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Political Will and Economic Necessity? The Construction of High-Speed Rail Networks in Portugal and East Germany

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Abstract: This article aims two EU member countries (i.e. Portugal and Germany) from different regions in Europe which have, for decades, been following common strategies regarding HSR development. The authors discuss the economic profitability vs. political aims, which were related to rail modernization. The text outlines the historic background of early railway construction, important milestones for a new level of rail planning in the 1980s and 1990s in both Portugal and Germany and delays in the realization of HSR projects, their rising costs, and the opposition of the public against the new lines. The experience of the countries under scope serves as an example for other EU members who have plans to take part in the Trans-European Transport Network.

Keywords: History of transportation; Development of railways; High-speed rail in Portugal; High-speed rail in East Germany

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Introduction

The recent global trends in transportation prioritize economic efficiency and ecological topics. Albeit these trends do not significantly impact individual transportation vehicles (e.g. cars), they have had a deep impact on the development of air and rail transportations. Exemplifying, the air industry has taken several steps to construct supersonic (i.e. to limit the travel time between world economic centres) and heavy aircrafts (i.e. with the capacity of several hundreds of passengers), but it has done so only to find out that these were the blind ends of the development, as they have proven to be un-economic or simply not able to meet the expected demand.

With the growing competition of both individual and air transportation, rail transportation companies found themselves attempting to keep their passenger numbers; to keep up with

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the competition, they resorted to strategies that highlighted the comfort and convenience of train travel. Thus, this paper mainly deals with the state of the railways based on their historic development, financial, political, and infrastructure challenges of rail transportation; despite such focus, we are aware of the future changes that will be evoked by the post-COVID-19 development, which will certainly mainly influence air traffic, partly influence rail traffic, and stimulate individual transportation.

One of the main issues which rail transportation companies have been dealing with regarding competition has been the speed. At one point, aircrafts became a very fast mean of transportation, mostly thanks to the introduction of jet engines to commercial air service during the 1950s—the so-called Jet Age (Van Vleck 2013: 239-280); meanwhile, cars benefitted from the quickly developing network of highways in the second part of the 20th century. Railway networks, on the other hand, are comprised by tracks which have been mostly built in the 19th century, only rarely modernized in the 20th century. Thus, to achieve higher velocity, rail companies relied mostly on the help of the state to develop technologic methods and financial reserves that would allow for upgrading the outdated rail infrastructure. On the supranational organization level (e.g. the European Union, hereafter EU), strategies related to the future development of rail infrastructure have been concentrated on the idea of high-speed rail (hereafter HSR), which would connect the whole territory of the EU without the need for using air transportation (The European Parliament 1996). The HSR would also enable connections between air and interurban rail services that can be more convenient for travellers; for example, substituting feeder flights for high-speed feeder trains that connect with long-distance flights.

In this scenario, this article aims to show a very specific part of transportation policies; specifically, to describe the discrepancies in the decision-making behind building up the HSR network, which begs a question: does this decision really need justifiable economic reasons or does it need, rather, political imperatives? If we were to question this to every minister of transportation across the EU, they would potentially answer this question with a list of objectives (e.g. economic, geographic, etc.) and arguments for each project. In the case of HSR systems, the reality of different countries might differ.

Thus, in our article, we chose the following two case-studies: Portugal and the former German Democratic Republic (hereafter GDR; as a part of Germany after its reunification in 1990). We chose these countries because historically, they represent very different economic regions that concomitantly have similarities regarding their size, population, EU membership, and the starting conditions and goals of their HSR projects. In the article, we explain the historic background of railway development which is the reason for specific conditions of the transportation system in both countries in the late 20th century. On the one hand, Portugal was able to construct and modernize its underdeveloped rail network only after the peaceful democratic revolution in 1974; on the other hand, the so-called *Neue Bundesländer* (hereafter New States of Germany), which suffered from 40 years of mismanagement in a centrally planned economy, could do so only in 1990.

