foreign transport groups. The first to enter the market was the Arriva Group, which today belongs to the German rail operator Deutsche Bahn, which bought up several regional concession holders in Galicia in 1999, in Mallorca in 2002, and in the Community of Madrid in 2007.¹⁵⁹ This was followed by the leading British bus operator, National Express Group, which acquired the ALSA Group in 2005.¹⁶⁰ A year later, Grupo Avanza was acquired by the British private equity fund Doughty Hanson¹⁶¹ and since 2013 it has been part of the Mexican mobility group ADO.¹⁶²

¹⁵⁵ This operation was analysed by the Tribunal for the Defence of Competition (Tribunal de Defensa de la Competencia; TDC) in merger case C 45/99 ALIANZA BUS/ENATCAR, suggesting its authorisation subject to conditions. The operation was authorised by Council of Ministers Agreement of 14 April, 2000, subject to the following conditions: (i) that ALSA refrain from acquiring new state concessions during the 5-year period; (ii) that it refrain from bidding for new concessions, both state and regional, during the 5-year period; and (iii) that it transfer its shareholdings in the company ANSA, jointly controlled with the Continental Auto Group.

¹⁵⁶ TDC (1999, p. 43), p. 43.

¹⁵⁷ Operation analysed by the National Competition Commission (Comisión Nacional de la Competencia; CNC) in merger case C106/07 NATIONAL EXPRESS/CONTINENTAL AUTO/MOVELIA. The CNC authorised the merger unconditionally, although it warned of the need to ensure effective competition in bankruptcy proceedings.

¹⁵⁸ Servicio de Defensa de la Competencia (2006), p. 3.

¹⁵⁹ TDC (2007), p. 53.

¹⁶⁰ The transaction was analysed and tacitly authorised by the TDC in its Report N/05091 NEG / GTI / TURYEXPRESS /DABLIU.

¹⁶¹ The operation was analysed and tacitly authorised by the Spanish Competition Authority in its Report N/06127 DOUGHTY HANSON / AVANZA.

¹⁶² Expansión, news item from August 21, 2013 ([link](#)).

The injection of foreign capital into national operators enabled them to finance their expansion by acquiring smaller concession holders. As a result of these acquisitions, the market concentration increased substantially in the years prior to the initiation of state tenders, in 2007. However, since then, market concentration has remained at stable levels (see Table 15).¹⁶³ With the information available on the state market, at the end of 2019 ALSA had an estimated share in the total Spanish concession market of 30% in terms of total revenues, double the share of its second main competitor, AVANZA (see Table 15).¹⁶⁴

Table 15. Business structure of the scheduled intercity bus transport sector (2019)

BUSINESS STRUCTURE OF SCHEDULED GENERAL-USE INTERCITY BUS TRANSPORT ¹ (2019)				
Group	Nº concessions	Nº buses	Total revenues (€ millions)	Market share (revenues)
ALSA	96	1,245	[400 - 500]	[25 - 35]%
AVANZA	24	936	[200 - 300]	[10 - 20]%
ARRIVA	17	362	[50 - 150]	[0 - 10]%
GRUPO RUIZ	3	299	[50 - 150]	[0 - 10]%
INTERBUS	15	236	[50 - 150]	[0 - 10]%
GLOBAL SU	1	346	[50 - 150]	[0 - 10]%
SAMAR	13	311	[50 - 150]	[0 - 10]%
GRUPO MOVENTIS	12	48	[0 - 50]	[0 - 10]%
AISA	4	97	[0 - 50]	[0 - 10]%
MONBUS	26	154	[0 - 50]	[0 - 10]%
GRUPO ACHA MOVILIDAD	2	83	[0 - 50]	[0 - 10]%
JULIAN DE CASTRO	3	90	[0 - 50]	[0 - 10]%
SAGALES	36	0	[0 - 50]	[0 - 10]%
VECTALIA	12	0	[0 - 50]	[0 - 10]%
TRANSABUS BALEAR	5	265	[0 - 50]	[0 - 10]%
REST	644	2,533	[200 - 300]	[10 - 20]%
TOTAL AVAILABLE¹	913	7,005	1,483.3	100%
2019 HHI Index	1,260			
2007 HHI Index²	1,270			

Source: In-house estimation using data from MITMA and the General Transport Directorates of the Autonomous Communities. The information presented in the table refers only to the data on scheduled bus passenger transport concessions supplied by those Autonomous Communities

¹⁶³For ease of comparison, Table 15 is an update of Table 7 published in Merger Case C106/07 National Express/Continental Auto/Movelía (TDC, 2007, p. 44).

Information on the Autonomous Communities that responded to the CNMC's request for information.¹⁶⁴ Andalusia and Aragon did not reply to the request. 2019 data from Castile-La Mancha not available. In 2006, these Autonomous Communities accounted for 15% of total revenue and 19% of passenger-kilometres of the state and regional concessions (CNC, 2008, p. 16). Revenue data is not available for Mallorca, Tarragona and Gipuzkoa. The data for Galicia does not include concessions tendered in 2017 (XG 500-549).

that responded to the request for information and does not include the revenue that operators receive from other sources. The representativeness of the available information corresponds to the percentages indicated in Table 8. Information on total revenues and market share has been replaced by ranges to maintain the confidentiality of the specific values.

Note: ¹ Andalusia and Aragon did not reply to the CNMC's request. Data from Castile-La Mancha not available. In 2006, these Autonomous Communities accounted for 15% of total revenue and 19% of passenger-kilometres of the state and regional concessions (CNC, 2008, p. 16). Revenue data is not available for Mallorca, Tarragona and Gipuzkoa. The data for Galicia does not include concessions tendered in 2017 (XG 500-549). ² 2007 HHI index reported in the economic concentration file C106/07 (TDC, 2007, p. 44).

In recent years, the main operators have increased their presence in the Autonomous Communities by purchasing several smaller regional concession holders. The ALSA Group has acquired control of operators in Galicia (Cal Pita, 2018¹⁶⁵), the Canary Islands (Gumidafe, 2019¹⁶⁶) and, recently, Aragon (Ágreda Bus, 2020¹⁶⁷), while the Avanza Group took control of the Basque operator Grupo Pesa in 2019¹⁶⁸.

Table 16 shows the geographical distribution of the companies in the sector, including the top two operators in each Autonomous Community, and the HHI index in terms of estimated revenue for each Autonomous Community, according to the information available from the information request. The representativeness of the available information considered is presented in a separate column.

It is worth noting the high degree of concentration in the regional markets, where the first two operators often account for more than half of the revenue. As a consequence, the corporate HHI indices are substantially higher than those calculated for concessions, shown in Table 11 of Section 3.3.3.2. Therefore, of the 15 public authorities considered, 11 present indices higher than 2,500.

In addition to the main state operators (ALSA, AVANZA and ARRIVA), within each Autonomous Community, there are business groups formed through the acquisition or merger of local companies, such as Moventis and Sagalés in

¹⁶⁵Cadena Ser, news item from July 9, 2018 ([link](#)).

¹⁶⁶ALSA, press release of November 21, 2019 ([link](#)).

¹⁶⁷EI Economista, news item from January 31, 2020 ([link](#)).

¹⁶⁸The operation was analysed by the CNMC in File C/1043/19 AVANZA/GRUPO PESA(Comisión Nacional de los Mercados y la Competencia, CNMC, 2019b) and authorised in the first phase.

Catalonia, Vectalia in the Autonomous Community of Valencia, Transabús Balear in the Balearic Islands, and Global Salcai-Utinsa in Gran Canaria.¹⁶⁹

¹⁶⁹ The merger of Salcai and Utinsa was approved following the annulment by the Supreme Court of the Council of Ministers' agreement of 6 October, 2000, in its ruling of 1 April, 2002. This agreement had declared the operation inadmissible at the request of the Tribunal de Defensa de la Competencia in the economic concentration case C 56/00 SALCAI/UTINSA (TDC, 2000).

Table 16. Geographical distribution of scheduled transport companies (2019)

GEOGRAPHICAL DISTRIBUTION OF SCHEDULED BUS TRANSPORT OPERATORS				
Authority	HHI ¹ (revenues)	% Observ. (nº concessions)	Operators	Share (revenues)
Andalusia ²	n.d.	n.d.	n.d.	n.d.
			n.d.	n.d.
Aragon ²	n.d.	n.d.	n.d.	n.d.
			n.d.	n.d.
Asturias	4,267	100%	ALSA	[60 - 70]%
			PULLMANS LLANEZA	[0 - 10]%
Balearic Islands ³	1,647	100%	TRANSABUS BALEAR	[20 - 30]%
			ARRIVA	[10 - 20]%
Canary Islands	4,778	100%	GLOBAL SU	[60 - 70]%
			ARRECIFE BUS	[10 - 20]%
Cantabria	7,355	100%	ALSA	[80 - 90]%
			AUTOBUSES PALOMERA	[0 - 10]%
Castile and Leon	1,024	100%	LINECAR	[10 - 20]%
			ALSA	[10 - 20]%
Castile-La Mancha ²	n.d.	n.d.	n.d.	n.d.
			n.d.	n.d.
Catalonia ⁴	1,531	83%	GRUPO MOVENTIS	[30 - 40]%
			SAGALES	[10 - 20]%
Community of Madrid	2,779	100%	AVANZA	[20 - 30]%
			ALSA	[10 - 20]%
Valencian Community	2,535	100%	VECTALIA	[30 - 40]%
			AVANZA	[20 - 30]%
Extremadura	1,044	100%	MIRAT	[10 - 20]%
			LEDA	[0 - 10]%
Galicia ⁵	5,736	34%	ARRIVA	[70 - 80]%
			EMPRESA FREIRE	[10 - 20]%
La Rioja	7,151	100%	JIMENEZ	[80 - 90]%
			RIOJACAR	[10 - 20]%
Murcia ⁶	3,279	100%	TTE. VIAJEROS MURCIA	[40 - 50]%
			INTERBUS	[0 - 10]%
Navarre	3,930	100%	ALSA	[50 - 60]%
			LA ESTELLESA	[10 - 20]%
Basque Country ⁷	2,705	50%	ALSA	[40 - 50]%
			AVANZA	[20 - 30]%
GSA	4,039	100%	ALSA	[60 - 70]%
			AVANZA	[10 - 20]%
Total available	1,260	91%	ALSA	[30 - 40]%
			AVANZA	[10 - 20]%

Source: In-house estimation using data from MITMA and the General Transport Directorates of the Autonomous Communities. The information presented in the table refers only to the data on scheduled bus passenger transport concessions from Autonomous Communities that responded to the request for information and does not include the revenue that operators receive from other sources. The representativeness of the available information corresponds to the percentages indicated in Table 8.

Note: ¹ The Herfindahl-Hirschman Index (HHI) measures the degree of market operator concentration and is calculated as the sum of all operators' market shares squared. ² Andalusia and Aragon did not reply to the CNMC's request. No annual data is available for Castille-La Mancha. ³ No data for Mallorca for 2019. ⁴ The data for Catalonia does not include information on subsidies and compensation as this information is not available per concession. Revenue data for Tarragona not available. ⁵ The data for Galicia does not include concessions tendered in 2017 (XG 500-549), so market shares are not representative. Galicia has also not reported information on subsidies and compensation granted to concession holders. ⁶ Murcia has not reported information on subsidies and compensation granted to concession holders. ⁷ Gipuzkoa data not available.

4. ANALYSIS OF THE CONCESSION SYSTEM FROM THE PERSPECTIVE OF COMPETITION AND EFFICIENT ECONOMIC REGULATION

Having described the evolution and current situation of scheduled interurban bus concessions, this section analyses the main competition restrictions existing in the market, which distort the operation of the concession system and prevent the advantages derived from competition from being exploited. Two main types of restrictions have been identified, arising, firstly, from a poor tender specification design and, secondly, from inadequate management of the concessions by the authorities. Finally, the limitations intrinsic to the concession system itself are analysed.

4.1. Constraints in the design of tender specifications

One of the main lines of analysis concerns the design of the tender specifications. These determine the competition conditions in force in the tendering process for the concessions that are put out to tender and, therefore, the efficiency of the concession system. It should be remembered that the concession system involves the formation of temporary monopolies, so that the existence of adequate competition for the concession is essential in order to limit the monopolist's market power.

As explained in Section 3.2.2, since the MITMA began the process of renewing state concessions for scheduled intercity buses in 2007, on several occasions the CNMC has had the opportunity to analyse the terms and conditions of the state concessions for scheduled intercity buses.¹⁷⁰ The reports drawn up by the Commission highlight the competition restrictions contained in the State's tender documents.

As the tendering process progressed, the MITMA introduced a series of amendments to the specifications, sometimes mitigating the problems identified and, on other occasions, introducing new restrictions. In turn, the tenders issued by the various Autonomous Communities from 2010 onwards were based on MITMA's experience, adapting this to the reality of the service in their regions.

This section analyses the main elements contained in the state and regional specifications for the most recent tenders, from the standpoint of competition and efficient economic regulation.

¹⁷⁰ CNC (2008), CNC (2010a) and CNMC (2014), as well as the 2018 Madrid-Toledo-Piedrabuena tender (see CNMC 2018 Report).

4.1.1. Contract size and division into lots

Public procurement rules¹⁷¹ require that, whenever the nature or subject matter of the contract so permits, provision must be made for the separate awarding of each part of the contract, by dividing it into lots, failing which the reasons for the decision must be justified. The lack of division into lots is therefore an exception to the general rule, and this must be duly justified.

Despite the above, in many cases the different routes covered by the contracts are aggregated as part of a single concession without adequate legal or economic justification. The result of this operation is a larger concession, which, as will be seen in Sections 4.1.5 and 4.1.6, involves higher solvency requirements for bidders, making it more difficult for smaller bidders to submit offers and restricting competition for the concessions.¹⁷²

Thus, the specifications of the state concessions tendered from 2018 onwards state, in this respect, that 'The exclusive character of the services defined in this contract precludes, by their very nature, the independent awarding of each part of the service by means of a division into lots.' Accordingly, the lack of division into lots is justified by the impossibility of separating the services covered by the contract and guaranteeing the exclusivity of the operators of the resulting concessions, due to the concurrence of routes.

However, the tender specifications do not indicate the reasons that prevent the design of non-overlapping routes that could be operated separately. For example, the VAC-213, which runs between Santander, Bilbao, Valencia and La Manga, could be divided into several non-overlapping lots that would separately cover the routes between Santander-Bilbao and Valencia, and between Valencia and La Manga, without the MITMA justifying the need to integrate these routes.¹⁷³

¹⁷¹ Article 99.3 of Law 9/2017, of 8 November, on Public Sector Contracts, transposing into Spanish law the Directives of the European Parliament and of the Council 2014/23/EU and 2014/24/EU, of 26 February, 2014 (LCSP).

¹⁷² In this regard, the Catalan Competition Authority (Autoridad Catalana de la Competencia; ACCO) asked the Barcelona Metropolitan Area (Àrea Metropolitana de Barcelona; AMB) to withdraw two tenders for urban transport services, with an estimated value of 603 million ([Ref. LA 6/2020](#)) and 1 billion euros ([Ref. LA 7/2021](#)), on the grounds that they were deemed anti-competitive. In both cases, contracts created by merging several existing services were put out to tender, which, together with excessive technical expertise requirements, restricted competition for the contracts.

¹⁷³ This service has been tendered twice, in 2009 and in 2018. The first tender was annulled by the Supreme Court ruling of 2 February, 2015, while the second was annulled by the TACRC in its Resolution No. 742/2018.

Finally, the lack of justification for the absence of division into lots is even more evident in cases where the public authorities decide to combine services previously covered by different concessions under a single concession, highlighting the fact that these can actually be operated separately. This is the case of the two most recent services tendered by the MITMA, but also of a large number of regional concessions, where the public authorities have substantially reduced, or plan to reduce, the number of contracts to be tendered.¹⁷⁴¹⁷⁵ Although most regional operations respond to the need to update a concession map that has remained unchanged for decades, to adapt it to current demand and rebalance contracts, these circumstances must be duly accredited in the tender documents, so that these objectives are weighed against the harm to competition caused by an increase in the size of the contracts. In this respect, it would be advisable for the MITMA and the regional authorities to ask the competition authorities for a report on the impact of these operations prior to the publication of the tender specifications.¹⁷⁶

4.1.2. Concession duration

Concession duration represents the most important regulatory barrier to market entry, as the exclusivity of the contract prevents competition from other operators until the end of the contract. As the CNMC has previously pointed out, the duration of the contract must strike a balance between the recovery of the investments to be made by the contractor and the need to tender the services periodically, to ensure that at all times users benefit from the most advantageous fares and service frequencies.¹⁷⁷ In this respect, it should be borne in mind that investments in the fleet do not represent sunk costs, as the vehicles can be re-

¹⁷⁴ The service between Madrid-Toledo and Piedrabuena, last tendered on 16 December, 2019, with file code AC-CON-04/2019, unifies the routes in concessions VAC-023 Madrid-Toledo and VAC-152 Madrid-Piedrabuena. The service between Valladolid, Soria and Zaragoza, put out to tender for the last time on the same day, with file code AC-CON-03/2019, unifies concessions VAC-076 Soria-Zaragoza and VAC-145 León-Zaragoza.

¹⁷⁵ In the Basque Country, the Provincial Council of Álava reduced the number of concessions from 18 to 6, following the tenders launched between 2015 and 2019; and in Bizkaia from 8 to 6 with the 2010-2014 tenders. In Mallorca, the number of concessions fell from 20 to 3 following the tendering process on 25 September, 2018, based on the island's main tourist areas. In Navarre, the 37 linear concessions will have been reduced from the existing total to 10 zonal concessions by the end of the current tendering process. In Aragón, the current 135 concessions will be reduced to 19 zonal concessions in the new map; in Castile and León, from 148 to 80; in the Valencian Community, from 89 to 39; and in Murcia, from 35 to 10.

¹⁷⁶ CNC (2008, p. 49), CNC (2012, p. 23) and CNMC (2017, p. 26).

¹⁷⁷ CNC (2008, p. 39), CNC (2010c, p. 22) and CNMC (2014, p. 11).

allocated to other concessions or market segments once the concession has expired.

The excessive duration of concession contracts is one of the main obstacles to market competition, impeding the benefits for users and public authorities that accrue from the regular renewal of concessions.¹⁷⁸ Moreover, longer contract durations increase the risk of "regulator capture" by prolonging the relationship between the regulator and the regulated party.

Finally, as discussed in Section 4.3.2.2, the duration of the contract affects the rigidity of the concession system by restricting the capacity of the service to adapt to changing demand. The nature of the concession system implies that any substantial modification to a contract must be subject to a new tender¹⁷⁹, to avoid the operator appropriating the monopoly surplus to the detriment of the user. This limits the capacity of the concession to be adapted to unforeseen changes in demand, introducing a dynamic inefficiency in the concession system, which becomes greater the more uncertain the forecasts in the specifications and, therefore, the longer the duration of the concession.

Current procurement legislation indicates that the duration of public contracts must be established on the basis of objective economic parameters, "*taking into account the nature of the services to be provided, the characteristics of their financing and the need to ensure that they are regularly put out to tender*".¹⁸⁰ In this sense, the maximum duration of ten years imposed by European legislation for public bus transport service contracts¹⁸¹ should be understood as a maximum, meaning that it does not necessarily have to be exhausted.

The CNMC welcomes the MITMA's progressive reduction in contract duration, which has been set at less than ten years for tenders launched in 2018 and beyond. However, many of the recent regional tenders¹⁸² do not contemplate this

¹⁷⁸ CNC (2008), p. 39-42.

¹⁷⁹ The limits to the supervening modification of the concessions are analysed in Section 3.1.2 The state legal framework.

¹⁸⁰ Article 29 of Law 9/2017, of November 8, on Public Sector Contracts.

¹⁸¹ Article 4.3 of Regulation 1370/2007.

¹⁸² Since 2016, all tenders awarded by Castile-La Mancha, Galicia and Mallorca have a duration of ten years. Aragon and the Valencian Community will soon renew their concession map by tendering contracts with a homogeneous duration of ten years, in accordance with the approved operating projects. Extremadura, on the other hand, launched an emergency call for tenders for its services for a period of 20 months, to allow it to conclude the renewal of the concession map. Other Autonomous Communities have tendered concessions with terms of less than ten years, although these continue to be in the minority: 2 concessions in Andalusia (2-3 years), 1 in Menorca (4 years), 1 in Catalonia (8 years), 1 in the Valencian Community (5 years), 2 in Navarre (6 years), and 3 in the Basque Country (7-8 years).

possibility, adopting ten-year terms, irrespective of the asset depreciation conditions.

By way of example, all recently tendered concessions in Galicia¹⁸³ have a total duration of ten years, with this term applying to both large concessions connecting the Galician provincial capitals and small rural concessions, which are to be financed through subsidies.

Table 17 shows the operating conditions envisaged in the operating plans for two of these concessions¹⁸⁴, both of which have a surplus, but with markedly different sizes. Thus, concession XG-817 has to cover almost seven times as many kilometres with almost seven times as many vehicles as concession XG-623, but in return it is expected to receive ten times more demand and revenue. As a result, although the revenue per passenger-kilometre transported is equivalent for both concessions, the XG-817 concession will receive greater revenue per vehicle and per kilometre travelled, so that it will be in a better position to amortise vehicle investment. It could be supposed that concession XG-817, which connects the main Galician cities and has considerable traffic, could have a shorter duration, so that its users would benefit from the resulting increased competitive pressure.¹⁸⁵

Table 17. Comparison of operating conditions for two concessions in Galicia

COMPARISON OF OPERATING CONDITIONS FOR TWO CONCESSIONS IN GALICIA									
Id	Operating conditions			Estimated operating data			Key performance ratios		
	Duration	Vehicles	Max. Age	Passenger-km	Vehicle-km	Estimated revenues	Revenues/passenger-km	Revenues/vehicle-km	Revenues/vehicle
Name	Years	Nº	Years	Thousands	Thousands	Thousand €	€/pass-km	€/veh-km	€/veh
Lugo-Orense-Vigo (XG-623)	10	9	16	15,393	1,039	1,052	0.07	1.01	116,923
Eje atlántico (XG-817)	10	62	16	160,493	7,242	10,805	0.07	1.49	174,281

Source: Compiled by author with data from Contratos Públicos de Galicia.

In this sense, the tendency of the Autonomous Communities to set a uniform duration for all concessions is a result of the rigidity of the concession system

¹⁸³ Between 2019 and 2020 Galicia put out to tender and awarded a total of 133 new contracts, in lots of 100 contracts (lots XG-600 to XG-743), 4 contracts (lots XG-603, XG-630, XG-641 and XG-686), and 29 contracts (lots XG-800 to XG-891).

¹⁸⁴ The referral of the relevant information to the Operating Projects of each concession makes it difficult to carry out a systematic analysis of the lots tendered.

¹⁸⁵ The service covers, among others, the urban centres of A Coruña, Lugo, Ourense, Pontevedra, Ferrol, Santiago de Compostela and Vigo.

when it comes to adapting services to transport demand. The difficulties in substantially modifying existing concessions and the prohibition of route concurrence if these belong to different concessions mean that it is easier to redesign the concession map once all the concessions have expired, so that new services are not conditioned by existing ones. The setting of a uniform ten-year term would correspond to the need to ensure the amortisation of assets in the concessions with the lowest demand, where a shorter term is not possible. In this way, the need to guarantee the service on these routes translates, as a result of the rigidity of the concession system, into inefficiency for the other concessions, in terms of less competitive pressure and more infrequent updating of services.

4.1.3. Obligation to assign vehicles

Both state and regional contracting authorities require service operators to assign a certain number of vehicles to the concession, although not all require the exclusive use of the assigned vehicles. Usually, the number of vehicles required corresponds to the number of vehicles used in the current operations. In addition, the tender specifications usually impose maximum limits on the age of the fleet assigned.

The CNMC considers that the obligation to assign a minimum number of vehicles to the concessions is not necessary, insofar as the specifications guarantee the contractor will provide a minimum frequency and number of services.¹⁸⁶ On the other hand, it may lead to significant competition and efficiency constraints in the provision of the service:

- Firstly, the obligation perpetuates historical inefficiencies and prevents operators from formulating more attractive proposals based on a more efficient use of vehicles, increasing costs for public authorities and users.
- Secondly, the obligation to use assigned vehicles for related services disadvantages smaller operators, which have less flexibility in terms of organising their vehicle fleet, and new entrants *vis-à-vis* the incumbent operator, which has more information on the number of vehicles actually needed to provide the service and can continue to use these to provide related services according to the organisation it has developed during the previous contract.
- Thirdly, the number of vehicles assigned to the concession has a bearing on the technical solvency requirements to be met by bidders, which can make it

¹⁸⁶ CNMC (2014), p. 13.

difficult for operators to compete, reducing the competitive pressure for the contract.

In terms of vehicle age, the restriction must be justified by a reason of general interest, such as traffic safety, or market failure, such as pollution. Thus, the tender documents must specify the criteria for determining the maximum age of the contracts, based on objective economic parameters, such as the amortisation derived from the increased use of the vehicles, or their emissions.¹⁸⁷

The CNMC welcomes the fact that the specifications for the state tenders called in 2019 have eliminated the possibility of continuing to use the vehicles of the previous concession holder, even if they did not meet the age requirements set out in the specifications, as this allowed the extraction of regulatory rents through the sale of the vehicles and asymmetrically benefited the incumbent.

4.1.4. Personnel obligations

State and regional specifications usually include two types of staffing provisions:

- The obligation to assign a minimum number of staff to the concession.
- The obligation to be subrogated as an employer to the former contractor's labour relations, including both drivers and other administrative staff assigned to the concession.

The first of these obligations is a labour protection measure that restricts the operator's ability to reorganise the service, making it difficult to reduce labour costs and perpetuating historical inefficiencies. This measure is sometimes supported by the applicable legislation¹⁸⁸, so it is necessary to evaluate the rules from the perspective of efficient economic regulation, given that this measure is not necessary to guarantee the performance of the service.

As regards subrogation, this is another labour protection measure, in this case imposed by the labour legislation in force, through the "Acuerdo marco estatal sobre materias del transporte de viajeros por carretera, mediante vehículos de tracción mecánica de más de nueve plazas, incluido el conductor" [State framework agreement on road passenger transport matters, by means of

¹⁸⁷ CNMC (2014), p. 13.

¹⁸⁸This is the case of the LOTT, which stipulates that the tender specifications must establish "the minimum number of staff that the contractor must assign to the provision of the service" (Art. 73.2 g) LOTT).

mechanically powered vehicles with more than nine seats, including the driver].¹⁸⁹ This framework agreement establishes that the subrogation affects not only the driving staff, provided that they dedicate at least 80% of their time to the concession¹⁹⁰, but also the rest of the staff, regardless of their degree of dedication.¹⁹¹

As the available empirical evidence suggests¹⁹², taking over the staff of the previous concession is a labour protection measure that restricts the concession holder's organisational capacity in labour matters and limits the cost efficiency gains that can be obtained through tenders.

Although Regulation 1370/2007 provides for the possibility of requiring the subrogation of the new contractor¹⁹³, the subrogation obligation contained in the Framework Agreement is too broad, so that a single non-driving employee of the incumbent can be assigned to any of the concessions operated by the incumbent. This is to the advantage of the incumbent concession holder, which has ample scope to attach indirect staff to the concession, forcing competitors to take on more staff than is necessary to provide the service. This increases the costs for these operators and reduces the competitiveness of their offers, in turn reducing the competitive pressure on the incumbent in the tender. It should be noted that the strategic allocation of non-driving staff benefits the incumbent even in the event of losing the tender, as it allows them to rid themselves of the least productive or most senior staff at zero cost.

To avoid this, it is necessary to introduce greater transparency, separating the accounts of public services and the allocation of costs to these, as required by EU regulations for services of general economic interest (SGEI), as set out in the

¹⁸⁹ Published in the BOE through the [Resolution of 13 February, 2015, of the Directorate General for Employment, which registers and publishes the State Framework Agreement on road passenger transport matters, by means of mechanically powered vehicles with more than nine seats, including the driver.](#)

¹⁹⁰ Article 19:4 of the State Framework Agreement on matters concerning the carriage of passengers by road using mechanically powered vehicles with more than nine seats, including the driver.

¹⁹¹ Article 19:5 of the State Framework Agreement on matters concerning the carriage of passengers by road by means of mechanically powered vehicles with more than nine seats, including the driver.

¹⁹² Nash and Wolański (2010).

¹⁹³ Article 4.5 of Regulation 1370/2007.

Regulation¹⁹⁴ itself and in the Altmark judgment of the Court of Justice of the EU (CJEU).¹⁹⁵

The contracting authority¹⁹⁶ could mitigate the anti-competitive effects of the labour regulations by exercising its prerogative to adjust the subrogation requirements of the contract to the new needs of the service, which may have been modified in the new contract put out to tender. This is established by the State Public Procurement Advisory Board (Junta Consultiva de Contratación Pública del Estado; JCCPE) in its report 24/20¹⁹⁷, which states that it is only acceptable to subrogate the contracts of workers who are actually necessary for the provision of the service.

Therefore, the state and regional contracting bodies should interpret Article 19(5) of the State Framework Agreement and the equivalent provisions in the applicable labour legislation restrictively, ensuring that only non-driving personnel actually employed in the concession are allowed to be assigned to that specific concession.

Ultimately, it should be remembered that labour law is not *per se* excluded from the application of competition rules¹⁹⁸, which apply in situations where the incumbent operator strategically uses the assignment of staff solely to restrict competition in tenders.

4.1.5. Accreditation of technical ability or professional solvency

Public authorities usually require a minimum technical or professional solvency from bidders to ensure that they can fulfil the obligations of the contract. In the tender specifications, this usually translates into the need to demonstrate relevant previous experience in the provision of similar services, in terms of the value of

¹⁹⁴ Article 4.5 and Annex of Regulation 1370/2007.

¹⁹⁵ Ruling of the Court of Justice of the EU of 24 July, 2003, in Case C-280/00, Altmark Trans GmbH and Regierungspräsidium Magdeburg v Nahverkehrsgesellschaft Altmark GmbH, involving the Oberbundesanwalt beim Bundesverwaltungsgericht. Preliminary ruling request: Bundesverwaltungsgericht - Germany.

¹⁹⁶ The contracting authority is the body that represents the public authorities in the tendering procedure.

¹⁹⁷ Report of the State Public Procurement Advisory Board on file 24/20, available at the following [link](#).

¹⁹⁸ As stated in EU case law, in the rulings on Albany (judgment of the CJEU of 21 September, 1999, Case C-67/96) and Viking (judgment of the CJEC of 11 December 2007, preliminary ruling in Case C-438/05).

the contract¹⁹⁹, the kilometres travelled²⁰⁰, or the vehicles²⁰¹ or drivers²⁰² used in the operation.

As a selection criterion rather than an award criterion, the technical solvency requirements lead to a reduction in the number of companies that can bid for the tender, which restricts competition in the market. As argued by the CNMC²⁰³, the requirement to demonstrate the bidder's prior experience is a barrier to entry for new operators, since it *"closes the market to operators that have just been established or intend to become established and may be fully capable of providing the services covered by the management contract"*. In this sense, it is necessary to consider whether, given the technical complexity of the service, it is necessary for companies to have prior experience in the provision of the service, or whether this could be accredited through the possession of the vehicles or the hiring of drivers.

In cases where the technical complexity of the service so justifies, it is necessary to design the tender specifications in such a way that the proof of solvency has the least possible impact on competition. In this respect, five elements should be considered which affect the stringency of the selection criterion:

Firstly, the period for which solvency is required must be determined. A period of three years is usually fixed, for which the tenderer has to prove that it has operated transport services with the required characteristics. The more years of experience required, the greater the potential exclusionary effect of the measure on new operators, and it should therefore be considered whether this should be reduced. Moreover, this criterion is easier to prove for scheduled transport operators than for operators in the deregulated market (occasional, tourist or international), as their operations are more stable over time. There would be less distortion if the tender specifications assessed the maintenance of an average

¹⁹⁹ This is the case of the tenders for zonal services launched by the Castile-La Mancha regional government in 2017, or the emergency tenders in Extremadura in 2018.

²⁰⁰ The 5 tenders issued by the Provincial Council of Alava stipulated having provided public urban or intercity transport services for passengers in the last 3 years with a minimum of 80% of the kilometres travelled or 70% of the fleet of the current service. Similarly, Navarre required previous experience in providing services with a minimum number of kilometres and vehicles in tenders for NAV-002 and NAV-003 services.

²⁰¹ This is the case of the state concessions, those of Andalusia, Mallorca, Navarre (NAV-001) and those of the Provincial Councils of Bizkaia and Gipuzkoa.

²⁰² The tenders launched in Galicia between 2019 and 2020 demanded the provision of services with a minimum number of drivers and vehicles equivalent, respectively, to 25% and 50% of those assigned to the concession, over the previous 3 year period.

²⁰³ CNMC (2014), p. 22.

sized operation over the preceding three years, rather than requiring compliance with the requirements in each and every one.

Secondly, the services which are considered relevant for technical solvency should be defined. Too strict a definition, requiring the provision of "scheduled" or "general purpose scheduled" services excludes operators in the deregulated market, who have experience in bus passenger transport and who could exert greater competitive pressure. It is also discriminatory to impose more lenient technical solvency criteria for scheduled transport operators than for other operators.²⁰⁴

Thirdly, it is necessary to reflect on which objective parameters are used to quantify the operator's previous experience. Among the available parameters, vehicle numbers are often used, requiring the operation of a fleet equal to or larger than the one assigned to the tendered service. As argued in Section 4.1.3 above, this requirement reduces the incumbent operator's incentives to optimise the management of its fleet, since the use of a larger number of vehicles allows it to exclude more operators from any future tenders. Moreover, the ability to restrict competition in tenders in this way means that, even if the operator were able to reduce the number of vehicles required to provide the service, it would have no incentive to disclose this to the relevant public authorities, further increasing the costs of monitoring the system.

The above considerations also apply to tenders that require proof of service provision with a minimum number of drivers, as the number of assigned staff has the same potential for manipulation. In this sense, the use of solvency criteria related to the service output²⁰⁵, rather than the inputs used, distorts the incentives of the incumbent contractor to a lesser extent and reduces the asymmetry of information between the contractor and the authorities, as it is more easily verifiable by the latter.

Fourthly, the impact on competition must be considered when setting the minimum threshold or absolute level of experience required. The requirement to have operated services with an *equal or greater* number of vehicles, or with an estimated annual value or number of kilometres *equal to or greater than* the

²⁰⁴ By way of example, the tender specifications for the concession between Ezkerraldea and Meatzaldea, issued by the Provincial Council of Bizkaia, require scheduled bus operators to have a minimum fleet of 74 buses, as opposed to the 92 required of those without experience in this segment. Similarly, the tender specifications for the service between Tolosa and San Sebastian issued by the Provincial Council of Gipuzkoa, which were annulled by the TSJPV in a ruling of 13 October, 2016, required a lower number of vehicles (40) for carriers in the scheduled segment than for the rest (60).

²⁰⁵ Such as the number of passenger-kilometres or vehicle-kilometres of the concession, or its average annual value.

tendered contract is a restriction that prevents operators from accessing larger contracts, thereby slowing down the growth of companies in the sector and consolidating the position of large business groups. Moreover, this is a restriction that aggravates the impact on competition of actions such as the unification of routes, since it prevents operators who could have bid for existing concessions prior to the tender from the bidding process.

The use of this formula may substantially reduce competition in the tendering of the largest concessions. By way of example, with the information available from the request for information made to the MITMA and the Autonomous Communities, at the national level only three operators provide scheduled services with an estimated annual value equal to or greater than that of the largest concession in the sample in terms of annual revenue, the VAC-501 in the Autonomous Community of Madrid. Of these three, one is the incumbent operator.

On the other hand, only five operators at national level provide scheduled services with a combined mileage equal to or greater than the concession with the longest route, the AUTGC-1 in Gran Canaria. In terms of vehicles, only four operators have a number of vehicles (used in scheduled concessions) at their disposal equal to or greater than that of the largest concession, AUTGC-1.

It should be noted that both these concessions, VAC-501 and AUTGC-1, arose as a result of the unification of previous routes, highlighting the importance of justifying these operations.

Fifthly and lastly, it is necessary to take into account the requirements imposed to accredit solvency in the case of participation in temporary joint ventures (TJVs).

Requiring an excessively high level of technical solvency means that smaller companies must join forces in order to meet the requirements. In this sense, specifications that do not permit the solvency of the component companies in a joint venture to be accumulated, but instead require compliance with the requirements by one or all of the members of the joint venture, run the risk of excluding SMEs from tenders and increasing their dependence on larger companies, with which they must reach agreements in order to be able to bid.

Ultimately, the imposition of technical solvency requirements limits the number of operators and restricts competition, the necessity and proportionality of which must be adequately justified.²⁰⁶ It should be emphasised that this is a selection criterion, which is intended to accredit the contractor's capacity to perform the tendered contract, and not an award criterion for selecting the most qualified

²⁰⁶ Art. 74.2 of Law 9/2017, of November 8, on Public Sector Contracts.

operator. Along these lines, it would be advisable to assess whether it is necessary to require prior experience to implement smaller or less complex contracts. It is also worth considering replacing these requirements with dissuasive sanctions in the event of non-compliance, which could include a ban on public procurement, including appropriate contingency plans in the event of service interruption to ensure the continuity of the service, e.g., the designation of a 'last resort' operator among the remaining bidders.

4.1.6. Proof of economic and financial solvency

State and regional contracting authorities require operators to have sufficient economic and financial resources to be able to carry out the contract. In this sense, the specifications usually require that operators have a minimum turnover or capital of their own, in relation to the average annual value of the contract.

As in the case of technical solvency, economic solvency requirements exclude some bidders from the tender procedure and must therefore be justified in terms of necessity and proportionality. In this sense, the requirements must be directly related to the purpose of the restriction. For this reason, solvency requirements requiring a minimum turnover linked to specific activities, such as road passenger transport or scheduled transport²⁰⁷, which are not directly linked to the economic and financial solvency of the tenderer, are not appropriate.

On the other hand, the contracting authority should allow a bidders to accredit their economic solvency in a variety of alternative ways, so as not to discriminate between operators with sufficient economic capacity. In this respect, in addition to the criteria relating to the net worth or turnover of the company, the presentation of financial guarantees or sureties, or the availability of professional risk indemnity insurance, should be assessed. It should be remembered that assessing these alternative means of accrediting solvency is compulsory²⁰⁸ for contracts subject to standardised regulation.²⁰⁹

²⁰⁷ By way of example, the tender specifications for the concessions NAV-001, NAV-002 and NAV-003 in Navarre require a minimum volume of business in the field of public road passenger transport.

²⁰⁸ Art. 86.1 of Law 9/2017, of November 8, on Public Sector Contracts.

²⁰⁹ These are contracts subject to harmonised regulation for service concession contracts with an estimated value of more than 5,350,000 euros (Art. 20.1 of the LCSP) and those envisaged in Section 2 of the LCSP.

Finally, in the case of joint ventures, the contracting body should admit the possibility of accumulating the economic solvency of the members, for the reasons set out in Section 4.1.5 above.

With regard to the most recent state tenders, it is worth highlighting the acceptance of financial guarantees or insurance as proof of solvency. However, Clause 13.5 of the contracts includes a restriction for groups of companies by requiring at least one member of the joint venture to meet each of the economic solvency requirements. This could place these companies at a disadvantage compared to those that present themselves individually, which then only have to prove compliance with one of the listed requirements²¹⁰. In other words, at least one member of the joint venture is required to have a minimum net worth, a minimum turnover and a financial guarantee or civil insurance for a certain amount. This wording²¹¹ raises the economic solvency requirements for joint ventures with respect to the rest of the bidders, thereby discriminating against those bidding under this modality.

4.1.7. Evaluation of the financial offer

The financial offer is made up of the basic financial criteria that the bidder's offer must contain. In the absence of a standard definition of the criteria comprising the financial offer in the national and regional tender specifications, this section analyses the evaluation criteria relating to fares, number of journeys or vehicle-kilometres offered and, where appropriate, those determining the financial compensation to be received from the authorities for the provision of the service. These variables have been chosen for their importance to the end user, in the

²¹⁰ Clause 13.5 of the tender specifications for the services between Madrid-Toledo and Piedrabuena, and Valladolid-Soria-Zaragoza announced in 2019 stipulates the following:

"One of the following three requirements must be met:

- a) The net worth at the close of the last financial year for which the obligation to approve annual accounts is due must not be less than 20 percent of the estimated annual value of the contract.
- b) The annual volume of business, with reference to the best year out of the last three (3) financial years concluded, must be at least 1.5 times the estimated annual value of the contract.
- c) Proof of the existence of a financial guarantee or professional risk indemnity insurance for an amount equal to or greater than the estimated annual value of the contract. (...)

If the bidders participate in the procedure as a group of entrepreneurs, each of the above requirements must be fulfilled by at least one of its members."

In the 2018 tender documents, if the bidders participate in the procedure as a group of entrepreneurs, one of the above requirements must be met by one of the members of the group.

²¹¹ In comparison, the tender specifications issued in 2018 for the equivalent services contained a less demanding wording: "If the bidders participate in the procedure as a group of entrepreneurs, one of the above requirements must be fulfilled by one of its members."

case of fares and journeys²¹², as well as for their direct impact on the cost of providing the service borne by the authorities.

Each of these criteria usually carries a score, which is distributed among the bidders according to a formula, so that the most advantageous offer for users or the authorities receives a higher score. The tender documents usually specify minimum conditions for each criterion, i.e., the maximum fare to be applied or compensation to be paid by the authorities, and a minimum service frequency, which can be improved by the operators, so that offers that do not achieve these minimum requirements are excluded from the process. In turn, the contracting committee²¹³ may decide to exclude abnormally low offers, i.e., those which, in its opinion, are economically unfeasible or will not allow the contract to be fulfilled adequately.

Therefore, when considering the impact on competition of the financial offer assessment, the following aspects need to be taken into account: the total weighting of the financial offer over the total number of award criteria, the maximum and minimum criteria determining which offers are acceptable, and the formula used to discriminate the most advantageous offers.

Firstly, in terms of the weight given to the economic criteria out of the total number of award criteria, it is necessary for these to carry a fundamental weight when assessing the offer. The price, service frequency and compensation to be paid by the public authorities are the objective parameters that best reflect the efficiency of the bidders, as they determine both the basic conditions of the service for the user and the overall cost for the authorities, and should therefore be decisive when choosing the winning bid.

In the case of state tenders, the CNMC takes a positive view of how the weighting of these criteria has evolved, increasing from 15% in 2007 tenders to 60% in the most recent tenders. However, as Table 18 shows, in many of the regional tenders issued, the combined weight of these parameters is below 50%. A greater weighting of these variables would allow the overall evaluation of the offers in these tenders to be more in line with the principles of selecting the most economically advantageous offer, cost control, and safeguarding the free competition that should govern public procurement.²¹⁴

²¹² The tender specifications establish the route and length of the routes that make up the concession, so that the number of kilometres travelled annually (vehicle-kilometres or journeys) is directly related to the frequency of the service.

²¹³ The contracting authority is a collegiate body that assists the contracting body during the tendering process, and in particular in the evaluation of the bids.

²¹⁴ Art. 1 of Law 9/2017, of November 8, on Public Sector Contracts.

Table 18. Score for the economic offer in the latest tenders

EVALUATION CRITERIA FOR THE FINANCIAL OFFER IN THE LATEST CALLS FOR TENDER					
Authority	Nº of tenders	Average weight of the fare	Average weight of trips	Average weight of compensations from the authority	Average weight of the financial offer
	Nº	% total	% total	% total	% total
GSA	2	40%	20%	n.a.	60%
Andalusia	5	37%	10%	n.a.	47%
Castile-La Mancha	3	10%	5%	70%	85%
Extremadura	44	0%	0%	70%	70%
Galicia	129	n.a.	3%	34%	37%
Navarre	3	10%	0%	23%	33%
Valencian Community	1	30%	15%	n.a.	45%
Mallorca	3	n.a.	n.a.	51%	51%
Alava Provincial Council	5	4%	3%	33%	40%
Vizcaya Provincial Council	6	n.a.	n.a.	45%	45%

Source: Compiled by author with data from the MITMA and the General Directorates of Transport of the Autonomous Communities.

