



# Reform and regulation of the Portuguese rail sector. What has failed?

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## ABSTRACT

In 1998, and in the context of the European Directives, a reform of the Portuguese rail sector was implemented, through the vertical separation of the two basic rail activities, and an access charging system with economic regulation was introduced. This study sought to understand the Portuguese reform and its outcomes, particularly, at the level of the infrastructure manager's productivity, where losses were detected. Although access charges are being defined under a price-cap regulation regime since 2005, no progress was found in the cost recovery by the infrastructure manager. The paper concludes with suggestions to improve the current regulatory model.

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## 1. Introduction

In the last decades the European Union (EU) has witnessed a growing discussion on the rail sector, motivated by the high deficits of the companies and the reduction in demand to other transport modes. This situation led the national and EU authorities to seek new strategies to face these problems. The environment is another strong issue on the EU transport agenda<sup>1</sup>, with increasing relevance since the White Paper 2001 on transport has been issued. At this level, rail transport can play an important role, both in suburban and long-distance transport, in particular at high speed. Besides, it is a high capacity transport mode which produces lower emissions when compared with other means of transport.

The organisational model of the EU rail sector has already experienced various stages (Giannopoulos and Giannakos, 2007). First, it was driven by private initiative, later it was nationalised and, currently, its reform is again in a transition phase. The EU has developed a profound legislative reform dedicated to the rail sector (rail packages) that advocates the separation of the management of rail infrastructures from the provision of transport services, trying to improve management transparency as well as the companies' efficiency, through the introduction of competition in transport services. The regulation both of safety standards and quality of service, the definition of public service obligations (PSO), the

infrastructure and rolling stock technical specifications and network access rights, across the EU, have also been a concern. Otherwise the viability of a European rail network would be impossible. Regulatory authorities are also established, aiming at reducing market distortions and promoting competition.

This research sought to characterise the Portuguese rail sector, understand the changes in its organisational structure, in the context of the EU reform, the means used to achieve them and the way it still has to go. It focused especially on the Portuguese regulatory model, since it adopts a price-cap regime which is not very usual in Europe. The Portuguese Infrastructure Manager's role is addressed in more detail to assess productivity change and to confront it with the target set by the regulator in a period after the rail sector reform. The concept of total factor productivity (TFP) is used for this purpose. This paper is organised as follows. After this brief introduction, Section 2 describes the market structure of the Portuguese rail sector. Section 3 focuses on the access charging system in Portugal and Section 4 discusses the economic regulation of the rail sector. Section 5 computes and analyses the productivity of the Infrastructure Manager and Section 6 provides an insight into the reforms and model followed. Section 7 presents the major conclusions.

## 2. Organisational structure of the Portuguese rail sector

### 2.1. The railway sector in Portugal

The Portuguese rail sector has a history more than 150 years old and it has gone through several phases. The beginning of the rail sector in Portugal was driven by private initiative, then public and private companies coexisted for some time and in 1975 the sector was nationalised. This led to the establishment, in March 1977, of

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<sup>1</sup> This issue gained relevance after a UE White Paper (COM 2001/370) on transport was released where it is stated that externalities of transport services must be allocated to its users.

the public company Portuguese Trains (*Caminhos-de-Ferro Portugueses* – CP). This model persisted until a decade ago.

With the enactment of the Decree-Law 104/1997, introducing the unbundling process, CP undergone a vertical separation resulting in two companies, the National Rail Network (*Rede Ferroviária Nacional* – REFER EP), responsible for the operation, maintenance and renewal of the rail infrastructure, and the company Portuguese Trains Comboios de Portugal – CP, EP as the public rail undertaking. In 2000, the company High Speed Rail Organisation (*Rede Ferroviária de Alta Velocidade* – RAVE) was created with the responsibility of promoting studies, financing and constructing the future high-speed network.<sup>2</sup> The financing model for the construction of the high-speed network, in addition to relying on government and EU support, innovates with the implementation of public–private partnerships in the rail sector, as it is already happening at a large scale in the road transport and in other sectors in Portugal.

In terms of passenger transportation, besides CP, EP, the historical incumbent and public Rail Undertaking, there is a private passengers' company, Fertagus, SA., with the right to provide transport services in a suburban corridor of Lisbon, the one which crosses the Tagus River. Concerning cargo transportation, apart from CP, EP, COMSA Rail and Cargo Rail companies were also recently licensed.