Nevertheless, both countries were able to start a fast modernization of their railway transportation; Portugal was able to do so with the help of EU funds, while the New States of Germany were able to do so mainly with the intensive help of the German Federal Government and, later, of EU funds. During the years of 1990–2015, the most important

projects related to the HSR were approved and introduced into service both in Germany and Portugal; thus, chronologically, our study will mostly examine this specific timeline. Topic-wise, we will mostly examine these projects based on the examples of the Northern Line (Portugal) and the Berlin-Hannover/Berlin-Hamburg lines (Germany).

As aforementioned, if we consider the New States of Germany as a part of the reunified Germany, and then compare it to Portugal, we see that these two are very different regarding their land mass, geography, population, infrastructure, and economic capacities. Nevertheless, and related to the EU strategy for HSR, both countries have been developing HSR tracks, albeit with different levels of success; these differences owe to the characteristics of the HSR projects of these countries, which have been usually accompanied by various issues (e.g. underestimation of costs, construction delays owing to technical and financial issues), associated risks and uncertainties, and the following problem in HSR planning (one of its major issues): the accuracy—or the lack of accuracy—of the estimations related to the prediction of future demands and revenues (Bruzelius 2002: 144).

A historic review of rail development in Germany and Portugal

The development of the first railways in Europe did not occur simultaneously for all countries, even if it accompanied the industrial revolution. For example, Germany has always had—and continues to have—one of the most developed railway networks in Europe. In 1835, only 10 years after the opening of the first steam railway in Great Britain, the territory of the so-called German Confederation (i.e. *Deutscher Bund*) became the location for the onset of the construction of railways in continental Europe; accordingly, Germany has, ever since, been one of the areas with the most intensive railway network development in Europe.

German railways were based on the British rail technology and benefited from solid ranks of educated engineers and skilled labour in the first stage of the railway construction process. Nevertheless, prior to the unification of Germany in 1871, there had not been any coordination regarding railway construction between the individual governments in the German Confederation (Jehle and Langner 1985: 97).

In 1870/1871, the Franco-Prussian War exposed the eminent importance of railway infrastructure for military and strategic operations; this led to the improvement and interconnection of lines and city bypasses to be initiated shortly after 1871. Thus, the unification of Germany, military reasons, and the nationalization of private railway companies led to a furthered and more efficient railway development. Before World War I, there were more than 63,000 km of railway tracks being used in Germany, culminating at almost 70,000 km before World War II; nonetheless, both conflicts caused multiple reductions of the German territory, thereby diminishing the German railway network span to around 50,000 km (Schliephake 2001: 31).

At the other end of the European continent, the beginning of the Portuguese railway construction was deeply connected to British and French investments (Lopes Vieira 2015). Additionally, since its very start, scholars have widely discussed the problems of financial burden and corruption which were associated with such construction (Espinha da Silveira, Lima, Alcântara and Puig 2011: 29). Hence, the first track in the country was

built in 1856, 20 years after Germany, being only 36 km long; at that time, its neighbour, Spain, had already 500 km of working tracks (Espinha da Silveira, Lima, Alcântara and Puig 2011: 37). Moreover, we consider somewhat bizarre that, while Portugal was constructing its first main tracks, some lines in Great Britain had already begun to shut down owing to low efficiency and technical reasons (Mojica and Martí-Henneberg 2001: 19). This late start was the outcome of the lack of any consistent strategy regarding the construction and service of the railway in the long run, with the most uncertain issue being the role of the state versus that of private businesses in the whole process (Espinha da Silveira, Lima, Alcântara and Puig 2011).