Secondly, it is necessary to consider the criteria used to set the maximum fares or compensation and the minimum required service frequencies in the offers. The minimum required service frequencies should be set by the contracting authority based on the minimum services it wishes to guarantee in the towns served. The remaining eligibility criteria (maximum fare and maximum compensation to be received) should be set by referring to the real cost structure of the concession, which must be reliable and up to date, and the actual fare that the incumbent has been applying; "upgrading in quality" and linking to maximum fares set for similar concession blocks is discouraged.²¹⁵

Thirdly, the criteria used to exclude abnormally low offers from the tendering process should be analysed. An excessively conservative abnormality threshold could discourage competitive offers and restrict competition between operators.

The current public procurement rules allow abnormally low bids to be excluded provided that the contracting authority has previously established in the tender specifications the objective criteria that determine which bids are presumed to be abnormal.²¹⁶ In the event that the bid is presumed to be abnormal, the bidder must justify their offer, which may be excluded if the tendering committee

²¹⁵ CNMC (2014), p. 16-17.

²¹⁶ Art. 149.2 of Law 9/2017, of November 8, on Public Sector Contracts.

considers it to be economically unfeasible. Thus, after assessing the bidder's justification, the tendering committee may exclude abnormally low bids, i.e., those which, in its opinion, are economically unfeasible or do not allow for proper performance of the contract.

Although it is not compulsory for scheduled intercity transport contracts²¹⁷, it is common practice²¹⁸ for tender documents to adopt the criteria set out in Article 85 of Royal Decree 1098/2001, of 12 October, approving the General Regulations of the Public authorities Contracts Act (RGLCAP), which establishes guidelines for auctions.²¹⁹

In line with these criteria, and with some exceptions²²⁰, in tenders where more than three offers are submitted, those which are more than 10% from the average of the offers submitted, i.e., which involve reductions in the average fare or compensation to be paid by the authorities of more than 10%, or increases of more than 10% in the schedule frequency, are considered to be abnormally

²¹⁷ According to the interpretation of both the JCCPE (File 119/18) and the TACRC (Resolution no. 1187/2018), Article 149 of the LCSP gives the contracting body the freedom to either establish or not establish criteria for the presumption of abnormality in the specifications. In the event that the specifications do not establish any, Article 85 RGLCAP would only be applied in a supplementary manner to tenders in which price is the sole award criterion, while in tenders with multiple criteria, such as those for regular road passenger transport, it would not be possible to exclude tenders due to their abnormal nature.

²¹⁸ Possible examples are the tenders launched in Mallorca in 2019, in Castile-La Mancha in 2017, in Extremadura in 2018, and those launched in Alava and Bizkaia between 2010 and 2018.

²¹⁹ In public procurement, an auction is a tender in which the price is the sole award criterion.

²²⁰ The wording of Article 85 of the RGCAP states that:

"Bids shall, in principle, be considered to be disproportionate or unreasonable, in the following cases:

1. When a single bidder's offer is lower than the base tender budget by more than 25 percentage points.
2. When two bidders participate, one is more than 20 percentage points lower than the other bid.
3. When there are three bidders, those that are more than 10 percentage points lower than the arithmetic mean of the bids submitted. However, the highest bid shall be excluded from the calculation of this average if it is more than 10 percentage points higher than the average. In any case, a bid more than 25 percentage points lower than the average shall be considered disproportionate.
4. When four or more bidders participate, those that are more than 10 percentage points lower than the arithmetic mean of the bids submitted. However, if among them there are bids that are more than 10 percentage points higher than this average, a new average shall be calculated using only the bids that are not in the aforementioned situation. In any case, if there are fewer than three remaining bids, the new average will be calculated using the three lowest bids."

low.²²¹ In contract specifications that do not adhere to Article 85 RGLCAP, the abnormality threshold may be more demanding.²²²

These thresholds might be inappropriate in the scheduled road passenger transport sector, where companies operate concessions that have not yet been tendered and might therefore be unproductive, which could structurally raise the average fare presented in tenders. This should not be an obstacle to accepting leaner and more competitive offers.

Thus, as Table 19 shows, with the information available for state concessions, 19 of the 47 concessions tendered from 2007 onwards were awarded to bids that, a priori, would have been presumed to be abnormal, according to the above criteria, due to the fare offered, the frequency of service, or both. These concessions were awarded with a mean drop in fares of 12% with respect to the overall average of the offers received and an average frequency increase of 13%; all of these are still operating today, from which it can be deduced that the offers were in fact economically viable.

²²¹ Thresholds of this kind can act as a reference and facilitate collusion between operators.

²²² For example, the tender specifications for services VJA-058 and VJA-400 to 403 in Andalusia, NAV-002 and NAV-003 in Navarre, and services C-01 and LUR-M-05 of the Provincial Councils of Alava and Gipuzkoa reduce the threshold of abnormality for all or part of the award criteria considered, admitting maximum reductions of between 3% and 8%.

Table 19. Winning bids in cases of presumed of abnormality in terms of General State Administration contracts

WINNING BIDS OVER THE ABNORMALITY THRESHOLD IN STATE CONTRACTS				
Contract	Service	Nº bidders	Winner's fare/ Average fare	Winner's trips/ Average trips
VAC-214	Madrid-Sevilla-Ayamonte	6	-16%	1%
VAC-215	Madrid-Córdoba-San Fernando	7	-16%	2%
VAC-216	Madrid-Almería	10	-12%	0%
VAC-222	Madrid-Plasencia	3	-8%	10%
VAC-224	Madrid-Jaraíz de la Vera	5	-12%	19%
VAC-225	Pamplona-Jaca	5	-3%	12%
VAC-226	Madrid-Navamorcuende	3	-4%	18%
VAC-227	Calahorra-Soria	4	-27%	32%
VAC-229	Murcia-Almería	11	-8%	11%
VAC-232	Madrid-Málaga-Algeciras	16	-8%	12%
VAC-234	Irún-Algeciras	12	-15%	19%
VAC-235	Burgos-Zaragoza	7	0%	24%
VAC-236	Badajoz-Murcia	4	1%	17%
VAC-237	Alicante-Cartagena-Murcia	7	-16%	37%
VAC-240	Mérida-Sevilla	11	-27%	14%
VAC-242	Madrid-Aranda de Duero-El Burgo de Osma	10	-13%	-4%
VAC-244	Madrid-Molina de Aragón-Teruel-Valencia	5	-15%	-3%
VAC-245	Barcelona-Huesca	8	2%	12%
VAC-246	Madrid-Segovia	16	-27%	11%
TOTAL (average)		8	-12%	13%

Source: Compiled by author based on MITMA data. The grounds for the criteria of tender abnormality in the field of public procurement are set out in Law 9/2017, of 8 November, on Public Sector Contracts, transposing into Spanish law the Directives of the European Parliament and of the Council 2014/23/EU and 2014/24/EU, of 26 February, 2014, particularly Article 149.

Based on the above, it is advisable for contracting authorities to reconsider the presumption of bid abnormality in scheduled road passenger transport tenders, in order to adapt them to the current reality of the sector and encourage the formulation of competitive offers based on real data that the authorities are unaware of, given the asymmetry of information between the operators and the authorities. This could also reduce the judicial conflict in tenders and help to generate efficiency.

In turn, when assessing the economic viability of a bid that is presumed to be abnormal, the contracting committee should seek the advice of the specialised technical service.²²³ This should assess the bid in its entirety, taking into account the offer made in the other award criteria. Likewise, when analysing the viability of the bid, it is advisable to take into account the information asymmetries existing between the contracting body and the incumbent operator with regard to the real

²²³ Art. 149.4 of Law 9/2017, of November 8, on Public Sector Contracts.

costs of providing the service, as well as the discretion the latter has when assigning vehicles or personnel to the concession, which can considerably affect the final costs of that particular concession.

Finally, it is necessary to consider the formula used to evaluate the economic offers. The LCSP grants broad discretion to the contracting body when selecting the evaluation formula, provided that the formula is detailed in the specifications, and that it identifies the tender that offers the best value for money.²²⁴

However, there are a number of formula design elements that it is advisable to respect in order to ensure that there is an adequate margin of competition in the award criteria considered:²²⁵

- The most advantageous or economical offer (the one offering the lowest price, or the lowest maximum compensation to be paid by the authorities, or the highest number of service frequencies) should receive the maximum score, and the one offering no improvement over the minimum parameters set out in the tender documents should receive no score.²²⁶ This ensures that all available points are distributed among the bids received, so that the bidders compete for the full range of points. The following table analyses the case of a tender that did not comply with this recommendation.

Formulas for assessing the economic offer: the case of Mallorca's tender specifications
<p>The three lots of road passenger transport services in Mallorca tendered on 25 September, 2018, awarded a total of 51 points to the economic offer, with the aim of minimising the cost of operating the service. The offers were valued according to the following formula:</p> $\text{Achieved score} = 51 \times \frac{CSO_{min} + CTS - CSO_i}{CTS}$ <p>Where CSO_{min} is the lowest Cost of the Service Offered (CSO) among all the bidders, CTS is the Cost of the Tendered Service (the maximum admissible cost in the offers), and CSO_i is the Cost of the Service Offered by bidder i.</p> <p>According to this formula, the operator that offered the lowest CSO (CSO_{min}) would get the maximum score (51 points). However, the bidders who offer the maximum CSO allowed by the specifications (CTS) would receive a positive score, reducing the margin of competition in this criterion.</p>

²²⁴ Art. 145 of Law 9/2017, of November 8, on Public Sector Contracts.

²²⁵ Ministry of Defence (2016).

²²⁶ In line with the preferences expressed by the TACRC in its Resolution No. 260/2019.

For example, if the minimum CSO offered were 25% lower than the maximum CSO allowed, the bidders who offered the maximum CSO would obtain a score equivalent to 75% $\left(\frac{CSO_{min}}{CTS}\right)$ of 51 points, i.e., 38.25 points. As a consequence, the real margin of competition in the economic offer in this tender would be 12.75 points, instead of 51, giving greater real weight to the rest of the criteria when awarding the contract.

- The score increase must be proportional to the improvement offered with respect to the minimum required in the specifications, so that equidistant offers correspond to the same score difference. This implies that the formula used must be continuous and linear, as non-linear or tiered formulas²²⁷ distort the weight of the criterion assessed over the offer as a whole. For example, a formula that awards a proportionally lower score the more competitive the offer discourages competitive offers and makes it relatively easy to obtain a high score, thus reducing the real scope for competition in the offers. Conversely, a formula that rewards the most competitive offers with a proportionally higher score tends to increase the score differences between the most competitive bidders and the rest, distorting the weight of the scoring criterion over the other criteria when awarding the contract. In the extreme, if all evaluation criteria were to use formulas that give more than proportional score increases to the most competitive offers, it would be difficult to assess the real weight given to each criterion, which would reduce the transparency of the tender. For this reason, it is preferable to evaluate the offers according to a continuous and linear formula.

Formulas for assessing the economic offer: the case of the latest state specifications

The tender specifications for the services between Madrid-Toledo and Piedrabuena, and between Valladolid, Soria and Zaragoza, tendered on 16 December, 2019, awarded 40 points to the fare offered by the bidders, to be distributed according to the following formula in two tranches:

$$Score = 40 \times \frac{F_{min}}{F_{med}} \times \frac{F_{max}-F}{F_{max}-F_{med}} \quad \text{if } F_{med} \leq F \leq F_{max}$$

$$Score = 40 \times \frac{F_{min}}{F} \quad \text{if } F < F_{med}$$

Where F is the fare offered by the bidder, F_{max} is the maximum admissible score set by the specifications, F_{med} is the average fare offered by the bidders, and F_{min} is the lowest fare among those offered, which has not been excluded due to abnormality.

²²⁷ Valuation formulas based on sections have been widely used in recent tenders, both in state concessions and in Galicia, in the Provincial Council of Alava and in the Provincial Council of Bizkaia.

In this way, above-average fares would receive between 0 points and $40 * \frac{F_{min}}{F_{med}}$ points, while below-average fares would receive between $40 * \frac{F_{min}}{F_{med}}$ points and 40 points. Therefore, the number of points to be distributed between the two tranches is determined by the ratio between the best offer received and the average offer $\left(\frac{F_{min}}{F_{med}}\right)$.

However, supposing that the tendering committee were to interpret the threshold of abnormality in a restrictive way, rejecting all offers that represent a reduction of more than 10% compared to the average fare, this would condition the ratio between the minimum fare and the average fare $\left(\frac{F_{min}}{F_{med}}\right)$, which could not be less than 0.9.

This, in turn, implies that the score distributed among the above-average fares would be between 0 and 36 points, while the score given to the most competitive fares would be between 36 and 40 points. In other words, there would be a difference of only 4 points between the most competitive tariff and the average tariff offered.

The only case in which the score is distributed equally between the most competitive and the least competitive offers, with 20 points allocated between the two, is if the low bid is 50% lower than the average fare. For drops of less than 50%, the score range assigned to less competitive offers is higher than that of competitive offers, narrowing the score difference between the best offer and the average offer. It should be noted that, so far, no tender has been awarded to a bid that is 50% below the average tariff (see Table 19 above for a list of the winning low bids) and that, if it were to occur, the offer would probably be declared abnormally low.

In this way, the interaction of the tranching with the abnormality threshold creates a disincentive for competitive offers, which run the risk of being declared abnormally low, while obtaining marginal increases in the score.

- The formulas should not have a saturation limit beyond which the improvements offered do not lead to an increase in the score. These thresholds are usually introduced to avoid the submission of abnormally low bids. However, its use reduces the competitive margin for the bidders, who know exactly which offer they must make in order to receive the maximum score for each criterion. For this reason, it is preferable to use the procedure described in Article 149 of the LCSP to exclude abnormal offers.²²⁸

Evaluation of the economic offer: the case of the old state specifications

The first tenders for road passenger transport services under the General State Administration, issued between 2007 and 2010, included a 10% limit on the fare reductions offered with respect to the updated fare in force in the preceding concession, or the average fare of the block of similar concessions to which the tendered concession belonged. Price reductions above this

²²⁸ CNC (2010c), p. 12-13.

threshold were not awarded a higher score, which was a disincentive to price competition. An equivalent mechanism operated to limit the scoring of service frequencies.

This mechanism was criticised by the then CNC in two documents, as restricting competition.²²⁹ Several of the tender specifications containing these provisions were appealed and annulled by the courts.²³⁰

As shown in the tables, some recent tender experiences do not comply with the above suggestions, which affects how the evaluation criteria for the financial offer are scored, often reducing their real weight in the award decision.²³¹ Instead of these evaluation formulas, a linear formula would be preferable, allocating zero points to the lowest offer required in the tender documents and the highest score to the most advantageous bid, with the score being distributed proportionally among the intermediate offers. A formula that would meet these characteristics for the fare criterion would be the following:

$$Score_i = Score_{max} \times \frac{Fare_{max} - Fare_i}{Fare_{max} - Fare_{min}}$$

Where $Fare_{max}$ is the score given to the rate criterion, $Fare_i$ is the fare offered by operator i , $Fare_{min}$ is the lowest fare offered by all bidders and $Fare_{max}$ is the maximum fare admissible according to the specifications.

4.1.8. Assessment of the technical offer and other elements

In addition to the economic offer, the tender specifications usually include award criteria that assess the technical quality of the offer, as well as other elements such as interconnections with the network of transport services dependent on the public authorities, or the adoption of efficiency and environmental protection plans or measures. The CNMC understands and supports the need to include these criteria in public procurement, which, moreover, are covered by current

²²⁹ CNC (2008) and CNC (2010a).

²³⁰ The contracts for VAC-210, VAC-211, VAC-212, VAC-213, VAC-214, VAC-215 and VAC-216 were annulled by judgments of the Supreme Court between January 2013 and February 2015. VAC-217 was annulled by judgment of the Madrid High Court of Justice of 29 January, 2014; it was not appealed and is, therefore, final.

²³¹ By way of example, the tenders issued by the MITMA, Galicia, the Provincial Council of Alava and the Provincial Council of Bizkaia contain evaluation formulas with several sections that assign a proportionally lower score to the most attractive bids. On the other hand, the tenders of Mallorca and Navarre do not distribute the total score available in all cases, which reduces the real margin of competition in the economic criteria.

public procurement regulations²³², provided that they are related to the object of the tender.

However, some of these criteria are difficult to assess with objective parameters, so that their inclusion should not undermine the score given to the economic bid or its decisive nature in the awarding of the contract.

In any case, tender specifications should specify the parameters that will be used as a basis for evaluating the offers. Whenever possible, the contracting body should adopt automatic evaluation criteria based on objective parameters, which reduce discretion when evaluating the offers, such as establishing scoring mechanisms based on the age of the fleet offered, or its annual emissions. Where evaluation criteria based on value judgements are established, the parameters the tendering committee will base its evaluation on should be made clear.²³³

In this regard, some of the regional tenders issued in recent years have awarded excessive points to criteria that depend on a value judgement, the evaluation parameters for which are not made explicit.²³⁴ The high scores they receive, together with the mechanisms that reduce the competitive margin and the real weight of the economic offer described in Section 4.1.7, attribute a great deal of discretion to the contracting authority when awarding contracts. This, in turn, could intensify the judicial conflict in tendering procedures.

4.1.9. The economic regime of the contract

The economic regime of the contract governs the remuneration received by the contractor for providing the service, as well as the sharing of risks between the contractor and the public authorities. These elements shape the contractor's incentives and affect the efficiency of the service provision, so it is necessary to analyse them from the perspective of competition and efficient economic regulation.

Different public authorities have implemented different contractor remuneration schemes, depending on their preferences and the characteristics of the service.

²³²Art. 145.2 of Law 9/2017, of November 8, on Public Sector Contracts.

²³³ CNMC (2014).

²³⁴ For example, the tender specifications for Galicia in 2019 and 2020 award a total of 49 points to the evaluation of a descriptive report on the quality of the service. The same weighting is given to criteria that are evaluated by means of value judgements in the tenders issued in Mallorca, or by the Provincial Councils of Alava and Bizkaia, which require the presentation of action plans that are difficult to evaluate, such as service operation plans, transition plans, operation monitoring plans, and maintenance plans.

Based on the literature, it is possible to classify the different economic regimes used into three main categories:

- Fixed-price contracts: where the minimum service frequency and maximum fare are fixed and can be improved by the contractor. Under this regulatory scheme, the contractor operates the concession at its own risk and receives all the benefits it obtains from operating the service, which incentivises it to adopt improvements that attract greater demand and lower its costs. This is the scheme followed in many regions in Spain, especially for surplus services. According to the information available, it is the scheme applied in the concessions dependent on the General State Administration, Andalusia²³⁵ and some concessions in Navarre and the Basque Country.²³⁶
- Cost-plus contracts: these contracts remunerate the contractor for the costs incurred, plus a reasonable profit, which is not linked to the demand for the service. The revenue received from ticket sales belongs to the authorities. In contrast to *fixed-price* contracts, in this scheme the authorities insure the operator against demand risk, associated with fluctuations in the number of passengers, and production risk, associated with variations in production costs. As there is no transfer of risk to the contractor, these contracts do not provide an incentive for the contractor to reduce its operating costs or to attract more demand, which is why they are not commonly used in practice.
- Hybrid contracts or incentive contracts²³⁷: these combine aspects of the previous schemes and are used in cases where the authority considers that the services are loss-making, but wishes to introduce certain incentives to improve the efficiency of the concession. These, in turn, can be classified according to their degree of proximity to previous regulatory schemes, as follows:²³⁸
 - *Net-cost* contracts, in which operators receive the fare revenues, with compensation from the authorities in case of losses, normally up to a maximum limit.²³⁹ These tend to maintain the fare and cost structure of the *fixed-price* scheme to a large extent, as the demand risk and production

²³⁵ Information obtained from the Procurement Platform of the Andalusian Regional Government.

²³⁶ This is the case of the Navarre concession NAV-001, tendered in 2019 and C-02 of the Álava Provincial Council, tendered in 2016.

²³⁷ Laffont and Tirole (1993), p. 6-7.

²³⁸ Roy and Yvrande Billon (2007).

²³⁹ Scheme in force in the three new contracts awarded by Castile-La Mancha in 2017, Extremadura, Galicia, and some concessions in Navarre (NAV-002 and NAV-003) and the Basque Country (C-01 from the Provincial Council of Alava).

risk are transferred to the operator. However, once the contracts have been awarded, the authorities lose some control over the routes to be covered, since any *ex post* modification of the route can alter the economic equilibrium of the contract.

- *Gross-cost* contracts, in which the contractor obtains remuneration equivalent to a fixed cost for operating the service, calculated on a global basis or according to kilometres travelled or passengers carried, to which quality or demand incentives are usually added. As a result, there is risk sharing whereby the authorities bear the demand risk and the operator bears the production risk. These are often used in situations where the authorities wish to maintain greater control over the fares and services provided, for instance, in large metropolitan areas with integrated fare systems.²⁴⁰

As discussed above, the choice between different regulatory schemes depends to a large extent on the characteristics of the service, where the choice will depend on whether or not the fare revenues are sufficient to cover the cost of providing the service, and the degree of control that the authorities wish to maintain over the service.

With regard to this last point, the available information suggests that in regions where the *gross-cost* scheme predominates, the cost of providing the service per vehicle and kilometre offered is notably higher than in other public authorities. This could be due, at least in part, to lower incentives for reducing operating costs in these concessions, where the revenues depend on cost-relevant parameters such as the number of vehicles or hours worked.

Consequently, the implementation of *gross-cost* type contracts should be accompanied by a cost-benefit analysis in which the gains of an integrated fare system are weighed against the losses caused by the lower incentives associated with these contracts, especially in those metropolitan services which, given their high passenger traffic, could be surplus and operable through *fixed-price* contracts.

²⁴⁰ Scheme in force in the new contracts awarded in Mallorca and in the concessions under the Regional Transport Consortium of Madrid as well as in most of the Basque Country (in Alava, Gipuzkoa and Bizkaia). In the Community of Madrid and the Basque Country, the *gross cost* system is predominant; these are concessions integrated within a regional transport network administered by the public authorities concerned, which intervene in the routes and the fares paid by users, usually by means of zone-based pricing systems.

4.1.10. Overall assessment of the tendering processes

The above restrictions have the potential to limit competition in tenders issued by public authorities, especially when several of them occur simultaneously in tender specifications. As a result, the concession might not be awarded to the most efficient operator, to the detriment of both the contracting public authorities and the users of the service.

These restrictions could facilitate the renewal of the contract by the incumbent operator, strengthening the incumbent's position in the market. Furthermore, some of the restrictions, by excluding smaller operators from tenders, encourage market concentration.

In the case of state tenders, successive bidding rounds have improved the tender specifications, increasing the weight of the economic offer and eliminating anti-competitive elements, such as the saturation limits imposed on fares and service frequencies, which limited the scores for the most competitive improvements and the right of preference of the previous contractor in case of a tie or similar offers. However, restrictions remain, such as the obligation to absorb the former contractor's driving staff, which was changed from a scoring award criterion to a mandatory requirement from the third set of tender specifications and extended to administrative staff from the fourth set of tenders (see Table 20).

Table 20. Conditions of tender specifications for General State Administration concessions

CONDITIONS IN TENDER SPECIFICATIONS FOR STATE CONCESSIONS							
Assigned weight	First group	Second group	Third group	Fourth group	Fifth group	Sixth group	Seventh group
	2007	2008-2010	2011	2014-2016	2016-2017	2018	2019
Weight of the financial offer¹	15%	23%	40%	55%	55%	47%	60%
Fare	10%	15%	25%	35%	45%	35%	40%
Trips	5%	8%	15%	20%	10%	12%	20%
Weight of other criteria¹	65%	62%	60%	45%	45%	53%	40%
Energy efficiency	8%	5%	5%	5%	5%	8%	6%
Customer service and marketing	13%	13%	13%	13%	12%	9%	8%
Confort and security	26%	26%	21%	12%	14%	18%	19%
Other ²	18%	18%	21%	15%	15%	18%	7%
Other elements that restrict competition							
Priority right of the previous concessionaire	Yes	Yes	Yes	No	No	No	No
Upper bounds to maximum score for fares and trips	Yes	Yes	Yes	No	No	No	No
Commitment to hire the staff of the previous concessionaire ¹	20%	15%	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory

Source: Compiled by author using data from MITMA and Asensio et al. (2016). Note: ¹ Score of the criterion out of the total award criteria (%). ² "Other" includes criteria for quality, age of vehicles, connectivity and intermodality, adoption of organisational plans for means and personnel, and discounts for special groups.

The improvements in the clauses have resulted in heightened competition for state contracts, with an increase in the number of bidders per tender, and reductions in fares compared to those in force on the renewed services, this being particularly significant from the fourth set of tender specifications onwards²⁴¹ (see Table 21). Gains in terms of service frequencies have been more moderate, with average reductions in the number of kilometres travelled compared to the previous service in some tender specifications. These observations could be due to the restructuring of services undertaken by MITMA prior to the tender, as substantial increases have been achieved compared to the minimum frequencies set out in tender specifications. As in the case of fares, these gains are particularly relevant from the fourth group of tenders onwards. Annex III quantifies the benefits to users of the tendering of state concessions.

Despite the above, only 47 awards have been made out of a total of 64 contracts put out to tender, the last of which was in 2017, due to the judicial conflict over tender specifications.

Table 21. Results of tenders for General State Administration concessions

RESULTS OF TENDERS FOR STATE CONCESSIONS								
Contract characteristics and result	First group	Second group	Third group	Fourth group	Fifth group	Sixth group	Seventh group	
	2007	2008-2010	2011	2014-2016	2016-2017	2018	2019	
Contract characteristics								
Tendered contracts	9	10	7	23	6	5	4	
Average estimated value ¹	11,006,142	26,792,299	35,775,193	9,327,466	18,320,329	n.d.	n.d.	
Average concession duration	11	9	10	10	10	6	6	
Assigned vehicles	3	14	13	7	11	n.d.	n.d.	
Results of the tender procedure								
Awarded contracts	9	9	2	21	6	0	0	
Average number of bidders	2	5	11	5	9	n.d.	n.d.	
Change of operators	4	3	1	9	4	0	0	
Average fare reduction	Previous service	-1%	0%	-7%	-10%	-25%	n.a.	n.a.
	Tender maximum	-5%	-20%	-19%	-25%	-38%	n.a.	n.a.
Average trip increase	Previous service	10%	15%	-21%	1%	-7%	n.a.	n.a.
	Tender maximum	2%	9%	5%	47%	31%	n.a.	n.a.

Source: Compiled by author using data from MITMA and Asensio et al. (2016). Note: ¹ Value of contracts estimated on the basis of total concession revenues in the first full year after award, multiplied by their duration.

²⁴¹ These findings complement those of Asensio et al. (2016), who found that the fares of the tenders awarded under the first three groups of specifications do not differ substantially from those in force in the concessions that were validated after the approval of the LOTT. In contrast, they found that the fares of the concessions that were tendered in the early 1990s were 21% lower than the validated ones, which they attribute to the pro-competitive design of these specifications, which gave a 60% weighting to the economic offer.

As for regional tenders, the results have been positive, although more moderate than in the case of state concessions. According to the available information, Castile-La Mancha, Galicia and Navarre have achieved reductions in both fares and compensation to be paid by the public authorities with respect to the maximum levels set in the tender specifications, and have achieved increased service frequencies, despite the smaller relative size of the concessions tendered and fewer bidders. Meanwhile, the large size of the Basque concessions tendered and the proportionally lower number of bidders, as well as the relatively moderate nature of the price reductions obtained, stand out.

Table 22. Result of regional tenders

RESULT OF REGIONAL TENDERS						
Result of the tender procedure	Castile-La Mancha	Galicia	Navarre	Valencian Community	Mallorca	Basque Country
Contract characteristics						
Awarded contracts	3	129	1	1	3	7
Average estimated value	13,467,270	10,459,327	10,206,607	285,701	246,880,005	291,568,242
Average duration	10	10	10	5	10	10
Results of the tender procedure						
Average nº of bidders	2	2	5	1	8	3
Average fare reduction (relative to tender maximum)	-19%	n.a.	-5%	0%	n.d.	n.a.
Average trip increase (relative to tender minimum)	0%	3%	>5%	n.d.	n.d.	n.a.
Average compensation reduction (relative to tender maximum)	-10%	-10%	n.d.	n.a.	n.d.	-6%

Source: Compiled by author with data from the MITMA and the General Directorates of Transport of the Autonomous Communities.

Note: the table includes Autonomous Communities for which public information on tender specifications is available.

The heterogeneity of the results of regional tendering processes may be due to the different characteristics of the services put out to tender, as well as to differences in the design of the concessions and tender specifications. In this respect, it would be advisable to reinforce inter-territorial cooperation between the Public authorities in these areas, pooling the experiences of the different tendering bodies in their respective processes. Finally, it is recommended that a prior report be requested from the CNMC and the regional competition authorities on the design of tender specifications.

4.2. Restrictions on the management of the concession system by the public authorities from a competition standpoint

As discussed in the previous section, the basis of the concession system is the periodic tendering of concessions, as operators are periodically exposed to competition. Despite this, certain administrative actions have resulted in delays in the tendering of state and autonomous community concessions, extending their operation beyond that foreseen in the original awards. These actions include the general extension of contracts, delays in the call for tenders and substantial modifications to existing contracts in the absence of a new tender.

4.2.1. Concession extensions

As described in Section 3.2, following the adoption of the LOTT in 1987, which enshrines the general rule of awarding contracts through competitive tendering, three general extensions have been approved, which have affected the majority of the concessions currently in force:

- The general extension contained in the Second Transitional Provision of the LOTT, of at least twenty years from its entry into force.²⁴² This extension was applied to concessions dependent on the General State Administration and all the Autonomous Communities except Catalonia, which adopted an equivalent extension.²⁴³
- The additional five-year extension provided for in Article 167 of Law 13/1996, applicable to all concessions, except those in Catalonia, which undertook not to increase fares during the following two years and to renew the fleet.
- The regional extensions adopted between 2003 and 2009, which extended the duration of the concessions to dates varying between 2017 and 2028. These extensions were justified by the need to improve the existing service, through the adoption of an improvement plan by the concession holder, or to unify the expiry dates of the concessions in order to reorganise the concession map.

²⁴² The Second Transitional Provision allowed holders of current contracts to maintain their concession titles for a total of 25 years from the date they were awarded, or to replace them with new concessions with a term of 20 years, starting either in 1987, in the case of concessions granted before 1962, or from 1988.

²⁴³ The First Transitional Provision of Law 12/1987 of 28 May 1987 on the regulation of road passenger transport by motor vehicles in Catalonia offered holders of existing concessions the possibility of maintaining their concession rights for a total of 25 years from the date of award, or replacing them with new concessions with a duration of 20 years.

As a result of these actions, most of the concessions in operation on 31 December, 2019, had been in held for more than ten years, with an average duration of 12 years for state concessions and with only four Autonomous Communities included in the available information reporting durations shorter than this average (see Table 23).

Table 23. Average duration²⁴⁴ of operating concessions as of December 31, 2019

DURATION OF CONCESSION TITLES ACTIVE AS OF DECEMBER 31, 2019					
Authority	Available information		Current contract		
	Nº concessions	Origin of the data	Year of start	Expiration year	Duration to 2019
Andalusia ¹	n.d.	n.d.	n.d.	n.d.	n.d.
Aragon ¹	n.d.	n.d.	n.d.	n.d.	n.d.
Asturias	54	1988	2009	2024	10
Balearic Islands	28	1998	2013	2027	6
Canary Islands	11	1986	1989	2028	30
Cantabria ¹	n.d.	n.d.	n.d.	2013	n.d.
Castile and Leon	223	1987	1987	2019	32
Castile-La Mancha	67	2013	2013	2020	6
Catalonia	149	1972	1972	2028	47
Community of Madrid	36	1994	1995	2024	24
Valencian Community	67	2001	2004	2015	15
Extremadura	48	2000	2008	2022	11
Galicia ²	65	1998	2011	2017	8
La Rioja	16	1991	1991	2028	28
Murcia	31	1993	1993	2020	26
Navarre ³	36	1987	1987	2012	32
Basque Country ⁴	22	1991	2004	2022	15
GSA ⁵	80	1994	2007	2020	12

²⁴⁴ The duration of the contracts presented here is a conservative estimate of the actual duration of the contracts, for two reasons:

- On the one hand, the age of the information reported by the MITMA and the Autonomous Communities does not allow us to ascertain the actual origin of a large number of concessions, which predate the entry into force of the LOTT and which, as seen in Section 3.2.1, date back to the concessions created under the Royal Decree of 1924 or the Laws of 1947.

Source: Compiled by author based on information provided by the MITMA and the Directorates-General for Transport of the Autonomous Communities. ¹ Andalusia and Aragon did not reply to the CNMC's request Cantabria provided no information on current contracts. ² Galicia renewed all its concessions in 2020 through a tender. ³ Navarra put out two new tenders in 2020 and 2021. ⁴ In 2020, Gipuzkoa put out the LUR-M-05 concession to tender, which replaces three of the expired concessions in this province. ⁵ No individualised information is available on the 26 state concessions tendered in the 1987-2006 period, except for that available in TDC **(1999)**.

As shown in Table 23 above, concession extensions have led to a considerable delay in the introduction of competition in the intercity bus passenger transport market, where the duration of concessions has far exceeded the maximum ten years plus five years of extension provided for in Regulation 1370/2007.

The justifications put forward by the competent authorities justifying the approval of these extensions and their exclusion from competitive processes do not appear to be based on any overriding reason of general interest:

- The upgrades obtained through the concession holder's improvement plans, such as fleet renewal or the introduction of security systems or Wi-Fi on the buses, could be obtained through a tender procedure that includes these technical requirements in the tender specifications.²⁴⁵ This would facilitate, in addition to these improvements, reductions in fares or the compensation to be received from the public authorities, or increased frequencies, which would benefit both users and the public authorities. By allowing the most efficient operator to be chosen from those available, the result of a properly designed tender will always be at least as good as that of a conditional extension, and in many cases will improve upon the latter.
- The reorganisation of the concession map that justified the regional extensions in the 2000s²⁴⁶ has not yet materialised, more than ten years later, even giving rise to new extensions, explicit or tacit, while the services are being restructured.²⁴⁷ During this time, the public authorities could have put

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- On the other hand, a direct award is considered to be a new contract for the purpose of calculating contract duration. In practice, this figure has been used to award virtually identical services to the holders of the previous contracts, extending the duration of the original contracts in a manner analogous to a contract extension. This is the case of the unified state concessions in the early 1990s (TDC, 1999, p. 24), of the direct awarding of the Asturian zonal concessions in 2009, and of the Galician concessions in 2017.

²⁴⁵ CNC (2010b).

²⁴⁶ Expressly cited in the explanatory memorandums of the laws enabling the extension of services in the Autonomous Communities of Aragon, Asturias, Balearic Islands, Castile-Leon and Extremadura.

²⁴⁷ In Andalusia, Aragon, Asturias, all the Balearic Islands except Mallorca, Castile-Leon, Valencia, Extremadura and Murcia.

concessions out to tender as the concession titles expired, between 2007 and 2012, to the benefit of users, while planning the new concession map.

In short, concession extensions seriously harm competition and the general interest by extending the duration of concessions and postponing competitive tendering. For this reason, Regulation 1370/2007 envisages them as a tool for exceptional use, which can only be used in three situations:

- In case of emergency, due to service disruption or risk of such a situation occurring, for a maximum period of two years.²⁴⁸ This term has been exceeded in all the extension agreements analysed above.
- In outlying regions, when justified by the costs arising from the geographical position, for a maximum period equivalent to half of the original duration.²⁴⁹ The Canary Islands is the only Autonomous Community considered to be an outlying region, despite the fact that it has some of the largest and most in-demand concessions in Spain, so it would be difficult to justify a general extension of all its contracts under this precept.
- Generally speaking, when justified by the depreciation conditions of the assets provided by the operator which are significant for the provision of the service, for a maximum period equivalent to half the original duration of the contract.²⁵⁰ Considering that the average duration of Spanish concessions is 24 years, much longer than the useful life of the vehicles, and that in any case the costs of investment in fleet are relatively recoverable²⁵¹, the general extensions adopted by the public authorities cannot be justified from the point of view of the general interest. This led to the CNC challenging the extensions in Galicia and Valencia, which were annulled by the courts.²⁵²

4.2.2. Delays in the call for tenders

Delays in calling for tenders to replace expiring concessions also negatively impact competition and the functioning of the market by allowing the previous contractor to continue operating the concession on the basis of an expired concession award.

²⁴⁸ Article 5.5 of Regulation 1370/2007.

²⁴⁹ Article 4.4 of Regulation 1370/2007.

²⁵⁰ Article 4.4 of Regulation 1370/2007.

²⁵¹ CNC (2008), p. 40.

²⁵² Annulled by Supreme Court ruling of 14 March, 2016.

In order to guarantee continuity in the provision of a public service, the LOTT establishes that, once the licence has expired *"without the procedure leading to the award of a new one having been completed"*, the contractor is obliged to continue operating the service for two years, if so required by the authorities.²⁵³ This informal extension is therefore designed as a temporary solution in the event of a time lag between the expiry of the title and the conclusion of the award procedure.

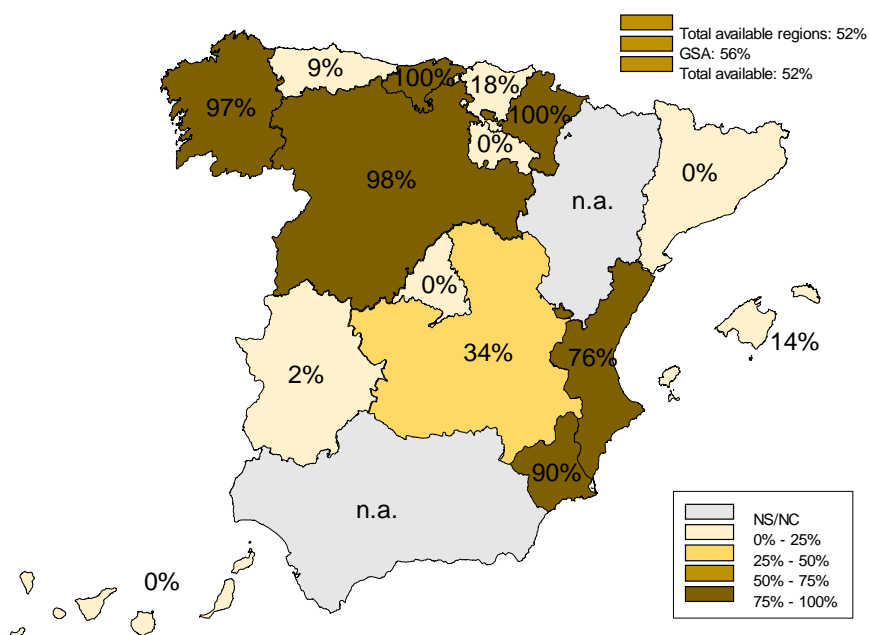
From a legal perspective, concession expiry is an irregularity in that the service operator lacks a valid contract justifying the maintenance of a monopoly on the route. In turn, operating concessions under an expired contract is a situation that is detrimental to the interests of public authorities and users for several reasons:

- Firstly, as in the case of an extension, the contractor continues to provide the services in line with the fares and service frequencies agreed in the expired contract, and the authorities are obliged to keep paying the compensation set out in that same document. This precludes fare and compensation reductions, and frequency increases associated with a tender, as discussed in Section 4.1.10.
- Secondly, the expiry of the contract and the possibility of an upcoming tender reduce the operator's incentives to renew the fleet or to undertake costly investments or restructuring that would help to increase the efficiency of the operation, as the operator may not benefit from its positive effects in the future.
- Finally, the operator of an expired contract obtains revenue that was not foreseen in the original contract. Had this income been included in the operating plan on the basis of which the service was awarded, it could have made it possible to improve the conditions of service provision, so that its appropriation by the contractor is in itself an overcompensation, allowing it to extract the surplus from both users and the public authorities.

As a result, the public authorities must try to minimise the duration of this situation. On many occasions, the concession expires without the authorities even having issued a new call for tenders, so that the interim situation described above becomes the general rule in the operation of a large number of concessions. According to the information available as of 31 December, 2019, 52% of Spanish concessions had expired (see Figure 10).

²⁵³ Art. 82.2 of Law 16/1987, of July 30, on the Organisation of Land Transport.

Figure 10. Percentage of expired concessions as of December 31, 2019.



Source: Compiled by author based on information reported by the MITMA and the General Directorates of Transport in the Autonomous Communities. Note: Andalusia and Aragon did not reply to the CNMC's request. Galicia renewed all its concessions in 2020 through a tender. Navarra called two new tenders in 2020 and 2021. Gipuzkoa called a new tender in 2020 to replace three expired concessions. The Valencian Community began to tender the new concession map in 2020.

There are several reasons for this inactivity on the part of the public authorities. In the case of the Autonomous Communities, the majority of delays are attributable to the need to complete the updating of the concession maps. However, the Autonomous Communities know the expiry date of their concessions in advance and have had a reasonable period of time to organise their resources and reorganise services; indeed, more than 30 years have elapsed since the LOTT and the first extensions were approved.

Given that the average concession lasts at least ten years, it is essential that the route is updated when it expires in order to adapt it to changes in transport demand that have occurred during the concession period. In this sense, in order to have a public transport network that meets minimum efficiency standards, the public authorities must monitor these changes, so that they are aware of emerging needs and the new services have already been planned by the time the operating concessions expire, thus guaranteeing the regular renewal of contracts.

In terms of state concessions, one of the reasons for the delay in the call for new concessions is the judicial dispute over tender specifications described in Section 3.2.2. In particular, the presence of technical deficiencies in the clauses has led to the annulment of all tender specifications from 2018 onwards, with the exception of the last two tenders. In this respect, it is necessary that amendments made to the tender specifications between tender rounds have adequate legal backing, in order to minimise legal uncertainty for operators and facilitate the renewal of concessions.

On the other hand, calls for tender at the national level have not followed the expiry order of the concessions. By way of example, the last four concessions tendered, for services between Madrid-Toledo-Piedrabuena and Valladolid-Soria-Zaragoza, replace contracts that expired between 2013 and 2016, even though there are state concessions with an earlier expiry date that should have been renewed beforehand, such as the service between Zaragoza and Murcia, which expired in 2009. Not knowing the explicit rationale for this action prevents potential bidders from planning their bids in advance and is a source of uncertainty that discourages investment by the concession holders of expired lines.

Priority should therefore also be given to the tendering of concessions that are being operated by the successful bidders of annulled tenders, on the basis of invalid contracts and conditions that have not been determined in a competitive process.

Finally, the health crisis caused by the coronavirus has further delayed tendering plans. The decline in demand during 2020 has called into question the validity of the operational projects and feasibility studies carried out prior to the pandemic, and has led to great uncertainty as to the future evolution of passenger numbers, which could delay calls for tenders and alter their outcome. At the same time, some of the COVID-19-related aid has been allocated to operators holding invalid or expired concessions, in order to prevent them from ceasing to provide a service that they are no longer obliged to continue to provide.

As a consequence, it is necessary for the public authorities to regularise the situation of expired concessions by calling for tenders. If the current context of uncertainty over future demand persists, the possibility of shortening the duration of these contracts should be assessed, while relaxing the investment requirements in terms of contractors' fleets. In this way, services could be redesigned in the near future, in line with the current demand, updated service maps, and the decarbonisation and energy transition objectives set by the public authorities.

4.2.3. Substantial modification of concessions in the absence of a tendering process

As explained in Section 3.1.3, the public authorities are bound by a series of legal limits that prevent them from making substantial modifications to existing contracts. In this way, the concession system is given a certain degree of flexibility to adapt to sudden changes in demand, while at the same time a number of safeguards are put in place against an abusive use of this power by public authorities. Such abuse could be problematic for the following reasons:

- The modification of an existing contract may alter the economic equilibrium in favour of the contractor, granting it new exclusive rights in the absence of a competitive procedure.
- This in turn violates the principles of equal treatment, non-discrimination and transparency of the original bidders, who could have altered their offers if they knew that such a modification would be introduced, which could have altered the outcome of the process.