## 2.2. Traffic characterisation

In Europe, rail transport is highly associated with passenger transportation while cargo transportation has a secondary role (Beagley, 1994). Portugal is not an exception. In the EU, 79% of all train kilometres correspond to passenger services and, in Portugal, the same indicator represents 72% (Pasi, 2007a). It is in the metropolitan areas of Lisbon and Oporto that 88% of the passengers are transported (CP, 2005; MOPTC, 2006). Despite this apparent dominance of passenger services, the passenger transport by rail is nevertheless very different from the situation in the past. Since the 1990s, a 35% reduction in demand for passenger services has occurred. In 2005, passenger transportation corresponded to 3.7 thousand million passenger kilometres (EC, 2006). At the level of cargo transportation services, an increase of 20% has taken place over the last years, reaching 2400 million tonne kilometres in 2005.

This scenario is easily understood when the market share of passenger transport by rail is compared with that observed in other inland modes of transport. For instance, in the EU the rail passenger transport (including the passengers transported by metro) has 8% of the market share, valued at passenger kilometres, while in Portugal it accounts for 4%, half the EU figures (Pasi, 2007b). Considering only the road transportation, in Portugal, the use of individual cars corresponds to 90% of the total. This is, surely, associated with the strong investment in road infrastructures, especially made in the last two decades, which led Portugal to achieve, in 2004, a density of 23 m/km<sup>2</sup> of motorways, above the EU average of 15 m/km<sup>2</sup>, while the density of rail infrastructure remained on 31 m/km<sup>2</sup>, against the EU average of 50 m/km<sup>2</sup> (EC, 2006).

The Portuguese government acknowledged the importance of reversing this situation. It set to 2015 a goal of a 10% increase in the number of passenger kilometres (MOPTC, 2006), having in mind the environmental benefits that can be capitalised. Indeed, the ongoing project of the high-speed rail network can help to reverse the market share distribution.<sup>3</sup> However, specific features of

Portugal must be considered, such as the size of the country and its peripheral location. The issue of scale constitutes an obstacle, for example, to the competitiveness of cargo transport, and the peripheral location is reflected in the absence of cross-border traffic. An integrated network with Spain would be crucial for freight and passenger long-distance transportation, in the latter case, at high speed.

## 2.3. Regulatory bodies

One of the important aspects that emerged from the vertical separation was the establishment of a business relationship in a fragmented value chain. Access charges constitute an important element of this relationship. They are defined by the Infrastructure Manager, according to the principles that will be described in detail ahead. Nevertheless, as it acts under a natural monopoly regime, its regulation is essential. However, in the case of the Railway Undertaking with the liberalization the regulation lost importance. In 1998, the government created the National Institute of Rail Transport (*Instituto Nacional do Transporte Ferroviário* – INTF) a public entity endowed with administrative, financial and legal autonomy, with the functions of regulation and supervision of the sector. In addition to the railway, INTF has responsibilities over all entities of the various means of transport that use their own infrastructure, like the metro, the tram and other guided systems.<sup>4</sup>

The rail regulators of the EU member states can be classified into three types according to their independence from the government (IBM, 2006). Portugal was included in the traditional group because INTF was a regulatory entity separated from the general administration of the State even though not recognised with effective power of decision and as truly independent (IBM, 2006). The Portuguese Court of Auditors in its audit to the regulation of the rail sector confirms IBM's study, pointing out the limitations of the regulator to intervene in the sector by stating that "the rail regulator presents serious limitations in respect to its organisational and functional independence, which can constrain the achievement of the European policy objectives for the railway sector" (TC, 2006). The three years length of the administration mandates, shorter than the government, the lack of financial independence, since it is partially supported by the State budget, and the fact that it can receive instructions from the government (lack of functional independence) were some of the causes found for the weaknesses of the regulator (Marques, 2005). Besides, the government has the power of appointing and dismissing the board of directors (absence of organisational independence).

Another difficulty faced by INTF to fulfil its mission concerns the lack of PSO definition in the law. This is a very important issue in the EU rail sector, as about 85–90%, valued in passenger kilometres, of the rail passenger transport services must comply with PSO (CER, 2007). In Portugal, the PSO contracts with the rail companies are the sole responsibility of the national authorities. Within the EU that responsibility belongs generally to the national authorities, to the regional authorities, as it is the case of France, or it is shared between these two kinds of authorities, as in Sweden (CER, 2005). However, the Portuguese government's failure in contracting PSO with the rail sector players is a major obstacle to the success of the regulatory functions since the regulated companies lack accountability.

As a result of the legislation published in 2006, the merger process of several public entities was concluded, such as the General Traffic Directorate, General Directorate for Transport and

<sup>2</sup> However, RAVE is closely related to REFER, since the latter owns 40% of the former and the other 60% are held by the State.

<sup>3</sup> The TGV in France was the major driver of rail passenger transport increasing.

<sup>4</sup> As such, the Rails Undertakings which do not have their own infrastructure are not subject straightforwardly to the regulation of INTF, in spite of indirectly suffering its consequences.

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