Since the early years, the obvious priority for the use of railway tracks in Portugal has been the facilitation of travelling between the urban areas of Porto and Lisbon, followed by the connection of Lisbon with the South of Portugal, and the connection of Lisbon with Spain. These are practically the same lines which are currently under scrutiny regarding attempts to accelerate the development of HSR solutions. This becomes even clearer considering the proportion of the urban population in these two major centres of Portugal in the end of the 19th century; in 1900, the regions of Lisbon and Porto accounted for 54–60% of the overall Portuguese population (Espinha da Silveira, Lima, Alcântara and Puig 2011).

Between 1878 and 1893, the great rail construction boom occurred in Portugal (Espinha da Silveira, Lima, Alcântara and Puig 2011), albeit the establishment of its main railway network did not finish before 1940 (Mojica and Martí-Henneberg 2001). Meanwhile, in Germany, the main lines were established long before the beginning of World War I, and new secondary lines were already opening at a slow rate after that. Exemplifying this in numbers, in 1950, there were 12,895 km of railway lines in the GDR, against 3,584 km in Portugal (Mitchell 2007).

Description of the political regimes and the transportation politics in Portugal and Germany before 1974 and 1989, respectively

Like in most European countries, both in Germany and Portugal, private railway companies progressively declined and were eventually merged into public corporations. Still, the mixed ‘blessing” for the Portuguese railway network was the fact that, although the construction of its railway network came substantially late compared with that in big European economies, its network was able to connect the major economic centres of the country.

Meanwhile, the World War II significantly changed Germany and greatly influenced its railway system. The long-lasting bombardment of Germany and the heavy fights during the last weeks of the war led to a massive destruction of the German railway network and its rolling stock; following the end of World War II, the rolling stock and its railway infrastructure were objects of dismantling by the victors as a type of reparation—namely, by the Soviets in their occupation zone. Moreover, the division of Germany into four occupation zones (i.e. United States, Great Britain, France, and the Soviet Union) created growing East-West tension and was one of the central Cold War hotspots. Eventually, in 1949, the German territory was divided into the two following countries: the Federal Republic of Germany (FRG) and the GDR. While the FRG became a part of Western Europe, had a democratic political system, and capitalism as the main economic direction,

the GDR became a part of the Eastern communist block and supported a centrally planned economy. This division consequently and massively influenced the railway systems in both countries and highlighted the different ways by which both Germanies were developing (for the origins of the division, see Nichols 1999: 267-280).

The *Deutsche Bundesbahn* (DB), as a state-owned company in the FRG, was exposed to the free market, the growing competition of road transportation, and showed a similar development to that of other Western railway companies. Still, this growing competition led rail transportation to experience a fading economic importance; exemplifying, in the 1960s, the number of both passengers and cargo transported by rail showed a slow, albeit steady, decline. Despite state ownership, economic efficiency was of a high importance for the managers of these rail companies; hence, they decided to reduce the railway network. Accordingly, the DB started to focus on commuter/long-distance passenger and cargo services; this led the tracks of long-distance lines to be improved, and, throughout the 1970s, to the speed of several lines to rise to 200 km/h (Siegfried 1978: 435-436).

Nonetheless, the real turning point for the DB was the decision to build up a HSR network (in German called the *Intercity Express*/*ICE* lines) based on new lines (i.e. *Neubaustrecke*) and to improve the present lines (i.e. *Ausbaustrecke*). This new concept was supposed to improve the position of rail compared with that of road and air transportation. In 1988, the first ICE line opened, connecting Hannover and Würzburg; specifically, on 1 May 1988, in a speed test conducted between the cities of Würzburg and Fulda, the record of 406 km/h was reached by one of its trains (Burkhard Faune 2018). Then, in 1991, the second HSR line between Mannheim and Stuttgart was finished (Dieter Eikhoff 2014).

Contrarily to DB, the *Deutsche Reichsbahn* (DR), in the GDR, was part of the centrally planned economy, so there was no competition; since the central plan set the conditions for the economy, all transportation tasks were directed to rail transportation. Additionally, there was no competition from other types of transportation owing to a very low growth of individual motorisation and a less developed road network in the GDR compared with that in the FRG. Accordingly, the DR remained a key mean of transportation for goods and passengers in the GDR until 1989; moreover, although there were no significant increases in the quality of rolling stock or train speed, there was some network reduction—a phenomenon like that in the DB case.