Thus, in Paragraph 2.3.6 of Commission Communication 2014/C 92/01, which sets out guidelines for interpreting Regulation 1370/2007, the European Commission points out that, in the absence of specific provisions in the Regulation, the principles established by the case law of the Court of Justice of the EU (CJEU) on the modification of service concession contracts apply.

For its part, in order to ensure procedural transparency and equal treatment of bidders, the Court of Justice of the EU (CJEU) considers that a substantial modification of the contract must give rise to a new award procedure. This would be the case for amendments which *"are of a significantly different nature from those set out in the original contract, therefore demonstrating the intention of the parties to renegotiate the essential conditions of the contract"*, or which introduce *"conditions which, if they had been part of the original award procedure, would have allowed the admission of bidders other than those initially admitted or the acceptance of an offer other than that initially accepted"*.²⁵⁴

Finally, the applicable state regulations introduce, through the ROTT, a quantitative limit by not admitting modifications that involve increases of more

²⁵⁴ As can be seen from the judgments of the CJEU in the following cases: Case C-337/98 Commission v France, points 44 and 46; Case C-454/06 Presstext Nachrichtenagentur, points 34 and 35; and Case C-91/08 Wall AG, points 37 and 38.

than 20% of the population served by the services, which must give rise to a new award procedure.²⁵⁵

In spite of the above, the applicable state and regional regulations grant broad powers to the public authorities to modify in force contracts, regardless of the quantitative limit of the ROTT, although this must always be interpreted within the limits established by European Union jurisprudence:

- Firstly, the LOTT allows contracts to be unified into a single contract *"when there are objective reasons of general interest that justify this, and it is not feasible or appropriate to establish a new service independently of the previously existing ones"*. The LOTT thus makes it possible to unify existing contracts without the need to conduct a new award procedure. This operation could be carried out after the contracts have been in force for three years and, at least, until the two years prior to their termination (Art. 81 of the LOTT).
- Secondly, the LOTT and regional regulations allow several linear concessions in a given area to be unified into a zonal concession, which may also include special services, normally school or work-related, previously rendered under other contracts.²⁵⁶ The unified contract can be awarded directly *"when the rationality in the design of the transport system so warrants"* (Art. 80.3 of the LOTT).

As discussed in Sections 3.2.2 and 3.3.3, both the MITMA and the Autonomous Communities have made extensive use of these powers to consolidate concessions under their jurisdiction. In some cases, the mergers were carried out after the original contracts were terminated and the new services were put out to tender. In other cases, however, the public authorities merged existing contracts, often belonging to the same incumbent, and awarded the resulting contract directly to the incumbent.

This is the case of the unifications of state contracts carried out during the first years after the entry into force of the LOTT, which even extended the duration of the resulting concession, although these operations were also put into practice in other Autonomous Communities, such as the Community of Madrid and Gran Canaria. For its part, the unification of general and special use service contracts has been carried out in autonomous regions such as Asturias, which unified its general and school services in the zonal concessions of 2009²⁵⁷, and Cantabria,

²⁵⁵ Art. 88 of Royal Decree 1211/1990, of September 28, approving the Regulations of the Law on the Organisation of Land Transport.

²⁵⁶ Art. 78 of Law 16/1987, of July 30, on the Organisation of Land Transport.

²⁵⁷ Agreement of the Asturias Transport Consortium of July 28, 2009.

which recently integrated its general and school services.²⁵⁸ Neither of these two Autonomous Communities put the resulting services out to tender.

These operations restrict competition by increasing the size of existing contracts and reducing the number of contracts in force. In turn, the larger size of the concessions negatively impacts the requirements demanded of the companies in the resulting service tender, facilitating the renewal of the concessions by the former contractor, thereby strengthening its position in the market. Finally, the possibility of unifying lines is greater if both belong to the same operator, since this does not entail a cost for the public authorities in terms of compensation, which, in turn, is more likely for large operators that operate nearby concessions, reinforcing the regional concentration observed in Section 3.3.5.

Consequently, for the operation to be of general interest, it is necessary for it to entail some benefit, either through the possibility of rebalancing concessions with profitability problems, or by taking advantage of the economies of scale or scope derived from the joint operation of several lines. These benefits must be duly reflected and accredited in the unification project, so that the effects of the operation can be subsequently assessed, and the unification reversed when they are not realised.

However, in order for the benefits of unification to be passed on to the user, and not entail a cost reduction that exclusively benefits the contractor, it is essential that the resulting concession be put out to tender.

By allowing contract unification in the absence of a tendering procedure, the LOTT and the applicable regional regulations restrict competition and could contravene EU case law on supervening modifications. This is because the unification of several lines under a single contract alters the main purpose of the existing contracts, which is the provision of transport services on a given set of routes. Moreover, the unification of routes, whether to rebalance concessions or to take advantage of economies of scale, is evidence of the willingness of the parties to renegotiate existing contracts, and necessarily affects the quantity and content of the offers that would have been received in the original contract award procedure.

Therefore, service unifications, whether for general or special use, should be considered to be substantial modifications in the sense of EU jurisprudence and should trigger a new award which, after the end of the transitional period established by Regulation 1370/2007 on 3 December 2019, should be

²⁵⁸Decree 199/2019, of October 3, which regulates the integration of scheduled public passenger transport services by road for general and special use in the Autonomous Community of Cantabria.

implemented via a competitive process. In relation to zonal concessions, as the CNC pointed out²⁵⁹, "*rationality in the design of the transport system is not among the circumstances that allow this type of service to be awarded directly, in accordance with Regulation 1370/2007*".

As a consequence of the above, it is suggested that modifications to the aforementioned provisions of the LOTT should be assessed where appropriate, and that regional provisions with equivalent content should also be assessed to ensure greater consistency between the sectoral regulations applicable at state and EU level. Finally, with regard to the quantitative limit of 20% of the population served introduced by the ROTT, the CNMC considers that this is an imprecise parameter for assessing the acceptability of contract modification. Instead, the estimated value of the contract should be used as the objective benchmark in these cases.²⁶⁰

4.2.4. Consequences of restrictions on the management of the concession system

As a consequence of the actions detailed in the previous sections, the introduction of market competition in the Spanish concession system has been postponed on several occasions, so that, at the present time, 30 years after the entry into force of the LOTT, a large part of the Spanish concession map has not been put out to tender.

The following table shows the number of concessions and percentage of revenue for each regional market, according to whether or not they have been tendered in recent years, using the information provided in the information request (see Table 24). The percentage of concessions tendered by each public authority is summarised in an illustrative map (see Figure 11).

²⁵⁹ CNC (2012), p. 22.

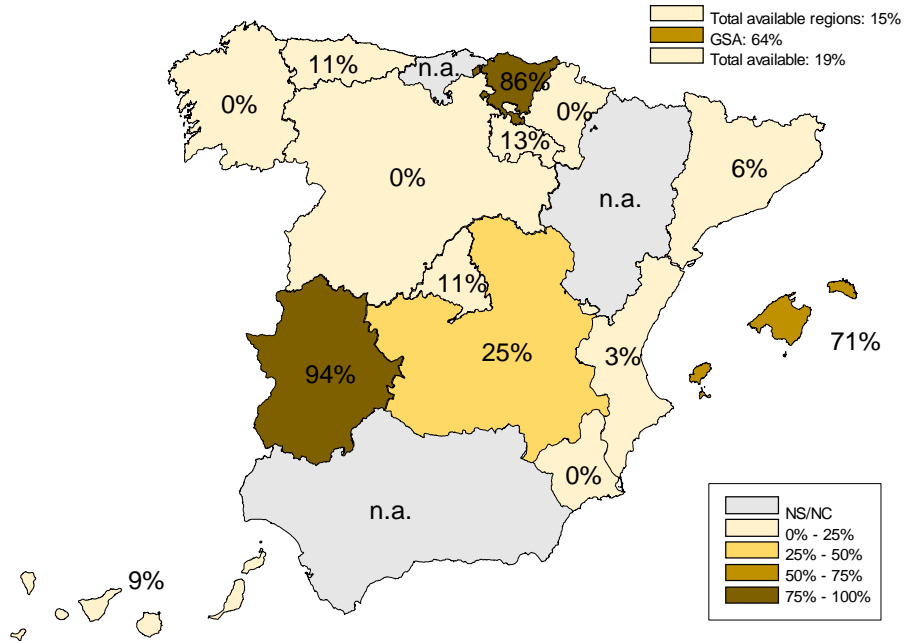
²⁶⁰For example, in Article 205 of Law 9/2017, of November 8, on Public Sector Contracts, or in Article 72 of Directive 2014/24/EU, on public procurement (Comisión Nacional de los Mercados y la Competencia, CNMC, 2017, p. 26).

Table 24. Origin of operating concessions as of December 31, 2019.

ORIGIN OF OPERATING CONCESSIONS AS OF DECEMBER 31, 2019							
Authority	Origin of data	Nº of concessions			% Total revenues ¹		
		Tendered ²	Not tendered	N.A.	Tendered ²	Not tendered	N.A.
Andalusia ³	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Aragon ³	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Asturias	1988	6	48	1	5%	95%	0%
Balearic Islands	1998	20	8	0	60%	40%	0%
Canary Islands	1986	1	10	0	2%	98%	0%
Cantabria ³	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Castile and Leon	1987	1	222	0	1%	99%	0%
Castile-La Mancha ³	2013	17	50	0	n.d.	n.d.	n.d.
Catalonia ⁴	1972	10	139	12	4%	96%	0%
Community of Madrid	1994	4	32	0	6%	94%	0%
Valencian Community	2001	2	65	3	9%	91%	0%
Extremadura	2000	46	2	1	97%	3%	0%
Galicia ⁵	1998	0	65	0	0%	100%	0%
La Rioja	1991	2	14	0	49%	51%	0%
Murcia ⁶	1993	0	31	0	0%	100%	0%
Navarre ⁷	1987	0	36	0	0%	100%	0%
Basque Country ⁸	1991	19	3	0	100%	0%	0%
GSA ⁹	1994	51	29	0	42%	58%	0%

Source: Compiled by author based on information reported by the MITMA and the General Directorates of Transport in the Autonomous Communities. Note: ¹ Total revenue includes revenue received by the concession holders, as well as transfers from the public authorities, excluding VAT, for 2019. ² A concession is considered to have been tendered if that same concession, or any of the branches comprising it, has been awarded under an open procedure at any time since its creation. ³ Andalusia and Aragon did not reply to the CNMC's request. Cantabria provided no information on current contracts. No total revenue data is available for Castille-La Mancha. ⁴ There is no revenue data for Tarragona. ⁵ Galicia renewed all its concessions in 2020 through a tender. ⁶ Murcia has not reported information on subsidies and compensation granted to concession holders. ⁷ Navarra called two new tenders in 2020 and 2021. ⁸ In 2020, Gipuzkoa put the LUR-M-05 concession out to tender, which replaces three of the expired concessions in this province. The Gipuzkoa Provincial Council has not reported information on its total revenue. ⁹ There is no individualised information on the 26 state concessions tendered in the 1987-2006 stage, except for that available in the TDC(1999).

Figure 11. Percentage of tendered concessions¹ as of December 31, 2019, according to available information²



Source: Compiled by author based on information reported by the MITMA and the General Directorates of Transport in the Autonomous Communities. Note:
¹ A concession is considered to have been tendered if that same concession, or any of its component branches, has been awarded under an open procedure at any time since its creation.
² Andalusia and Aragon did not reply to the CNMC's request. Cantabria provided no information on current contracts. Galicia renewed all its concessions in 2020 through a tender. Navarra called two new tenders, in 2020 and 2021. Gipuzkoa called a new tender in 2020 to replace three expired concessions. The Valencian Community began to tender its concession map in 2020. There is no individualised information on the 26 state concessions tendered in the 1987-2006 stage, except for that available in the TDC (1999).

The above figures show that the number of Spanish concessions that have been put out to tender in recent years continues to be low, amounting to just 19% of the total national market, and accounting for 24% of total revenues. With the information available for the concessions dependent on the General State Administration, it is worth noting that the tendering procedures carried out have only affected 64% of the concessions, which represent 42% of the revenue, meaning that the larger concessions have remained closed to competition. By Autonomous Community, it should be stressed that concessions are rarely tendered in practically all the Autonomous Communities for which information is available, with the exception of Extremadura, the Basque Country, the Balearic Islands and, more recently, Galicia.

From the competition perspective, the delay in the tendering of national concessions has a number of negative consequences for the intercity bus transport sector, as detailed below:

4.2.4.1. Impaired efficiency in the operation of public transport

The awarding of concessions through non-competitive procedures makes it impossible to ensure that the service providers are the most efficient operators in the sector, i.e. those in a position to offer a greater number of services at a lower cost; this reduces the overall efficiency of the transport system. Furthermore, the failure to renew expired concessions is a legal irregularity, which substantially reduces contractors' incentives to make investments or restructuring that reduce the costs of providing the service. Section 5 empirically quantifies the impact of these actions on operator efficiency.

4.2.4.2. User detriment

Operator inefficiency is detrimental to users, who might otherwise enjoy lower prices, higher quality or more frequent services, as analysed in Section 4.1.10. Annex III quantifies the benefits to users of the tendering of state concessions.

Thus, the information available on state concessions obtained through the CNMC's request for information indicates that the unit revenues of current concessions are significantly lower than those of expired concessions, by 34% in terms of revenue per passenger-kilometre and 37% in terms of revenue per vehicle-kilometre. The same result is obtained when comparing tendered concessions and those awarded through non-competitive procedures, where reductions reach 24% in terms of passenger-kilometre revenue and 19% in terms of vehicle-kilometre revenue.

Table 25. Unit revenue from state concessions in 2019, according to their origin and term

UNIT REVENUES OF ORIGIN CONCESSIONS IN 2019, BY ORIGIN ¹ AND TERM STATUS				
Situation as of 31/12/2019	Tendered ²	Not tendered	In force	Expired
Nº of concessions	51	29	35	45
% Total revenues ³	42%	58%	13%	87%
Revenues/pass-km	0.052	0.068	0.042	0.064
Revenues/veh-km	1.315	1.622	1.001	1.584

Source: Compiled by author based on information reported by the MITMA and the General Directorates of Transport in the Autonomous Communities. Note: ¹ There is no individualised information on the 26 state concessions tendered in the 1987-2006 period, except for that available in the TDC(1999). ² A concession is considered to have been tendered if that same concession, or any of its component branches, has been awarded under an open procedure at some point since its creation. ³ Total revenue includes the revenue received by the concession holders, as well as transfers from the authorities, excluding VAT.

These results are in line with the conclusions of an investigation carried out by the Organisation of Consumers and Users (OCU)²⁶¹ in 2019, which showed that expired concessions have fares that are 30% higher on average than other concessions and up to 47% higher on radial routes.

The above analyses do not, however, take into account the different characteristics of tendered and non-tendered routes, such as their distance, or the existence of intermodal competition, which may influence the results. However, this was done by Asensio et al. (2016), in a study that analyses fares on routes between provincial capitals on the Iberian Peninsula. These authors found that state concessions that were put out to tender after the LOTT came into force had fares 21% lower than those that were renewed. Among their results, they highlight the absence of a significant fare reduction in concessions that were tendered from 2007 onwards, according to the first three groups of tender specifications, which underlines how important properly designed tender specifications are for competition. Finally, the authors show that prolonged regional concessions have fares that are 13% higher than extended state concessions and up to 34% higher than the state concessions tendered in the early 1990s.

²⁶¹ OCU (2019).

4.2.4.3. Detriment to the public authorities and the general interest

Since a large number of concessions receive subsidies to compensate for a service's operating deficit, operator inefficiency means that the cost to the public authorities of maintaining the service is higher than that which they would have to bear if the services were awarded to more efficient operators. According to the results in Section 4.1.10, the tenders in Castile-La Mancha, Galicia and Bizkaia would have resulted in reductions in the compensation to be received by operators of up to 10% compared to that initially envisaged by the contracting authorities.

The cost overrun caused by the absence of tenders is detrimental to the taxpayer and diverts public resources from other purposes and initiatives, which are necessary in a context of crisis and the transformation of the Spanish economy. Furthermore, higher bus fares and lower service frequencies increase the attractiveness of private cars, whether owned, hired or shared, leading to an increase in the negative externalities associated with this mode of transport, including increased congestion and pollutant emissions.

4.2.4.4. Damage to competition in the concession market and related markets

The absence of competitive tendering means that the benefits obtained by operators, either from users or the public authorities, could be higher than those that would have resulted from a competitive award. This gives operators of non-tendered services a competitive advantage, as they can use the overcompensation received to compete more competitively in tenders called for other services. This advantage could be even greater for operators of services awarded prior to the entry into force of Regulation 1370/2007, to which the obligations of transparency and accounting separation provided for in its Annex would not apply, making it difficult to adjust the remuneration received. In this respect, Regulation 1370/2007 made it possible to exclude operators of non-tendered services from tendering processes during the transitional period that ended on 3 December 2019, a power that has not been exercised in any of the tenders put out.²⁶²

The absence of tenders therefore not only prevents competition for non-tendered services, but may also significantly alter the competitive dynamics in tenders in the rest of the national market.

²⁶² Article 8.4 of Regulation 1370/2007.

Finally, in a similar way, holders of concessions that have not been tendered could use the overcompensation received to compete more competitively in the deregulated market segments in which they are present, such as international, occasional, tourist or special-use transport services, to the detriment of the other operators present in these markets.

4.2.4.5. Obligations under the transitional regime of Regulation 1370/2007

As shown in Section 3.1.1, Regulation 1370/2007 introduced a transitional period for the full application of the obligation to tender contracts, which ended on 2 December 2019. During this period, the Regulation imposed an obligation on Member States to progressively introduce competition into the awarding of their public service contracts *"in order to avoid serious structural problems, in particular with regard to transmission capacity"* (Art. 8(2) of Regulation 1370/2007). According to the available data, only 25% of the national concessions have been tendered to date.

4.2.4.6. Obstacles to the future introduction of market competition

The end of the transitional period set out in Regulation 1370/2007 entails the obligation to tender existing contracts as they expire. In this respect, the high volume of routes still to be tendered implies that the transition to the competitive market regime will be more abrupt, which could affect the success of the tenders. Consequently, the European Commission warned that Member States should progressively comply with the obligation to tender *"to avoid a situation in which available transport capacity in the public transport market will not allow transport operators to satisfactorily respond to all competitive tendering procedures that would be launched at the end of the transitional period."*²⁶³

Table 26 below shows the percentage of the market, in terms of revenue, that will be opened up to competition in the coming years, due to the expiry of existing contracts.

²⁶³ Section 2.6.2 of Commission Communication 2014/C 92/01 on Guidelines for the interpretation of Regulation (EC) No 1370/2007 on public passenger transport services by rail and by road.

Table 26. Estimated market share of expired contracts, by expiry date

ESTIMATED MARKET SHARE OF EXPIRED CONTRACTS, BY EXPIRATION DATE			
Expiration date	% of total revenues		
	Total Available Regions	State	Total available info
2021	16%	87%	31%
2022	17%	89%	32%
2023	17%	89%	32%
2024	73%	89%	77%
2025	74%	89%	77%
2026	74%	95%	78%
2027	80%	96%	84%
2028	98%	99%	98%
2029	100%	99%	100%
2030	100%	99%	100%
2031	100%	99%	100%
2032	100%	99%	100%
2033	100%	100%	100%

Source: Compiled by author based on information reported by the MITMA and the General Directorates of Transport in the Autonomous Communities. Forecasts of market shares of expired contracts, according to the market share of concessions in 2019, calculated based on all available information.

The table above shows that most of the regional (and national) market will be open to competition in 2024, when contracts in the Autonomous Communities of Madrid, the Provincial Council of Bizkaia and other Autonomous Communities including Asturias and Castile-La Mancha expire at the same time. The next key years for the process are 2027 and 2028, when the concessions in Catalonia, the Canary Islands and Mallorca expire. In addition to all these routes, there are state concessions that have expired but which have not yet been put out to tender and whose calls for tenders could coincide, in terms of time, with those in the mentioned Autonomous Communities.

In these tenders, market competition could be limited by the combined effect of three elements:

- The large size of the concessions put out to tender, especially the state concessions and those in the Autonomous Communities of Madrid, Bizkaia, Mallorca and Gran Canaria.
- The stringency of the selection criteria imposed in the tender documents, especially those relating to technical solvency and the size of the fleet.
- The simultaneous calling for tenders.

The combination of these elements will increase the incidence of the barriers to market competition identified in Section 4.1 above. In particular, SMEs may be restricted in their ability to bid for tenders, as they will have to establish joint ventures so that they can meet the solvency and fleet requirements. Furthermore, the administrative costs associated with the examination of documents and the submission of bids are not insignificant, and it is unlikely that these operators will be able to meet them for the large number of contracts tendered.²⁶⁴

As a result, simultaneous calls for tender could reduce the number of bids received per contract, giving a comparative advantage to larger operators, which will become more important the larger the size of the service, and which could condition the results of the tenders and increase post-tender market concentration.

In order to foster competition in the tenders to be launched, the Public Authorities should:

- Stagger the announcement of the lots, avoiding announcing a large number of tenders at the same time. At the same time, public authorities should publish an expected timetable of upcoming tenders, well in advance, to allow operators to organise their resources to bid for tenders.
- Split contracts into smaller lots, where possible, and relax the previous experience and fleet size requirements in the tender documents.
- Public authorities that currently have expired contracts should put them out to tender as soon as possible, to avoid any further overlap of tenders at the national level.

²⁶⁴In this regard, the French Autorité de la Concurrence issued an opinion recommending that the transport regulator of the Ile-de-France region space out tenders for urban buses, having noted that simultaneous calls for tenders require operators to have large development teams, which are not financially sustainable for alternative and smaller operators, and which can lead to the accumulation by large operators of the expert staff needed to organise transport networks (Avis de l'Autorité de la Concurrence no. 20-A-08 of 16 September 2020, paragraphs 115-122).

4.3. Intrinsic limitations of the concession model

This section assesses those aspects of the concession system that restrict competition, or lead to inefficiencies in the scheduled bus market or related markets, but which are intrinsic to this system. By their nature, these restrictions will exist even in a system of market competition that functions well, and although their impact can be mitigated, it is not possible to eliminate them without profoundly changing the existing regulatory framework.

4.3.1. Information asymmetries

The private operation of intercity bus services for general use by under a monopoly regime means that these companies obtain first-hand access to information on the services provided that is not available to other agents, either public authorities or other companies in the sector. Due to its nature, this information is extremely valuable, both for planning and administering concessions, as well as for managing the service itself and formulating bids in tenders.

The consequences of these information asymmetries between the operator and the authorities, and between the incumbent operator and the other operators in a bidding process, are discussed below.

4.3.1.1. Information asymmetries between the regulator and the regulated party

The relationship between the public authorities and the operator can be analysed in the framework of Agency Theory, which describes those situations where:

- There is a contractual relationship between a principal (the public authority), which entrusts an agent (the concession holder) with the performance of a service, in exchange for remuneration.
- There is a conflict of interest between the principal (the public authority) and the agent (the concession holder), to the extent that:
 - the principal seeks to ensure the provision of a safe and high-quality public transport service at the lowest possible price and cost, which entails a costly effort for the agent.
 - the agent seeks to maximise the benefits obtained from the operation, minimising the cost of providing the service and maximising its income from both users and public authorities.

- The agent has an informational advantage over the principal:
 - The agent has greater knowledge, among other aspects, in terms of: i) the demand for transportation in general and the current and expected demand for the service it operates; ii) its cost structure and the productive factors necessary to provide the service; iii) the sector and the characteristics of potential competitors; and iv) the technical characteristics relevant to the provision of the service, related to technological innovations in terms of safety, the environment and user comfort.
 - This information is critical for the principal (the public authorities) as it allows them to: (i) verify that the agent (concession holder) is correctly fulfilling the contract; (ii) correctly design the contract and the bidding terms prior to its being awarded, in order to align the agent's (concession holder's) incentives with its own; and (iii) correctly design the public transport network.

In the context of the agency problem, the existence of information asymmetries between the concession holder and the public authorities, as well as a conflict of interest between the two, means that the concession holder may choose not to share all the relevant information with the public authorities, disclosing only that which serves its interests. The negative consequences of this for the public authorities and for the operation of the concession system as a whole are set out below.

Firstly, the concession holder may conceal information that prevents the authorities from verifying compliance with the concession contract with a view to receiving greater compensation. In *fixed-price* contracts, the concession holder may try to reduce costs by providing lower quality services, which are more costly for the principal to verify, for example, by reducing the frequency of service along less profitable sections of the route, or by providing some services with buses whose characteristics are inferior to those foreseen in the contract. The absence of competitive pressure prevents users from changing supplier if this happens, which requires the public authorities monitoring compliance with the terms of the contract.

On the other hand, in hybrid or incentive contracts, in which part of the costs incurred by the concession holder are covered, the latter can alter the parameters that determine the amount of the compensation to be received from the authorities, for example, by reporting lower revenues from the sale of tickets, or a higher number of kilometres covered.

The solution to these problems involves reducing the information asymmetries and designing contracts that align the objectives of the concession holder with those of the public authorities.

To reduce these information asymmetries between the public authorities and concession holders, it is necessary to implement measures that allow the authorities to verify the veracity of the data and the characteristics of the service provided. Traditionally, this is done through transport inspections, which are generally costly for the authorities. New technologies make it possible to reduce these costs by allowing the real-time identification and geolocation of buses, or gathering information on the real-time demand for services, thanks to the implementation of integrated ticketing and payment systems.

On the other hand, the concession holder's incentives can be aligned with those of the authorities through an appropriate contract design, for example, by introducing incentives for service punctuality, where this is measurable, or with a sufficiently dissuasive sanctioning system.²⁶⁵ Possible examples are the introduction of a system of bonuses or surcharges for contractors based on the quality reported by users, calculated on the basis of face-to-face or telematic surveys, or the setting up of a complaints mailbox, which could lead to financial penalties for contractors if they reach a certain threshold. In any case, the functioning of the system must be clearly reflected in the contracts and be based on objective parameters.

According to Laffont and Tirole(1993), another possible solution is to reinforce the contractor's incentive to maintain its reputation, through a sanctioning regime that punishes repeated non-compliance²⁶⁶, or the periodic publication of statistics on the quality reported by users, the number of complaints, punctuality or other objective parameters, for each contract.

Secondly, the concession holder may conceal data or provide biased information to the public authorities to influence the design of contracts or the regulatory framework. As described above, the solution to the agency problem usually involves the design of a contract or regulatory framework that aligns the objectives of the principal and agent. The problem in this case is that the principal (the public authorities) needs information from the agent (concession holder) in order to properly regulate their relationship. In a dynamic context, where interactions between operators and public authorities extend beyond the duration

²⁶⁵ By way of example, clause 32 of the latest tender documents issued by the MITMA provides for the possible termination of the contract in the event of the contractor's repeated failure to comply with its obligations.

²⁶⁶ The current regulations in force at state level only provide for such sanctions in the case of interruption of service provision (Art. 143.1 i) and j), and 143.5 of the LOTT).

of a specific contract, this can lead to a **situation of regulatory capture**, where the actual design of the specifications and regulatory framework benefits incumbent operators.

With regard to the specifications, Sections 4.1.3, 4.1.4 and 4.1.5 have already shown how incumbent operators can use their informational advantages to increase the incidence of the technical solvency requirements demanded of operators. In turn, an increase in reported costs could push up the likelihood that bids that are presumed to be abnormal are ultimately rejected by the Contracting Committee, if the fare quoted does not cover the costs reported by the concession holder. These elements deter competition for the concession and increase the incumbent operator's chances of renewing the contract, which makes it necessary to design the bidding terms and conditions carefully, as described in this document.

As regards contract design, information asymmetries can be exploited by the incumbent to overestimate investments and sunk costs, increasing its amortization and investment recovery periods and thus obtaining a longer contract term or an extension. In this respect, the fleet does not represent a sunk cost that must be fully recovered during the term of the concession, since it is an asset that can be assigned to other transport services once the concession has come to an end.

The concession holder may also overestimate its costs in order to renegotiate the current contract, reducing frequencies in unprofitable services, obtaining fare increases or increases in the compensation to be received from the public authorities. For this reason, it is essential that any changes are made on the basis of justified general interest and that the services are put out to tender on a regular basis, so that competition controls the compensation to be received for the operation.

Finally, it should be noted that certain aspects of the institutional framework increase a concession holder's influential capacity and the likelihood of regulatory capture. As a result, it is relatively common for sectoral associations to have some type of representation in public decision-making bodies, such as the National Road Transport Committee (Comité Nacional del Transporte por Carretera; CNTC), the Board of Directors of the Madrid Regional Transport Consortium (Consortio Regional de Transportes de Madrid; CRTM), or the Madrid Road Transport Committee (Comité Madrileño de Transporte por Carretera; CMTC), a

representation, however, that is not usually granted to transport users.²⁶⁷ Through this representation, incumbent companies can participate in regulatory processes and obtain economic or informational advantages²⁶⁸ that are denied to non-associated operators, thereby encouraging coordination among competitors and increasing the risk of capture.²⁶⁹ In turn, to the extent that these bodies grant greater representation to the major associations, whether at the state or regional level, this provides some operators with a greater capacity to influence the others.

Thirdly, the concession holder may not provide the government with the information necessary to optimise the public transport network. In order to carry out the transport network planning functions granted to them by the concession system, the public authorities need very detailed information on the demand for travel between localities within their jurisdiction. However, concession holders may have no incentive to provide this information to the public authorities if they believe that this may undermine their comparative advantage over other operators in a future tender, as detailed in the following section. Instead, the operator may claim information processing difficulties, providing data that is aggregated at the time or concession level, and which lacks the necessary detail for service optimization.

The results of the CNMC's request to the General Transport Directorates of the Autonomous Communities reveal gaps in the information available on the management of the services by operators. As a consequence, many Autonomous Communities lack information on the operating costs of their concessions, or data on the operation of the services broken down by quarter or route. In some cases, this information is not available for more than one or two years, or in a

²⁶⁷ Users are not represented in either the CNTC (Art. 55 et seq. of the ROTT) or the CMTC (Art. 1 and 9 of the Decree of the Community of Madrid 2/2005 of 20 January), and are less represented in the CRTM (1 member as opposed to 4 for companies and trade unions).

²⁶⁸ The functions of the CNTC include participation, on behalf of the companies and transport associations, in the procedure for drawing up transport provisions, plans or programmes affecting the development of road transport (Art. 59 LOTT), functions which are shared by the CMTC (Art. 2 of Decree 2/2005). In this respect, the MITMA has traditionally discussed the clauses of the contracting specifications with the business associations prior to their publication. Thus, the 2007 Protocol came about as a result of an agreement between the Ministry, the associations and the trade unions representing the sector.

²⁶⁹ CNMC (2017), p. 12-13.

processable format that facilitates its analysis.²⁷⁰ Responding to the CNMC's request has meant a significant investment of time and resources for the Autonomous Communities, some of which lack the means to process the required information within a reasonable period of time.

4.3.1.2. Information asymmetries between the incumbent operator and other bidders

Operating the service under a monopoly regime means that the incumbent concession holder has privileged access to information which is essential when formulating competitive and realistic bids in tenders, information which cannot be replicated by other bidders²⁷¹ and which includes information relating to transport demand, service provision costs, and profitability.

In this regard, the tender documents published by the public authorities usually contain certain basic information aimed at mitigating this information asymmetry, such as the overall number of passenger-kilometres transported annually by the renewed concession or the costs of subrogable personnel.

However, the current operator could still have much more detailed information, with data on demand and operating costs by month, day or even hour, and broken down by route or by stops at origin and destination. Thus, current data processing capabilities give the incumbent contractor a substantial informational advantage when forecasting the future evolution of demand, the users' willingness to pay, and the costs of the concession, which places it in an advantageous position when bidding for the route.

For this reason, the public authorities must demand greater transparency from the operators in the information reported, gathering all information that is potentially relevant when designing the tender specifications. This implies that the public authorities must have sufficient means to process the information

²⁷⁰ Thus, 9 Autonomous Communities stated that they lacked information on the operating costs of the concessions, while 4 Autonomous Communities possess information in a non-editable format, often scanned and sometimes aggregated by operator, which makes it impossible to determine the real costs of providing the service in the concessions. On the other hand, 5 Autonomous Communities lacked operational data on the service, such as passenger numbers, vehicles or revenue, disaggregated by route, which makes it difficult to plan concessions.

²⁷¹ In this regard, opinion no. 20-A-08 of the Autorité de la Concurrence recommends that the transport regulator of the Ile-de-France region ensure that all operators have access to reliable, transparent and exhaustive information, as those operators who have this information have had access to it thanks to their relationship with the public operators who operated the monopoly service. The press release on the decision can be found here: <https://www.autoritedelaconcurrence.fr/en/press-release/opening-bus-networks-ile-de-france-competition-autorite-issues-opinion-ile-de-france>.

received from concession holders, standardise it and make it available to bidders in an open, accessible and transparent manner.

Information collected in this way would help reduce information asymmetries between the public authorities and concession holders, and could be used to optimise the design of contracts as well as the public transport network, to the benefit of its users and society as a whole.

4.3.2. Inefficient design of the public transport network

This section addresses certain aspects of the concession system that directly impact the efficiency of the design of the public transport network. Since it is a network industry, an inefficient network design has repercussions on the entire system in the form of lower demand, higher unit service costs and, therefore, higher prices for users.

Among the elements that could reduce the efficiency of the transport system are the administrative planning characteristics of the services, and the rigidity intrinsic to the concession system.

4.3.2.1. Administrative planning of the services

The concession system involves exhaustive planning by the public authorities, as the tender specifications must establish key aspects for the operational efficiency of the service, such as the routes of the services that make up the concession, the minimum service frequencies along each route or at each stop, or the minimum number of vehicles to be assigned to the concession and their capacity.

The centralised planning of services by the authorities may result in inefficiencies for the following reasons:

- Firstly, the authorities may not have all the relevant information, or the necessary means, to carry out their planning tasks²⁷², as discussed in the previous section.
- Secondly, even if the information and means are available, it is possible that planning may respond to criteria other than transport demand or minimising the operating costs of the socially desirable network.

²⁷² By way of example, of the 17 Autonomous Communities to which the CNMC's request for information was addressed, 5 were unable to provide relevant information on the operation of the concessions (passenger numbers, revenue, dispatches, etc.) broken down by route on a quarterly basis, within a period of 90 days.

- Finally, the distribution of regional powers between the State and the different Autonomous Communities may condition the planning of the service.

In terms of deciding upon routes, administrative planning can lead to situations in which services are established between two towns for which there is insufficient demand, and to a lack of connections between municipalities that would be covered in a free market, given the absence of private initiative. In turn, it is possible that the overall design of the transport network may not be the most efficient from the point of view of transport demand or costs.

Hence, the centralised planning of transport networks by the public authorities has traditionally resulted in the implementation of *point-to-point* transport networks, which connect origin-destination pairs between which a demand for the service is identified.²⁷³ This was the case of the concessions in force when the LOTT came into force, and continues to be the case in state concessions and a large number of regional concessions, which include a multitude of routes between two or three main hubs (Madrid-Almería, Santander-Bilbao-Barcelona).

The need to guarantee transport services in localities of less economic interest has led most of the linear concessions to incorporate, in addition to more or less direct routes between main destinations, others that make a multitude of stops in small towns.²⁷⁴ In this way, more or less direct services between the main towns subsidise transport between small municipalities, which have a markedly regional character, with shorter distances travelled and different travel patterns.

This scheme may not be efficient, for several reasons:

- For long- and medium-distance transport, the greater number of stops increases travel time, which reduces demand, reduces bus occupancy, and increases unit transport costs.
- Local transport does not follow such markedly linear routes, but tends to be organised around hub-and-spoke patterns, where inhabitants of less populated municipalities travel temporarily to the busiest centres for work, leisure or business purposes.

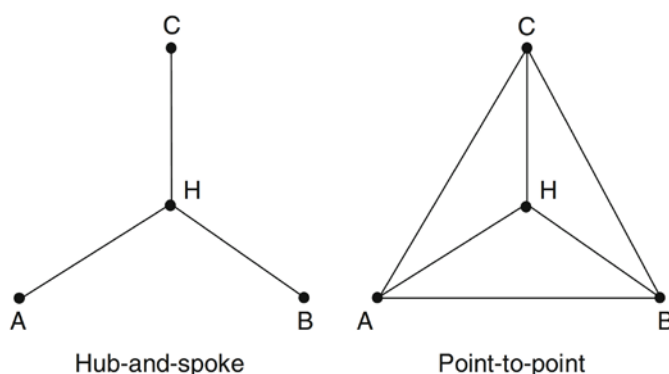
The above patterns imply that a more efficient way of organising transport could be through a *hub-and-spoke* network, where local transport connects small

²⁷³This is the well-known case of air transport in the United States, prior to deregulation, documented, among others, by Oum and Tretheway (1990).

²⁷⁴For example, one of the VAC-157 routes between Madrid and Irún makes a total of 88 stops, 72 of which are in Castile and León, in municipalities such as Santa Olaja de la Acción (148 inhabitants in 2020), Otero de Curueño (307), and Bercedo (707).

municipalities in an area with regional transport hubs, which are then linked through state or regional point-to-point lines.²⁷⁵

Figure 12. *Hub-and-spoke and point-to-point network scheme*



Source: (Cento, 2009).

Some of the Autonomous Communities that have renewed their concession maps have followed this scheme, establishing zonal concessions that group together all intercity bus services in a given area.²⁷⁶ However, the majority of the Spanish concession map does not correspond to the scheme described above:

- In the case of the Autonomous Communities, the extensions and delays in the renewal of concessions, described in Section 4.2, have meant the survival of the previous point-to-point system.
- Despite segregating traffic to the Autonomous Communities, state concessions continue to provide a large number of connections between very small municipalities, with an average of ten stops per route.²⁷⁷

²⁷⁵Jara-Díaz and Basso (2003) proposed a theoretical model in which they show that the best way to connect three geographical points to each other is through a *hub-and-spoke* strategy. Crozet and Guihéry (2018) reported the development of *hub-and-spoke* strategies by French operators following the liberalisation of long-distance bus services.

²⁷⁶ This is the case in Asturias, Mallorca, Castile-La Mancha, Galicia (regional concessions), Navarre, the Basque Country and the new services planned in Aragon and Castile and Leon.

²⁷⁷ According to information provided by the MITMA, nearly 50% of the municipalities covered by the state network have less than 1,000 inhabitants. Routes to and from these municipalities accounted for 3% of passengers and 1% of overall revenue in 2019.

Due to their characteristics²⁷⁸, in certain situations these services could be better served by an autonomous regional network, adapting the frequencies and vehicle capacities to the local needs of the service, something that would positively impact demand and the unit costs of service provision. At the same time, transferring responsibility for this traffic to the Autonomous Communities would, under certain circumstances, make it possible to reduce the number of stops on state routes, increasing their attractiveness and reducing the costs of providing the service.

The above scheme would result in reduced provision costs and increased efficiency of transport network as a whole. However, as these services are loss-making, any transfer to the Autonomous Communities would oblige them to pay for part of these services by means of compensation, which is currently borne by the users of the national network; this means that the current situation is likely to persist.

Another aspect to consider when planning the transport network is the existence of alternative modes of transport. When designing the network, the public authorities must consider the complementarities between the different modes of transport, especially with regard to the new rail services that will be developed after liberalisation. At the same time, they should avoid establishing loss-making services subject to Public Service Obligations (PSOs) where PSOs exist for other modes, such as trains. This requires close cooperation between the various competent regional administrations in order to optimise public transport spending.

Finally, under the concession system, the public authorities must establish the minimum service to be provided on each section of the network, with a minimum number of daily journeys and bus capacity established in the contracts signed with the operators. This allows the public authorities to establish the minimum coverage in commercially unattractive areas, but it also entails the risk of oversizing the service, resulting in an inefficient increase in costs. In this sense, the public authorities should adapt bus capacity to service demand. In the event of fluctuations in demand that make it necessary to increase the existing capacity, it is necessary to consider whether this excess demand should be covered by the scheduled network (e.g., if it occurs at certain times of the day), or by the liberalised segments of the market (if the demand has seasonal patterns, is due to particular events, or for tourism-related reasons).

²⁷⁸ Services to and from these municipalities carried an average of 174 passengers per year in 2019, who travelled an average of 112 km. Nearly 50% of these journeys were between municipalities located in the same province.

4.3.2.2. Rigidities in terms of the subsequent modification of contracts

Even if the service planned by the public authorities were efficient, the legal restrictions on modifications to the contract make it difficult to adapt the service to demand during the term of the contract. In the current context, where mobility habits are shaped in the short term by pandemic disruptions and in the long term by digitalisation and energy transformation, freezing the contract design for ten years (or longer) could lead to significant dynamic inefficiencies.

Contract rigidity also has important implications for the bidding process, where bidders must anticipate demand and/or cost developments, and cannot adapt once the contract is in force. The resulting uncertainty means that the best bid may not be made by the most efficient operator, but by the most optimistic one, which could lead to problems during the execution of the contract.

On the other hand, a more flexible approach to contract modification means that the contractor could obtain benefits that were not foreseen in the original contract by operating new services. This is detrimental to both users and other bidders, since, had this been envisaged in the tender specifications, it could well have resulted in different bids and more favourable conditions for the user. In turn, the possibility of renegotiating the contract during its term affects offers made by bidders, which could be based on renegotiation expectations rather than on the characteristics of the tendered service, making it difficult to identify the most efficient operator.²⁷⁹

The above considerations imply that the solution to this problem requires a careful balancing by the transport authorities.

On the one hand, the public authorities should try to reduce operator uncertainty by making all the relevant information available for bid preparation. At the same time, reducing the duration of concessions could also help to reduce the uncertainty of demand.

With regard to the plausibility of bids, it is desirable that the tender specifications introduce mechanisms to discourage operators from presenting unrealistic offers.²⁸⁰ Ultimately, the contracting authorities may take into account the credibility of a bidder's demand projections when assessing tenders that are

²⁷⁹ Nash and Wolański (2010), p. 8.

²⁸⁰ The combination of a guarantee requirement and penalties in case of non-compliance may be effective in this respect, as may the designation of the second bidder as the operator of last resort. In cases where public compensation is anticipated in the event of losses incurred in the provision of the service, it is possible to establish compensation for each passenger carried, so that bidders take into account the lowest compensation to be received when bidding on this parameter. (van de Velde & Eerdmans, 2016)

presumed to be abnormal, although their action should be limited to those cases where the operator's forecasts are manifestly unfounded.

Finally, with respect to the possibility of modifying the contract subsequent to the awarding, as argued in Section 4.2.3, it is necessary to reinforce the cases where a modification is considered substantial, in accordance with European case law, which does not conflict with the flexibility that the current legislation grants to non-substantial modifications.²⁸¹ However, in relation to this last point, it would be necessary for the transport authorities to keep in mind the considerations of the other agents involved:

- It is desirable for operators to participate in the design of the service route (and, in general, of the transport network), as they have first-hand knowledge of its characteristics, and their proposals could contribute to increasing its efficiency.²⁸² This participation must take place with the appropriate safeguards in place to prevent abuse of the monopoly power granted to the operator, e.g., through a reduction in supply.
- The participation of user associations or the populations concerned is also desirable, so as to avoid making changes to the service that benefit only the contractor, to the detriment of the general interest.

4.3.2.3. Conclusions on network design

As a consequence of the above points, the planning of public bus transport services may not be adequately adjusted to the needs of users, or to the economies of scale or scope derived from several routes being operated by the same operator. At the same time, the rigidity of the concessionary system makes it difficult to adapt the network to changes in demand, in addition to the problems caused by the management deficiencies described in Section 4.2. All these factors contribute to reducing the attractiveness of the bus as a means of transport, with consequent detrimental effects on users, citizens in general and the environment.

It should be noted that public planning would not be necessary in a liberalised market, where operators would optimise routes taking into account both demand and provision costs. The CNMC therefore considers that this solution is more

²⁸¹ Article 75.3 of the LOTT allows the public authorities to modify contracts in the event of unforeseen circumstances affecting the potential demand for the service, or when the need arises to cover new transport in the vicinity, after consulting the contractor.

²⁸² In this respect, Article 75.3 of the LOTT stipulates that the contractor must be consulted prior to the modification.

efficient than public planning for those services which, due to their attractiveness, can be operated by more than one operator simultaneously.

In the case of loss-making services, which are considered necessary from a regional and social structuring perspective, there are intermediate solutions that allow operators to be involved in designing the service network and that may contribute to promoting the efficiency of the public transport system.

By pre-determining the area of service provision, zonal concessions allow greater flexibility in this respect. Indeed, it is worth highlighting the Dutch experience with "hybrid contracts", which are *net-cost* type contracts in which the authorities actively collaborate with the operator to design the service during the execution of the contract. Also noteworthy are "super-incentive contracts", where bidders have complete freedom to design the services in their offers, subject to minimum accessibility standards set by municipality or area, and where the winning bidder is allowed to modify the contract during its term, subject to a series of conditions.²⁸³

For areas of lower demand, it is necessary to highlight on-demand transport solutions, which allow the user to contract a trip in advance, at a regulated price. This scheme allows the contractor some flexibility in adapting the service to the frequencies demanded and even to the route required by users. However, as the service does not have a fixed timetable, it cannot be considered scheduled transport, so a modification of the regulations would be necessary to be able to offer this type of service on a concessionary basis.²⁸⁴

Under all circumstances, and as long as the concessionary system is maintained, it is essential to consider the private initiative of operators in the design of the concessionary system, in order to optimise the network and adapt it to the demand for services.

4.3.3. Lack of transparency in public transport financing

One of the intrinsic aspects of the concession system is the scheme for financing unprofitable routes through cross-subsidies. This means that the financing of unprofitable sections depends on the profitable routes with which they coincide.

²⁸³ Normally, operators must compensate for the reduction of services on one route with an increase on another. The reduction of the service to below the original offer must be authorised by the transport authority, after consulting the passenger associations and municipalities concerned (van de Velde & Eerdmans, 2016, p. 28).

²⁸⁴For more information, see ACCO Report OB 39/2018 (2019).

As a result, the distribution of the costs associated with unprofitable routes varies from concession to concession, depending on their characteristics. In this way, passengers on non-profitable lines whose routes coincide with those in high demand will, by extension, enjoy a higher quality of service than other towns. Similarly, passengers on profitable routes with less demand or who have to travel on a greater number of unprofitable sections will bear a higher additional cost, thus creating a greater disincentive to use the bus as a means of transport and aggravating the problems of the line's profitability.

The characteristics and quality of the service are therefore highly dependent on concession design, leading to inequalities in regional connectivity and in the cost of accessing this essential public service. At the same time, the fact that this system is financed by the users of this mode of transport, who tend to have a relatively lower income compared to the average population and lack other alternatives, may have equity implications, compared to a system in which unprofitable lines are subsidised by the public purse.

All these factors are aggravated by the lack of transparency in the system. Integrating different routes into the same concession means that the amount of these cost overruns remains hidden from the public. Subsidising unprofitable lines from the public budget could instead facilitate greater efficiency in the overall operation of the system.

4.3.4. Distortions in related markets

The need to guarantee the contractor's monopoly for the duration of the concession has led the regulator to establish restrictions that affect market segments which are already liberalised, such as international passenger transport, occasional, tourist or regular special-use transport. In this way, the concession system may also extend competition restrictions to these related markets.

The main restrictions introduced by the regulations to the operation of these markets are set out below.

4.3.4.1. The artificial segmentation of markets

The public ownership of scheduled public passenger transport services for general use and the fact that they are subject to an economic regime different

from the regime of free exercise under authorisation²⁸⁵ means that a distinction must be made between these and all other intercity bus transport services.

This legal distinction is based, however, on indeterminate concepts, so that the separation between one service and another may not be clear from an operational point of view, making it necessary to impose additional restrictions on the free market activity of operators. The restrictions on each market segment are analysed below: occasional passenger transport, regular special-purpose transport, tourist transport and international transport.

The LOTT defines occasional transport as transport that is not subject to a pre-established itinerary, calendar or timetable.²⁸⁶ The distinction therefore rests on the indeterminate concept of repetition, so that operators in this segment are prohibited from repeating "*pre-established traffic*".²⁸⁷

This indeterminate concept rules out services of a discretionary nature, but where there is a repeated itinerary, timetable or schedule, such as the transport of attendees to an event that is held regularly every year, or even the provision of services for a single event for which several buses are needed, where there would be a de facto repetition of traffic. However, the provision of these non-regular services could have a significant role in metropolitan and peri-urban areas where the scheduled public transport system has poor connectivity. For this reason, it seems necessary to clarify the regulation in order to avoid hindering the development of services that could be useful for users under the current scheme of segment separation.

Finally, as an additional restriction, the regulation introduces a ban on the sale of seats, obliging operators to hire out the entire vehicle.²⁸⁸ This measure is not necessary to protect operators in the concessionary system, who would be covered by the ban on repetition, and it is a disproportionate restriction on the freedom of action of operators in this transport mode, forcing them to operate through intermediaries or enter into contracts with large event organisers. In turn, it restricts the development of on-demand transport business models based on the aggregation of individual transport requests that exploit new technologies, forcing potential users to use less efficient and more polluting alternatives to

²⁸⁵ Arts. 42, 70 and 71 of Law 16/1987, of July 30, on the Organisation of Land Transport.

²⁸⁶ Art. 64 of Law 16/1987, of July 30, on the Organisation of Land Transport.

²⁸⁷ Art. 140.6 of Law 16/1987, of July 30, on the Organisation of Land Transport.

²⁸⁸ Arts. 99.3 and 140.6 of Law 16/1987, of July 30, on the Organisation of Land Transport and Art. 122 of Royal Decree 1211/1990, of September 28, which approves the Regulations of the Law on the Organisation of Land Transport.

cover their travel demand. It would therefore seem advisable to reform both the LOTT and the ROTT in order to eliminate this restriction.

The LOTT establishes that special-use scheduled transport services are those *intended to serve, exclusively, a specific group of users such as schoolchildren, workers, military personnel, or similar homogeneous groups*" (Art. 67 of the LOTT). Once again, the distinction with respect to scheduled transport for general use rests on the indeterminate concept of "homogeneous group" of users.²⁸⁹

The interpretation of this concept is left to the transport authorities, which must issue a special transport authorisation for the service in question, granted for the duration of the transport contract.²⁹⁰ This can lead to conflicts of interest between special-purpose transport companies and the public authorities, where the latter must decide whether to grant an authorisation to a service that may be in competition with a scheduled general-purpose service whose losses are insured by the public authorities themselves.

In general, making the provision of the service subject to obtaining prior specific authorisation from the public authorities restricts the operation of a service that is, in theory, liberalised. In turn, the uncertainty caused by the ambiguity of the regulations and the possibility of a conflict of interest with the authorities restricts the legal certainty of operators and is detrimental to their operations. In this sense, it would be desirable to reform the regulations to make the concept "homogeneous group" clearer and to replace the prior authorisation regime with one of prior communication or responsible declaration.

Tourist services are defined as those which are carried out as part of a package tour, or which, *"having a duration of not more than 24 hours and not including an overnight stay, are offered through travel agencies or other recognised intermediaries"*.²⁹¹ The LOTT definition restricts the possibility of offering transport services directly to tourist groups, forcing operators to enter into contracts with tourist intermediaries or to integrate vertically with these.

On the other hand, the regulation introduces important restrictions on these services to differentiate them from scheduled services of general use, by requiring that they be offered together with *"other complementary services of a*

²⁸⁹ Art. 105 of the ROTT clarifies the concept a little more, by requiring that they be "qualitatively different from those of general use services."

²⁹⁰ Art. 89 of Law 16/1987, of July 30, on the Organisation of Land Transport.

²⁹¹ Art. 110 of Law 16/1987, of July 30, on the Organisation of Land Transport.

*tourist nature, such as meals, tourist guides or similar*²⁹², or that their price be at least 30% higher than that of a scheduled service of general use with which the route coincides.²⁹³ In the latter case, the provision of services is subject to prior notification to the public authorities.²⁹⁴

Restrictions on fares or the marketing of tourist transport services distort the market for these services, transferring to it the inefficiencies inherent in the concessionary system, and these are unnecessary, since the impact on scheduled transport concessions could be verified after an examination of the route. In this way, they reduce the capacity of operators to cater for an important niche of transport demand, given the importance of Spain as a tourist destination.

Lastly, the LOTT defines international services as those *"whose route runs partly through the national territory of foreign States"*²⁹⁵. As explained in Section 3.1.1, international services have been liberalised following the entry into force of Regulation 1073/2009, which nevertheless allows Member States to refuse to authorise such a service if "on the basis of a detailed analysis, it decides that the service in question may seriously affect the viability of a comparable service provided under one or more public service contracts in accordance with the Community legislation in force on the direct sections concerned".

The regulation states that *"In such a case, the Member State shall lay down criteria, on a non-discriminatory basis, to determine whether the service applied for will seriously affect the viability of the said comparable service"*, specifying, *"the fact that a carrier offers lower prices than those offered by other road carriers or the fact that the route in question is already being operated by other road carriers shall not, in itself, constitute justification for refusing the application"*.²⁹⁶

²⁹² Arts. 110 and 112 of Law 16/1987, of July 30, on the Organisation of Land Transport, and Art. 128 of Royal Decree 1211/1990, of September 28, approving the Regulations of the Law on the Organisation of Land Transport.

²⁹³ Art. 129 of Royal Decree 1211/1990, of September 28, which approves the Regulations of the Law on the Organisation of Land Transport.

²⁹⁴ Art. 130 of Royal Decree 1211/1990, of September 28, which approves the Regulations of the Law on the Organisation of Land Transport.

²⁹⁵ Art. 65 of Law 16/1987, of July 30, on the Organisation of Land Transport.

²⁹⁶ Article 8.4 of Regulation 1073/2009.

On the basis of these precepts, in 2019, MITMA approved a series of criteria for authorising international lines in Spain, with the aim of preserving scheduled concessions, which include:²⁹⁷

- Prohibiting stops that allow passengers to board and alight between locations located less than 100 km apart.
- Prohibiting more than one stop in the same town.
- Obliging these services to use bus stations for stops that allow passengers to board and alight.
- A preference for provincial capitals "or population centres of sufficient size" for stops that allow passengers to board and alight.

The CNMC considers that these criteria represent a restriction on the development of international transport activity and, as they are established *ex ante* for any application, they may conflict with Regulation 1073/2009, which requires that the refusal be made on the basis of a "*detailed analysis*" which determines that the service "*may seriously affect the viability*" of an existing service subject to PSOs. Such an analysis must assess the impact of the new service on the economic viability of the PSO concession, with a mere reduction in revenues not being sufficient for a refusal,²⁹⁸ and the CNMC considers that, prior to refusal, a proposal should be made to modify the proposed service to avoid conflict with the PSO service, where possible.

The method guiding this detailed analysis should be published by the Ministry and be governed by objective and non-discriminatory criteria, which should be related to the viability of the PSO service that is affected.

In the CNMC's view, the proposed criteria does not meet these requirements. As a result, the current wording of the document allows service refusal when any of the criteria are not met, regardless of whether or not the requested service coincides with a scheduled general-purpose transport concession, which, moreover, is not sufficient justification, as established in the regulation itself.

²⁹⁷ Common criteria for applying for and reporting or authorising regular international passenger transport routes, with origin/destination in Spain or transit through the country, available at the following link:

https://www.mitma.gob.es/recursos_mfom/comodin/recursos/criterios_viajeros_dic2019.pdf.

²⁹⁸ A possible example of this analysis can be found in the method approved by the CNMC for performing the economic equilibrium test in the event of a conflict between liberalised passenger rail services and those subject to PSOs (Comisión Nacional de los Mercados y la Competencia, CNMC, 2020).

As a consequence, the restrictive competitive conditions imposed on the domestic market by the concessionary system are extended to the international sector. The cost of these measures in terms of efficiency could be substantial, taking into account the potential demand for international services connecting Spain with France and Portugal, two EU Member States with which Spain has close economic and commercial ties, whose bus transport sectors are liberalised and which, like Spain, are important tourist destinations.

4.3.4.2. Distortions of competitive dynamics in related markets

The liberalisation of the related markets discussed here has meant that there are cases where the same company simultaneously operates scheduled transport concessions and services in the free market. This can distort competition in the free market in several ways.

Firstly, and as discussed in Section 4.2.4, the holders of concessions that have not been tendered, or that have expired, can use the overcompensation received for operating that service to operate more competitively in the free market, distorting competition in the latter.

In turn, if their concessions have excess fleet attached to the contract, operators can use these vehicles, whose amortisation is guaranteed by the concession contract, to provide services on the free market at a more advantageous price.

Finally, the management of some bus terminals by scheduled operators may give rise to strategic behaviour and refusals of access to free market operators competing with the terminal operators in one of these markets.²⁹⁹ In this respect, the results of the public consultation held by the CNMC ³⁰⁰suggest that alternative transport operators could be experiencing difficulties in accessing bus stations, where the following practices could be common³⁰¹:

- The station manager refuses a competitor in the liberalised market the use of the station on the grounds of lack of space.

²⁹⁹ The now defunct CNC sanctioned similar conduct in Case 627/07 Estación Sur de Autobuses, in which the station manager denied access to the station's marketing services to a company with which it competed in the international transport segment (CNC, 2007).

³⁰⁰ The original text of the consultation and the responses received can be found at the following [link](#). A summary of the responses can be found on the CNMC blog ([link](#)).

³⁰¹ Cascales Moreno (2021).

- The station operator applies more advantageous station usage fees to companies in its own group, which may give them an advantage over other operators in the liberalised segments.
- The manager discriminates against competing operators in terms of access to complementary services offered at the station, such as the availability of ticket offices or trading points.

4.3.4.3. Conclusions on the impact the concession system has on related markets

The coexistence of a concessionary general-purpose scheduled transport market with the rest of the liberalised markets means that the latter are subject to a series of restrictions that would not exist in a fully liberalised market. The restrictions analysed are not necessary to guarantee the monopoly of the scheduled transport concession holders and may entail disproportionate restrictions being imposed on the freedom of action of the free market operators. The cost of these measures in terms of efficiency could be substantial in the case of Spain, which has the ideal characteristics for the growth and development of these segments.

In this respect, it is necessary to re-evaluate the LOTT and its implementing regulations to ensure that the restrictions imposed are necessary and proportional, and to clarify undefined concepts, reducing legal uncertainty for operators in this market. The public authorities should consider replacing these general restrictions with a simplified system of prior notification in which an authorisation is refused, where appropriate, after an individualised analysis of the impact of the proposed commercial service on the concession in accordance with a transparent and publicly available method.

However, insofar as a concessionary market segment continues to exist to ensure the provision of loss-making services, frictions between this and the free market are probable, in particular with regard to the granting of authorisations by transport authorities or access to stations.

For this reason, the CNMC considers that, in order to ensure the appropriate liberalisation and development of the international, occasional, tourist and regular special use bus transport markets, an independent national road transport authority should be set up, similar to those existing in other European countries.³⁰² This authority could be responsible for resolving disputes between

³⁰² For example, the French Autorité de régulation des transports, or the Portuguese Autoridade da Mobilidade e dos Transportes. Annex VI contains a comparison of international regulatory authorities for bus passenger transport.

the commercial sector and concessions over the refusal of authorisations, specifying the method for the proposed impact test. It would also be responsible for resolving disputes that may arise in relation to the refusal of authorisations and access to stations.

Furthermore, it is recommended that the LOTT be amended to regulate a procedure for access to bus terminals that guarantees carriers' access rights to terminals under fair, equitable, non-discriminatory and transparent conditions, in line with the provisions of the European Commission's Proposal for the amendment of Regulation 1073/2009.³⁰³

4.3.5. Judicial contestability of tender specifications

In the concession system, where market shares and the position of operators depend on the outcome of tendering processes, operators have incentives to use all legal tools at their disposal to win contracts, including administrative or judicial disputes, so that it is common for market competition to move beyond the tendering process to administrative and judicial proceedings.³⁰⁴ It is therefore likely that, as expired state and regional concessions are put out to tender in the coming years, the number of related appeals will increase.

Administrative or judicial conflict benefits the incumbent operator, which continues to operate the concession until the tender is resolved, postponing its replacement. In turn, it entails an added cost for the public authorities and operators, derived from the legal costs, to which must be added the costs incurred by the judicial system itself. This heightens the perception of legal or regulatory risk in the sector, which discourages bidding in tenders, given the potential for these costs to be incurred in a process with an uncertain outcome.

In this respect, it is to be expected that the larger the size of the contract and its duration³⁰⁵, the greater the judicial conflict, which is an additional reason for the competent authorities to reduce the length of time contracts last, and to split them into lots whenever possible. Recent experience shows that the introduction of clauses that reduce competition between operators is one of the main reasons

³⁰³ Articles 5 et seq. of the Draft Regulation of the European Parliament and of the Council amending Regulation (EC) No 1073/2009 on common rules for access to the international market for coach and bus services.

³⁰⁴ Similar experiences have been reported in the Netherlands, which also maintains a concessionary system for local and regional bus transport (van de Velde & Eerdmans, 2016, p. 41).

³⁰⁵ Van de Velde and Savelberg (2016), p. 16.

for tender annulment³⁰⁶, and the authorities should therefore respect the principles set out in this document in order to streamline tendering processes.

Finally, it is advisable for the public authorities to promote tender designs that boost legal certainty and reduce, as far as possible, incentives for incumbent operators to file appeals that postpone their replacement, by speeding up procedural steps once appeals have been resolved, or by calling for new tenders to replace annulled calls.

4.3.6. The costs of the concession system

The above points suggest that, compared to a liberalised market, the concession system entails implicit costs, for the public authorities, concession operators, and related markets.

Hence, on the one hand, the public authorities must devote resources to the following activities:

- The administrative planning of the routes.
- The costs of managing the tendering process and the costs associated with administrative and judicial litigation, both for the courts and for the public authorities represented.
- The costs of supervising and administering existing contracts.
- The costs of supervising related markets, linked to the examination and award of the authorisations necessary for new services, given the legal segmentation of the market.

At the same time, intercity bus operators incur a number of costs that are not associated with the operation of the service:

- Administrative and legal costs linked to submitting bids for tenders.
- Legal and representational costs in administrative and judicial litigation.
- Legal costs for submitting applications for authorisation to operate in markets related to the concession market.

³⁰⁶ For example, the rulings annulling the tender specifications of the second and third group of state tenders (called between 2008 and 2011) highlighted the low score given to fares and journey frequencies, the reduced margin of real competition in terms of fares and journey frequencies due to the existence of a maximum score limit for the reductions (increases) offered, and the establishment of a right of preference in favour of the former contractor in the event of similar bids.

- Costs linked to lobbying activities with the aim of influencing the actions or decisions of the various authorities and administrations with jurisdiction in the sector.

All these costs are ultimately passed on to taxpayers or transport service users, in both the concessionary and related markets.

5. QUANTITATIVE ANALYSIS OF THE EFFICIENCY OF INTERURBAN BUS CONCESSIONS MANAGED BY THE GENERAL STATE ADMINISTRATION

The preceding chapter details the shortcomings in the design of the tender specifications, the restrictions involved in the management of the system by the public authorities, and the inefficiencies inherently associated to the concession system. This chapter analyses the influence of these factors on the efficiency of intercity bus concessions managed by the General State Administration between 2009 and 2018, by applying a *Data Envelopment Analysis* (DEA). A detailed description of the methodology used for the empirical analysis can be found in Annex IV.

The analysis presented is divided into several sections. The first presents the strategy used to estimate the efficiency of the concessions during the period considered. The second describes the data and methodology used to build the DEA models used in the analysis. The third presents the results obtained, estimating the impact on concession efficiency of the expiration of the contract, its renewal, the unification of concessions, and the awarding of concessions through an open procedure. The fourth section presents the main conclusions of the analysis.

5.1. Data Envelopment Analysis (DEA)

Economic efficiency is usually defined as the ability of a firm to maximise its output while minimising its costs or the number of inputs used.³⁰⁷ The economic literature uses two main strategies to quantify the efficiency of a given firm or sector:

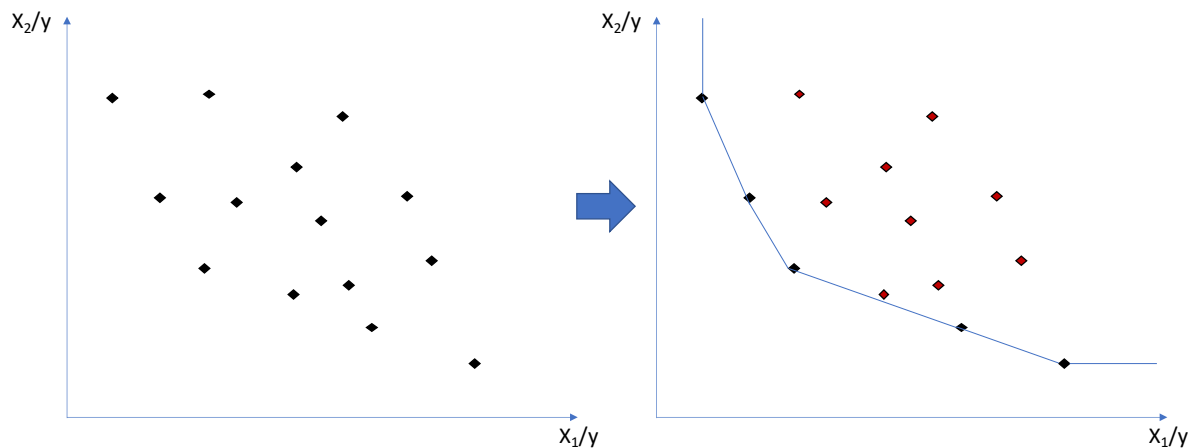
- One way is to estimate a cost function that predicts the minimum cost of producing a given quantity of output with a given technology, and then measuring the distance of each firm to the estimated efficient frontier³⁰⁸.
- The second alternative is to "envelop" all available observations, i.e., the observed combinations of inputs used in production and outputs produced, with an efficiency frontier that satisfies a set of logical conditions, which are

³⁰⁷This is known as technical efficiency. Throughout this section we will refer only to this type of efficiency, and it should not be confused with other efficiency concepts such as scale efficiency or allocative efficiency, discussed in section A of Annex IV.

³⁰⁸ This is a parametric estimation technique known as stochastic frontier analysis (SFA). For more information on this type of technique, we recommend reading Battese and Coelli (1988, 1992), Aigner et al. (1977), Meeusen and Van den Broeck (1977) or Farrel (1957).

as unrestrictive as possible (see Figure 1). The efficiency of each firm can be measured as its distance to the frontier estimated in this way. This method is known as Data Envelopment Analysis (DEA)³⁰⁹. Section A of Annex IV offers a more detailed explanation of how this method works.

Figure 13. Graphic representation of the efficient frontier estimated using DEA



Source: compiled by author.

Note: Each point on the graph is a combination of two inputs (X_1 and X_2) used by a firm (e.g., buses and fuel) for the production of output Y (e.g., the number of kilometres travelled by buses on a given route). For a more detailed explanation, see section A of Annex IV.

By not imposing a certain functional form on the observed data, DEA is a simpler and more flexible approach that allows comparisons to be made between similar firms. However, this flexibility has a number of disadvantages, as the results obtained can potentially be sensitive to the selection of production factors and products, so it is necessary to analyse the relevance of the variables before including them in the model, as well as to present various specifications for the models analysed.

³⁰⁹ DEA is a so-called non-parametric technique, which estimates the production frontier by solving a linear optimisation problem with two constraints:

- The efficiency of each company must be the maximum possible, i.e. its distance to the frontier must be minimised.
- That the set is convex, in other words, that the frontier contains, or "envelops", all available observations.

For more information on this technique, we recommend reading Charnes et al. (1978).

5.2. Description of the data and method used

5.2.1. Description of the database

The proposed DEA analysis uses the operational, accounting and contractual data of the state concessions depending from the General State Administration. These data were obtained from the Ministry of Transport (MITMA)'s response to the CNMC's request for information. The choice of MITMA's data was motivated by the availability of a wide selection of variables over a relatively constant time span. Unfortunately, the great disparity in the time coverage and the reduced availability of variables of interest have made it impossible to extend this analysis to the concessions administered by the Autonomous Communities.

A data panel of 65 state concessions was used to estimate the DEA, analysed over a ten-year period (2009-2018). This represents an elevated coverage with respect to the total of 83 concessions that were active over the period considered³¹⁰. Tables 27 and 28 show the representativeness of the data panel for the different classifications of concessions considered throughout the following sections, compared to the total number of concessions in place during the period:

³¹⁰Some of the concessions had to be excluded from the database due to the lack of observations for variables necessary to estimate the DEA. The method used to choose the model variables and select the sample of concessions can be consulted in section B of Annex IV.

Table 27. Representativeness of the DEA database by contract type. Period 2009-2018

REPRESENTATIVENESS OF THE DEA DATABASE, BY CONTRACT TYPE				
Nº of concessions		Total	DEA	% Coverage
Contract term	Expired	39	33	85%
	In force	42	32	76%
Origin of the title ¹	Tender	44	35	80%
	Direct Award	21	13	62%
	N.A.	18	17	94%
Total		83	65	78%

Source: compiled by author based on MITMA data. Note: ¹ The origin of the title refers to the procedure for awarding the contract in force at the end of the period considered. Concessions whose origin could not be determined following the request for information sent to MITMA are classified as "NS/NC" (see Section B of Annex IV for a description of the data panel).

Table 28. Representativeness of the DEA database by concession size. Period 2009-2018

REPRESENTATIVENESS OF THE DEA DATABASE, BY SIZE ¹				
Code	Size label ¹	Total	DEA	% Coverage
A	Very large	6	6	100%
B	Large	9	9	100%
C	Medium-large	12	11	92%
D	Medium-small	10	9	90%
E	Small	14	13	93%
F	Very small	32	17	53%

Source: compiled by author based on MITMA data. Note: ¹ Concession size according to the average number of vehicle-kilometres produced during the period 2009-2018. The criteria used for the classification are detailed in Section D of Annex IV.

State concessions are highly heterogeneous, encompassing concessions of very different sizes and operating parameters. This heterogeneity makes it difficult to estimate concession holder efficiency, given the large number of human, technological, socioeconomic and demographic factors that may affect it, which cannot be covered by the models proposed and for which no information is available. Consequently, the analysis presented in this section **has to be regarded as indicative and comparative, rather than causal.**

5.2.2. Construction of DEA models

First of all, estimating a DEA model requires choosing the relevant observation unit, known as the *Decision Making Unit* (DMU). Each unit must correspond to an agent that has the capacity to determine which inputs are used in the production of outputs.

In this analysis, the concession is considered to be the DMU, since most of the relevant parameters for operating the concessions, such as the number of annual kilometres to be covered, personnel, vehicles, seats or frequencies offered, are specified in the concession contract signed between MITMA and the concession holder.

It should be noted that the concession system works differently from a free market, where the operator cannot make production decisions freely, as sometimes they require a modification of the concession contract by MITMA, which reduces the agility of the production process. This characteristic could condition the results, which should be interpreted as a comparison of the efficiency of the different contracts managed by MITMA, which may or may not reflect differences in the operating efficiency of the concessionaires.

Finally, the database size (the number of DMUs) must be consistent with the number of variables to be used, to avoid unnecessary increases in inter-variable dependencies, which in turn artificially increases the efficiency value of all the observations, invalidating the calculations obtained (Kerstens, 1999). For this, it is necessary to comply with the empirical rule proposed by Brouck and Golany (1996):

$$N^{\circ} DMUs \geq 3 * (n^{\circ} Outputs + n^{\circ} Inputs)$$

As will be seen below, the proposed models comply with Brouck and Golany's rule (1996). Thus, the specification with more variables (integrated model) employs a total of 1 output and 5 inputs, which multiplied by three makes a total reference value of 18, clearly lower than the number of DMUs in our database (65).

Secondly, the relevant parameters for the production decision must be selected, in other words, what is produced (the output) and what factors are used in production (the inputs). This decision took into account the relevant literature, the

availability of data³¹¹, the correlation between the candidate variables³¹² and the analysts' own criteria.

Taking into account the above, the following parameters were selected:

- Outputs: the variable vehicle-kilometre is used, reflecting the number of kilometres produced by the concession³¹³. However, this variable could lead us to consider “efficient” some situations where there is a mismatch between supply and demand . To complement the supply-side perspective, production in terms of passenger-kilometres is also analysed³¹⁴. Nevertheless, to interpret this term one should bear in mind that the primary objective of the concession system is to ensure the provision of a service that would not be profitable in a free market. The simultaneous use of supply and demand variables is abundant in the literature³¹⁵.
- Inputs: several groups of inputs are used:
 - Accounting inputs: personnel costs and operating costs are considered for their relevance for total concession expenditures (they account for 70% of the average costs of the concessionaires in the database), and due to the wide availability of observations³¹⁶.
 - Operating inputs: following the ranking by Lope (2012), the following variables are taken:
 - Service features: the number of offered trips is included, representing the frequency of service³¹⁷.

³¹¹ The DEA estimation does not allow for periods with no observations, or where the variables take zero or negative values, which excludes the use of all those variables that fulfil these characteristics.

³¹² The correlation between inputs and output should be positive, to ensure that the inputs selected are sufficiently related to the production of output. Furthermore, to improve the specification of the model, it is important for it to be relatively high, but not perfect, as this would prevent the variations in output from being imputed to variations in each of the inputs, reducing the precision of the model. In addition, the correlation between the inputs should also be positive but relatively low, so that each input provides different information. Section C of Annex IV presents the correlation table for the variables considered.

³¹³ Throughout the analysis, this will be referred to as the "supply model" or "supply-side model".

³¹⁴ Throughout the analysis, this will be referred to as a "demand model" or "demand-side model".

³¹⁵For example, in Odeck and Alkadi(2001), Garcia Sanchez(2009), Viton(1998), or Kerstens(1999).

³¹⁶ For example, in Bhatt et al. (2019) or Filippini et al. (2015).

³¹⁷ Used in Lope (2012) and Güner and Coşkun (2019).

- Vehicle fleet: in line with the literature³¹⁸ and given the similarity of the correlations of the variables vehicles and seats, the variable seats was chosen, which more accurately reflects the total capacity offered.
- Network and infrastructure: the length of the route is included, to capture the efficiency of the design of the concession route³¹⁹.

Next, for each output considered output, we estimate an integrated or global DEA model that includes all the inputs listed above, and two partial models, each including only the accounting or the operational inputs, to analyse the extent to which these contribute to overall efficiency.

The estimation of these models is input-oriented. In other words, we analyse the contractor's efficiency in producing a given amount of output while minimising the inputs used. This decision is based on the limited freedom the concessionaire has over the volume of production, which is determined in the contract, or on demand-levels, which can be considered largely exogenous. Concession holders do have greater power to act over the amount of inputs used, although, as explained above, this choice may be partly constrained by the concession contract. This approach is common in the literature when analysing transport³²⁰ or regulated sectors³²¹

In any case, the choice of orientation tends to have a very residual influence on the overall results since the frontier calculated is the same³²². The efficient or inefficient concessions are identical, where only the absolute value of the coefficients vary, which is less relevant in this type of comparative analysis.

Finally, it is necessary to decide which type of returns to scale are to be assumed by the model. In line with the relevant literature, we have chosen a DEA with Variable Returns to Scale, since assuming that all concessions operate at the optimal scale would be too restrictive.

Taking into account the above aspects, the specified models have been estimated, using the free software designed by Tim Coelli, a lecturer at the University of Queensland, in Australia³²³.

³¹⁸ For example, in Odeck and Alkadi (2001).

³¹⁹ A similar strategy is followed in Asmild (2009).

³²⁰ Nolan (1996), Cowie and Asenova (1999).

³²¹ Murillo-Zamorano(2004), p. 42.

³²² Coelli and Perelman (1996).

³²³ Accessible at the following link: <https://economics.uq.edu.au/cepa/software>.

5.2.3. Analysis Strategy

Once the components of the model had been described, we carried out a dynamic analysis, which consisted of performing an annual DEA (for each year between 2009 and 2018) for each model described. In this way, we analysed the evolution of the efficiency of the same group of 65 concessions throughout the considered period, which provided consistency for the analysis.

The aim of this method is to obtain indicative information on the impact of MITMA's management on the technical efficiency of state concessions. Specifically, we analysed the evolution of the efficiency of the concessions that have undergone the following structural changes:

- Contract expiration.
- Unification of concessions.
- Renewal of a contract through an open tendering procedure.

Since the structural changes analysed occur at different points in the lifetime of the concessions, the analysis will compare the efficiency of the concession around the change in question, taking into account two relevant aspects for measuring the impact:

- The heterogeneity of the concessions.
- The seasonal variation of efficiency.

In an attempt to mitigate issues associated to the heterogeneity of the concessions under analysis, they have been classified according to the average number of vehicle-km produced (supply) during the ten years of the panel. Thus, the analysis is refined by defining six groups of comparable concessions³²⁴, taking advantage of the breadth of the database³²⁵. The results show that larger concessions tend to be more efficient on average³²⁶, so the division based on size is a coherent methodological strategy. The classification criteria and the resulting distribution of concessions are detailed in section D of Annex IV.

In this way, the impact of a given structural change on the efficiency of a concession is analysed by comparing the performance of that concession with the average performance of the comparable group over the same period. This

³²⁴ The criteria used to classify the variables and the resulting concession distribution are presented in Section D of Annex IV.

³²⁵ (Bhatt, Vasudevan, & Misra, 2019) propose a similar strategy for analysing the efficiency of intercity bus operators in India.

³²⁶ Section D of Annex IV shows the evolution of the average efficiency of the different groups of concessions classified by size, during the period considered.

methodology takes into account the **average seasonal differences of the comparable group**.

Finally, the results obtained using the DEA methodology are complemented with an analysis of the descriptive statistics available, to determine which variables are responsible for the observed movements in terms of efficiency, as well as to analyse the evolution of other relevant variables not included in the model.

5.3. Results

This section highlights the main results of the analyses performed³²⁷. Firstly, the values and evolution of overall efficiency are presented by way of context, followed by the analysis of specific situations that are relevant from a competition perspective (contract expiration, unifications and tenders).

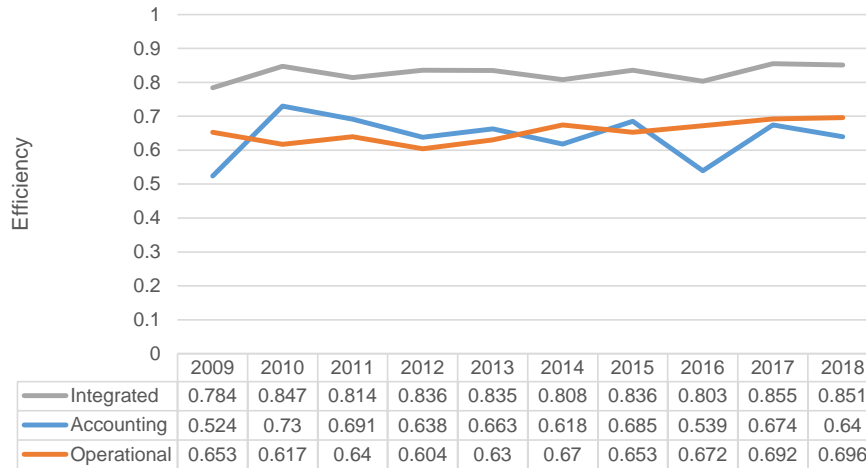
5.3.1. General results

This section presents the main results of the different DEA models³²⁸. Figures 14 and 15 show the evolution of the average efficiency of the 65 concessions that make up the panel over the ten years analysed, for both the supply and demand models. The coefficients show a certain stability, although, as mentioned, seasonal differences will be considered in further analysis to avoid bias. Section D of Annex IV of the CNMC's study details the average efficiency evolution of each of the concession groups classified by size.

³²⁷ The concession code is anonymized for results on specific concessions.

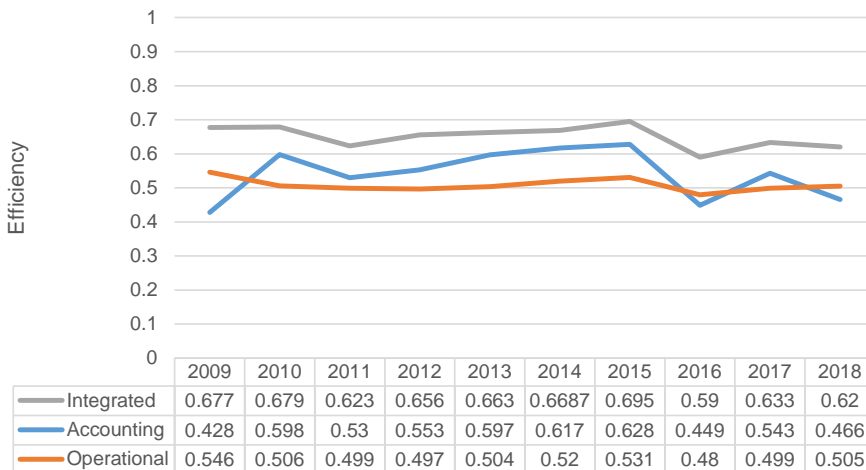
³²⁸ Section E of Annex IV of the CNMC's study contains a table of descriptive statistics for the panel used.

Figure 14. Evolution of the efficiency as measured by the integrated, operational, and accounting models: supply side



Source: compiled by author.

Figure 15. Evolution of the efficiency as measured by the integrated operational and accounting models: demand side



Source: compiled by author.

The above Figures show that demand-based efficiency values are lower than those estimated with the supply-side model, a fact that persists throughout the analysis. This is because transport demand is not under the direct control of the

concession holder³²⁹ and depends on external factors such as the existence of alternative transport modes. This reinforces the argument for using supply-side output as the cornerstone of the analysis, while checking demand-side estimations for robustness³³⁰.

Finally, as discussed above, efficiency as measured with the integrated model is always higher than efficiency using disaggregated models, by construction, as the mere fact of including all inputs *per se* increases average efficiency values. This highlights the importance of conducting separate analyses of the disaggregated input models. In general, the trend of operational efficiency is more stable than that of accounting efficiency, with a marked minimum in 2016.

Focusing the analysis on the most and least efficient concessions in the database, we consider as efficient those concessions whose average efficiency, as measured by a given model, lies in the upper quartile of the distribution. Likewise, those concessions whose efficiencies lie in the lower quartile are considered to be inefficient³³¹.

Based on the criteria described above, Table 29 presents the concessions that are coincidentally efficient and inefficient in both the accounting input model and the operational input model, from a supply-side perspective. These results are therefore robust for all partial specifications of the supply model.

Table 29. Detailed analysis of efficient and inefficient concessions: supply side

COMPARISON OF EFFICIENT AND INEFFICIENT CONCESSIONS (SUPPLY SIDE)					
Efficient concessions (Supply side. Accounting and Operational models)			Inefficient concessions (Supply side. Accounting and Operational models)		
Code	Accounting Ef.	Operational Ef.	Code	Accounting Ef.	Operational Ef.
C#34	0.89	0.96	C#8	0.33	0.29
C#24	0.83	0.98	C#40	0.39	0.35
C#13	0.89	1.00	C#12	0.37	0.37
C#53	1.00	1.00	C#14	0.43	0.23
C#36	0.95	1.00	C#60	0.41	0.31
C#35	0.84	0.94	C#59	0.42	0.31
C#44	0.98	0.91	C#45	0.30	0.27
C#56	0.99	1.00			

³²⁹ In transport economics, the output of the transport operator is usually considered to be an intermediate good, which users combine with travel time to achieve the final product, reaching the destination (Small, Verhoef, & Lindsey, 2007).

³³⁰ Section C of Annex IV of the CNMC's study presents the correlations between the DEA results and the main operational variables.

³³¹ The efficiency thresholds used in the ranking can be found in Section D of Annex IV of the CNMC's study.

Source: compiled by author.

According to the results, the most efficient concessions in terms of supply tend to connect large provincial capitals along the main infrastructure corridors in Spain (north, south, Atlantic and Mediterranean corridors), while the least efficient tend to connect smaller towns and rural hubs. However, some small and rural concessions figure amongst the most efficient. This is a direct consequence of the employed methodology, as the frontier is constructed using extreme observations. Thus, in these cases there is no other concession that can offer a better combination in terms of input reduction relative to the output produced. The efficiency of the most efficient concessions is estimated to be two to three times higher than that of the least efficient, with the differences being greater in the operational model than those in the accounting model.

The analysis is complemented below through the integrated model, incorporating the demand-side perspective. Table 30 shows the efficient and inefficient concessions according to the integrated supply and demand models, using all inputs. These concessions therefore exhibit efficient resource management from all perspectives considered.

Table 30. Detailed analysis of efficient and inefficient concessions, according to the integrated supply and demand DEA model

EFFICIENT AND INEFFICIENT CONCESSIONS (INTEGRATED SUPPLY AND DEMAND SIDE MODEL)					
Efficient concessions (Supply and demand side)			Inefficient concessions (Supply and demand side)		
Code	Int. Supply	Int. Demand	Code	Int. Supply	Int. Demand
C#30	1.00	1.00	C#51	0.68	0.45
C#5	0.98	0.91	C#65	0.60	0.42
C#24	1.00	0.99	C#12	0.61	0.38
C#13	1.00	1.00	C#8	0.53	0.33
C#36	1.00	0.86	C#40	0.57	0.32
C#44	0.99	0.99	C#54	0.63	0.30
C#30	1.00	1.00	C#14	0.51	0.26
C#56	1.00	1.00	C#60	0.52	0.39
C#25	1.00	0.98	C#59	0.54	0.30
C#35	1.00	0.95	C#45	0.48	0.35
C#47	1.00	1.00	C#17	0.63	0.36
			C#7	0.55	0.34

Source: compiled by author.

This group of concessions, most of which coincide with those shown in the analysis in the previous table, offers an interesting starting point for a detailed analysis of the possible liberalisation of long-distance routes. Broadly speaking, the majority of the efficient concessions identified have characteristics that lend themselves to liberalisation, as they connect large population centres connected by high-capacity routes. They are also profitable, as their revenues exceed their total costs, by between 3% and 34% over the ten years analysed.

However, three of these concessions do not present these characteristics. These are three short-haul concessions between smaller municipalities. All of these are clearly loss-making, as their revenue does not even represent 30% of their total expenditures. This would justify, *a priori*, intervention through the concession regime, following an assessment of the need to maintain the service.

Finally, the concessions classified as inefficient under the supply and demand models are those that are not operating adequately according to the present methodology and, moreover, are loss-making. According to the models used, their efficiency is between two and three times lower than that of the most efficient concessions, with larger differences in the demand model. In these cases, a future individualised analysis is necessary to identify possibilities for improving the concession system.

5.3.2. Effect of expired contracts on efficiency

Section 4.2.2 outlines the need to monitor the duration of concessions, and the possible adverse effects that the absence of a valid concession contract could have on the operator's incentives and efficiency³³².

In particular, during the two years following the contract's expiration, the operator must continue providing the service according to the specification of the contract, if required to do so by the authorities³³³. However, after this date the contractor is no longer bound by the contract and can decide to stop providing the service at any time, which significantly reduces its incentives to improve the service.

This section therefore analyses the impact of expired contracts on the operator's efficiency, estimated using the DEA models presented. For this purpose, we

³³² The periodic renewal of tenders allows both parties to adapt the contracts to current conditions, thereby correcting imbalances in the contract. Furthermore, following the theory of incentives proposed by Laffont and Tirole (1993), proper control of concessions reduces information asymmetries between the concession holder and the public authorities, which allows the latter to optimise their design, in terms of supply (quantity, quality, regional design), public spending and incentives.