At the same time, the crisis of the European railway system—which occurred in the 1950s–70s—hit Portugal relatively mildly, with its railway network being able to retain its stability (For the continuing impact of new tracks in Portugal on the development of the society, see Sarmento 2002: 60). Nevertheless, despite various efforts and the steadiness of the railway network, around 30% of the Portuguese population had not been using it until recently, especially in the country's interior (Mojica and Martí-Henneberg2001: 23); moreover, no railway construction was ever undertaken in the archipelagos of Madeira and Azores. Furthermore, prior to the 1974 Carnation Revolution, instead of investing in continental Portugal, the state invested heavily in the African provinces of Angola and Mozambique. For example, in 1960, a new modern bridge was built on the Benguela line, facilitating the travel between the cities of Lobito and Benguela, Angola (Companhia do Caminho de Ferro de Benguela 2008).

Ever since its establishment in 1951, a private company named Trains of Portugal (i.e. *Comboios de Portugal, CP*) has controlled the rail operations in the country; its practical monopoly over both passenger and freight transportation has never been challenged, not even after the nationalization of the company in 1975—except for one small privately run line over the Tagus river. Nonetheless, as part of EU's liberalization efforts, an organizational separation was implemented in 1997, when the new state-owned company, named National Railway Network (*Rede Ferroviária Nacional Empresa Publica* [REFER]), was assigned to manage the national railway infrastructure (European Conference of Ministers of Transport 1998: 84).

Before 1974, the infrastructure of the national railway system was developed to support industry, trade, and connect the two economic centres of the country, Lisbon and Porto, through the so-called Northern Line. Specifically, in 1953, the fastest Portuguese line, Foguete, was introduced; with 100 km/h, it was unprecedently fast for the conditions of the Iberian Peninsula. Nevertheless, further investments were halted owing to the ongoing colonial wars in the 1960s and early 1970s, and there was only a minor improvement in the line between Lisbon and Porto during the 1960s, related to its successful electrification.

Additionally, probably the most ambitious infrastructural undertaking for both rail and automotive transportation in Portugal before the revolution of 1974 was the construction of the Salazar Bridge (known today as 25 of April Bridge [*Ponte 25 de Abril*]); albeit it was initially intended to serve cars, it was adapted to serve for rail transportation in the late 1990s.

Improvement of the rail infrastructure in the New States of Germany and Portugal in the 1990s-2000s

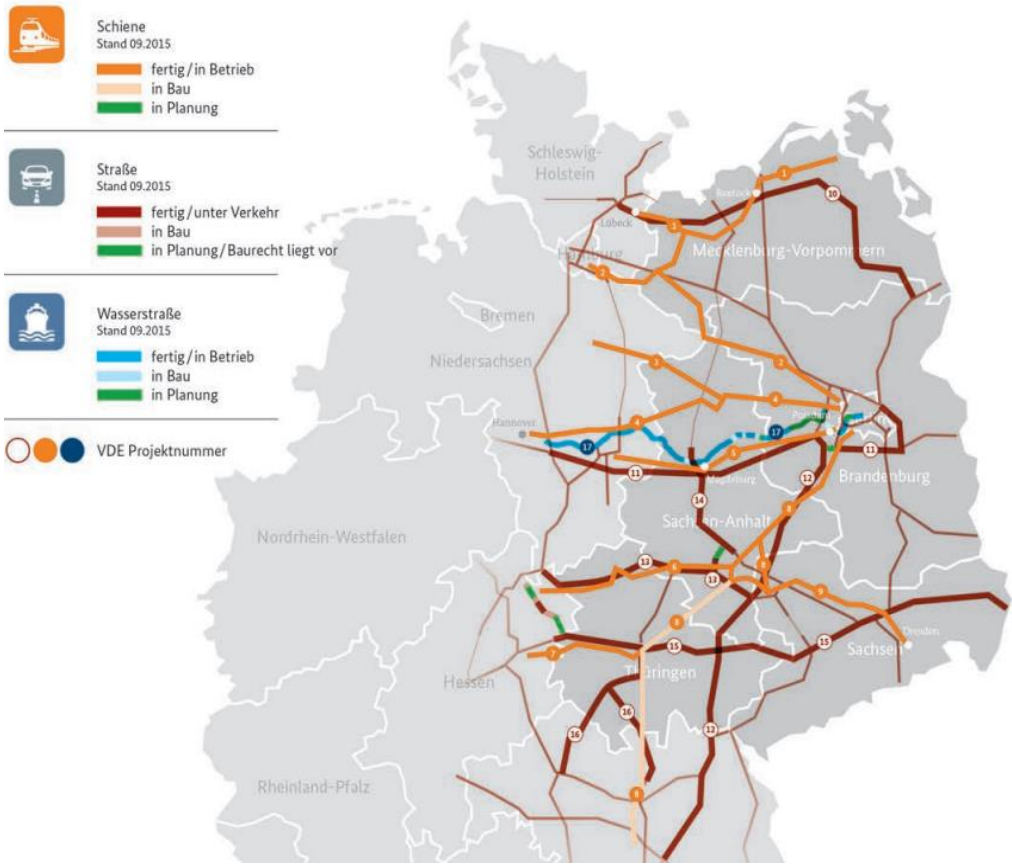
In 1989, there was the fall of the Iron Curtain, and in 1990, the reunification of Germany; both brought upon a long period of transformation for the economy and society in the New States of Germany. During this period, all companies which used to be in the hands of the state before 1990 became subject to transformation, meaning that they could be privatised, re-structuralized, or closed. The reunification of Germany also opened massive investment opportunities for the East German federal states, albeit the reasons behind such investments were less related to economic reasoning and more about institutional conditioning; this is because, based on the German constitution—specifically article 106—the living standard level of the whole German territory should be equalized on various levels, including the transportation system, and especially roads and railways (Federal Ministry of Justice and Consumer Protection 2019). This meant huge investment in all public companies of the East German federal states.

However, the reunified Germany did not automatically trigger an immediate unification of the DB and DR—this operation was not possible owing to these companies having completely different structures and operation. Nevertheless, since the very first days of the unification, the DR was facing a road map that led to its merger with the DB, and it also became subordinated to both the DB and the Federal Government. According to the German railway reform act (*Eisenbahnneuordnungsgesetz*) from 1993, both companies were supposed to merge into the *Deutsche Bundesbahn AG* on 1 January 1994 (Federal Ministry of Justice and Consumer Protection 2019). Still, this was an enormous challenge

because the railway network in the former GDR suffered from underfinancing and a rolling stock of slow, overaged trains. Moreover, like other GDR companies, the DR overemployed workers at both maintenance and services. Exemplifying, a study showed that it had more than 250,000 employees in 1990, which had to be cut by half until 1993, and that it collected a debt of Deutsche Mark (hereafter DM) 66 billion by 1993 (Kopper 2011: 231).

At this point, we should point out the changes in East German's infrastructure and development. The Federal Government decided to invest massively into its infrastructure, injecting DM 222 billion between 1991 and 2010, albeit the real costs to improve this infrastructure amounted to DM 414 billion. From this amount, around 48% went into improvements for rail tracks; this latter value was supposed to be of DM 108 billion, but eventually rose to DM 194,9 billion throughout the years (Schöller, Canzler and Knie 2015).