³³³ Art. 82.2 of Law 16/1987, of July 30, on the Organisation of Land Transport.

analyse the differences between the efficiency growth rate in the years before and after the reference date, i.e., two years after the expiry of the concession. To account for possible year-specific time effects, the average efficiency growth rate of the concessions belonging to the comparable group in terms of size is subtracted from the efficiency growth rate of a given concession, as estimated by the DEA models³³⁴, according to the following formula:

$$e_{i,k,t} = \frac{E_{i,k,t} - E_{i,k,t-1}}{E_{i,k,t-1}} - \frac{\bar{E}_{k,t} - \bar{E}_{k,t-1}}{\bar{E}_{k,t-1}}$$

Where $e_{i,k,t}$ is the adjusted growth rate obtained, $E_{i,k,t}$ is the result of the DEA model considered for the concession i , belonging to the group k and the period t , and $\bar{E}_{k,t}$ the average result of the DEA model considered for the set of concessions belonging to group k in period t .

Finally, the average adjusted growth rates obtained for the set of expired concessions are compared to those of the concessions that were tendered after their expiration dates, taking the date of the tender as the reference date. Some concessions had to be dropped from the analysis, as we did not have sufficient observations to be able to compare the evolution of efficiency before and after their reference dates. As a result, the number of concessions included in this analysis dropped from 33 expired concessions and 35 tendered concessions to 24 in both cases³³⁵.

The distribution by groups is balanced, although there is a higher proportion of large concessions, which tend to have a higher average efficiency, in the group of expired concessions compared to those that have been put out to tender (see Table 31).

Table 31. Composition of comparison groups, by size

COMPOSITION OF THE COMPARISON GROUPS, BY SIZE							
Group	A	B	C	D	E	F	Total
Tendered	0	3	5	3	6	7	24
Expired	6	5	5	2	3	3	24

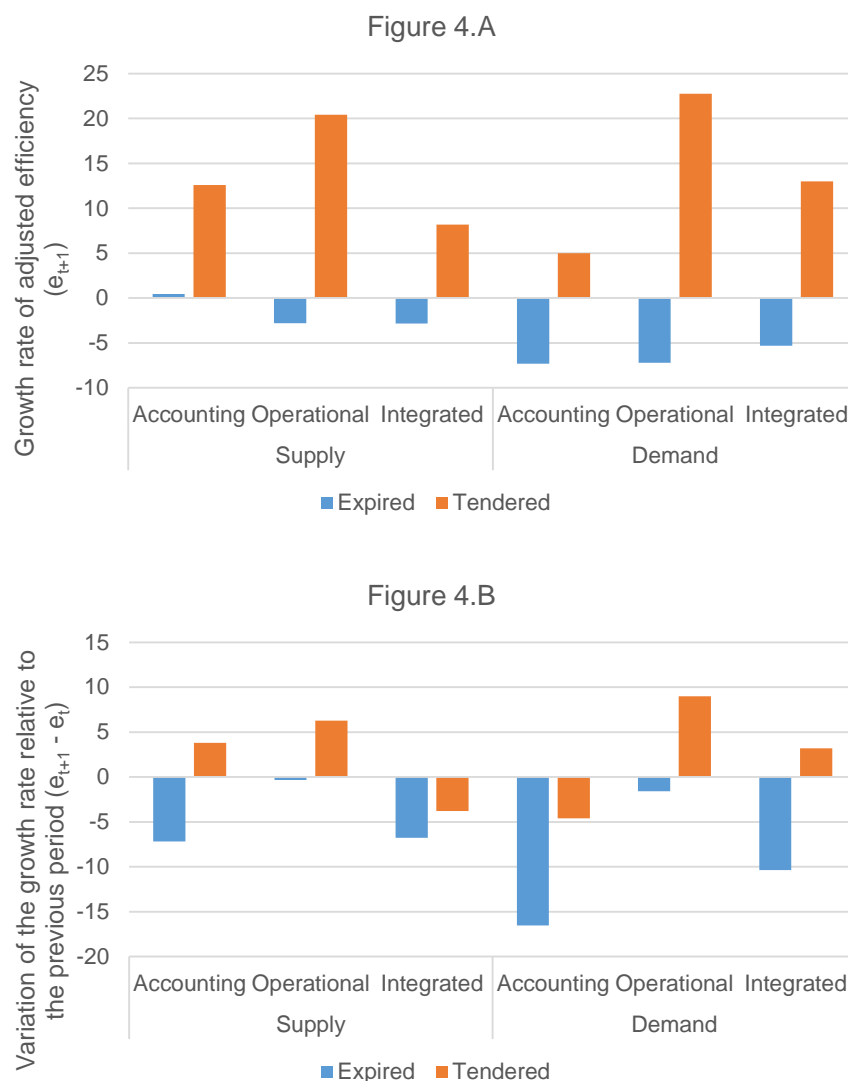
Source: compiled by author.

³³⁴ The groups considered are the groups defined according to the size of the concessions in terms of vehicle-kilometres, as described in Section 5.2.3 and in Annex IV.D.

³³⁵ Concessions whose reference date (2 years after expiry, or tender date) was before 2010 or after 2017 have been excluded, due to the lack of sufficient observations to compute growth rates to make the comparison.

The results of the above analysis are shown in the following figures:

Figure 16. Growth rate of the adjusted efficiency of expired and tendered concessions, and change in growth rate compared to the previous period



Source: compiled by author. Note: Figure 4.A shows the average growth rate of the adjusted efficiencies of expired and tendered concessions, between the reference date and the following period (e_{t+1}), calculated according to the formula presented at the beginning of this section. Figure 4.B shows the difference between this average adjusted growth rate and that of the previous period ($e_{t+1} - e_t$).

In view of the figures above, it is possible to see how, two years after the concession has expired:

- There is a drop in the efficiency of expired concessions in all the models considered, except in the supply model with accounting inputs (Figure 16.A). The adjusted growth rates are between -2.8% and 0.4% in the supply model and between -7.3% and -5.3% in the demand model.

- Compared to the previous period, the efficiency growth rate of expired concessions decreases in all the models considered. This is explained from an accounting perspective by a disproportionate increase in expenditures relative to the levels of supply and demand served (Figure 16.B).
- The efficiency growth rate of tendered concessions remains positive (Figure 16.A), and even increases for some of the models considered, especially from an operational point of view (Figure 16.B).

An in-depth analysis of the behaviour of the variables contained in the model reveals two potentially problematic situations that occur relatively frequently in expired concessions, after the reference date.

- There are increased expenditures, especially personnel costs, that run counter to declining trends in supply (and demand).
- There are efficiency improvements based on a reduced or less frequent supply. In these cases it should be noted that, although supply rationing may be efficient from a financial standpoint, it is detrimental to the affected populations, as it results in unsatisfied demand. Furthermore, in the absence of a tendering process, these efficiency gains are not accompanied by reduced prices or improved conditions for other users. Hence, they are only beneficial for the contractor, altering the economic equilibrium of the concession.

There are two main possible explanations for this evolution:

- Certain aspects of the tender specifications and the tendering process may induce operators to increase their reported costs in order to increase their chances of renewing the contract in a tender. In this sense, increases in assigned fleet size raise technical ability requirements that operators must meet to submit their bids, acting as a barrier to entry. On the other hand, assigning additional staff to the concession raises costs for rival operators and reduces the competitiveness of their bids, therefore relaxing competitive pressures in the tender. At the same time, this strategy increases the likelihood that bids that appear to be abnormally low be ultimately rejected by the contracting authority, should the proposed fare not cover the costs reported by the concessionaire. Finally, making the concession appear to be less profitable than it actually is also deters future competition for the tender. This behaviour has limited consequences for the operator, given the information asymmetries with respect to the public authorities.
- Uncertainty about the timing of the tender reduces the contractor's incentives to improve the efficiency of the service, in particular if this entails a cost, as it

is not certain that they will benefit from these improvements. In turn, the absence of contractual liability for abandonment of the expired contract increases the contractor's bargaining power with respect to the authorities, which it could use to its advantage by cutting less profitable services. This situation becomes even more critical if the authorities cannot credibly commit themselves to tendering the concession within a reasonable time period, increasing their dependence on the contractor holding the expired contract to provide the public service.

The problems described above disappear with the tendering of the service, since:

- The renewal of the contract reduces contractor uncertainty and restores contractual liability vis-à-vis the authorities.
- The competitive pressure generated by tenders allows for the selection of a more efficient contractor who may introduce management improvements.
- The administration may adequate the level of service to service needs during the drafting of the tender specifications, which may also positively affect efficiency and reduce information asymmetries with the contractor.

5.3.3. Effect of contract unifications on efficiency

The unification of concessions restricts competition by reducing the number of existing contracts open to tender, and magnifying the impact of some of the entry barriers set out in the tender specifications. For these reasons, the benefits for the general interest of the unification need to outweigh the cost to competition. These benefits may arise from the possibility of restoring the economic equilibrium of unprofitable concessions, or from exploiting economies of scale from the joint operation of several lines.

In view of the above, an analysis of the impact that unification has on efficiency is of interest, in order to assess the extent to which these operations are justifiable. In principle, the existence of economies of scale seems reasonable given the tendency of larger concessions to be more efficient.

During the period under review, MITMA unified 16 of the concessions in force in 2009, which were transformed into 4 newly created concessions. Of these, three concessions (C#13, C#65 and C#17) were awarded directly to the operator of the previous services, while just one was put out to tender (C#26) and awarded to a different operator.

This section analyses the impact on efficiency of this consolidation carried out by the MITMA. However, it is important to note that the lack of a sufficiently

representative number of unified concessions means that the results of this analysis cannot be extrapolated to the rest of the unifications carried out by MITMA or the autonomous communities.

On the other hand, the reduced number of unified concessions allows for a more in-depth analysis of post-unification changes. We examine variations in efficiency and other relevant variables before and after unification. We do so by taking, for each variable, the average value of all the observations available before and after unification, and comparing the average variation observed between periods. In the case of efficiency, we subtract to this result the variation in the average efficiency of the concessions belonging to the comparable group, similarly to the methodology employed with expired contracts, in accordance with the following formula:

$$\bar{e}_{i,k} = \frac{\frac{1}{2018-T} \sum_{t=T+1}^{2018} E_{i,k,t} - \frac{1}{T+1-2009} \sum_{t=2009}^T E_{i,k,t}}{\frac{1}{T+1-2009} \sum_{t=2009}^T E_{i,k,t}}$$

$$e_{i,k} = \bar{e}_{i,k} - \bar{e}_{kC}$$

Where T is the unification date, $E_{i,k,t}$ is the result of the DEA model considered for concession i , belonging to group k and period t , $e_{i,k}$ is the adjusted variation obtained for concession i (discounting the variation of the comparable group k), $\bar{e}_{i,k}$ is the variation experienced by concession i (without discounting the variation of the comparable group k), and \bar{e}_{kC} is the variation during the same period of the average efficiency of the DEA model considered for the set of concessions in group k .

Table 32 shows the adjusted variation of the average efficiency calculated according to the above formula for each DEA model considered, in addition to the variation experienced by the DEA inputs and outputs during the same period. It should be noted that in the case of C#26 only one post-unification observation is available, which may condition the results.

Table 32. Variation¹ in the efficiency and the main variables of the model in unified concessions

VARIATION IN EFFICIENCY AND THE MAIN VARIABLES OF THE MODEL, IN UNIFIED CONCESSIONS				
Concession	C#13	C#65	C#17	C#26
Year of unification	2011	2012	2013	2017
<i>Difference in growth rate relative to comparable size group (p.p.)</i>				
Supply. Acc.	0.04	-0.13	-0.15	0.08
Supply. Ope.	0.04	-0.03	0.36	0.41
Supply. Int.	0.01	-0.06	0.04	0.03
Demand. Acc.	0.19	-0.10	-0.17	0.15
Demand. Ope.	0.08	0.01	0.32	0.30
Demand. Int.	0.17	-0.02	-0.05	0.20
<i>Growth rate with respect to the previous period (%)</i>				
Veh-km	-2%	-2%	-10%	-43%
Pass-km	-7%	-2%	-17%	-32%
Trips	-8%	-40%	-38%	-15%
Length	-17%	8%	-17%	-45%
Seats	-5%	-9%	-23%	-66%
Staff Exp.	31%	56%	19%	-33%
Operating Exp.	-4%	-3%	-3%	-59%
Profitability	4%	2%	-11%	-25%

Source: compiled by author. Note: ¹ Variation in the values of each indicator, averaged for all available periods before and after unification.

The results of the analysis show a reduction in both outputs (vehicle-kilometres and passenger-kilometres) and operational inputs (length, trips and number of seats) after unification. This would indicate that the unification was an attempt to reduce duplicities in partially concurrent services.

These modifications would have increased the operational efficiency of the concessions with respect to their counterparts. This result is maintained on both the supply and demand sides, except in the case of C#65, whose operational efficiency drops on the supply side and increases only marginally on the demand side.

These service cuts are reflected in reduced operating costs, but not in personnel costs, which rise sharply in all the concession unifications, except C#26, the only one that has actually been put out to tender. As a result, accounting efficiency improves in only two concessions (the aforementioned C#26 and C#13) while it worsens in the rest.

The combination of the above elements implies that the efficiency measured using the integrated models registers (marginal) increases in three of the

concessions in terms of the supply models, while on the demand side it increases (significantly) in just two concessions.

In conclusion, of the four unified concessions:

- C#13 and C#26 would be justified on efficiency grounds, as they achieve significant gains in operating and accounting efficiency compared to the average performance of their comparable groups. In addition, both concessions rebalance loss-making contracts by merging them with other profitable ones. However, it should be noted that C#13 has not been put out to tender, despite having expired a number of years ago, which makes it difficult for the efficiency gains that the operator obtains through the merger to be passed on to users.
- C#65 is not justifiable on efficiency grounds, since it is worse than the comparable group in all but one of the models considered, and it involves the merger of two contracts that were profitable prior to the operation, meaning that the economic rebalancing justification does not apply either. Finally, the harm to competition is aggravated in this case, as the resulting concession is one of the largest in terms of passenger-kilometres transported after unification.
- The result of C#17 is ambiguous, with efficiency improving relative to the comparable group on the supply side, but worsening on the demand side. The increase in staff costs reduces the accounting efficiency of the concession, widening the gap with the comparable group and offsetting the improvements in operating efficiency.

These experiences underline the importance of justifying the overriding reason relating to the public interest underlying these operations. This should be made explicit in the unification project and be subject to subsequent evaluation to determine whether the expected efficiency gains have been realized, and to inform the future design of the transport network. Lastly, it emphasises the importance of tendering the resulting concession as a way to contain the evolution of costs, optimise the operation of the service, and mitigate any negative impact on competition.

5.3.4. Effect of tenders on efficiency

After studying the effect of contract expiration and unifications on the efficiency of concessions, it is necessary to analyse the main tool available to public authorities for encouraging efficient concession management: tenders.

This section analyses the impact on efficiency of the renewal of concessions through a competitive procedure, comparing them with the concessions that were renewed by direct award and with those of unknown origin that were neither tendered nor renewed during the study period, which were analysed in a previous section.

The following table shows the distribution of the concessions in the database according to their size³³⁶ and the award procedure used.

Table 33. Composition of comparison groups, by size

COMPOSITION OF THE COMPARISON GROUPS, BY SIZE							
Group	A	B	C	D	E	F	Total
Open procedure	0	3	6	6	8	11	34
Direct award	5	3	2	1	2	1	14
N.A.	1	3	3	2	3	5	17

Source: compiled by author.

Our data panel is made up of 34 tenders, 14 direct awards and 17 concessions of unknown origin³³⁷. As a consequence of the database's time span, between 2009 and 2018, we only consider the tenders resulting from the second tendering round (2008-2010), third tendering round (2011) and fourth tendering round (2014-2016).

The previous table draws attention to how none of the large concessions in terms of supply have been put out to tender, while most of the smaller concessions have. For the concessions that have been put out to tender, the database contains information on the number of bidders and the identity of concession holders, both by operator and by business group, capturing the changes in the

³³⁶ For more information on the composition of the groups, see Annex D "Classification of concessions by size".

³³⁷ These concessions were granted between 1992 and 1998, for an average duration of 20 years. Despite the request for information made to the Ministry of Transport, Mobility and Urban Agenda, it has not been possible to determine whether these concessions benefited from the extensions contained in the LOTT, or whether they are the result of tenders launched during the period (between 1987 and 2006, 26 new concessions were tendered, and 119 extensions were made to concession titles in place before the entry into force of the LOTT). Nevertheless, it has been possible to determine with complete certainty that these concessions have not been put out to tender nor subject to substantial modifications during the analysed period. As a result of which, all of them have expired.

identity of the concession holder after the award. This information is summarised in Table 34.

Table 34. Competition conditions in calls for tender, by size of the contract

COMPETITION CONDITIONS IN CALLS FOR TENDER, BY SIZE OF THE CONTRACT							
Group	A	B	C	D	E	F	Total
Tendered contracts	0	3	6	6	8	11	34
Change of operator	0	0	2	1	2	3	8
Average nº of bids	0	9	8	9	7	2	6

Source: compiled by author.

From the above table, it appears that there is a direct relationship between the size of the concession and the number of bidders, suggesting that these concessions are more attractive. In spite of this, only 8 of the 34 tenders analysed resulted in a change of operator, none of which occurred in the largest concessions (groups A and B).

The table below shows the average efficiency throughout the considered period for concessions that were tendered through an open procedure (OP), awarded directly (DA) or of unknown origin (NA), for all the DEA models considered:

Table 35. Average efficiency of concessions, according to their award procedure

AVERAGE EFFICIENCY OF THE CONCESSIONS, BY AWARD PROCEDURE				
Model	Inputs	OP	DA	NA
Supply	Accounting	0.64	0.76	0.58
	Operational	0.65	0.70	0.63
	Integrated	0.82	0.87	0.81
Demand	Accounting	0.57	0.56	0.47
	Operational	0.53	0.48	0.49
	Integrated	0.68	0.62	0.63

Source: compiled by author.

In view of the above table, it is worth noting that concessions of unknown origin show lower accounting efficiency values than the other concessions, underscoring how important it is to monitor them periodically in order to curb the evolution of costs.

On the other hand, it can be seen that concessions awarded through a competitive process do not show, in general, higher average (ten-year) efficiencies than those awarded directly.

These results may be due to several factors:

- Firstly, the values presented represent ten-year efficiency averages. For concessions that were awarded towards the end of the database period, this value may not be representative of the efficiency gains associated with the tender.
- Secondly, the smaller size of tendered concessions relative to the rest of the groups would tend to reduce the average efficiency of these concessions.
- Thirdly, restrictions to competition arising from the design of tender specifications could be preventing these concessions from becoming more efficient.

In an attempt to discriminate between the first two factors, we follow an approach similar to the one used to analyse expired contracts. In this way, the effect of tendering on concession efficiency is approximated by analysing the differences in the efficiency growth rate between the period prior to and after the date of the tender, after adjusting for the average change in the efficiency of the group of comparable concessions over the same period. This approach allows us to use the greatest number of observed tenders, dropping 10 of the 34 concessions in the panel due to the absence of one of the 3 required observations (year prior to tender, time of tender, or year after tender).

The results presented in Table 36 show that the tendered concessions improve their efficiency in the year after being awarded, between 8%-20% (Supply) and 5%-23% (Demand), depending on the model used.

Table 36. Evolution of the efficiency of the tendered concessions

EVOLUTION OF THE EFFICIENCY OF TENDERED CONCESSIONS						
Model	Inputs	e_{t+1} (%)	Difference $e_{t+1} - e_t$ (%)	Nº of concessions which improve (%)	e_{t+1} (%) / change of operator	e_{t+1} (%) / incumbent renews contract
Supply	Accounting	13%	4%	58%	15%	12%
	Operational	20%	6%	71%	32%	17%
	Integrated	8%	-4%	50%	11%	7%
Demand	Accounting	5%	-5%	50%	15%	2%
	Operational	23%	9%	63%	45%	17%
	Integrated	13%	3%	58%	25%	10%

Source: compiled by author.

In general, the entry of a new operator seems to improve efficiency in all the models considered, compared to those cases where the incumbent renews the contract.

As shown in the table, the adjusted efficiency growth rate of tendered concessions accelerates in all the models with respect to the previous period, except in the integrated supply model and the demand accounting model, where a deceleration is observed, although the growth rate continues to be positive after the tender. As discussed previously, these results are particularly significant when contrasted with the negative trend of expired concessions.

5.4. Conclusions

The analysis presented in this section offers an indicative, non-causal assessment of the impact on efficiency of the administrative management of state concessions. The following conclusions can be drawn from this analysis to improve the concession system:

1. Periodic monitoring of the terms and duration of concessions is necessary. The analysis corroborates that concessions that have expired and remain unmodified tend to be more inefficient.
2. Tendering expired concessions brings efficiency gains that could be passed on to the user through the competitive procedure. According to the evidence presented, concessions put out to tender should improve their efficiency in terms of kilometres travelled (vehicle-km) by 8% to 20% in the year following their award, or by 5% to 23% in terms of passenger transport efficiency (passenger-km). Therefore, to improve service provision, public authorities should tender the services once the existing contracts expire.
3. Unifications must be justified by overriding reasons relating to the public interest, and these must be made explicit in the unification project so that they can be subsequently evaluated. In addition, the resulting concession should be allocated through a tendering process, as a way of providing incentives to contain operating costs, pass on efficiency gains to the user, and mitigate the negative impact on competition.
4. It is important to create real competition *for* the market and not merely formal or procedural competition, ensuring equal treatment between the incumbent and new entrants, encouraging participation in the process and transparency.
5. Concessions should be designed on the basis of an integrated approach to the multiple dimensions that influence them.

6. Some concessions are very efficient from all perspectives, connecting large population centres along high-capacity roads, and which show a profitability of between 3% and 34%. These concessions could be susceptible to market competition.
7. On the other hand, there are some very inefficient concessions, connecting smaller towns and in rural areas, the liberalisation of which could result in the disappearance of the service. In these cases, it is recommended that the need for the current service be reassessed, taking into account its potential provision by alternative modes of transport or on-demand transport services. It is also advisable to review their design to improve their efficiency as far as possible, to declare their public service obligation and to tender the corresponding concession. This should guarantee the efficiency of the operator and minimise the public resources used in the provision of the service.

6. OPPORTUNITIES AND CHALLENGES FOR INTERCITY BUS LIBERALISATION

The previous chapters have analysed the operating restrictions of the concession system from the point of view of competition and efficient economic regulation, and have shown the negative impact these have on the efficiency of the concessions. These restrictions had already been identified by the CNMC in previous activities³³⁸, although no comprehensive reforms of the system have been undertaken to date.

Recently, there have been several European initiatives to deregulate the intercity transport of passengers by bus, in countries such as Germany, France, Italy or Portugal, which follow previous experiences in the United Kingdom and Sweden. Annex IV provides more details on the liberalisation experiences of these countries.

The positive results observed in these countries have motivated the European Commission to adopt a proposal to amend Regulation 1073/2009, which extends the scope of the Regulation to all scheduled services, including domestic services, and liberalises journeys longer than 100km.

The proposal aims to open up national markets in order to remove barriers to the development of intercity bus services as a sustainable transport alternative. This proposal has been approved by the European Parliament, which has introduced amendments aimed at protecting services subject to PSOs³³⁹, and is pending approval by the EU Council.

The current context of deregulation in the EU, the current situation of Spanish concessions in terms of expiry and obsolescence, as well as the ongoing liberalisation of the railway sector, provide, in the CNMC's opinion, a window of opportunity for reassessing the concession system in the light of European experiences and analysing the possible effects of liberalising the market in Spain, in line with the Europe-wide proposal.

³³⁸ CNC (2008), CNC (2010b), CNC (2010a), CNC (2012), CNMC (2014) and CNMC (2017).

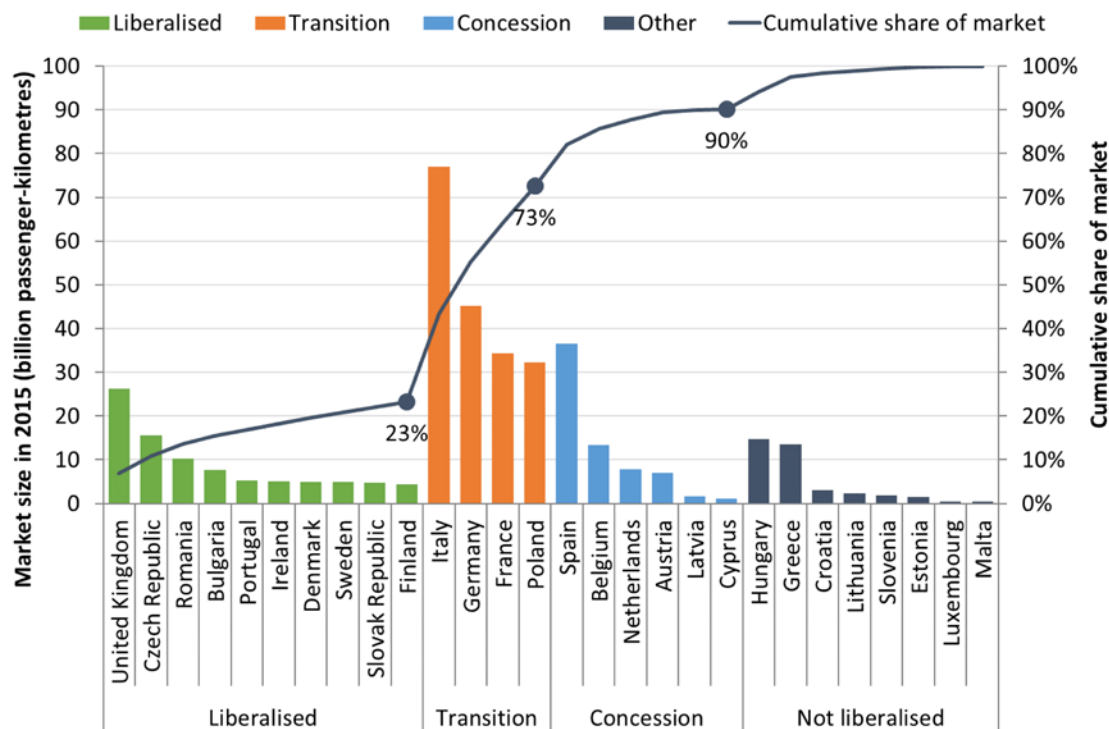
³³⁹ The European Parliament excludes urban or suburban routes from the application of the Regulation, limiting this to intercity routes, and introduces the possibility of refusing authorisation to new commercial services in two situations: where the new service would compromise the economic equilibrium of an existing PSO; and where the independent regulator appreciates that the applicant plans to offer its services below their normal value over a long period of time, and that this conduct may lead to a distortion of fair competition.

6.1. Spain in the European context

As a result of the reforms implemented in the majority of neighbouring countries, Spain is currently the largest European market with a concessionary system for intercity bus transport.

Figure 17 below shows the market share of the different Member States and the regulation in force as of 2015. Since that time, all states that were in transition have completed the liberalisation of their services, which means that most of the European market is deregulated³⁴⁰, with Spain, Greece and Hungary being the largest markets yet to be liberalised.

Figure 17. Market share (passenger-kilometres) and regulation of bus transport in the Member States, 2015



Source: Phillips (2017).

³⁴⁰ Phillips (2017) points out that in 2015, 73% of the European market in terms of passenger-km was liberalised or in the process of being liberalised.

6.2. European liberalisation experiences

This section presents the main effects of liberalising national intercity bus passenger transport services in the markets of the Member States considered, extracting the factors common to all these reforms. Specifically, the liberalisations in the UK, Sweden, Germany, Italy, France and Germany are analysed. Annex V contains an in-depth analysis of the evolution of the markets considered before and after their opening.

This is followed by an analysis of the effects that the reform has had on market structure, service supply and coverage, demand, prices, quality and variety of services offered, as well as intermodal competition.

6.2.1. Effects on market structure

Broadly speaking, the effects of liberalisation on the market structure can be divided into two stages. In the first stage, there is an entry of operators, leading to a decrease in market concentration, usually accompanied by an expansion in the number of passengers, frequencies and connections. Then, as the market matures, there is usually a consolidation of the number of operators into an oligopoly of a small number of between 2 and 5 companies.

However, the evidence available to date suggests that the final impact depends on the starting conditions of the market. Thus, in markets that already had a dominant operator prior to liberalisation, such as the UK (National Express), Sweden (Swebus) and, to a lesser extent, France (Ouibus), the concentration tends to remain relatively high immediately after the reform, as the presence of these operators restricts the growth possibilities of new entrants, which in turn suggests the existence of first-mover advantages. The Italian market, which was highly fragmented before liberalisation due to the previous concessionary system, has the highest number of operators post-reform, although further consolidation is not ruled out in the future.

A noteworthy aspect in all the cases analysed is the operational strategy of the dominant operators, which outsource most of their operations to smaller operators, handling the marketing and network design functions. This platform model has been adopted by the European operators FlixBus and BlaBlaBus, as well as National Express and Megabus in the UK, and, to a lesser extent, Swebus and Vy Buss in Sweden.

This model gives platform operators a number of advantages over traditional operators:

- Outsourcing services allows platform operators to expand their network and reorganise their services in an expeditious manner, without the need for fleet acquisition³⁴¹, which increases their ability to react to competition³⁴² and allows them to gain significant advantages by exploiting economies of scope.
- The focus on commercialisation allows these operators to implement dynamic pricing systems to maximise their profits and gain economies of scale derived from higher occupancy rates and the operation of larger vehicles.³⁴³ A key element in these operators' marketing strategy is digitisation, where platform operators use mobile technology and a network presence, as well as heavy discounts, to quickly gain a market share and compete with incumbent operators.³⁴⁴
- Outsourcing to smaller operators creates commercial links with potential competitors and discourages them from adopting more ambitious, competitive and risky competitive strategies.³⁴⁵ In turn, by acting as intermediaries between smaller operators and demand, platform operators gain greater market knowledge, increase their monopsonistic power vis-à-vis smaller operators and act as price setters.³⁴⁶

These factors explain the trend towards concentration observed in European markets. At the same time, the ambitious marketing and expansion strategies implemented during the start-up phase lead to large losses for the operators; this is a barrier to entry for smaller operators due to their greater difficulty in terms of access to financing.³⁴⁷

Notwithstanding the above, there are several factors that reduce the market power of these operators in relation to consumers:

- On the one hand, there is competition between the platform operators themselves, notably between FlixBus and BlaBlaBus, which are present in most European markets and compete directly on a large number of routes. For example, in France, 85% of intercity bus users use routes that are served

³⁴¹ Crozet and Guihéry (2018).

³⁴²For example, it highlights the rapid reaction of National Express to the entry of competitors at the start of deregulation in the UK, and following the entry of Megabus and First Greyhound, described by White and Robbins(2012), as well as the rapid expansion of FlixBus in continental Europe (Phillips, 2017, p. 40).

³⁴³ Gaggero et al. (2019).

³⁴⁴ Reynolds (2018), White and Robbins (2012).

³⁴⁵ Reynolds (2018).

³⁴⁶Crozet and Guihéry (2018), Reynolds (2018).

³⁴⁷ Crozet and Guihéry (2018), Guihéry (2019).

by both operators.³⁴⁸ At the same time, the presence of other competitors in the domestic market could contain price increases on routes where there is no direct competition, given the possibility of entry by other companies.³⁴⁹

- On some routes, the existence of smaller operators may also act as a disincentive to fare increases, where there is previous experience of entry in individual corridors and niche markets.³⁵⁰
- Barriers to market entry are low, which increases the likelihood of new companies entering the market and reduces the market power of incumbent operators:
 - Investments in rolling stock are relatively low compared to other industries and modes of transport, and are recoverable in the event of an exit, so they do not constitute a sunk cost. In turn, the possibility of subcontracting operations to incumbent operators also removes any barriers this might involve.
 - Digitalisation and *online* marketing reduce the costs associated with marketing and advertising, and allow for a rapid gain of user share, which facilitates market entry.

Recent examples are the entry of BlaBlaCar in Germany in 2019, dominated by FlixBus, or FlixBus in the UK in 2020, under the control of National Express.

- Intermodal competition is high in intercity passenger transport, where, depending on the characteristics of the route, buses compete with trains and car sharing for the most price-sensitive passengers.³⁵¹ This competition intensifies where the rail markets are liberalised.

6.2.2. Impact on prices

One of the main effects of liberalisation in the countries analysed is a fare reduction, especially during the initial expansion phase, driven by the competition

³⁴⁸ Autorité de Régulation des Transports (2020).

³⁴⁹Fageda and Sansano (2018) analysed routes between the ten largest cities in the UK, Germany, Italy, France, Sweden and Spain and found that the price impact of competition on the same route is higher in Spain than in the other countries. This is interpreted as a sign that the threat of potential entry, non-existent in Spain because of the concessionary system, restricts the possibility of price increases for operators in the other countries, even if they are the sole providers of the route.

³⁵⁰For example, on the M4 corridor in the UK, on certain routes in southern Scandinavia, or on routes to airports (Reynolds, 2018, p. 158).

³⁵¹ Beria and Bertolin (2019).

between operators. This has been the case in the UK, Sweden, Germany and France³⁵². In Italy, the market has evolved more slowly, with a gradual decline in prices up to 2019.

However, subsequent consolidation has led to fare increases in some countries, such as the UK and France.³⁵³ An analysis of the final effect of liberalisation on fares in these countries is complicated by the implementation of dynamic pricing systems by operators, which widen the range of prices observed.³⁵⁴

However, comparative studies on international intercity passenger transport by bus show that fares per kilometre in liberalised countries are significantly lower than in other countries, which seems to confirm the positive effect of market competition on fares. Fageda and Sansano (2018) compared routes between the ten most populated cities in each country and found that fares/km in Spain are 12%, 17%, 23%, 23%, 23% and 36% higher than fares in the UK, Sweden, Germany, France and Italy, respectively.

6.2.3. Impact on supply: frequencies and number of connections

Another of the most notable impacts of liberalisation is the increased supply of services, both in terms of frequencies and number of connections, which continues even after the sector has consolidated.

For the most recent liberalisations, for which a more complete record is available, the frequency in Germany increased by 300% between 2013 and 2014 to 7,000 weekly journeys³⁵⁵, the total number of kilometres offered increased from 26 million km in 2012 to more than 220 in 2015³⁵⁶, and the number of lines increased from 62 to 287 between 2013 and 2018.³⁵⁷

Meanwhile, with the information available for France, the number of cities served has increased by 221% from 2015 to 260 in 2019 and the routes offered have grown by 340% over the same period, to 1,769, while the frequency and seat-

³⁵²As reflected in OECD (2018), Alexandersson et al. (1999), Grimaldi et al. (2017), and Blayac and Bougette (2017), respectively.

³⁵³ Dunmore (2016), Blayac and Bougette (2017), or Blayac and Bougette (2020).

³⁵⁴ As reported by Grimaldi et al. (2017) in Germany.

³⁵⁵ Dürr and Hüscherlath (2015).

³⁵⁶ Grimaldi et al. (2017).

³⁵⁷ Guihéry (2019).

kilometres offered increased by 25% and 15%, respectively, between 2016 and 2019.³⁵⁸

Finally, in Italy, the number of routes increased by 33% between 2013 and 2015, after one year of liberalisation, while frequencies increased by 38% during the same period.³⁵⁹ The upward trend in supply appears to have continued, with the number of routes offered growing by 30% between 2018 and 2019.³⁶⁰

6.2.4. Impact on supply: network coverage

One aspect to consider when analysing supply growth concerns service coverage. Liberalisation implies that new entrants, seeking their own profit, may not provide adequate coverage to regions with lower a demographic or profitability weight. These regions may be affected by higher prices, less frequent services, or ultimately a complete lack of connection.

Regions where, prior to reform, less profitable intercity bus services were financed by revenue from profitable routes could see their welfare reduced following liberalisation, which would thus have a regressive component.

The most comprehensive evidence available on this phenomenon comes from the **UK**. This is an interesting case because prior to liberalisation it had an extensive bus network operated by the state monopolist NBC, and also because, unlike in other countries, liberalisation actually affected the entire market, including regional transport and rural areas, with the exception of Northern Ireland and urban transport in London.

The liberalising regulations allowed local authorities to establish subsidies for operating socially necessary concessions, providing them with state aid to cover this cost for four years.

Bell and Cloke (1991) point out that only a small proportion of the pre-existing routes in rural Wales were registered for commercial operation, and that local authorities were able to maintain bus provision in these areas by tendering the remaining services at the same or lower costs than before deregulation, but they did this thanks to the state funds received, and the authors could not rule out a future reduction in provision after the cessation of state support. Subsequently, White and Robbins (2012) reported that less densely populated areas and rural areas did see a reduction in the level of services offered in some cases.

³⁵⁸ Autorité de Régulation des Transports (2020).

³⁵⁹ Beria et al. (2018), p. 3.

³⁶⁰ Autorità di Regolazione dei Trasporti (2020).

On the other hand, with the information available for **Italy**, Beria et al. (2015) noted that, after liberalisation, the frequency was slightly reduced for routes connecting southern regions. However, the authors did not observe a reduction in the number of connections, which even increased in some central and southern regions (Calabria, Basilicata and the Adriatic coast).

Finally, liberalisation in **France** led to the creation of a long-distance bus network with significant coverage. However, in 2020, 6 of the 96 French *départements* were not connected to this network, being served only by the regional network. Additionally, in 18 *départements*, less than 20% of the population lives within 10 km of a bus stop on the state network.³⁶¹

Experiences therefore show that the opening of the market, by eliminating cross-subsidies between profitable and unprofitable routes, necessitates administrative intervention through the declaration of public service obligations financed by subsidies in those areas where there is no commercial interest. In other words, in areas previously served by cross-subsidised services, liberalisation makes the cost of providing the service explicit and shifts it from the users of profitable lines to the public authorities, which may ultimately lead to the rationing of supply if the authorities are unwilling to bear the cost.

6.2.5. Impact on the variety and quality of service offered

Competition between operators has led to the adoption of innovations that improve the quality of service provided and broaden the range of services available to users.

Among the possible innovations are those related to the operation of the service, such as the comfort of the bus, the availability of Wi-Fi, the existence of different classes within the buses, or the variety of services offered, such as express, night or tourist services.³⁶² In the latest liberalisations, innovations related to digitalisation stand out, including online marketing, the development of mobile apps, and on-demand transport platforms that aggregate the requests of independent users.³⁶³

At the same time, liberalisation reduces segmentation between markets previously subject to different regulations, which has boosted the development of international services between these countries, where the flexibility of the bus

³⁶¹ Autorité de Régulation des Transports (2020).

³⁶² White and Robbins (2012), Guihéry (2019), Grimaldi et al. (2017), and Beria et al. (2018).

³⁶³ Reynolds (2018).

makes it possible to connect regions in different countries between which there are no transport alternatives such as rail.³⁶⁴

6.2.6. Intermodal impact

The liberalisation of intercity transport in the countries analysed has led to an increase in intermodal competition between the other forms of transport.

For example, Beria and Bertolin (2019) analysed long-distance services in Italy and found signs of competition between carpooling, buses and trains. As a result, the Italian market presents a certain convergence of fares, where it is not uncommon to find cheaper rail tickets than bus fares for the same route. Competition between trains and buses is stronger over shorter distances, where journey times are shorter and buses are more competitive.

Gremm (2018) analysed Deutsche Bahn's pricing policy in Germany and found more discounted fares offered where its services compete with bus services. Conversely, Beria et al. (2018) found that bus fares in Italy are 7% lower when competing with high-speed rail, and 5% lower in the case of PSO services, for the 100 most in-demand routes. Fageda and Sansano (2018) reported reductions in bus fares of between 14% and 17% for connections between the ten largest cities in the UK, Germany, Italy, France, Sweden and Spain that compete with the railways.

Competition and complementarities between the various modes of transport are actively exploited by operators, and there are widespread examples of integration or co-operation between modes. These activities take place in a global context of the popularisation of the *mobility-as-a-service* (MaaS) concept, where users value the possibility of solving their door-to-door transport needs through a single platform that makes a wide variety of transport modes available to them.

The most notable case is that of BlaBlaBus, an operator that emerged from the acquisition by BlaBlaCar, the car-sharing platform, of OuiBus, the long-distance bus brand of the French rail operator SNCF, which in return acquired a stake in BlaBlaCar.

In addition, FlixBus entered the long-distance rail market in Germany and Sweden, through its FlixTrain brand, and has recently launched its own car-sharing platform in France, FlixCar. The company is developing a door-to-door

³⁶⁴ Reynolds (2018), Guihéry (2019).

transport strategy, through the signing of an agreement with Uber in major German and French cities.³⁶⁵

The above developments point to the unification of the long-distance transport markets in Europe, brought about by the liberalisation of the buses and railways, which are expanding the range of services available to the user.

6.2.7. Effects on the demand for services

Ultimately, the increased and more frequent supply of services, together with lower fares, has had a positive impact on demand, which has increased significantly in the countries analysed. For example, demand in the UK had increased by 63% within 4 years of liberalisation, although the consolidation of the National Express monopoly and consequent fare increase had reduced the total increase to just over 20% by 1996.

In Germany, meanwhile, demand grew faster than supply, where the number of passengers carried increased tenfold to 24 million in 2016³⁶⁶, which fell after consolidation to 21 million passengers in 2019.³⁶⁷

In Italy, however, demand has shown a different pattern of growth. Traveller numbers grew by around 15%-18% between 2014 and 2016³⁶⁸, but growth accelerated to 36% between 2018 and 2019, accompanied by a gradual reduction in prices.³⁶⁹

Lastly, demand in France showed very strong growth of between 66%-82% between 2016 and 2019 in terms of passengers, and between 41%-54% in terms of passenger-kilometres.³⁷⁰

This growth in demand included both trips triggered by fare reductions and the convenience of the connections on offer, as well as a modal shift from rail and private vehicles. Thus, Phillips (2017) estimated, based on the German experience, that the European Commission's liberalisation proposal would generate an increase in demand for bus services coming from rail (46%), private cars (40%), air travel (4%), and new induced demand (10%).

³⁶⁵ Guihéry (2019, p. 9).

³⁶⁶ De Haas and Schäfer (2017, p. 2).

³⁶⁷ Source: Statista (2021).

³⁶⁸ Autorità di Regolazione dei Trasporti (2017), p. 29.

³⁶⁹ Autorità di Regolazione dei Trasporti (2020).

³⁷⁰ Autorité de Régulation des Transports (2021).

6.3. Possible impact of liberalisation on the Spanish market

This section assesses the possible effects that the liberalisation of routes longer than 100 km, similar to that proposed by the European Commission, would have on the Spanish long-distance bus market, in light of the European experiences presented in the previous section.

6.3.1. Service reorganisation

The proposed reform would mean the liberalisation of all routes longer than 100 km, which would have a significant impact on the current organisation of concessions.

It would, *de facto*, open up most state concessions and a good number of regional concessions to competition.³⁷¹³⁷² The existence, within these concessions, of routes with shorter distances between stops means that these would continue to be protected by the existing PSOs, but the loss of the cross-subsidisation from the most profitable routes –those connecting the main towns in the concessions with a smaller number of stops– would mean a serious financial imbalance for these concessions, which would have to be rethought so that the services could continue to operate.

Instead, the commercial lines resulting from liberalisation would link the main provincial capitals and towns of tourist or economic interest. The disappearance of the ban on overlapping concession contracts could lead to the emergence of new connections not envisaged in the current network, reinforcing non-radial services, in the Mediterranean or Cantabrian arc, and linking these with international passenger corridors from France or Portugal.

With respect to the previous situation, it is possible that these new commercial routes would eliminate any branches and stops whose financial benefit did not compensate for the additional detours and waiting times.³⁷³ These localities, where appropriate, could be absorbed by the regional concession network. In large urban and metropolitan areas, the current concessions could be in a

³⁷¹ Currently, only three state concessions are less than 100 km long.

³⁷² Autonomous Community concessions would be affected, but this percentage could be much higher given the lack of information on the length of the concessions: Thus, only 16 of the 96 possible routes between provincial capitals on the Iberian Peninsula belonging to the same Autonomous Communities are less than 100 km long.

³⁷³ Morrison and Winston (1985).

position to absorb these stops without major cost overruns, as these concessions run at a surplus. However, in rural or less densely populated areas, this would mean an increase in the cost of providing the service, which would be borne by either by the public authorities or other users.

On the other hand, the loss of direct connections with the state network is likely to cause an increase in the journey times or transfers necessary to make long-distance journeys in these localities.³⁷⁴ However, properly designed regional concessions could improve connections with the region's municipalities, benefiting those users who use the state concessions for short-distance journeys.

In general, improved network efficiency could be expected to reduce the overall costs of service provision as well as, possibly, average journey times. At the same time, the reorganisation of the regional concession network would provide an opportunity to evaluate the current levels of service provision and adjust these to existing demand and modal supply, avoiding cost overruns due to overcapacity or overlap with the rail network subject to PSO.

6.3.2. Market structure

The most likely consequence of liberalisation on the market structure is increased concentration.³⁷⁵ In this sense, liberalisation would probably accelerate the trend observed in the market over recent years, as a consequence of the entry of large operators that would compete with ALSA and AVANZA. The ability of the large state-owned operators to compete with new entrants is reinforced by the fact that they do not receive subsidies for existing state services.³⁷⁶ However, maintaining concessions on routes of less than 100 km would help to maintain a pool of companies with the capacity to establish routes in the liberalised long-distance market and thus exert competitive pressure. The Spanish market also includes many operators of related services, such as occasional services, and has considerable potential for development in this area, largely due to the dynamism of tourism. These operators could also exert competitive pressure by moving into long-distance routes.

In this respect, it is worth noting that the experience in Italy, which started from a system similar to that in Spain, points to a more gradual consolidation compared to other European markets, where operators with a strong regional presence,

³⁷⁴This is a common effect of *hub-and-spoke* networks (Morrison & Winston, 1985).

³⁷⁵ Phillips (2017), p. 292.

³⁷⁶ Grimaldi et al. (2017).

such as Monbús in Galicia, or Moventis in Catalonia, could contain the expansion of national operators in their territories, thanks to their first-mover advantages.

Finally, as discussed in Section 6.2.1, there are a number of factors that contribute to reducing the market power of operators, even in the presence of concentration:

- On the one hand, the presence of a large number of smaller, regionally based operators provides a broad base of potential competitors for the large groups, preventing them from exercising their market power on individual routes. After liberalisation, the existence of this pool of operators would be assured by the survival of the autonomous regional concession system, the tendency of large business groups to outsource operations and the importance in Spain of certain niche markets, such as tourist transport.
- The intermodal competition exercised in Spain by the railways, thanks to the extensive development of the rail network and shared transport, which is well established in the Spanish market, especially among young people

6.3.3. Impact on fares

The most direct effect of liberalisation in Spain would be the reduction of fares for commercial services, for two reasons:

- On the one hand, given appropriate competitive conditions in the market, fares would fall by the amount of the cross-subsidy, as they would no longer have to subsidise the provision of loss-making services.
- On the other hand, efficiency gains due to economies of scale and scope acquired by operators after liberalisation would allow for further fare reductions.³⁷⁷

In the light of European experiences, price trends could fall to a very sharp minimum after liberalisation, with a partial decline after market consolidation, if competitive conditions replicate the experience in France, with strong and dynamic competition between the large national operators; or they could follow a more gradual downward trend, similar to the Italian experience, as competition penetrates the various regional markets. In either case, a reduction in fares is expected as a result of increased competition, as has also been observed in the

³⁷⁷Gaggero et al. (2019, p. 27) analysed the pricing policy of FlixBus in Germany, and found evidence of a pass-through of the operator's economies of scale to the fares charged to users.

few cases of competing concessions on the same route in the Spanish concession system.³⁷⁸

Finally, it is likely that, after liberalisation, operators will introduce dynamic fare systems, as has happened in other countries.³⁷⁹ In this respect, the absence of a stable fare could be perceived negatively by users of the service. However, dynamic fare variation allows operators to increase bus occupancy rates, thus reducing both unit operating costs and prices for users.

Gaggero et al. (2019) analysed the pricing policy of FlixBus in Germany and found that fares increase as the available seats on the bus are sold out and decrease as the departure date approaches, but, unlike airlines, they do not respond with fare increases to capture the surplus of last-minute travellers, which the authors attribute to the high price sensitivity of long-distance bus users.

6.3.4. Impact on the frequencies, quality and variety of services offered

One of the empirical regularities observed in European liberalisation processes is the improvement of service frequencies, market innovation, and the development of related services following liberalisation.

In this respect, competition between operators would foreseeably lead to a frequency increase, so that they can position themselves in the market, in particular during the initial expansion. It is likely that in Spain, competitors will replicate innovations introduced in other European markets, such as the possibility of booking seats, the development of mobile apps, and the provision of door-to-door services, which are currently offered by a limited number of operators.

Finally, liberalisation would remove the need for restrictions and the segmentation of international, occasional, tourist and, to some extent, regular special use bus services. As a consequence, there is likely to be growth in these segments, associated with events, or international tourism, which in turn could cause knock-on effects on other industries, such as tourism or hospitality.

³⁷⁸Crespo (2009) found reductions of between 25% and 50% in concession holders' fares in the case of competing concessions on the Madrid-Pamplona, Madrid-Logroño, San Sebastián-Vitoria and San Sebastián-Bilbao routes (Crespo, 2009, pp. 21-24).

³⁷⁹ For example, in Italy and Germany (Grimaldi, Augustin, & Beria, 2017) or the UK (White & Robbins, 2012).

6.3.5. Intermodal impact

The liberalisation of long-distance bus transport would increase the competition exercised by this mode of transport on commercial rail passenger services, favouring an effective liberalisation of this sector. In this way, simultaneous liberalisation of these two modes would favour a transition to a more efficient organisation of services.

Similarly, bus liberalisation would allow operators to compete on better terms with car sharing schemes, or with the new high-speed rail services, which could attract large numbers of passengers on the typically more profitable routes.

Liberalisation would also provide an opportunity to reassess the supply of PSO rail services, analysing their necessity and the possibility of providing them through more cost-efficient alternatives, such as commercial or PSO buses.

Finally, the liberalisation of buses, together with that of other modes of transport, would facilitate the development of multimodal passenger transport options by private companies. This would help to increase the range of services available to users, thereby boosting their welfare. In this sense, to improve complementarities between modes of transport, it would be desirable to ensure that long-distance bus operators have access to multimodal stations and interchanges.

6.3.6. Impact on demand

The liberalisation of intercity transport could significantly increase its use, thanks to lower fares, more frequent services and greater complementarity with other modes of transport. In turn, this effect could be extended to the regional concession network, with greater demand induced by state liberalisation on routes that connect to the long-distance network.

6.4. Challenges for effective intercity bus liberalisation

This section analyses the possible challenges and obstacles that would need to be addressed in order to ensure the successful liberalisation of intercity bus transport in Spain.

6.4.1. Service provision on loss-making lines

As discussed in Section 6.3.1, liberalisation would bring with it a reorganisation of the concessions dependent on the Autonomous Communities to ensure the

provision of service in localities not covered by the free market. As a consequence, it is foreseeable that the costs of providing these services would increase in a large number of regions. Annex VII contains a preliminary estimate of the costs that this might entail for the public authorities, which suggests that the funding required could be in the range of between 270 and 300 million euros, depending on the percentage of journeys of 100 kilometres or less that would be supported.

Similar experiences in the UK suggest that insufficient funding may lead to a reduced service to the detriment of the inhabitants of these localities, who would not benefit from the reform.

The public authorities should, therefore, have sufficient funding to ensure the connectivity and cohesion of their entire region. The authorities will have to determine the most appropriate way of securing funding for the services. In this respect, it should be remembered that the principles of efficient regulation require that the measures adopted respect competition between the different modes of transport available to users. In this way, discrimination between different modes of transport, regardless of the type of vehicle, or its ownership, whether public or private, should be avoided, unless there are overriding reasons of general interest that justify this.

In any case, close coordination between the State and the Autonomous Communities, and between the Autonomous Communities themselves, is necessary to identify and guarantee those socially desirable services that are not provided in the market.

6.4.2. Station management and access

The UK liberalisation experience, where the incumbent operator had an advantage over new entrants by maintaining access to the main passenger stations, points to the need to ensure that new entrants are granted access to the network of stations, so that they can operate and market their services under non-discriminatory conditions.

The CNMC's previous experience suggests that the management of some bus stations by transport operators may lead to strategic behaviour and access denials, which would impede the proper development of the liberalised market.³⁸⁰

For this reason, it is considered important to reiterate the recommendation set out in Section 4.3.4, stating that the LOTT should be reformed to regulate the bus

³⁸⁰ See File 627/07 Estación Sur de Autobuses (CNC, 2007).

station access procedure, in line with the provisions of the European Commission's Proposal to amend Regulation 1073/2009.³⁸¹

Likewise, to guarantee that stations are managed efficiently and that the greatest possible number of operators is accommodated, it would be necessary that, when public authorities resort to the indirect management of stations, the awarding of contracts is carried out by means of public tender, avoiding direct awards except in exceptional cases. Periodic tendering of bus stations should include incentives to encourage their efficient management and proper maintenance, to the benefit of their users.

6.4.3. Accounting separation and transparency in the management of services subject to PSO

After possible liberalisation, commercial services would coexist alongside regional concessions. These concessions are often operated in return for compensation, and as they have not been subject to competitive bidding, this could be excessive. The existence of overcompensation in the concession market could distort competition in the free market, where the operator in question could use the overcompensation to compete more strongly.

For this reason, in the event of market liberalisation, it would be necessary for the Autonomous Communities to put their concessions out to tender in order to avoid overcompensation that could affect the free market. Operators of these services should also comply with the accounting separation obligations set out in the Annex to Regulation 1370/2007. The fact that these obligations do not apply to concessions awarded prior to the entry into force of the Regulation highlights the importance of tendering lapsed contracts, to ensure that they comply with all the safeguards set out in the Regulation.

6.4.4. The conflict between commercial services and concessions

The European Commission's liberalisation proposal allows Member States to refuse to authorise a commercial service of less than 100 km if it jeopardises the

³⁸¹ Articles 5 et seq. of the Draft Regulation of the European Parliament and of the Council amending Regulation (EC) No 1073/2009 on common rules for access to the international market for coach and bus services.

economic stability of an existing public service contract.³⁸² This is intended to protect the economic viability of services subject to PSOs.

The conflict between a new commercial service and an existing PSO must be analysed by the competent authority in accordance with an economic equilibrium test, similar to that in force in the rail sector³⁸³, which verifies the existence of a substantial financial impact on the economic equilibrium of the contract. In this case, the authority may propose changes to the stops or route of the commercial service or, ultimately, refuse the request.

In this respect, to avoid overly restricting the development of new services after liberalisation, the authorities should reassess the need to provide services through concessions and declare the relevant public service obligations, justifying the absence of economic interest, in accordance with Regulation 1370/2007. This would enhance the legal certainty for operators in the liberalised market and ensure that conflicts are managed appropriately. In particular, it may be advisable to reassess current concessions, as it may not be proportionate to impose PSOs on long-distance lines to cover journeys which, by their very nature, respond to local and regional travel needs.

6.4.5. The competitiveness of smaller operators

For effective intercity bus liberalisation, it is essential to create the right conditions for operators so that they can compete on a level playing field.

In view of European liberalisation experiences, a key element in ensuring competition in the market despite consolidation is the existence of a pool of smaller operators that present a credible competitive threat to the large operators. The advantage of the Spanish market is that there are a large number of small and medium-sized operators present in both the concessionary and related markets, which constitute an important competitor base for large operators, especially at the regional level. Maintaining concessions on services shorter than 100 km would help to maintain this pool of operators. In addition, removing the current limitations that apply to operators in related markets could help to boost the activity and competitive capacity of these companies.

However, it is common in liberalised markets for platform operators to act as intermediaries between small operators and demand, which in turn provides them with important informational advantages, increasing their bargaining power and

³⁸² Draft Regulation of the European Parliament and of the Council amending Regulation (EC) No 1073/2009 on common rules for accessing the international market for coach and bus services.

³⁸³ (Comisión Nacional de los Mercados y la Competencia, CNMC, 2020).

weakening the position of alternative operators. Accessibility to operational data thus becomes an important competitive variable, which may determine the success of liberalisation. Therefore, in the event of liberalisation, it will be necessary to monitor commercial relationships between large and smaller operators, ensuring that these guarantee competition in the market.

6.4.6. Monitoring of liberalisation and surveillance of competitive market conditions

Following liberalisation, the markets analysed exhibited significant buoyancy, where the market structure and competitive conditions changed significantly in a short period of time. Given the importance of the sector for lower-income individuals, and to ensure regional cohesion, the authorities should closely monitor the sector after the reform.

In this sense, an independent sector regulator should be set up, in line with the provisions of the European Commission's Proposal to amend Regulation 1073/2009, to supervise the liberalisation process and resolve any conflicts that may arise in terms of access to stations, or between commercial services and services subject to PSOs.³⁸⁴ As discussed in Section 4.3.4.3 above, the existence of a link between the authorities responsible for authorising new commercial services and those responsible for planning transport under PSOs could hinder entry into the liberalised market. Attributing the functions of authorising new services and performing the economic equilibrium test proposed in Section 6.4.4 to an independent authority would solve this problem.³⁸⁵

Ultimately, the CNMC and the regional competition authorities should monitor the competition conditions in the market, in particular the existing contractual relationships between operators, the horizontal concentration operations that are carried out, taking into account competition in related markets, such as the regional concession market and the tourism market, due to their importance for competition in the liberalised market.

³⁸⁴ Article 3a of the Draft Regulation of the European Parliament and of the Council amending Regulation (EC) No 1073/2009 on common rules for accessing the international market for coach and bus services.

³⁸⁵ This is the situation in France and Portugal, where these functions are carried out by two independent authorities, the French *Autorité de régulation des transports* and the Portuguese *Autoridade da Mobilidade e dos Transportes*. Annex VI contains a comparison of European regulatory authorities for bus passenger transport.

7. CONCLUSIONS

This study analyses the regular intercity bus passenger transport sector in Spain. From the analysis presented, the following conclusions can be drawn.

Firstly, the tendering process initially promoted by MITMA, and recently by some Autonomous Communities, has had a positive impact on both the efficiency of the concessions tendered and their management.

However, a number of factors have limited the benefits of tendering:

- Restrictions in the design of tender specifications, which have hindered competition in the concessions put out to tender, reducing the efficiency gains obtained through tendering and facilitating the renewal of contracts by their former holders.
- The low number and quantitative importance of the concessions put out to tender, as a result of the extensions implemented by some public authorities, delays in the call for new tenders and the substantial modification of contracts in the absence of tendering.

Secondly, the bus passenger transport concession system presents a series of limitations intrinsic to the model, resulting from the difficulties associated with the administrative planning of the services, the informational advantages of the incumbent operators of the routes over the public authorities concerned as well as their potential competitors, and the disputes that arise between the operators, whose competition for the concessions is transferred from the market to the courts. These constraints reduce the efficiency of the provision of scheduled transport services as well as other related services, whose activity is restricted by the market segmentation imposed to prevent any competition with the concessions.

The above factors feedback on one another, in that the granting of subsidies linked to the operation of concessions that have not been put out to tender may distort any bidding processes that are launched, and the unification and concentration of services in the hands of the same operator increases the likelihood of its contract being renewed in a future bidding process. In turn, concession concentration and the increase in operator size consolidate their informational advantages over the other competitors, as well as their capacity to influence the public authorities.

The intrinsic shortcomings of the concession model, together with the scant progress in calls for tenders in the more than 30 years that the LOTT has been in force, justify a study of possible alternatives to the model. Across Europe, there have been a number of liberalisations that have had a positive impact for

consumers and in which, in addition, the necessary safeguards have been adopted to protect short and medium distance public services.

In this context, the CNMC has carried out a preliminary analysis of the opportunities and challenges that a partial liberalisation of the market would entail. The analysis highlights the significant gains that could be obtained in terms of lower fares, increased frequencies and more connections, as well as for the overall efficiency of the transport network. On the other hand, after liberalisation it would be necessary to address the challenges that could arise from increased market concentration and competition between commercial services and those subject to Public Service Obligations.

For all these reasons, the CNMC considers that it is necessary to move forward with the liberalisation of scheduled road passenger transport services, introducing competition in the market for services covering distances of more than 100 km.

Below are a series of recommendations to guarantee the effective liberalisation of road passenger transport, to improve the concession system, and to ensure adequate competition in tendering procedures.

8. RECOMMENDATIONS

This section contains the main recommendations which the CNMC believes should be adopted to promote competition in the scheduled bus passenger transport market, thereby fostering the efficient functioning of the market and increasing the welfare of its users.

FIRST. Liberalising bus passenger transport services for distances of more than 100 kilometres

The lack of for-the-market competition in Spain, the problems associated with administrative management and the intrinsic limitations of the concession system entail additional costs for users and public authorities in the form of reduced management efficiency, which calls into question the current model. In view of the international experiences analysed, liberalisation could entail significant benefits for users of the service, in terms of lower prices, higher frequencies, more connections and better quality services offered. It would also favour a more efficiently designed public transport network and the development of multimodal passenger transport by private companies.

Taking these factors into account, the CNMC considers it necessary to address the liberalisation of scheduled bus passenger transport services longer than 100 kilometres, adopting an in-the-market competition model, in line with that proposed by the European Commission in the Proposal to amend Regulation 1073/2009, and the recent liberalisation in France.³⁸⁶

Furthermore, to ensure effective liberalisation that promotes competition between operators to the benefit of service users, the CNMC proposes the following recommendations:

Establish an independent regulatory body

The liberalisation of intercity bus passenger transport that covers distances of more than 100 kilometres is likely to entail a series of challenges in relation to, among other aspects, conflicts between concessions and the liberalised market, and access to stations.

³⁸⁶Article 48 of the [Draft Sustainable Mobility Bill](#) stipulates that "*In regular road passenger transport services under state jurisdiction, the Council of Ministers may authorise the provision of the service under free competition on routes proposed by the Ministry of Transport, Mobility and the Urban Agenda, although it may impose certain obligations on operators providing such services, in accordance with the procedure established by the regulations.*"

For this reason, following the example of countries such as France and Portugal as well as the European Commission's Proposal to amend Regulation 1073/2009, the CNMC considers it necessary for liberalisation to be accompanied by the creation of an independent regulatory body. This regulator would be responsible for monitoring the evolution of the market post-liberalisation and for resolving any conflicts that may arise between the liberalised market and the market subject to public service obligations (PSO); and access to infrastructures, without prejudice to the CNMC's powers in the area of competition advocacy.

In this respect, it should be ensured that the new sectoral regulator is fully independent of existing concessions and public services, in order to guarantee legal certainty for free market operators and respect for the principles of transparency and non-discrimination.

The existence of competition between the different modes of transport, together with the necessary coordination and multimodal integration of the public transport network, make it advisable to attribute these functions to a body with regulatory powers over other modes of transport.

Finally, the current coexistence of the concessionary system with a free market, comprising international, tourist, occasional and regular special-purpose services, makes it advisable to appoint a regulator of this kind to oversee conflicts between the different segments, even if there is no liberalisation of scheduled medium- and long-distance services.

Regulate the management of conflicts between liberalised services and services subject to PSOs.

After liberalisation, it must be ensured that there is appropriate management of conflict between liberalised services and services subject to PSOs, including short-, medium- and long-distance services whose coverage is not guaranteed by the market.

These conflicts should be arbitrated by the sector regulator proposed above, guaranteeing its independence from the public authorities that finance the PSO affected by the commercial service. Likewise, their resolution should be based on an economic equilibrium test that verifies that the commercial service has a substantial impact on the economic equilibrium of the current PSO concession, calculated according to a publicly available method, which provides operators with legal certainty.

Re-evaluate the current coverage of services subject to PSO and secure their funding

The liberalisation of services longer than 100 kilometres is likely to result in lower frequencies or less connections for some less-in-demand routes. In these cases, the public authorities may declare new PSOs to guarantee the provision of services whose coverage is considered to be of general interest, incorporating these into existing concessions or designing new concessions.

When declaring new PSOs, public authorities must respect the restrictions on public intervention set out in Regulation 1370/2007, limiting themselves to those services that are not provided by free market operators according to their commercial interest. The effectiveness of the liberalisation depends on the public authorities establishing the lack of commercial interest in the PSO services declared, as if these services are too extensive, this will restrict the development of the network of commercial services longer than 100 kilometres.

In this respect, and in order to realise the efficiency gains deriving from liberalisation, the intervention must be based on the social need for the proposed service; this may not necessarily coincide with the level of services existing prior to liberalisation.

In exceptional cases, the regulation could allow the declaration of a PSO for a route longer than 100 km connecting isolated population centres with nearby transport nodes within the same province, when there are reasons of general interest and the low demand for this service does not arouse the commercial interest of operators.

Maintaining PSO services on routes of less than 100 km would also help to maintain a diverse pool of operators with the capacity to exert competitive pressure on liberalised long-distance routes.

Finally, with the disappearance of cross-subsidisation between profitable and non-profitable services, it will be necessary for public authorities to adopt a regulatory framework to finance PSO services. This framework should guarantee funding stability and should not discriminate or distort competition between the different mobility options available to users, unless there are overriding reasons of general interest in this respect.

Avoid cross-subsidies between concessions and commercial services

It is necessary to ensure transparency and accounting separation in the management of PSO services by concession holders, so that they cannot derive

competitive advantages or cross-subsidies that distort competition in the free market.

Ultimately, the CNMC wishes to point out that the best way to avoid the incidence of cross-subsidies is to ensure that the remuneration received by concession holders is determined on the basis of a competitive procedure, in which the compensation to be received from the authorities is one of the main award criteria. For this reason, in conjunction with this recommendation, those set out below on improving the design of tender specifications and the management of the concession system should also be considered.

Reform the station access regime

Liberalisation will necessitate market operators having access to bus stations under the same conditions as concession holders. In this sense, if stations are managed by bus operators, this could lead to problems in terms of access to these services.

For this reason, it is recommended that the LOTT be amended to regulate a procedure for station access that guarantees fair, equitable, non-discriminatory and transparent access conditions for all operators, in line with the provisions of the European Commission's Proposal to amend Regulation 1073/2009.

The new regulation should limit the cases of vertical integration in transport services and station management by the same operator. In the short term, during the validity periods of the current management concessions, it is recommended that legal, accounting and functional separation of infrastructure management and service operation activities be a requirement.

In turn, to boost station management efficiency and to maximise infrastructure capacity, when resorting to indirect station management, the awarding of contracts should be carried out through an open procedure, with direct awards being reserved for exceptional situations. The award procedure should be given a reasonable timeframe, after which the award process should be reopened, encouraging competition between bidders and rewarding those bids that are most efficient and beneficial to station users.

The proposed independent regulatory body should oversee the correct application of this regulation, resolving any disputes that may arise in relation to access.

Finally, the CNMC considers that this reform is necessary even in the event that the public authorities decide to maintain the current concession system, given the

coexistence of this system with a liberalised market and the history of conflicts regarding station access.

Promote the competitiveness of smaller operators

The effective liberalisation of bus routes longer than 100 kilometres requires a pool of smaller operators to exert competitive pressure on the larger operators. In Spain, there is a wide range of operators of all sizes in both scheduled and related services with the capacity to maintain or increase their activity after liberalisation and to exert competitive pressure. The ability of these operators to exert such pressure will depend on the possible contractual relationships they have with the large operators who subcontract their services, and on the accessibility of operational and demand data for the services they operate.

Therefore, to achieve adequate competition in the sector, the following is necessary:

- Platform operators should allow their subcontracted operators access to data generated in the context of service operation.
- Platform operators should not prevent subcontracted operators from providing services to third parties.

SECOND. Improve the design of tender specifications to remove barriers to competition.

Irrespective of whether or not transport services longer than 100 kilometres are liberalised, it is advisable for the public authorities to improve the current design of tender specifications in order to ensure adequate competition conditions in tenders, which benefit both the public authorities and users, and mitigate distortions in related markets and, where appropriate, in the liberalised market. In particular, tender specifications should take into account the following aspects:

Encourage division into lots

The design of the concessions must respond to criteria of efficiency in the provision of the service. In this sense, public authorities should refrain from increasing the size of existing concessions through the unification or grouping of contracts that are not justified under strict efficiency criteria.

These criteria must be accredited and quantified in the unification or operational project for the contract and must outweigh the detriment to the general interest caused by, firstly, the reduced number of concessions available and the consequent increase in concentration; and, secondly, the fewer bidders that meet the technical and economic solvency requirements necessary to submit a bid.

The public authorities should request a report from the CNMC or the regional competition authorities, prior to publishing the tender specifications, analysing the impact of these operations on competition. Finally, the public authorities should carry out an *ex-post* evaluation of the results to analyse whether the expected efficiency gains have been achieved, and to inform the future design of the transmission network.

Encourage shorter contract duration

The duration of the contract must strike a balance between the recovery of the investments to be made by the contractor and the need to tender the services periodically, to ensure that users benefit from the most advantageous fares and services. Excessively long contracts generate inefficiencies in the form of reduced competitive pressure on the incumbent concession holder and a diminished ability to adapt the supply of the service to unforeseen changes in demand.

The CNMC considers that, given the recoverable nature of most of the investments made by concession holders, shorter contract durations should be favoured. This is especially advisable if the current context of uncertainty regarding the demand for concessions persists, as it would allow services to be redefined in the near future, in line with the evolution of demand, the updated service maps, and the decarbonisation and energy transition objectives set by the public authorities. Finally, the public authorities should adapt the term of the contracts to the particular characteristics of each concession, avoiding the maximum term allowed by law for all concessions.

Eliminate fleet and personnel secondment obligations

The CNMC considers that the requirement to assign fleet and personnel to concessions is not necessary to ensure the proper provision of the service, and that it prevents or restricts the contractor's ability to manage the productive factors to obtain efficiency gains and may even entail competitive advantages for the incumbent concession operator, causing serious distortions in tenders and

competition in markets related to scheduled general-purpose transport. For this reason, it is recommended that the public authorities eliminate these obligations.

In terms of the obligation to subrogate the staff of the previous contractor, the Public Authorities should apply a restrictive interpretation of the State Framework Agreement, ensuring that only staff, drivers or non-drivers, actually employed under the contract are obliged to be subrogated, in accordance with the rules on transparency and separation of accounts in Regulation 1370/2007.

The CNMC points out that labour law is not excluded *per se* from competition rules, which will be applicable in situations where the incumbent operator uses the secondment of staff in a strategic manner to restrict competition in tenders.

Relax the technical and economic solvency requirements

Some aspects of the technical and economic solvency requirements commonly demanded in tender documents may result in the exclusion of competitive operators, or create barriers to entry or growth for companies in the sector.

Firstly, the requirement for a minimum number of years of prior experience, normally three, to prove technical solvency restricts the entry of new operators into the market, forcing them to compete in joint ventures with established operators. The CNMC considers that the requirement for prior experience should be exceptional and reserved for those cases in which the technical complexity of the service justifies it. In any case, the number of years of experience required should be the minimum necessary and an alternative means of accrediting technical solvency should be sought for new entrants who lack experience in the sector, by accrediting the availability of sufficient human or material resources to meet their obligations to the authorities.

The requirement that a certain minimum number of services have been run over a number of years is a disadvantage for operators in the liberalised market, whose operations lack the stability of scheduled transport, which could be qualified by taking the average number of services operated over the period in question.

Secondly, it is advisable to relax the eligibility criteria for previous relevant experience. The tender specifications should assess the experience of operators in liberalised bus transport segments, such as tourist or occasional bus transport, avoiding overly strict definitions that only include scheduled or general-purpose transport. Similarly, the objective parameters used to quantify the operator's technical solvency should be directly related to the output of the service, such as the kilometres travelled per year, rather than to the production factors used, such

as the number of vehicles assigned, since these are more closely related to the purpose of the contract and are less susceptible to manipulation by the incumbent concession holder.

On the other hand, the public authorities should reconsider the quantitative thresholds set for proving technical solvency, avoiding the requirement of experience in performing contracts with "an equal or greater number" of vehicles, in order to encourage the growth of smaller companies in the sector. Instead, it is recommended that the authorities accept experience of operating services which, although of lesser quantitative importance than the service being tendered for, may be of similar or equivalent technical complexity.

To avoid discriminating between operators with sufficient economic capacity, it is recommended that a variety of alternative forms of proof of economic solvency be admitted. Thus, in addition to the criteria relating to the company's net worth or turnover, the public authorities should consider the presentation of guarantees or professional insurance for the required amount and equivalent documents.

Finally, in both cases, it is recommended that the technical and economic solvency of joint ventures be assessed cumulatively, so as not to place them at a disadvantage compared to larger companies.

Guarantee a proper evaluation of the economic and technical bid

The economic bid, understood as the one indicating the value of the fare, the frequency of services, and the factors determining the financial compensation to be received from the public authorities for the provision of the service, should be decisive when selecting the winning tender, since these are the objective parameters that best reveal the efficiency of the bidders. Likewise, the fare (low prices) stands out as the element most valued by users (see Figure 7 in Section 3.3). The scoring formula should encourage the submission of competitive bids and, where there is any doubt, should opt for a linear formula with no ranges, giving the highest score to the most advantageous bid and a zero score to the least advantageous bid, with the rest of the score being distributed proportionally.

In addition, it is important to avoid setting an overly conservative abnormality threshold in the tender documents, which increases legal uncertainty for bidders and discourages competitive bids. When determining the threshold, it is necessary to take into account whether the contract has been tendered in the past or not, as this will determine whether the reported costs correspond to the current market reality. In any case, the abnormality assessment should be carried out by the specialised technical service, bearing in mind the information

asymmetries between the contracting authority and the incumbent operator as regards the real costs of providing the service, as well as the latter's discretion when assigning vehicles or personnel to the concession, which may have repercussions on the final costs reported.

The maximum compensation to be received from the public authorities, and the maximum fare set in the tender specifications, should be based on the actual cost structure of the concession, which must be reliable and up to date, and on the current fare applied by the incumbent. "Quality upgrading" and links to compensation or maximum fares fixed for similar concession blocks, which could serve as a reference for bidders in the concession, are also discouraged.

Finally, the scoring for the technical bid should not undermine the decisive nature of the economic bid and should be based whenever possible on objective parameters that can be evaluated automatically, in order to reduce the discretion of the awarding body when evaluating the bids.

Strengthen inter-territorial cooperation in the design of tender specifications, requesting a report from the CNMC when necessary.

Designing tender specifications is complex and requires in-depth knowledge of the sector wherein the services are to be procured. In this respect, the State and Autonomous Community procurement agencies face similar challenges when tendering their scheduled bus passenger transport services.

The CNMC recommends strengthening inter-territorial cooperation between public authorities in the design of tender specifications, pooling the experience gained by the different tendering bodies. Furthermore, the public authorities could cooperate to establish standard tender specifications, which would enhance legal certainty for operators, facilitate the submission of bids for tenders and reduce litigation. The design of the specifications or the drafting of standard specifications should be done in consultation with the independent regulator proposed above. Finally, the CNMC suggests that the public authorities request a prior report on the design of the specifications from the CNMC and the regional competition authorities, to analyse their impact on competition.

THIRD. Ensure adequate management of remaining concessions

The LOTT has been in force for more than thirty years yet there has been no generalised tendering of the existing concessions. Several factors, associated with the administrative management of the routes, have influenced this. In the

future, it would be desirable for public authorities to improve their management of the concession system, whether they liberalise concessions longer than 100 kilometres or, more importantly, if they opt to maintain the current system. To this end, the following is recommended:

Put expired concessions out to tender

The expiry of a concession entails a financial loss for users and the public authorities due to the reduced efficiency of the service provider. In turn, it implies a legal situation in which the concession holder lacks a suitable contract justifying the operation of the service under a monopoly regime. The quantitative analysis carried out in this study points to the existence of an efficiency cost in concessions that lapse for more than two years compared to those for which the contract is renewed through a call for tenders. According to the analysis presented, the latter could improve their efficiency in terms of kilometres travelled by between 8% and 20% in the year following their award, while passenger transport efficiency would improve by between 5% and 23%. It is the awarding of tenders for these services that makes it possible to obtain these profits and pass them on to the users.

For these reasons, it is recommended that the public authorities tender the concessions under their jurisdiction in a timely manner, and that the two-year extension provided for in 82.2 of the LOTT be used only in cases of emergency, and for the minimum time necessary.

The CNMC proposes the following recommendations to improve existing tender management:

- Adequate planning of the tendering calendar. This timetable should be drawn up sufficiently in advance, taking into account the expiry date of the current concessions, the time needed to update the route and the characteristics of the services, avoiding unjustified delays.
- Unless there are objective criteria to the contrary, the call for tenders should respect the order in which concessions expire. Priority should also be given to those calls for tender whose specifications have been annulled, and the incentives for contractors to make strategic use of administrative and judicial channels to change the outcome of calls for tender or to postpone contract renewal should also be reduced.
- The planned tendering calendar for the current year and, where appropriate, the services to be renewed in the coming years should be published, facilitating the planning of operators wishing to bid for tenders. Calls for tender

should also be staggered over time and a staggered tendering schedule should be encouraged, so as to facilitate the submission of bids by smaller companies, avoiding the simultaneous tendering of the entire map.

- In the short term, public authorities with expired concessions should put them out to tender in order to avoid a greater overlap with the tenders that will be launched when the majority of the current regional concessions expire in 2024, 2027 and 2028. The CNMC recommends that the public authorities collaborate to implement an action plan for tendering all expired concessions over a transitional period during which expired concessions are put out to tender in an orderly and staggered manner.
- It is recommended that the LOTT be amended so that, at the end of the two-year emergency extension period for expired concessions and in the absence of a new tendering procedure, the service is automatically considered to be liberalised, so that it can be provided by any operator with an authorisation for passenger transport issued in accordance with Article 42 of the same law. This would provide an incentive for public authorities to correctly plan the tendering of their concessions, avoiding the accumulation of expired concessions and the associated costs in terms of reduced service provision efficiency.
- The drafting of tender specifications should be based on technical criteria and respect the principles set out in the second recommendation, in order to minimise the potential for litigation in tenders. In particular, inter-territorial cooperation in the design of tender specifications would allow authorities to exchange experiences and best practices that should reduce the conflictive nature of tenders.

Strengthen the regulatory limits regarding substantial modification of existing contracts

The current wording of the LOTT allows for the unification of existing contracts in the absence of an award procedure and the direct awarding of zonal contracts. The CNMC considers that these provisions and their application should be brought into line with EU case law on supervening contract modifications and should lead to a new award in accordance with Regulation 1370/2007, which requires a general tendering procedure. As a consequence, the above-mentioned provisions of the LOTT and those regional provisions with equivalent content must be amended.

On the other hand, the ROTT introduces a quantitative limit to the modification of contracts, which is permitted as long as the population covered by the service does not increase by 20%. The CNMC considers that this is an imprecise parameter for assessing the acceptability of contract modification. Instead, it recommends using the estimated value of the contract as the reference value.

Respect the exceptional nature of contract extensions

Finally, public authorities should refrain from generalised extensions of concessions under their jurisdiction. An extension should be seen as an exceptional mechanism in contrast to the tendering of the service and should be justified by the amortisation of the assets provided by the operator which are significant for providing the service. In this respect, the investments in the fleet are relatively recoverable, as these vehicles can continue to be used in the liberalised market after the end of the contract.

FOURTH. Mitigating inefficiencies associated with the concession system

The CNMC recommends adopting the following measures to mitigate some of the inefficiencies associated with the concession system:

Strengthen concession holders' transparency obligations

To ensure the proper functioning of the concession system, the public authorities must have sufficient information to design and regulate the tendered services and be in a position to check concession holders' compliance with their obligations.

The public authorities must demand greater transparency from the operators, collecting any information that may be relevant for designing services or calling for tenders, including information on the costs of providing the service, and the demand and supply of the service sufficiently broken down in terms of space (by stops) and time (monthly, daily or hourly). In turn, this implies that public authorities must have the means to process the information received from concession holders, standardise it and manipulate it in such a way that it can be used to inform planning processes.

In this respect, new technologies make it possible to identify and geo-locate buses in real time and determine the real-time demand for services thanks to the implementation of integrated ticketing and payment systems. This information

both enriches the information available to the public authorities and reduces the costs of inspecting contract compliance.

Ensure free and transparent access to concession operation data

The fact that the concession holder operates the service as a monopoly gives it an informational advantage over other bidders. The public authorities should reinforce the transparency of the concession system by regularly publishing data relevant to the provision of the service in an open, accessible and transparent manner. This data should be much more detailed than the current bidding documents, making the information available to both concession holders and other bidders. In this regard, the inclusion of information on demand and operating costs by month, day or even hour, and broken down by route or by departure and destination stops, should be considered.

This data should be made available to operators on a permanent basis, to help them plan tender bids sufficiently in advance, and it should be updated frequently, so that operators in the liberalised segments of the market can adapt their services to the public transport network, thereby complementing it.

Ensure a balanced representation of stakeholders in the institutional framework

The CNMC recommends rethinking the participation of operator associations in public decision-making bodies such as the National Road Transport Committee (Comité Nacional del Transporte por Carretera; CNTC), the Board of Directors of the Madrid Regional Transport Consortium (Consorcio Regional de Transportes de Madrid; CRTM), or the Madrid Road Transport Committee (Comité Madrileño de Transporte por Carretera; CMTC). This representation encourages coordination between competitors and increases the risk of regulatory capture, so its existence and functions should be re-evaluated and justified on general interest grounds.

The CNMC considers that the participation of operator associations in public decision-making bodies should in no case entail a transfer of the administrative functions entrusted to the regulator. Where their participation is considered essential, it is recommended that the statutes of these bodies balance the influence of the most representative associations with that of the minority associations, to ensure an adequate dialogue between the latter and the public authorities. Rotating the composition or appointment of representatives would also help to balance the weight of all operators in these bodies. Finally, the CNMC

considers that user associations should be given the same weight as operators in these institutions, to guarantee the correct balance between the interests of all parties.

Introduce contractual formulas that promote the quality of the service provided

The absence of competition means that contractors operating under a monopoly regime have an incentive to reduce service quality in all those parameters that are difficult for the public authorities to observe, so as to reduce their operating costs.

In the contracts, the public authorities should include surcharge systems that encourage concession holders to provide an adequate quality of service, based on punctuality, user satisfaction, the number of complaints received, or other objective parameters. In turn, channels should be provided whereby users can report their complaints and grievances to the relevant authorities, as well as a sufficiently dissuasive sanctioning regime that penalises repeated breaches of objective quality commitments, such as repeated long delays or the accumulation of complaints and grievances. Finally, regularly publishing statistics for each concession on the quality reported by users, the number of complaints, punctuality or other objective parameters would also promote service quality, because of its impact on the contractor's reputation.

Strengthen intermodality and inter-territorial cooperation in the design of the public transport network

The public transport network must be designed in a comprehensive and multimodal manner, taking into account all possible modes of transport available to citizens. When proposing new Public Service Obligations, the public authorities should examine the available options, including buses, trains and on-demand systems, and select the most effective and cost-efficient ones in order to optimise public spending on transport. Moreover, the service map should take into account the complementarities between the different modes of transport, especially the new rail or bus services that will be developed following liberalisation. Finally, designing an efficient map of public services requires close collaboration between

the different competent regional authorities to avoid duplication and ensure territorial cohesion.³⁸⁷

Encourage private initiatives in the design of the public transport network

The administrative planning of services means that the transport network may not be adjusted to the needs of users. In this sense, the CNMC recommends that the public authorities introduce mechanisms that allow users to suggest routes that are not currently covered by the concessionary system, potentially resulting in an extension of the existing network.

In terms of operator initiative, market liberalisation would mean that those with a commercial interest in operating a route not covered by a PSO would be able to do so without restrictions. However, if the current concession system is maintained, the CNMC suggests that the public authorities set up an operator proposal channel, similar to that recommended for users, to enable network improvements.

On the other hand, the rigidity of the concession system makes it difficult to adapt current services to changes in demand; this leads to efficiency losses in the overall public transport network, especially in the case of longer-term concessions.

The CNMC recommends that the public authorities explore alternative contractual formulas that give operators and users more say in the design of services, making the system more flexible. In this sense, it is worth noting the positive experiences of hybrid and super-incentive contracts implemented in the Netherlands, which give greater freedom to the operator to design transport services in a given area, or the on-demand transport solutions already implemented in some regions of Spain, which allow users to contract a journey in advance at a regulated price.

In any case, operator involvement in service design should proceed with the appropriate safeguards to prevent them from exercising their market power over users, by giving users equivalent representation. Ultimately, the proposed independent sector regulator would be able to resolve any conflicts arising as a result of this participation.

³⁸⁷Article 39 of the [Draft Sustainable Mobility Bill](#) calls on the public authorities to guarantee that "land transport services by road and rail and mobility services form a coordinated, intermodal and integrated system that is easy for citizens to use" and that "land transport operators by road and rail facilitate intermodality".

The implementation of flexible contracts or on-demand transport solutions could require a change in the LOTT and the applicable regional regulations, making the "regularity" or "repetition" requirements for concessionary services more flexible, to improve their efficiency and adaptability in terms of demand.

Under all circumstances, and as long as the concessionary system is maintained, the public authorities must consider the private initiative of operators in the design of the concessionary system, to optimise the network and adapt it to the demand for services.

Eliminate the artificial segmentation of related markets

The LOTT imposes a large number of restrictions on liberalised services, which are not necessary for guaranteeing the monopoly of scheduled transport concession holders and which, in turn, impose significant limitations on the development of these segments.

The CNMC considers that the artificial segmentation imposed between occasional, tourist, international and regular special use services is very restrictive and unjustified from the perspective of competition and good regulation. The restrictions imposed by the regulations limit the growth and development of segments that could experience significant demand in Spain. Moreover, the development of these activities could make it easier for operators in these segments to exert competitive pressure on scheduled passenger transport. Instead, it is proposed that passenger bus transport services not subject to a concession be deregulated so that they can be operated by any entity holding an authorisation for passenger transport acquired in accordance with Article 42 of the LOTT.

The introduction of scheduled services, according to a fixed timetable and route, could be subject to prior notification so that, in cases where the new service substantially impacts the economic equilibrium of an existing concession, the authorities could ask the independent regulator to carry out an economic equilibrium test, as proposed in the first recommendation.

In any case, an authorisation for special, tourist or international transport should only be refused after an individualised analysis of the impact the proposed commercial service would have on the concession, carried out in accordance with a transparent and publicly available method. In turn, prior to a refusal, the authorities should request that the operator modify the proposed route, whenever possible, to avoid conflict with the concession. In this regard, the CNMC

recommends that the MITMA re-evaluates the proposed criteria for authorising international transport services.

Finally, it is recommended that the LOTT and its implementing regulations be re-evaluated to eliminate unnecessary or disproportionate restrictions, such as the prohibition of sales by seat, the need to contract tourist services through intermediaries, and the obligation to offer complementary services of a tourist nature outside the transport activity in order to obtain authorisation for tourist transport services. It is also recommended that vague concepts such as "homogeneous group" or "repetition of pre-established traffic" be clarified in order to reduce legal uncertainty for operators in liberalised market segments.

ANNEX I. REGIONAL REGULATION OF INTERCITY BUS TRANSPORT

Table 37. Regional regulation of intercity bus transport

	Basic regulation	Additional regulation
Andalusia	Land Transport Management Act 16/1987 , July 30.	Act 2/2003 , May 12, for the Management of Urban and Metropolitan Transports in Andalusia. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities. Act 3/1985 , May 22, for the coordination of concessions of regular passenger road transport services in Andalusia.
Aragon	Land Transport Management Act 16/1987 , July 30.	Act 17/2006 , December 29, of Urgent Measures in the Intercity Passenger Road Transport Sector of the Autonomous Community of Aragon. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Asturias	Act 12/2018 , November 23, of Transports and Sustainable Mobility.	Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Balearic Islands	Act 4/2014 , June 20, of Land Transports and Sustainable Mobility of the Balearic Islands.	Act 13/1998 , December 23, for the delegation of powers in land transport to the Island Councils of Minorca and Ibiza. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Canary Islands	Act 13/2007 , May 17, of Road Transport Management in the Canary Islands.	Decree 159/1994 , July 21, for the delegation of powers on cableway and land transport from the Autonomous Community of the Canary Islands to the Island Councils. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Cantabria	Road Passenger Transport Act 1/2014 , November 17. Land Transport Management Act 16/1987 , July 30.	Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Castile and Leon	Act 9/2018 , December 20, of Public Road Passenger Transport in Castile and Leon.	Act 15/2002 , November 28, of Urban and Metropolitan Transport in Castile and Leon. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Castile-La Mancha	Act 14/2005 , December 29, of Public Road Passenger Transport Management in Castile-La Mancha. Land Transport Management Act 16/1987 , July 30.	Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.

	Norma básica	Normativa de apoyo
Catalonia	Act 12/1987 , May 28, for the Regulation of Road Passenger Transport on Motor Vehicles.	Decree 319/1990 , December 21, passing the Regulation of the Act for the Regulation of Road Passenger Transport on Motor Vehicles. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Valencian Community	Valencian Community Mobility Act 6/2011 , April 1.	Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Extremadura	Land Transport Management Act 16/1987 , July 30.	Act 5/2009 , November 25, of Urgent Measures for Regular, Permanent, General-Use Passenger Road Public Transport. Decree 10/1991 , January 22, for the Coordination of Powers of the Autonomous Community of Extremadura and its Local Councils on Regular Passenger Public Transport. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Galicia	Land Transport Management Act 16/1987 , July 30.	Act 10/2016 , July 19, of Urgent Measures for Updating the Public Transport System in Galicia. Act 5/2009 , November 26, of Urgent Measures for Modernising the Public Transport Sector in Galicia. Act 6/1996 , July 9, for the Coordination of Intercity and Urban Road Transport Services in Galicia. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Community of Madrid	Act 5/2009 , October 20, for the Management of Land Transport and Road Mobility.	Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Murcia	Act 10/2015 , March 24, for the Organisation of Powers on Intercity and Urban Transport in the Murcia Region. Land Transport Management Act 16/1987 , July 30.	Act 10/2009 , November 2009, for the Creation of the Integrated Public Transport System of the Murcia Region, and the Modernisation of the Concessions of Regular, Permanent, Public Passenger Road Transport. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Navarre	Land Transport Management Act 16/1987 , July 30.	Foral Law 11/2014 , June 18, modifying Foral Law 8/1998, June 1, of Regular Passenger Transport in the Region of Pamplona-Iruñerria. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
Basque Country	Road Passenger Transport Act 4/2004 , March 18. Decree 51/2012, April 3, passing the Road Passenger Transport Regulation.	Land Transport Management Act 16/1987 , July 30. Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.
La Rioja	Act 8/2006 , October 18, on Intercity Road Transport in La Rioja. Land Transport Management Act 16/1987 , July 30.	Organic Law 5/1987 , July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities.

ANNEX II. REGIONAL EXTENSIONS OF INTERCITY BUS CONCESSIONS

	Enabling Regulation	New expiration date
Andalusia	LOTT (DT 2ª). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167).	LOTT: 2007-2008. Law 13/1996: 2012-2013.
Aragon	LOTT (DT 2ª). Act 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Act 17/2006, December 29, of Urgent Measures in the Intercity Passenger Road Transport Sector of the Autonomous Community of Aragon (art. 5). Decree 24/2008, February 12, of the Government of Aragon, passing Regulation of Measures for the maintenance and improvement of intercity road passenger transport services of the Autonomous Community of Aragon.	LOTT: 2007-2008. Act 13/1996: 2012-2013. Act 17/2006: 2017.
Asturias¹	LOTT (DT 2ª). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Decree 1/2008, January 15, establishing the Conditions for the Extension of the Concessions of Regular, Permanent, General-Use Passenger Public Transport (art. 1). Agreement of 2009, July 28, of the Asturias Transport Consortium, awarding zonal concessions directly to concessionaires or authorized operators that previously operated one or several regular, linear, general-use services running entirely through the same transport zone. List of extensions passed by the Asturias Transport Consortium during the second quarter of 2019.	LOTT: 2007-2008. Law 13/1996: 2012-2013. Decree 1/2008: 2012. Agreement of 2009, July 28: 2019. Individual extensions: 2024.
Balearic Islands	LOTT (DT 2ª). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Decree-Law 5/2019, November 27, of Measures Regarding the Regular Public Road Passenger Services of the Balearic Islands and Several Regulations on Urban Planning.	LOTT: 2007-2008. Law 13/1996: 2012-2013. Decree-Law 5/2019: 2018.
Canary Islands	LOTT (DT 2ª). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Act 13/2007, May 17, of Road Transport Management in the Canary Islands (DT 2ª).	LOTT: 2007-2008. Law 13/1996: 2012-2013. Act 13/2007: 2022-2027.
Cantabria	LOTT (DT 2ª). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167).	LOTT: 2007-2008. Law 13/1996: 2012-2013.
Castile and Leon	LOTT (DT 2ª). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Decree-Law 2/2009, November 5, to Guarantee the Stability of the Concession System for Intercity Regular Passenger Public Road Transport of Castile and Leon (art. 1).	LOTT: 2007-2008. Law 13/1996: 2012-2013. Decree-Law 2/2009: 2019.
Castile-La Mancha	LOTT (DT 2ª). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Act 14/2005, December 29, of Public Road Passenger Transport Management in Castile-La Mancha (DT 1).	LOTT: 2007-2008. Law 13/1996: 2012-2013. Act 14/2005: 2022-2023.

Note: ¹ The Agreement of 2009, July 28, of the Asturias Transport Consortium replaces linear concessions with zonal concessions. Asturias approved an extension of the zonal concessions in 2019.

	Enabling Regulation	New expiration date
Catalonia	Act 12/1987, May 28, for the Regulation of Road Passenger Transport on Motor Vehicles (DT 1 ^a). Decree 128/2003, May 13, adopting Measures for Innovation and Promotion of Quality in the Network of Regular Passenger Transport Services in Catalonia (art. 2).	Law 12/1987: 2008. Decree 128/2003: 2028.
Valencian Community¹	LOTT (DT 2 ^a). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Act 16/2008, December 22, on Fiscal Measures, Administrative and Financial Management, and Organization of the Generalitat (art. 83). Decree 24/2020, January 29, of the Council, regarding the Modernization Plan for Concessions of Permanent, Regular, Public Road Passenger Transport.	LOTT: 2007-2008. Law 13/1996: 2012-2013.
Extremadura	LOTT (DT 2 ^a). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Act 5/2009, November 25, of Urgent Measures for Regular, Permanent, General-Use Passenger Road Public Transport.	LOTT: 2007-2008. Law 13/1996: 2012-2013. Act 5/2009: 2018.
Galicia²	LOTT (DT 2 ^a). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Act 5/2009, November 26, of Urgent Measures for Modernising the Public Transport Sector in Galicia (art. 1 ^o). Resolution of 2010, February 26, of the General Directory for Mobility, passing the Modernization Plan for Concessions of Permanent, Regular, General-Use, Public Road Passenger Transport in Galicia.	LOTT: 2007-2008. Law 13/1996: 2012-2013.
Community of Madrid	LOTT (DT 2 ^a). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Act 5/2009, October 20, for the Management of Land Transport and Road Mobility (DA Única). Agreement of 2009, October 23, of the Regional Transport Consortium of Madrid, approving the Modernization Plan. Agreement of 2019, November 19, of the Regional Transport Consortium of Madrid, extending ongoing concessions for five years.	LOTT: 2007-2008. Law 13/1996: 2012-2013. Agreement of 2009, October 23: 2019. Agreement of 2019, November 19: 2024.
Murcia	LOTT (DT 2 ^a). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Act 10/2009, November 2009, for the Creation of the Integrated Public Transport System of the Murcia Region, and the Modernisation of the Concessions of Regular, Permanent, Public Passenger Road Transport (art. 6).	LOTT: 2007-2008. Law 13/1996: 2012-2013. Law 10/2009: 2019.
Navarre	LOTT (DT 2 ^a). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167). Individual extension agreements signed in 2012.	LOTT: 2007-2008. Law 13/1996: 2012-2013. Individual extensions: 2014.
Basque Country	LOTT (DT 2 ^a). Law 13/1996, December 30, on Fiscal, Administrative and Social Order Measures (art. 167).	LOTT: 2007-2008. Law 13/1996: 2012-2013.
La Rioja	LOTT. Organic Law 5/1987, July 30, for the delegation of State powers on cableway and road transport to the Autonomous Communities. Act 8/2006, October 18, on Intercity Road Transport in La Rioja (DT 2 ^a).	LOTT: 2007-2008. Law 13/1996: 2012-2013. Law 8/2006: 2028.

Note: ¹ Decree 24/2010 was annulled by the Supreme Court in the ruling of 14 March, 2016, annulling the extension of the concessions. ² The Resolution of 26 February, 2010, was annulled by the Supreme Court in the ruling of 14 March, 2016, annulling the extension of the concessions.

ANNEX III. CASE STUDY: BENEFITS OF TENDERING

This Annex quantifies the benefits of tendering for users of two state concessions, VAC-225 and VAC-232, which were tendered in 2016 under the fourth round of tenders. These tenders renewed two contracts, VAC-111 and VAC-098, which had been in force since at least 1995.

As shown in Table 38 below, there is a big difference between the two concessions. The VAC-225 concession runs between Pamplona and Jaca, and is smaller in all the metrics considered, being the ninth state concession with the least income in 2019. For its part, the VAC-232, which connects Madrid, Malaga and Algeciras, is a larger concession, being the fourteenth state concession with the most revenue in 2019. The table shows the evolution of several indicators before and after the tendering of the route.

Table 38. Practical case: comparison before and after the tender

COMPARISON BEFORE AND AFTER THE TENDER						
Indicator	VAC-225 ¹			VAC-232		
	2015	2017	%	2016	2017	%
User fare ² (cent. €/pass-km)	6.78	6.00	-12%	4.17	2.73	-35%
Average fare ³ (€)	7.73	6.84	-12%	27.51	17.99	-35%
Trips ⁴	988	1,116	13%	6,550	9,039	38%
Seats ⁵	35	48	37%	952	1,201	26%
Vehicles	1	1	0%	16	22	38%
Vehicle-kilometres ⁶	108,782	131,216	21%	4,697,633	6,573,820	40%
Passenger-kilometres ⁷	1,769,327	1,723,409	-3%	188,531,744	235,349,434	25%
Length ⁸	218	118	-46%	3,948	2,601	-34%

Source: Compiled by author based on MITMA data.

Note: ¹ Complete information is not available for the VAC-225 concession for 2016. ² Average fare for each user and kilometre of journey in force in the concession during the current year. ³ Price of the journey between the main points of the concession (Pamplona-Jaca and Madrid-Algeciras), applying the average fare per user in force. ⁴ Annual service frequencies of the vehicles offered. ⁵ Number of seats on the vehicles assigned to the concession. ⁶ Total kilometres travelled by all the vehicles in the concession in one year. ⁷ Total kilometres travelled by all the passengers using the concession in one year. ⁸ Total length of all the routes that make up the concession, in kilometres.

In the case of the VAC-225, the main consequence of the tender was a 12% fare reduction. As a result, and considering that the distance between the concession's head offices is 114 kilometres, the average fare for travel between Jaca and Pamplona fell from 7.73€ per person to 6.84€, meaning a saving of 0.89€ per passenger. Likewise, based on the passenger-kilometres travelled by

the concession in 2017, the total saving for passengers on this concession during this year was 13,451€, compared to the total expenditure they would have made if the previous fare had been maintained. Despite these savings, the number of passenger-kilometres fell by 3% between these two years, although this decrease is in line with the fall in demand observed in the concession in previous years.

In addition to the fare reduction, the tender increased the number of journeys made³⁸⁸ by 13% between 2015 and 2017, as well as expanding the capacity of the assigned vehicle by 13 seats, or 37%, and increasing the number of annual kilometres travelled by the assigned vehicle by 21%, as a result of the higher frequencies offered.

Finally, the renewal resulted in a consolidation of various existing routes into a single line, so that the total length of all the routes in the concession was reduced by 46%. No information is available on the number of stops prior to the tender, so the evolution of this parameter is not quantifiable.

The renewal of the VAC-232 concession also led to a reduction in the average fare paid by users, which was already relatively low before the tender, and which fell by 35%. Thus, the average fare for travel between Madrid and Malaga fell from 22.09€/per person to 14.45€, representing a saving of 7.64€/per passenger. In the case of the journey between Madrid and Algeciras, the cost dropped 9.52€/per passenger from 27.51€ to 17.99€.

Based on the passenger-kilometres transported by the concession in 2017, the total saving for passengers on this concession this year was 3,394,445€, compared to the total expenditure they would have incurred if the previous fare had been maintained. At the same time, demand, in terms of passenger-kilometres, increased significantly, by 25%.

In terms of supply, the tender led to a 38% increase in journeys, and growth in the number of vehicles (38%) as well as their capacity (26%), and the total number of kilometres travelled (40%). Finally, the contract renewal was used to rationalise the existing routes, the total length of which was reduced by 34%.

³⁸⁸The increase in the number of annual journeys carried out means an increase in the frequency of the service.

ANNEX IV. DATA ENVELOPMENT ANALYSIS

A. Functioning of the DEA method

In essence, this method quantifies the technical and allocative efficiency of a given company within its industry.

To assess the **technical efficiency** of a company, DEA analyses the extent to which the company could reduce the productive factors (inputs) it uses without altering the quantity produced (output) This is known as an input-oriented DEA. Similarly, the DEA is able to determine how much the output could increase for fixed available inputs (output orientation).

On the other hand, in terms of **allocative efficiency**, given the input prices, DEA quantifies the extent to which the combination of inputs used by a company is optimal.

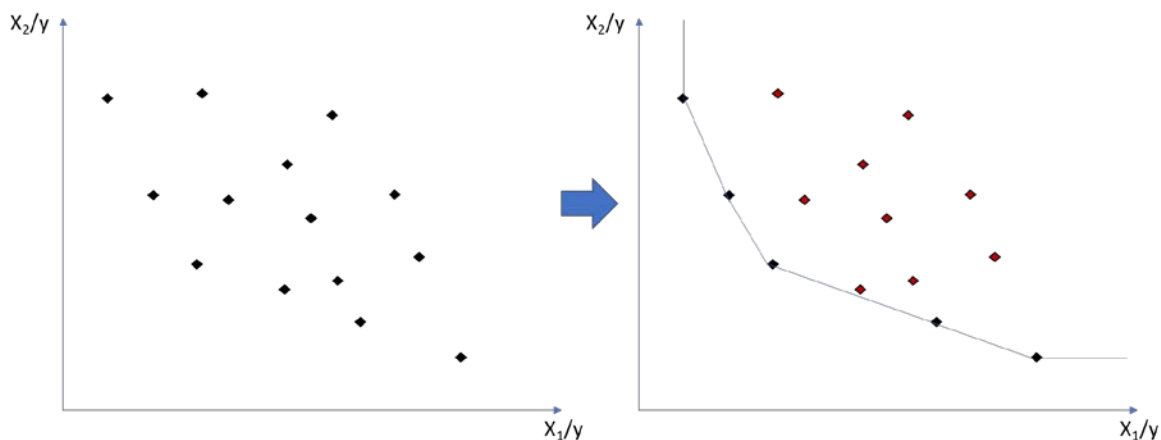
In both cases, and in a very basic way, DEA poses a linear optimisation problem to draw an efficient frontier by satisfying the following two constraints:

1. Using the observations in a way that maximises the efficiency of each company (making the distance to the frontier the least possible for each existing operator).
2. Achieving a convex set (where all the observations lie within the frontier set).

To better understand the model, it is useful to illustrate how the DEA operates through an example where the company uses two inputs (x_1 , x_2) that are transformed to produce a single output (y).³⁸⁹ Figure 18 shows a theoretical example in which each point represents a company. Starting from the distribution of the panel on the left, the DEA poses a linear optimisation problem to draw the efficient frontier by satisfying the above-mentioned constraints.

³⁸⁹This simplification makes it possible to work in two dimensions and to represent the observations on a map. However, the reasoning for sectors with more than one input or output would be equivalent.

Figure 18. Theoretical example to illustrate how the DEA works

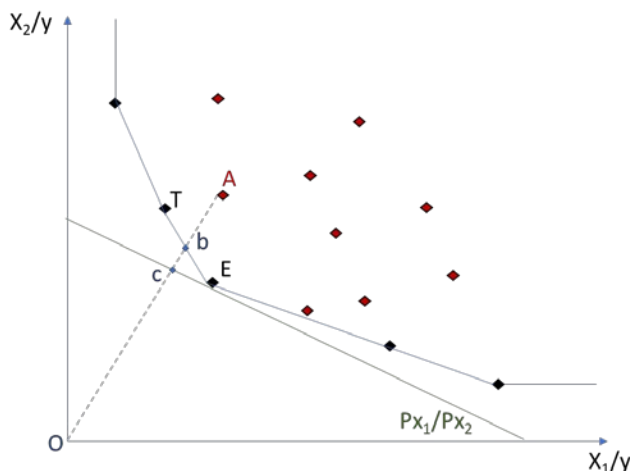


Source: compiled by author.

The right-hand panel in Figure 18 shows the frontier that would result from the linear optimisation problem posed. The companies in red would then be determined as non-efficient as they could move closer to the frontier defined by the line linking the most efficient companies. In other words, they could reduce their inputs while keeping their output constant.

However, the DEA not only determines which operators are not efficient, but also provides a measure of the degree of technical and allocative efficiency of each company, bounded between 0 (maximum inefficiency) and 1 (maximum efficiency). This quantification is illustrated in Figure 19.

Figure 19. Calculating the technical and allocative efficiency using DEA



Source: compiled by author.

For example, for company A, **technical efficiency** would be measured as the ratio between the length of the Ob/OA segments, i.e., it would reflect the company's distance to the isoquant³⁹⁰ that defines the technological frontier. Point b is a synthetic company created by the DEA by combining companies T and E (efficient companies), which is used for making the comparison with A.

In turn, **allocative efficiency** is determined by the distance to the isocost³⁹¹ line defined by the factor price ratio (Px_1/Px_2) of company E (the efficient company closest to O). Thus, the allocative efficiency of company A corresponds to the ratio Oc/Ob .³⁹²

The economic efficiency of company A is calculated by multiplying the technical and allocative efficiency indicator.

The solution to this problem allows the theoretical efficient frontier to be calculated and the observations ranked according to their efficiency, providing "counterpart companies". It also provides information on the efficiency of scale and returns.

One of the main advantages of this method is its simplicity and flexibility, as it allows a large number of inputs and outputs to be covered regardless of whether different units are used. It is also useful because it takes into account returns to scale when calculating efficiency, giving rise to the concept of increasing or decreasing efficiency depending on size and output levels. This makes DEA a particularly useful method for drawing comparative conclusions as a basis for more sophisticated studies.

In terms of limitations, its eminently comparative and non-parametric nature makes the results potentially sensitive to the choice of inputs and outputs, so the relevance of the variables must be analysed before they are included in the model. Moreover, it should be kept in mind that the number of efficient companies on the frontier tends to increase with the number of input and output variables. On the other hand, when there is no relationship between the explanatory factors (within inputs and/or within outputs), DEA considers each company as being unique and wholly efficient. The result is that the efficiency scores are very close

³⁹⁰In economics, the isoquant line represents all the combinations of productive factors (x_1 and x_2) that make it possible to produce the same quantity of product (y).

³⁹¹ The isocost line represents all the combinations of productive factors that involve the same cost for the company, given a set (or vector) of prices, Px_1 and Px_2 .

³⁹² Using radial distances in the DEA has a very important advantage. The measures of technical and allocative efficiency do not vary across the input and output unit measures.

to 1, meaning that there is no longer a way to distinguish between these efficient units.

B. Description of the database

Annual aggregate information is available for the following variables for each of the 83 concessions in effect in 2018. The variables are grouped into three different databases, paired by concession code:

- **Operational data:** the number of vehicle-kilometres, passenger-kilometres, vehicles, seats offered, service frequencies, fares and length of the concession are available. The information dates back to the 1990s, although the coverage during the early years of the series is somewhat deficient.
- **Accounting data:** this includes information on concession revenues and costs. Revenue is classified into operating revenues (revenue collection), financial revenues, subsidies and other revenues. The costs are broken down into operating costs (including fuel consumption and maintenance), personnel costs, amortisation costs and financial costs. For many of the concessions, this information has only been available since 2008 and the latest available data corresponds to 2018.
- **Contractual information:** information is available on the original date of the contracts, their expiry date, the company and group holding them, and the award procedure used. For tendered concessions, information is available on the procedure, such as the number of bidders, abnormally low bids, and bid scoring. Finally, information has been obtained on the structural changes³⁹³ that services have undergone over time, including the renewal of the concessions, validations and route unification. Coverage is uneven, with information available since the late 1980s for some concessions and since 2007 for others. No information is available for tenders launched prior to 2007, except for the one published in (TDC, 1999).

Starting from these three paired databases and considering that DEA does not admit zeros, null values (empty values), or negative values in the model variables, both the selection of variables to be considered and the temporal scope are necessarily narrowed down, leaving a final panel of 65 concessions observed

³⁹³ The information provided by the MITMA has been complemented with data from the Spanish Official State Gazette (BOE), TDC (1999) and Asensio et al. (2016), in view of the gaps caused by the lack of electronic records prior to 2007.

over ten years (2009-2018), representing good coverage with respect to the 83 concessions that were in force during the period under consideration.

C. Table of correlations between candidate variables and DEA results

Table 39. Table of correlations between candidate variables and DEA results

CORRELATION BETWEEN CANDIDATE VARIABLES AND DEA RESULTS																
R2	Variables included in the DEA models							Variables of commercial interest			Result of the DEA models					
	Veh-km	Pass-km	Trips	Seats	Length	Staff exp.	Operating exp.	Total exp.	Fare revenues	Profitability	Supply Int.	Supply Con.	Supply Ope.	Demand Int.	Demand Con.	Demand Ope.
Veh-km	1.00	0.95	0.54	0.81	0.84	0.90	0.95	0.98	0.97	0.60	0.46	0.54	0.45	0.25	0.35	0.27
Pass-km	0.95	1.00	0.45	0.73	0.71	0.83	0.94	0.95	0.97	0.65	0.51	0.51	0.54	0.41	0.50	0.44
Trips	0.54	0.45	1.00	0.78	0.37	0.65	0.47	0.56	0.52	0.28	0.06	0.04	-0.01	-0.11	-0.13	-0.10
Seats	0.81	0.73	0.78	1.00	0.66	0.86	0.73	0.81	0.77	0.43	0.15	0.29	0.06	-0.07	0.06	-0.07
Length	0.84	0.71	0.37	0.66	1.00	0.71	0.78	0.79	0.76	0.44	0.32	0.48	0.27	0.07	0.18	0.07
Staff exp.	0.90	0.83	0.65	0.86	0.71	1.00	0.77	0.90	0.87	0.51	0.36	0.42	0.30	0.15	0.23	0.15
Operating exp.	0.95	0.94	0.47	0.73	0.78	0.77	1.00	0.97	0.97	0.55	0.44	0.48	0.47	0.29	0.36	0.34
Total exp.	0.98	0.95	0.56	0.81	0.79	0.90	0.97	1.00	1.00	0.57	0.44	0.49	0.44	0.27	0.35	0.30
Fare revenues	0.97	0.97	0.52	0.77	0.76	0.87	0.97	1.00	1.00	0.59	0.46	0.49	0.48	0.32	0.39	0.35
Profitability	0.60	0.65	0.28	0.43	0.44	0.51	0.55	0.57	0.59	1.00	0.35	0.14	0.40	0.34	0.28	0.34
Supply Int.	0.46	0.51	0.06	0.15	0.32	0.36	0.44	0.44	0.46	0.35	1.00	0.75	0.87	0.80	0.72	0.70
Supply Con.	0.54	0.51	0.04	0.29	0.48	0.42	0.48	0.49	0.49	0.14	0.75	1.00	0.50	0.51	0.70	0.30
Supply Ope.	0.45	0.54	-0.01	0.06	0.27	0.30	0.47	0.44	0.48	0.40	0.87	0.50	1.00	0.82	0.64	0.90
Demand Int.	0.25	0.41	-0.11	-0.07	0.07	0.15	0.29	0.27	0.32	0.34	0.80	0.51	0.82	1.00	0.88	0.90
Demand Con.	0.35	0.50	-0.13	0.06	0.18	0.23	0.36	0.35	0.39	0.28	0.72	0.70	0.64	0.88	1.00	0.71
Demand Ope.	0.27	0.44	-0.10	-0.07	0.07	0.15	0.34	0.30	0.35	0.34	0.70	0.30	0.90	0.90	0.71	1.00

Source: Compiled by author based on MITMA data.

D. Classification of concessions by size

The number of categories was chosen using the Sturges rule as a guideline.³⁹⁴

The choice of category limits responds to an analysis of the data distribution, seeking to maintain balanced and representative categories. The following table shows the distribution of the concessions in the database according to their size.

Table 40. Classification of concessions by size

CLASSIFICATION OF CONCESSIONS BY SIZE			
Code	Size	Average veh-km/year	Nº concessions
A	Very large	More than 10 millions	6
B	Large	5 - 10 millions	9
C	Medium-large	3 - 5 millions	11
D	Medium-small	2 - 3 millions	9
E	Small	1 - 2 millions	13
F	Very small	Less than 1 million	17

Source: compiled by author.

Table 41 shows the average efficiency of the concessions in each of the groups. In general, large concessions (groups A and B) tend to be more efficient than small concessions (groups E and F).

Table 41. Average efficiency of concessions, by size

AVERAGE EFFICIENCY OF CONCESSIONS, BY SIZE							
Model	Inputs	A	B	C	D	E	F
Supply	Integrated	0.990	0.963	0.777	0.897	0.716	0.777
	Accounting	0.938	0.783	0.568	0.647	0.569	0.587
	Operational	0.865	0.864	0.593	0.720	0.471	0.609
Demand	Integrated	0.798	0.793	0.584	0.720	0.474	0.674
	Accounting	0.770	0.696	0.460	0.556	0.395	0.537
	Operational	0.669	0.694	0.432	0.555	0.303	0.536

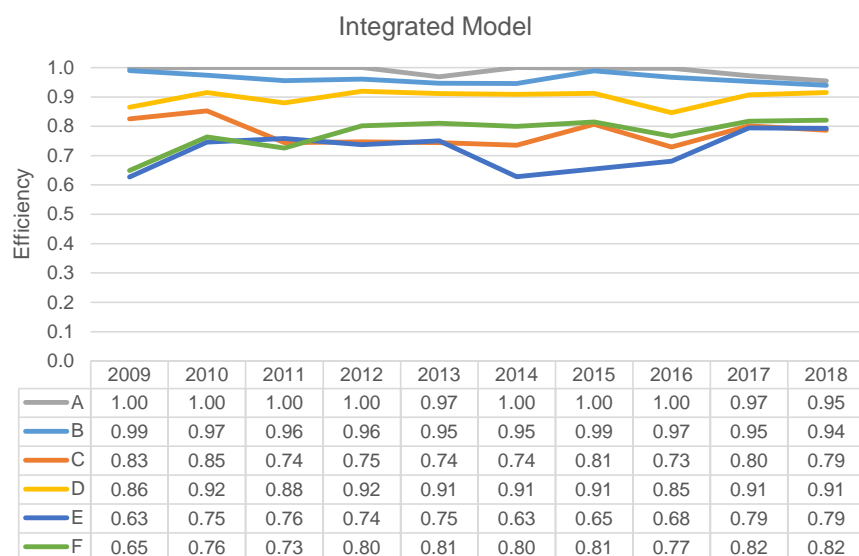
Source: compiled by author.

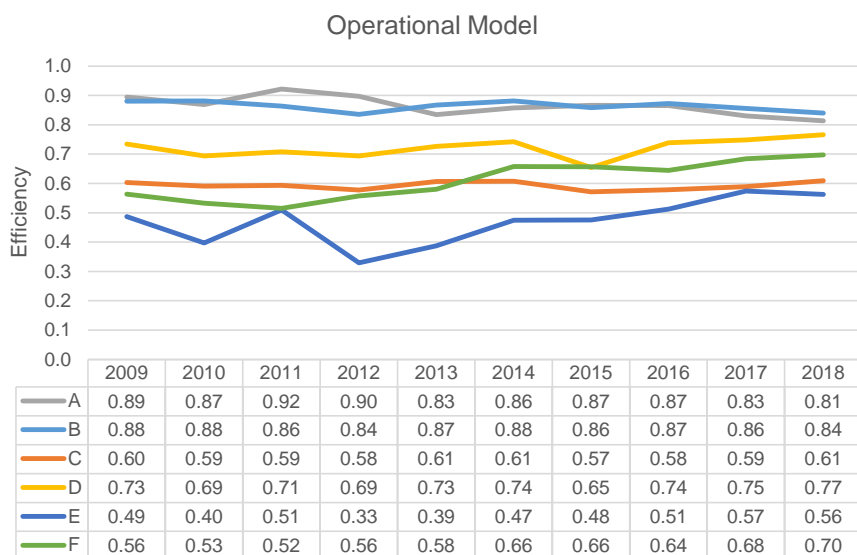
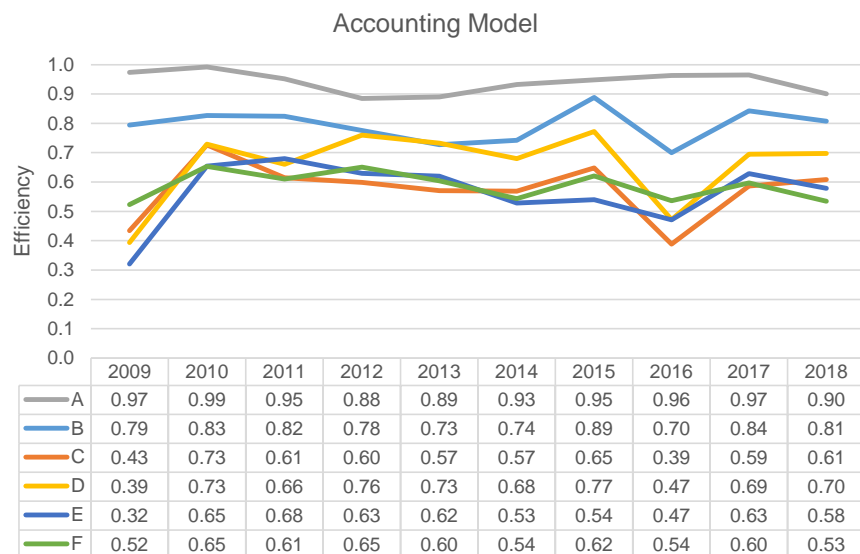
Figures 20 and 21 show the average efficiency trends for each group of concessions for the supply and demand models, respectively. In general, the efficiency of the different groups tends to evolve along similar lines, with the distinction between larger and smaller concessions being maintained at all times.

³⁹⁴ This rule approximates the number of classes (K) through the following formula: $K = 1 + 3.322 \times \log(N^{\circ} \text{ observaciones})$. Commonly used for data sets of less than 200 observations, the number of classes for this type of data ranges from 5 to 9.

There are some exceptions, such as the fall and subsequent recovery of the operating efficiency in Group E concessions from 2012, in both the supply and demand models, and the drop in the integrated, accounting and operating efficiency of Group A concessions in the demand model from 2014, which was much more pronounced than that recorded by the rest of the groups. For this reason, both the value of the variables that make up the models and the relative size of the concessions are taken into account when analysing changes in concession efficiency, making the proposed methodological strategy more robust.

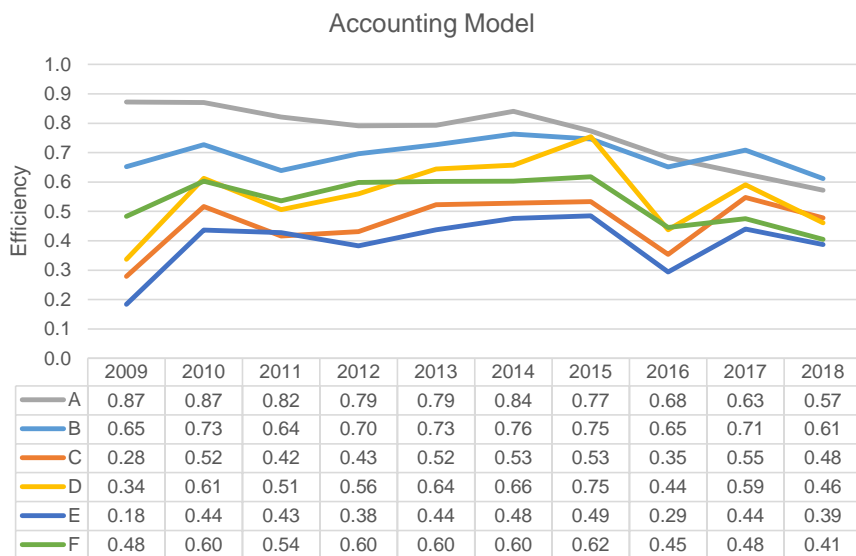
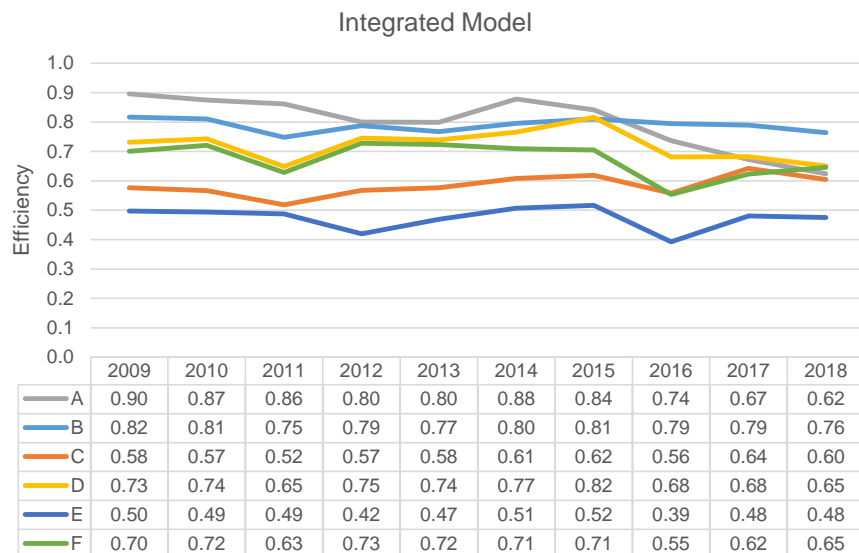
Figure 20. Evolution of average concession efficiency, by size.
Supply model

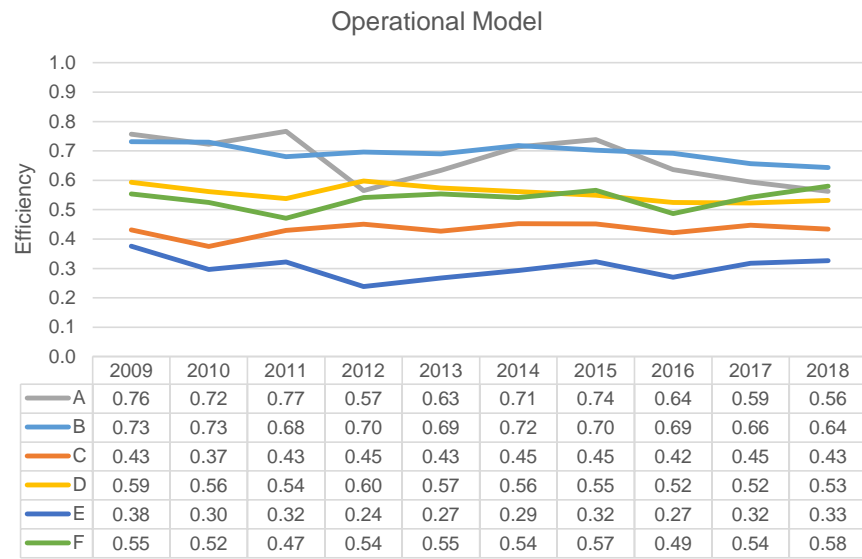




Source: compiled by author.

Figure 21. Evolution of average concession efficiency, by size.
Demand model





Source: compiled by author.

E. Descriptive statistics of the panel and results

DESCRIPTIVE STATISTICS OF THE PANEL											
Variable	Operational						Accounting				
	Passenger	Passenger-kilometres	Vehicle-kilometres	Trips	Seats	Length	Total revenues	Total expenditures	Staff exp.	Operating exp.	Profitability
AVERAGE	436,498	83,860,248	3,486,295	11,303	1,042	4,599	5,020,140	4,857,756	1,416,782	1,877,330	0.86
ST. DEV	493,935	109,678,918	3,749,769	11,066	889	5,449	6,569,046	6,074,111	1,654,601	2,572,173	0.23
MEDIAN	250,228	37,332,346	2,245,247	6,575	752	2,964	2,063,221	2,252,841	675,150	782,136	0.90
1º QUARTILE	83,289	12,712,324	939,847	3,528	365	794	937,365	1,017,618	333,212	342,660	0.71
3º QUARTILE	555,622	114,680,642	4,223,434	16,138	1,300	5,995	5,534,050	5,327,948	2,048,553	2,053,320	1.05
MIN	9,085	256,687	38,259	533	46	43	18,600	73,346	28,783	14,417	0.25
MAX	2,506,001	457,894,668	15,791,989	46,780	4,121	26,030	31,399,822	28,933,681	8,409,448	12,408,687	1.35

DESCRIPTIVE STATISTICS OF THE DEA RESULTS						
Variable	Efficiency (supply)			Efficiency (demand)		
	Integrated	Accounting	Operational	Integrated	Accounting	Operational
AVERAGE	0.83	0.65	0.65	0.65	0.54	0.51
ST. DEV	0.16	0.21	0.25	0.23	0.23	0.27
MEDIAN	0.87	0.68	0.64	0.64	0.49	0.43
1º QUARTILE	0.67	0.44	0.45	0.45	0.34	0.27
3º QUARTILE	0.98	0.80	0.91	0.86	0.71	0.74
MIN	0.48	0.30	0.23	0.26	0.25	0.11
MAX	1.00	1.00	1.00	1.00	1.00	1.00

Source: Compiled by author based on MITMA data.

ANNEX V. EUROPEAN EXPERIENCES OF LONG-DISTANCE BUS LIBERALISATION

A. The United Kingdom

The UK was the first European country to liberalise intercity bus transport, in 1980, when the state-owned operator, National Bus Company (NBC), which operated under the National Express brand, was split up and privatised, and the obligation to hold a licence to operate specific services was removed. Unlike other Member States, deregulation in the UK affected the entire market, with the exception of Northern Ireland and urban transport in London, although local authorities were allowed to provide subsidies to operate socially necessary concessions.³⁹⁵

Liberalisation was followed by the entry of a large number of smaller operators, who were unable to compete with National Express, which quickly reduced its fares and adapted its frequencies to prevent new entrants and compete more vigorously with the railways.³⁹⁶ In turn, new entrants had problems accessing the stations and ticketing network. By the mid-1980s, the independent operators had either disappeared from the market or were operating as subsidiaries of the two main groups: National Express in England and Wales, and Citylink in Scotland³⁹⁷.

This situation continued until the entry of Megabus in 2003, a subsidiary of the Stagecoach group, which also has a stake in Scotland's Citylink. This company operates under a *low-cost* model, based on internet sales and a network of stops located close to its target public, on pavements and university campuses, rather than at traditional bus stations.

As a result of the above developments, services and frequencies increased sharply after liberalisation, outpacing demand³⁹⁸ and leading to a price drop.³⁹⁹ The consolidation of the National Express monopoly led to price increases, which in 1996 were 8% higher than in 1980 in real terms, reducing the growth in demand, where the net increase over the same period was just over 20%.⁴⁰⁰

³⁹⁵ In practice, however, the lack of funds led to a reduction in services in rural areas. Before deregulation, these services were provided thanks to the cross-subsidisation scheme within the state operator NBC (Bell & Cloke, 1991), (White & Robbins, 2012).

³⁹⁶ White and Robbins (2012).

³⁹⁷ White (2007), van de Velde (2010).

³⁹⁸ Phillips (2017), p. 44.

³⁹⁹ The OECD (2018, p. 90) estimates a 50% drop, while Phillips (2017) reports a 33% drop in 1984 compared to 1980.

⁴⁰⁰ Phillips (2017).

Eventually, the entry of Megabus led to a price war between the two companies, which reportedly drove fares down again.⁴⁰¹

Today, the market continues to be dominated by National Express, which has an estimated share of between 75% and 87%.⁴⁰² In recent years, new operators have entered the market, such as Snap, a platform that uses *crowd-sourcing* techniques to provide on-demand transport, which entered the market in 2018, and the German operator FlixBus, which began operating in the country in 2020. In 2021, National Express announced its intention to acquire its competitor Stagecoach, an operation that would significantly increase market concentration and which is still pending approval by the Competition Markets Authority (CMA).

B. Sweden

Unlike the UK, Sweden only liberalised long-distance intercity bus services, defined as those that cross more than one county and which are more than 100 km long.⁴⁰³ Prior to deregulation, the bus network was limited to those services which did not compete with the rail network, or which were offered by the state rail operator SJ as a complement to rail traffic⁴⁰⁴. The deregulation took place in two stages, culminating in 1999, and resulted in the development of a radial network of services centred on Stockholm.⁴⁰⁵

In 2016, there were multiple operators in the market, resulting in significant competition, with up to 5 operators on a single route.⁴⁰⁶ The market was dominated by SweBus Express, originally owned by the rail operator, which in 2008 held a 50% market share.⁴⁰⁷ Consolidation has recently taken place, with the purchase of SweBus by FlixBus in 2018⁴⁰⁸, the disappearance of the Svenska Buss cooperative in 2020, and the purchase of Flygbussarna by the Norwegian operator Vy Buss in 2019, which has become the market leader.⁴⁰⁹

⁴⁰¹ White and Robbins (2012).

⁴⁰² Dunmore (2016), p. 250.

⁴⁰³ To operate regional services it is necessary to apply for authorisation from the Regional Public Transport Authorities in each county. As of 2019, only 1% of regional traffic in Sweden was operated on a commercial basis, the rest was subsidised.

⁴⁰⁴ Alexandersson et al. (1999), p. 34.

⁴⁰⁵ Dunmore (2016), p. 241.

⁴⁰⁶ Dunmore (2016), p. 243.

⁴⁰⁷ Van de Velde (2010).

⁴⁰⁸ Bussmagasinet, 2 May, 2018 ([link](#)).

⁴⁰⁹ Transdev press release of December 20, 2019 ([link](#)).

The results of liberalisation have been positive, with reported price decreases for consumers⁴¹⁰ and the creation of a dynamic market in which operators adjust their fares and services to demand, but where they also co-operate to complement their service offerings and offer combined tickets.⁴¹¹ This, in turn, has contributed to the development of the country's transport networks, where long-distance bus operators have been integrated into regional fare integration schemes, complementing regional service networks and their own revenue.⁴¹²

C. Germany

Germany liberalised its domestic long-distance bus services in 2013. Prior to this, the development of the bus network was severely limited by the high capillarity of the rail network operated by Deutsche Bahn and the ban on competition between the two. In practice, the only services were those from East Germany, which were maintained after reunification and operated by BerlinLinienBus, which was controlled by the railway operator.⁴¹³

The new regulations allow operators to provide any service with a distance between stops greater than 50 km or which does not have stops parallel to the rail network situated less than one hour's travel time away. Operators must declare the new services they wish to provide, which are then authorised by the transport authorities once they have verified that the requirements have been met.

It is possible to distinguish two post-liberalisation stages in the evolution of the German market. The first stage saw unprecedented dynamism, with supply increasing from 26 million km in 2012 to more than 220 million km in 2015, provided by more than 50 companies⁴¹⁴, led by MeinFernbus and FlixBus. The growth of these operators was based on a franchise model, where services were subcontracted to smaller operators, typically from the non-scheduled segment.⁴¹⁵ Demand grew faster than supply, with the number of passengers transported increasing tenfold and stabilising at around 24 million in 2016.⁴¹⁶ The number of

⁴¹⁰ Alexanderson et al. (1999) reported decreases in bus and train fares on the Gothenburg-Karlstad and Stockholm-Dalarna lines after liberalisation.

⁴¹¹ Dunmore (2016), p. 249.

⁴¹² Van de Velde (2010), p. 7.

⁴¹³ Grimaldi et al. (2017), p. 475.

⁴¹⁴ Grimaldi et al. (2017), p. 478.

⁴¹⁵ Dürr and Hüscherlath (2015).

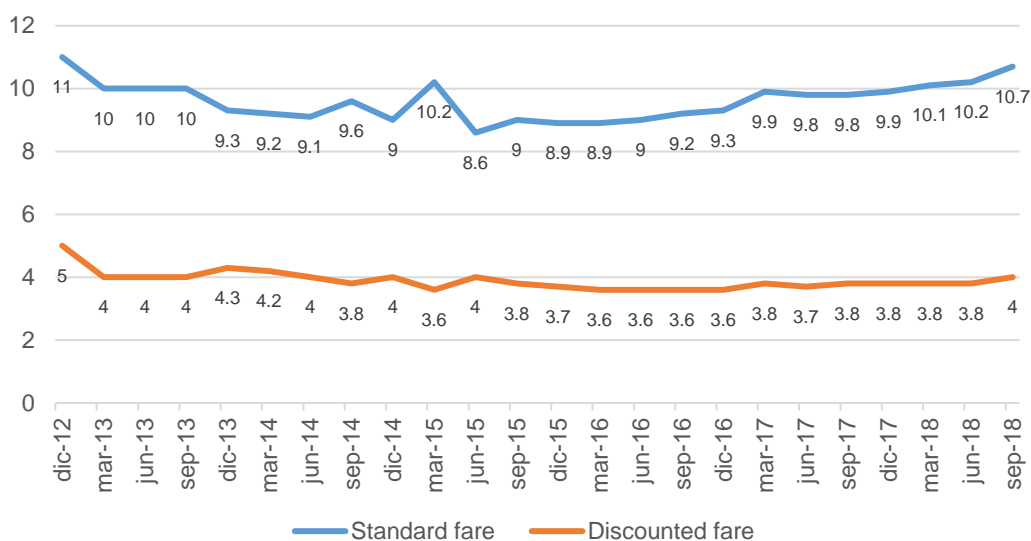
⁴¹⁶ De Haas and Schäfer (2017), p. 2.

lines increased from 62 in the first quarter of 2013 to 328 in the last quarter of 2015.

From 2015 onwards, the market entered a phase of consolidation around a single operator, FlixBus, which accumulated a 95% market share after absorbing both MeinFernbus (2015) and Postbus (2016). The company did not increase its fares immediately after the consolidation, which could be due to the existence of intermodal competition, but it did reduce service frequencies, indicating that the company maintained excess capacity to deter entry by competitors.⁴¹⁷

From 2017 onwards, the available information suggests that there has been an increase in the standard fares offered by operators, to around 10 cents/km, although discounted fares have remained stable at around 4 cents/km since the start of liberalisation (see Figure 22). At the same time, there has been a slight decrease in demand to 21 million passengers in 2019. The latest available information, for the third quarter of 2018, also points to a decrease in the number of routes served, down to 287 (see Figure 23).

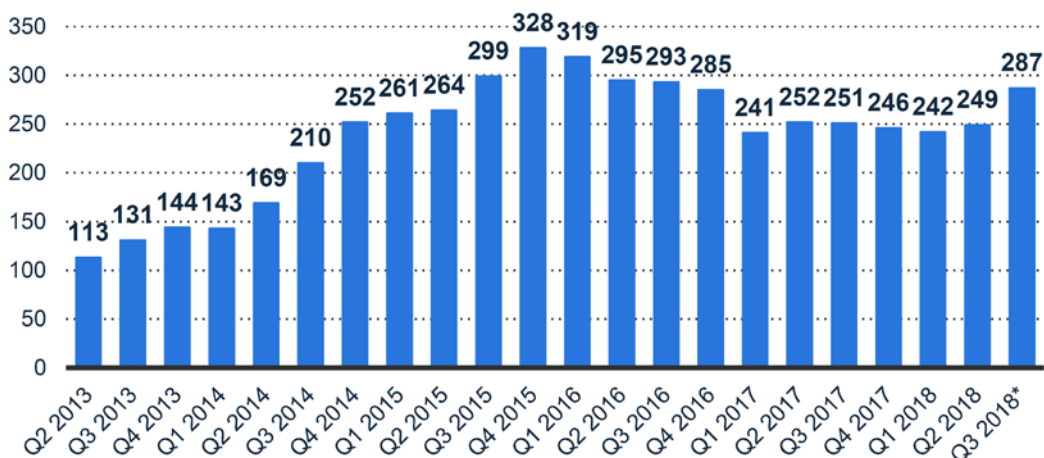
Figure 22. Intercity bus price/km in Germany



Source: Statista (2021).

⁴¹⁷ De Haas and Schäfer (2017).

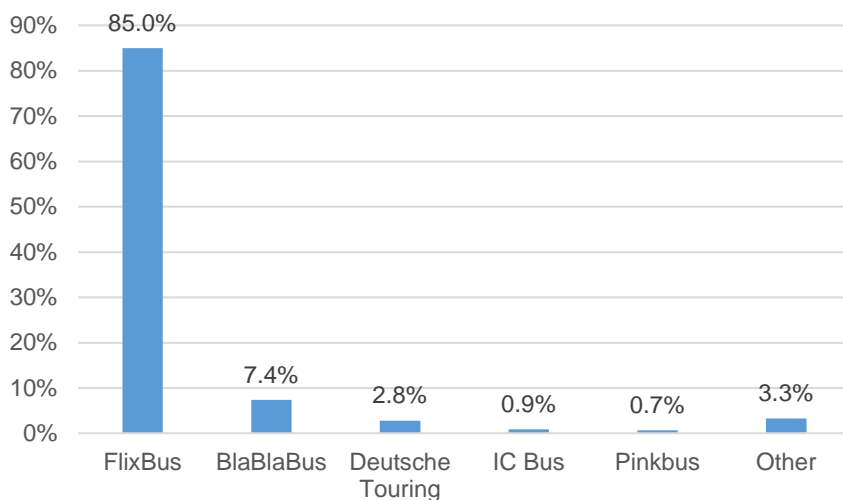
Figure 23. Number of intercity bus lines in Germany



Source: Guihéry (2019). The columns reflect the number of routes in each quarter.

In 2019, BlaBlaBus entered the German market. Competition from the French operator, which offers fares from 99 cents per ticket to attract customers, could trigger a new price war in the market. Information available for September 2019 suggests that FlixBus' share had decreased to 85%, although it continued to maintain a large gap over the new entrant (7.4%).

Figure 24. Market share of operators in Germany, by service frequencies, as of September 2019.



Source: Statista (2021).

D. Italy

The regulations in force in Italy before market liberalisation were very similar to those in Spain, where the transport authorities (the Ministry of Transport in the case of inter-regional⁴¹⁸ routes, or the regional authorities for routes within their territorial scope) determined the characteristics of the services to be provided, which they then put out to tender and awarded to private companies. The automatic extension of contracts was frequent, which prevented for-the-market competition⁴¹⁹.

In 2007, interregional bus transport was liberalised, coming into effect in 2014, after a transitional period. Following liberalisation, service provision became subject to a non-exclusive authorisation from the Ministry, after verification of the technical requirements. In addition, the authorisation is conditional on the route not threatening the financial position of overlapping services subject to PSOs.⁴²⁰ In practice, for the new service to be considered coincident with a PSO, it must run along the same route and operate on the same days, allowing the unrestricted approval of services that contain some alteration to these parameters.⁴²¹

Following liberalisation, the demand for services increased, with a 36% growth in the number of passengers between 2018 and 2019, hand in hand with a gradual fare reduction.⁴²² This downward trend in fares reversed sharply in 2020 as a result of lower occupancy rates caused by the health crisis (see Figure 25).

⁴¹⁸ Italian legislation considers services to be interregional if they run between three or more regions of Italy, according to the NUTS2 classification (the equivalent of Autonomous Communities in Spain).

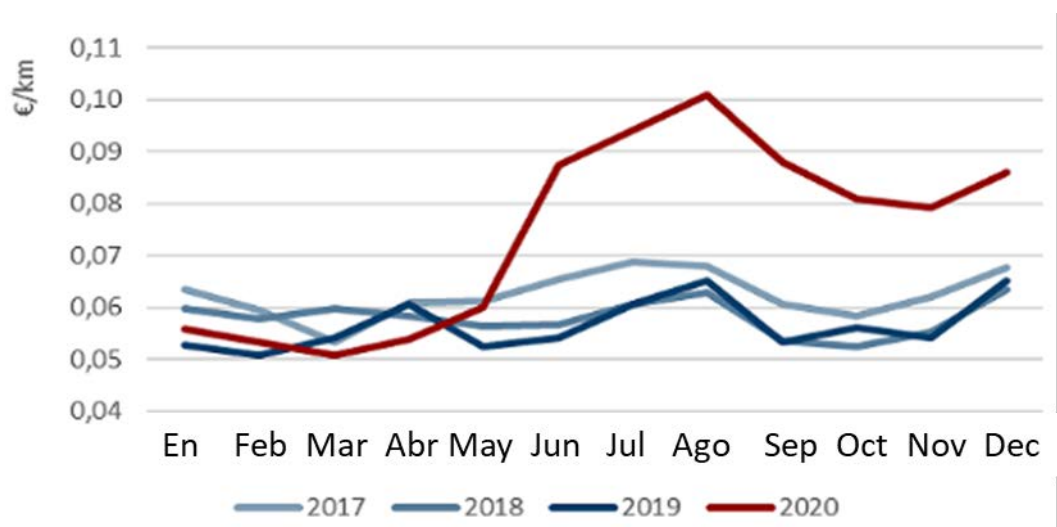
⁴¹⁹ Dunmore (2016), p. 198.

⁴²⁰ Beria et al. (2018), p. 2.

⁴²¹ Dunmore (2016), p. 200.

⁴²² Autorità di Regolazione dei Trasporti (2020).

Figure 25. Intercity bus price/km in Italy

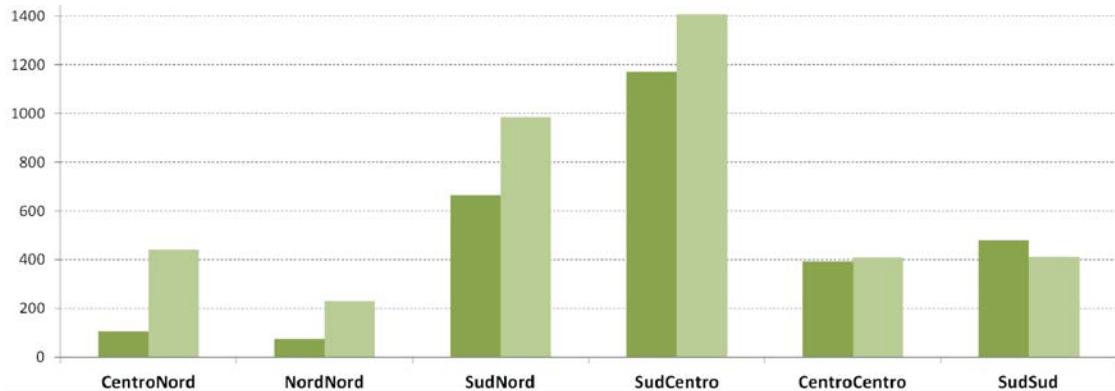


Source: Beria et al. (2021). Trips to or from airports are excluded.

The number of services has also increased, with a 30% growth seen between 2018 and 2019.⁴²³ There are also increases in both the number of routes and frequencies, increasing the geographical coverage. The increases are particularly apparent in the north of the country, where the historical prohibition of competition with rail had limited the development of bus services (see Figure 26). On routes linking regions in central Italy, which have historically had substantial coverage, the growth in frequencies has been less significant, while in southern areas the number of frequencies has fallen slightly. However, no reduction in the number of connections has been observed, these even increasing in some central and southern regions (Calabria, Basilicata and the Adriatic coast).

⁴²³ Autorità di Regolazione dei Trasporti (2020).

Figure 26. Variation in frequencies from 2013 to 2015, according to origin and destination regions



Source: Beria et al. (2015). For each Italian region, the columns on the left (dark green) reflect the frequencies in 2013, and those on the right (light green) reflect the frequencies in 2015.

This service expansion was accompanied by the entry of large European operators: FlixBus and Megabus. In the centre and south, where the former network was more extensive, the traditional operators maintain a strong presence, with a lower penetration of international groups.⁴²⁴

Today, the market remains dynamic, with a significant turnover of companies: FlixBus acquired the continental business of MegaBus (2016); the state-owned incumbent rail operator (FSI) acquired the Calabrian incumbent SIMET (2017), although it subsequently withdrew from the market; BlaBlaBus entered the country through the incumbent MarinoBus (2019); and, recently, a new company, Itabus (2021), was created, which will compete with the large platforms using a traditional business model based on its own fleet.⁴²⁵

The market has become more concentrated, with the market share of the first five Italian operators already doubling prior to the takeover of Megabus by FlixBus, from 30% pre-liberalisation to 53% in 2016.⁴²⁶ In 2019, five companies remained in the medium and long-distance transport sector, including Simet, FlixBus and Marino, in terms of number of routes and stops (see Table 42).

⁴²⁴ Grimaldi et al. (2017), p 485.

⁴²⁵ Beria et al. (2020, pp. 6-7), p. 6-7.

⁴²⁶ Autorità di Regolazione dei Trasporti (2017), p. 13.

Table 42. Number of medium- and long-distance bus routes in Italy, by operator

NUMBER OF MEDIUM AND LONG DISTANCE COACH SERVICES IN ITALY, BY OPERATOR			
Operator	Number of services		Stops served
	National	International	
Autolinee Curcio	3	0	9
Bus Center	25	13	12
FlixBus	56	52	83*
Marino	74	5	13
Simet	6	1	93*

Source: (Autorità di Regolazione dei Trasporti (ART), 2020). Note: * Includes all stops, and not just those made at bus stations.

E. France

France liberalised its long-distance intercity bus market in 2015. As in Germany, the intercity bus network was poorly developed prior to liberalisation, as competition with rail was prohibited, and buses were limited to regional connections operated through subsidies.

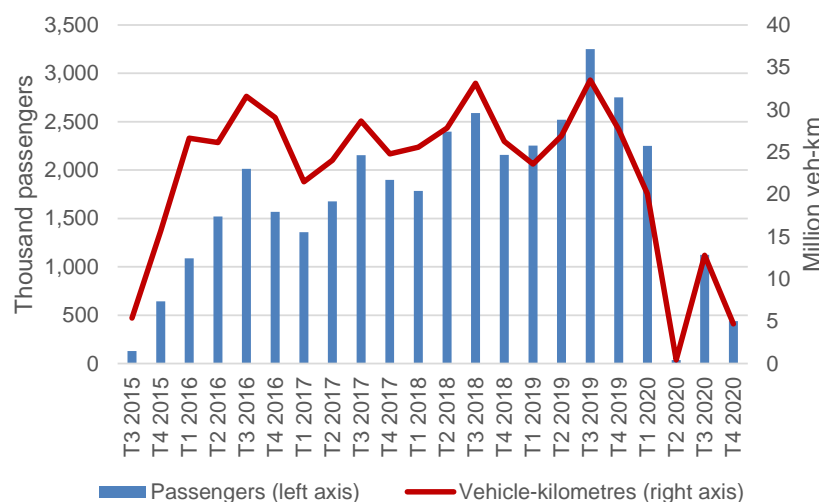
Market liberalisation consisted of fully deregulating routes over 100 km in length. Shorter distance routes need to obtain an authorisation from the transport regulator (Autorité de régulation des transports; ART), which verifies that the new service does not alter the economic balance of regional rail services subject to PSOs.⁴²⁷

Liberalisation meant an expansion of the market, albeit in a more restrained way than in the case of Germany. The number of towns served increased from 135 in 2015 to 320 in 2019, while demand rose by more than 50% from 2016, the first year for which there are complete records, to 2019 (see Figure 27). Supply, on the other hand, increased even more, leading to profitability problems for operators due to low occupancy rates.⁴²⁸

⁴²⁷ Dunmore (2016), p. 187-189.

⁴²⁸ Crozet and Guihéry (2018).

Figure 27. Intercity bus demand and supply in France



Source: compiled by author with data from the ART.

A characteristic aspect of the liberalisation in this country is the involvement of intermodal operators. For example, in view of the competition exerted by FlixBus on the German rail operator, Deutsche Bahn, France's state-owned rail operator, SNCF, decided to position itself in the bus market prior to liberalisation, launching international bus services under the OuiBus brand.⁴²⁹ This brand was later acquired by the car-sharing platform BlaBlaCar, operating under the BlaBlaBus brand.

From the beginning, the offer in France was concentrated around 5 operators with a national presence: the current BlaBlaBus, FlixBus, Megabus, Isilines/Eurolines and Starshipper. The losses suffered by the latter three led them to be absorbed by the first two, forming the current duopoly.⁴³⁰ In 2020, there were 7 companies in the market, 2 national and 5 regional.⁴³¹

The concentration does not seem to have affected the number of competing lines, which at the end of 2019 accounted for 22% of all routes, carrying 85% of passengers. Competition between companies for customers reduced the fare per passenger-kilometre to minimum levels in 2015. The losses incurred by the operators forced a subsequent fare increase, which is currently between 4 and 5 cents per passenger-kilometre (see Figure 28), somewhat higher than the

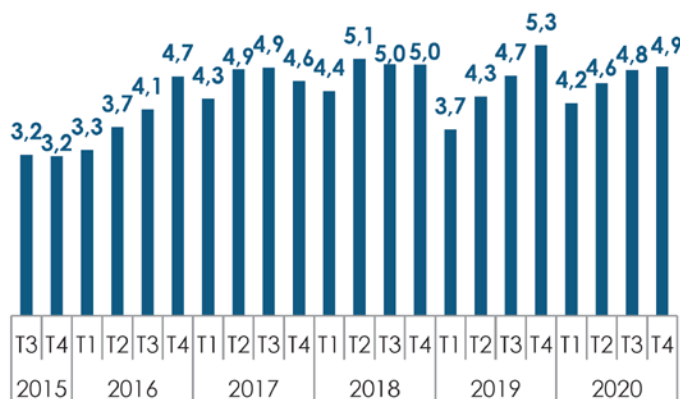
⁴²⁹ Reynolds (2018), p. 145.

⁴³⁰ BlaBlaBus acquired Starshipper in 2016, while FlixBus took over Megabus in 2016 and Isilines/Eurolines in 2019.(Blayac & Bougette, 2020).

⁴³¹ Autorité de régulation des transports (2020).

discounted fares in Germany, but below the 6 cents on Spanish state routes.⁴³² The shrinking supply from operators in 2020 seems to have contained price developments following the fall in demand.

Figure 28. Intercity bus price/km in France (cents €/km)



Source: Autorité de régulation des transports(2020).

F. Portugal

Prior to liberalisation, the provision of intercity bus services over 50 km, known as express services, or over 100 km, known as premium services, was licensed by the Ministry of Transport, which imposed significant restrictions on entry into the market for operators other than public transport concession holders or tourist agencies with more than three years' experience in the country.⁴³³

In 2016, there were 71 intercity transport companies in Portugal, although the market was dominated by Rede Nacional de Expressos (RNE), a group comprising several smaller transport operators, which has a market share of close to 70% in terms of passengers transported.⁴³⁴

Deregulation began in 2015, with the approval of Law 52/2015, which eliminated licensing requirements. However, liberalisation was put on hold until 2019, when Decree-Law 140/2019 was passed, which established the new authorisation criteria. Under the new regulation, the Ministry authorises services as long as

⁴³² Blayac and Bougette (2017) reported decreases in tariffs on existing international routes prior to liberalisation; on newly created routes, operators adopted an aggressive pricing policy, which was subsequently reversed with consolidation.

⁴³³ OECD (2018), p. 88.

⁴³⁴ OECD (2018), p. 87.

they do not compromise the economic balance of an existing public service contract, or if they are urban or suburban services.⁴³⁵

The approval and entry into force of this regulation meant the liberalisation of the Portuguese market. Large European groups such as Alsa/National Express and FlixBus have now begun to operate in the country, although the effects of the reform are not yet known.

⁴³⁵ After obtaining the prior binding decision of the Authority for Mobility and Transport (Autoridade da Mobilidade e dos Transportes; AMT), in accordance with Article 7 of Decree-Law 140/2019.

ANNEX VI. A COMPARISON OF EUROPEAN BUS TRANSPORT REGULATORS

This Annex contains a comparison of the role played by the different European regulators in the access to the internal market of intercity bus passenger transport services, both commercial and subsidised or subject to PSO's. It is interesting to analyse the institutional framework of our neighbouring countries because, as highlighted in Sections 4.3.4 and 6.4.6, the attribution of the authorisation functions for commercial services to the same authorities that organise the services subject to PSOs may restrict market entry.

Table 43, below, shows the results of this comparative analysis for the main EU and non-EU countries, including the institutional framework of the two largest markets with a concessionary system (Belgium and the Netherlands). Thus, the first three columns include, respectively, the scope of services that can be commercially operated, the authority competent to authorise this operation, and whether this authority is independent from the government. The last three columns detail the scope of services that can be declared as PSO, the authority responsible for planning services subject to PSO, and whether this authority is independent from the commercial licensing authority.

Table 43. Comparison of European regulatory authorities for intercity bus transport

COMPARISON OF EUROPEAN REGULATORY AUTHORITIES FOR INTERCITY BUS TRANSPORT							
Country	Commercial services	Licensing authority to operate commercial services	The licensing authority is independent from the Government	PSO services	Authority competent to declare PSO services	The licensing authority is independent from PSO authority	
Germany	Long distance	Regional governments	NO	Local	Local authorities	YES	
Belgium	International and occasional	Federal Public Service Mobility and Transport	NO	Regional	Regional Governments	YES	
France	Long distance	Transport Regulatory Authority	YES	Regional	Regional Departments	YES	
Ireland	All	National Transport Authority	NO	All	National Transport Authority	NO	
Italy	Long distance	Ministry of Sustainable Infrastructures and Mobility	NO	Regional	Regional Governments	YES	
Netherlands	International and occasional	Ministry of Infrastructure and Water Management	NO	Regional	Provincial Authorities	YES	
Portugal	Long distance	Mobility and Transport Authority	YES	All	National and regional	Institute for Mobility and Transport	YES
					Local	Local authorities	YES
United Kingdom	All	Traffic Commissioners	YES	Local	Department for Transport and Local authorities	YES	
Sweden	National	Swedish Transport Agency	NO	Regional	Regional authorities	NO	
	Regional	Regional authorities	NO				

Source: compiled by author.

In view of the table above, it is necessary to highlight the following aspects:

- Of the nine countries listed above, only three (the UK, France and Portugal⁴³⁶) entrust the authorisation of new commercial services to a regulatory authority that is independent of the government.
- In two of the remaining six countries (Sweden and Ireland), the authorisation of commercial services is entrusted to a specialised authority or agency attached to the government. In the remaining countries, this function is assumed by the national or regional government itself, through the Ministries of Transport.
- Despite this, in seven of the nine countries analysed, commercial services are authorised by an authority other than the one in charge of planning PSO services, as a consequence of the territorial distribution of transport competences. Of the two countries where these functions are entrusted to the same authority:
 - In Sweden, the operation of regional commercial services is subject to obtaining authorisation from the Regional Public Transport Authorities in each county. A 2014 report by the state agency Transport Analysis highlighted the restrictions on entry into the regional market, and noted that the Regional Authorities may not be acting in accordance with the principles of transparency, non-discrimination and proportionality.⁴³⁷ According to the information available for 2019, only 1% of regional traffic in Sweden was operated on a commercial basis, the rest being subsidised.⁴³⁸
 - In the case of Ireland, the licensing of commercial services and the planning and award of concessions subject to PSOs are the responsibility of the National Transport Authority, a specialised authority attached to the government. In this case, no problems have been identified in terms of access to commercial services, which are authorised as long as they do not conflict with an existing PSO.⁴³⁹

⁴³⁶ In Portugal, the authorisation is granted by the relevant transport authority, which reports to the government (the Institute of Mobility and Transport or the local and metropolitan authorities). However, the authority can only refuse to do so after requesting a binding report from the Mobility and Transport Authority, the independent body in charge of performing the economic equilibrium test (Art. 7 of Decree-Law 140/2019).

⁴³⁷ Transport Analysis (2014), p. 4.

⁴³⁸ Transport Analysis (2019). Fees expressed in terms of passenger-kilometres.

⁴³⁹ Dunmore (2016), p. 300.

Most European countries that have liberalised all or part of their intercity bus passenger transport services have separated the authorities that issue commercial licences from those in charge of planning the public transport network subject to PSOs. Indeed, the Swedish case illustrates the competition risk if these competences are entrusted to the same authority.

In Spain, this separation of functions is not guaranteed at present, nor would it be after the liberalisation of journeys longer than 100 kilometres.

For instance, the MITMA not only manages state concessions for scheduled bus services for general use, but it is also the authority responsible for granting authorisations for international transport, as well as for occasional, tourist or special use regular transport that covers more than one Autonomous Community. In the case of liberalised services at Autonomous Community level, authorisation is the responsibility of the respective General Directorates for Land Transport, which also manage their own concessions. It should be noted that this is not the case in other countries with a concession system, such as Belgium and the Netherlands, where the authorisation of international and occasional services is the responsibility of the national governments, while concessions are managed by downstream regional authorities.

In conclusion, the current distribution of competences in Spain does not guarantee the independence of the authorities that are responsible for authorising commercial services. This institutional framework would persist after liberalisation, indicating the need to create an independent sector regulator to manage any conflict that may arise between the free and regulated markets.

ANNEX VII. ESTIMATED COST OF LIBERALISATION FOR THE PUBLIC AUTHORITIES

As analysed in Sections 6.3.1 and 6.4.1, the liberalisation of routes longer than 100 kilometres would mean the disappearance of unprofitable routes, both those longer than 100 kilometres and those shorter than 100 kilometres, whose service is currently guaranteed thanks to revenue from profitable longer routes. At the same time, the consequent reorganisation of the public transport network could have knock-on effects on the demand and profitability of specific routes, where previously profitable or loss-making services could cease to be successful.

For all these reasons, reliably estimating which routes would no longer be provided after liberalisation and the costs of ensuring their provision by public authorities is not easy, and requires very detailed information on the demand and operating costs of each route, as well as their complementarities and the costs of adding stops, information which is currently unavailable.

However, it is possible to make a series of approximations in order to estimate the approximate magnitude of this cost and to establish some parameters that help to provide a preliminary orientation for the actions of the public authorities post-liberalisation. This Annex contains an estimated amount, based on publicly available information from the UK, as well as information available from MITMA routes.

A. Estimating the cost of provision based on UK data

The UK Department for Transport regularly publishes a series of statistics that give an insight into the volume of kilometres of commercial and subsidised services offered in the UK and the total cost to public authorities of ensuring the provision of subsidised services.⁴⁴⁰

The above information is available for so-called "local bus services", defined as those without a maximum route, but where the distance between stops is equal to or less than 15 miles (around 24 kilometres). These are, therefore, services that in Spain would be classified as *Cercanías*. Since deregulation, the provision of long-distance services has been unrestricted and is not compensated by the authorities.

Due to its characteristics, the information available for the UK includes both municipal and short-distance intercity bus services. To exclude data relating to municipal services in London and other large cities, only data relating to non-

⁴⁴⁰ UK Department for Transport (2021).

metropolitan areas in England has been included. This gives the percentage of vehicle-kilometres of this type that are subsidised in these areas of England (13%) and the total cost to the public authorities (2.29€ per vehicle-kilometre, at the average exchange rate for the period).

It is possible to use this information to estimate the total cost of subsidising loss-making lines in Spain after liberalisation, as follows:

- Firstly, it is necessary to estimate the number of vehicle-kilometres offered in Spain. For this purpose, the total vehicle-kilometres of the Autonomous Communities that replied to the request for information (519,873,657) have been taken as the base. The vehicle-kilometres of the remaining Autonomous Communities have been estimated according to their weight in total regional income in 2006, according to the CNC (22%), which gives a total of 667,072,529 regional vehicle-kilometres and 901,463,079 national vehicle-kilometres in 2019.⁴⁴¹
- Applying the percentage of vehicle-kilometres subsidised in non-metropolitan areas of England (13%) to Spain's annual vehicle-kilometres in 2019, it is possible to estimate the number of vehicle-kilometres that would have needed subsidising in that year (117,941,449).
- Finally, assuming that the cost per vehicle-kilometre would be identical in Spain and in the non-metropolitan areas of England, a subsidy of 270 million euros would be necessary to support these routes.

Table 44 below shows the result of the above operations.

Table 44. Estimated cost of service provision based on UK data

ESTIMATION OF THE COST OF SERVICE PROVISION BASED ON UK DATA		
Year 2019	United Kingdom ¹	Spain ²
Vehicle-kilometres	904,325,579	901.463.079 (e)
Loss-making vehicle-kilometres	118,315,960	117.941.449 (e)
<i>% financed veh-km</i>	13%	-
Total cost (€)³	270,881,330	270.023.898 (e)
<i>Cost/veh-km (€)³</i>	2.29	-

Source: compiled by author using data from the UK Department for Transport (2021) and MITMA.

Note: ¹ UK data for the year ending March 2020, for non-metropolitan areas in England. ² Vehicle-kilometre data is not available for Andalusia, Aragon and Castile-La Mancha, so the total shown

⁴⁴¹ According to figures published by the CNC (2008), p. 16.

is an estimate. Vehicle-kilometres for these Autonomous Communities in 2019 have been estimated by taking the weight of each of these Autonomous Communities in total regional income in 2006 as a guide, in accordance with the CNC (2008, p. 16). To calculate the data for the Balearic Islands, the data for Mallorca corresponding to the year 2018 and for Ibiza, Menorca and Formentera for the year 2019 have been taken. The other variables have been estimated taking the data from the UK as a reference.³ Original data in pounds sterling, transformed using the European Central Bank's reference exchange rate (1€ = £0.87519).

The resulting amount depends on two fundamental parameters:

- The percentage of services that the public authorities wish to subsidise after liberalisation. This, in turn, will depend on what percentage of the routes that are currently part of the concessions are less than 100 kilometres long and would therefore be eligible for PSO status after liberalisation, and how many of these are loss-making.
- The amount of subsidy per vehicle-kilometre of subsidised service. In this respect, it is worth noting that the amount paid by the UK public authorities to the service operators (2.29€/vehicle-kilometre) is very close to the total revenue received by the regional concession holders (2.28€/vehicle-kilometre), including both public authority compensation and revenue from ticket sales. Taking this fact into account, as well as the differences in labour costs and purchasing power between the UK and Spain, the final unit cost for the Spanish public authorities is likely to be lower than that in the UK.

B. Estimating the cost of provision from MITMA information

The MITMA provided the CNMC with information on revenue, passenger and passenger-kilometres broken down by origin and destination⁴⁴² for each route forming part of the state concessions. At the same time, aggregated information is available for each contract on the costs of providing the service and on the number of annual service frequencies.

With this information, it is possible to estimate which concession routes are loss-making and the revenue shortfall for 2018 (the latest available year in terms of accounting information), if, in addition, we make the following assumptions:

⁴⁴² The information refers to the number of passengers, passenger-kilometres travelled, and revenue raised, for each individual journey to and from each of the stops that make up the concession.

- That the unit cost per vehicle-kilometre offered in a concession is uniform for all the routes in that concession.
- That service frequencies are distributed evenly across all the routes in a concession, with no routes having a higher frequency than others.

In this way, the operating result of each route for the year 2018, defined as the difference between revenue and total costs attributable to the route, can be estimated as follows:

$$\widehat{Result}_{i,k} = Revenue_{i,k} - \widehat{Costs}_{i,k} \quad [1]$$

Where the Result of journey i , pertaining to concession k , is the difference between the revenue obtained on that journey over one year, for both outward and return journeys, minus the costs attributable to the journey, estimated in accordance with the following equation:

$$\widehat{Costs}_{i,k} = \frac{Total\ costs_k}{Vehicle\ -\ km_k} \times \widehat{Vehicle\ -\ km}_{i,k} \quad [2]$$

Where the estimated costs of providing the journey are the result of multiplying the average unit costs per vehicle-kilometre of the concession by the estimated number of vehicle-kilometres for that route.

Since no information is available on the annual vehicle-kilometres attributable to each journey, it is necessary to estimate this from the following available information:

- The annual vehicle-kilometres of the concession.
- The annual service frequencies of the concession.
- The number of origin and destination journeys that make up the concession.
- The number of passengers and passenger-kilometres transported on each route per year.

The estimate is made in two phases:

In the first phase, the vehicle-kilometres of each route are estimated as the product of:

- The average annual number of service frequencies on route i , estimated as the quotient between the total frequency per year for the concession and the number of journeys pertaining to the concession in the database. Since, in practice, a single bus can simultaneously make two or more journeys⁴⁴³, this measure underestimates the number of annual frequencies offered for each route.
- And the number of kilometres of the route, which is approximated based on the average distance travelled by passengers on that route, which results from the quotient between the passenger-kilometres and the passengers transported on the route in a year.

$$\widehat{Vehicle - km}_{i,k} = \frac{Trips_k}{n^o Routes_k} \times \frac{Passenger - km_{i,k}}{Passengers_{i,k}} \quad [3]$$

In a second phase, the result of this first approximation is corrected according to parameter $\hat{\beta}$, according to equation [4]:

$$\widehat{Vehicle - km}_{i,k} = \hat{\beta} \widehat{Vehicle - km}_{i,k} \quad [4]$$

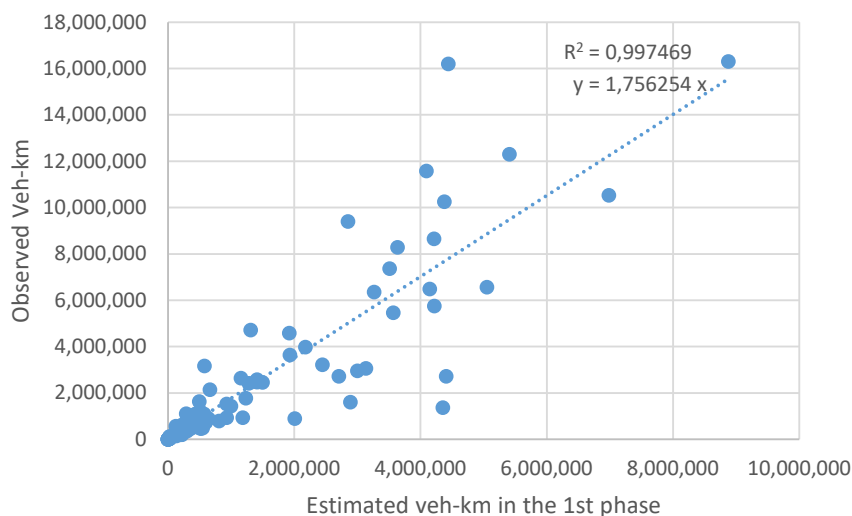
Where parameter $\hat{\beta}$ is the coefficient of a simple linear regression without a constant, estimated using OLS, between the estimated vehicle-kilometres for concession k , aggregating the result of equation [3] for n component trips, and the observed vehicle-kilometres for concession k , according to the following equation:

$$Vehicle - km_k = \hat{\beta} \sum_{i=1}^n \widehat{Vehicle - km}_{i,k} \quad [5]$$

Figure 29 below shows the results of the parameter $\hat{\beta}$ estimation:

⁴⁴³ For example, a journey between Madrid and Nerja, on VAC-092, may simultaneously run between Madrid and Granada.

Figure 29. Simple linear regression results



Source: compiled by author.

Thus, with the results of equations [4], [2] and [1], it is possible to estimate the vehicle-kilometres transported by each route in a concession, its provision costs and its operating result, respectively.

Table 45 below shows the list of the five most profitable and the five least profitable routes, in accordance with the previous exercise.

Table 45. Estimation of the most and least profitable routes

ESTIMATION OF THE MOST AND LEAST PROFITABLE ROUTES				
RESULT	CODE	NAME	ORIGIN	DESTINATION
Profitable routes	VAC-157	MADRID-IRUN WITH BRANCHES	MADRID	BILBAO
	VAC-099	MADRID-ZARAGOZA-BARCELONA WITH BRANCHES	BARCELONA	MADRID
	VAC-092	MADRID-GRANADA-ALMUÑECAR	GRANADA	MADRID
	VAC-127	MADRID-SALAMANCA-VIGO WITH BRANCHES	MADRID	SALAMANCA
	VAC-023	MADRID-TOLEDO WITH BRANCHES	MADRID	TOLEDO
Loss-making routes	VAC-092	MADRID-GRANADA-ALMUÑECAR	MADRID	NERJA
	VAC-099	MADRID-ZARAGOZA-BARCELONA WITH BRANCHES	BARCELONA	CALATAYUD
	VAC-099	MADRID-ZARAGOZA-BARCELONA WITH BRANCHES	BARCELONA	MEDINACELI
	VAC-099	MADRID-ZARAGOZA-BARCELONA WITH BRANCHES	BARCELONA	GUADALAJARA
	VAC-099	MADRID-ZARAGOZA-BARCELONA WITH BRANCHES	ALCALA DE HENARES	BARCELONA

Source: Compiled by author based on MITMA data.

According to the estimate, the most profitable routes link Madrid with other large Spanish cities, most of which are more than 100 kilometres from the capital, with the exception of the Madrid-Toledo route, which is 70 kilometres long.

Five long-distance routes are also among the most loss-making routes, with four of them belonging to the same concession, VAC-099, which also includes the second most profitable route. The towns which connect the loss-making routes are not small, all of them, with the exception of Medinaceli, having more than 20,000 inhabitants. In comparison, the revenue from each of these routes is not insignificant either. However, all of them are attributed very high costs, due both to their long distance and the high number of annual journeys offered, as they operate on very busy routes, such as the Madrid-Barcelona and Madrid-Granada routes.

This fact suggests two important conclusions to be taken into account when interpreting the results of the exercise:

- Firstly, that the deficit on these routes is partly due to the frequencies currently offered, which benefit from the high demand on the concession's main routes. In a liberalised market, the routes identified as loss-making could be profitable if these frequencies were reduced.
- Secondly, liberalisation would not necessarily lead to the disappearance of these routes. For example, when offering the route between Barcelona and Calatayud or Medinaceli, operators will take into account the cost of making an additional stop in these municipalities along the route between Madrid and Barcelona, which will be lower than the cost of offering a direct route between Barcelona and these municipalities.

As a consequence of the above considerations, **the estimated shortfall of the routes constitutes an upper limit to the subsidy** which the public authorities should offer to maintain loss-making connections after liberalisation, since in many cases it would be possible to adapt the frequency of the service to the route-specific demand, or to subsidise the marginal cost of making an additional stop as part of a commercial route.

Taking this fact into account, Table 46 shows the estimated shortfall for all MITMA-dependent loss-making journeys of 100 km or less, which amounts to just over 43 million euros. From this figure, and from the vehicle-kilometres estimated for these journeys, it is possible to estimate both the percentage shortfall in vehicle-kilometres on journeys of 100 km or less, and the average shortfall per vehicle-kilometre.

Table 46. Estimated shortfall of General State Administration journeys of 100 km or less

ESTIMATED DEFICIT OF STATE ROUTES OF 100KM OR LESS	
Year 2018	AGE
Total estimated veh-km	227,656,811
Loss-making veh-km (≤ 100 km)	32,782,614
% loss-making veh-km	14.4%
Estimated deficit (€)	43,480,072
Cost/veh-km (€)	1.33

Source: Compiled by author based on MITMA data.

Finally, it is possible to use the above information to calculate the total shortfall on national loss-making routes of 100 kilometres or less after liberalisation.

- Firstly, it is necessary to estimate the number of vehicle-kilometres for journeys of 100 kilometres or less that will have to be subsidised. In the case of the concessions dependent on the General State Administration, the percentage calculated in accordance with the previous year, 14.4%, is taken as the base. For regional concessions, a conservative assumption is made that the percentage of vehicle-kilometres to be subsidised is double that of state concessions, to reflect the fact that regional journeys of 100 kilometres or less are relatively more frequent in regional concessions than in state concessions. Taking into account the above, the vehicle-kilometres of loss-making journeys of 100 kilometres or less would amount to 225,869,358 in 2019, 25% of the estimated total.
- Finally, it is assumed that the shortfall per vehicle-kilometre on these routes is 1.33€ per vehicle-kilometre for both state and regional concessions. This amount represents compensation equivalent to 66% of the average total revenue per vehicle-kilometre of the current concession holders.⁴⁴⁴ As a result, the total deficit of the routes is estimated at around 300 million euros, of which 45 million euros would correspond to the state routes and 255 million euros to the regional services.

Table 47 shows the result of the above operations:

⁴⁴⁴ See Table 14 in Section 3.3.4.1.

Table 47. Estimated shortfall for routes of 100 kilometres or less.

ESTIMATED DEFICIT OF ROUTES OF 100KM OR LESS			
Year 2019	Autonomous C.	GSA	Total
Total vehicle-km¹	667.072.529 (e)	234,390,550	901,463,079
% financed veh-km	28.8%	14.4%	25.1%
Financed vehicle-km	192,117,084	33,752,274	225,869,358
Cost/veh-km (€)	1.33	1.33	1.33
Total cost (€)	254,807,766	44,766,146	299,573,912
% National budget 2019²	0.06%	0.01%	0.07%
% GDP 2019³	0.02%	0.00%	0.02%

Source: Compiled by author based on MITMA data.

Note: ¹ Vehicle-kilometre data is not available for Andalusia, Aragon and Castille-La Mancha, so the total vehicle-kilometres shown for the Autonomous Communities have been estimated. Vehicle-kilometres for Andalusia, Aragon and Castille-La Mancha in 2019 have been estimated taking as a reference the weight of each of these Autonomous Communities in the total regional revenues in 2006, according to the CNC (2008, p. 16). To calculate the data for the Balearic Islands, we have taken the data for Mallorca for 2018, and for Ibiza, Menorca and Formentera for 2019. ² Total expenditure of the 2019 General State Budget, published by the Secretary of State for Budgets and Expenditure. ³ Value of the 2019 GDP at current prices, published by the INE.

C. Conclusions of the analyses presented

The following conclusions can be drawn from the above exercises:

- Under conservative assumptions, the total estimated cost of subsidising services on loss-making routes of 100 kilometres or less after liberalisation would amount to a maximum of between 270 and 300 million euros, based on information from the UK and MITMA, respectively. Taking into account the 1,207 concessions⁴⁴⁵ currently existing in Spain, this equates to a subsidy of between 220,000 and 248,000 euros per concession.
- With respect to the amount that the public authorities currently allocate to subsidise the system's deficit of 196 million euros⁴⁴⁶, the above estimates imply an increase of between 70 and 100 million euros. This increase responds to the need to finance, through public budgets, services that are currently subsidised by users of profitable routes. This would require a

⁴⁴⁵Based on the 914 regional and state concessions of the public authorities that responded to the request, plus a total of 123 concessions in Andalusia ([PITMA 2020](#)), 109 in Aragon ([presentation of the new concession map](#)), and 61 in Castile-La Mancha (request for information).

⁴⁴⁶ 196,017,790€. This is a partial figure that does not include information on the Autonomous Communities and provinces that did not reply to the CNMC's request on this point: Andalusia, Aragon, Castile-La Mancha, Mallorca, Galicia, Murcia and Gipuzkoa, so the difference could be lower (see Section 3.3.4.1).

restructuring of the supply of concessions and a reform of the funding system, but it is beyond the CNMC's remit to analyse how this should be financed.

- In comparative terms, it should be noted that, even in the most adverse of the scenarios analysed, the shortfall to be financed represents only 0.07% of the General State Budget for the reference year and 0.02% of GDP. In terms of opportunity cost, it represents 25% of the cost of rail services subject to PSO, which amounted to 1,205 million euros in 2019.⁴⁴⁷

⁴⁴⁷ CNMC (2019c).

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