Figure 1. Map of Transportation Projects of German Unity



Source: Bundesministerium für Verkehr und digitale Infrastruktur: 25 Freiheit und Einheit, Mobilität und Infrastruktur, https://bmdv.bund.de/blaetterkatalog/catalogs/230534/ pdf/complete.pdf.

Additionally, the Federal Government prepared nine Transportation Projects of German Unity (*Verkehrsprojekte Deutsche Einheit* [VDE]) that focused on the rail, road, and water transportation lines across Germany. Their first steps focused mainly on improving the East German infrastructure on standard long-distance connections (i.e. of more than 600 km) and on the reactivation of past border connections that had been closed. Eventually, three projects were approved that aimed at creating connections between Berlin and West German urban centres via HSR.

Since Article 87 of the German Constitution - i.e. *Grundgesetz* (Federal Ministry of Justice and Consumer Protection 1993) puts the Federal Government in charge of all rail transportation, the Transportation Projects of German Unity were, ever since their beginning, of highest political priority; accordingly, the legal procedures needed to provide the official approvals for all such transport projects were reduced by the use of special laws (Deutscher Bundestag 2004). Nonetheless, in the late 1990s—a period of economic stagnation in the country—these projects were eventually heavily criticized, being deemed as an obvious overinvestment in East Germany at the expense of infrastructure development in the whole country. Nevertheless, the VDE 2 Berlin–Hamburg (with a speed that went up to 230 km/h) and the VDE 4 Berlin–Hannover tracks (with an even higher speed of 250 km/h) steadily received support of the main political parties, preventing these two projects from becoming targets of investment cuts. Their construction process, still, slowed down, leading to a significant postponing of the introduction of both tracks into service to the years 1998-2000 (Schöller, Canzler and Knie).

Additionally, since there was a parallel plan that envisioned the inclusion of a magnet rail to the VDE 2 project, its development was limited until the year of 2000; the idea of a magnet rail was eventually abandoned owing to the high costs related to this inclusion during the early 2000s. After discarding this parallel plan, the VDE 2 was modernised to achieve the speed of 230 km/h. Meanwhile, data shows that the popularity of this connection remains rising, with the number of passengers between 2014 and 2018 having risen from 4,5 million to 6,1 million passengers, respectively (Neumann 2019).

The VDE 4 project, which originally linked West Berlin with West Germany, was a very important connection even before 1989. Accordingly, the debates about the modernisation of this track located in the East German territory—which would be paid from West German taxpayers' pockets—began already during the late 1980s; the reconstruction works, hence, began shortly before the reunification—during summer 1990—and it eventually became a part of the Transport Projects of German Unity in 1991. The modernised VDE 4 connection was opened in 1998.

The latest, and most expensive, project to date has been the VDE 8, which connects Berlin to Nurnberg via Leipzig and Halle. The reason for the expensiveness of this project relates to the technical difficulties behind it, which owed mainly to its planned velocity of 200 km/h and the technically demanding construction in the terrain of the Mittelgebirge mountains. Nonetheless, in 2017, the project was eventually finalised together with its Nurnberg-Erfurt section (Eickhoff 2018).

In Portugal, the European Community developed a financial assistance system for the country; this occurred because it was facing massive economic problems after the democratization that followed the Carnation Revolution in 1974. Namely, owing to being

a country associated to the EC, Portugal received financial credits that helped the government modernize the national transport infrastructure. Although the initial efforts in the country were mostly related to road and, especially, highway constructions, the development of rail tracks and HSR eventually became a vital element on the government agenda; this turned more evident after adapting the Portuguese strategies to the Trans-European Transport Network plan (see Materus, Ferreira and Carreira 2008: 2). Thanks to these efforts, in the second half of the 1980s, the so-called Alfa service—which shared some similarities with the German ICE plans—was introduced, increasing the speed of the trains between Lisbon and Porto to 160 km/h. Subsequently, in 1999, the program was upgraded to the current Alfa Pendular model, which is serviced by the Pendolino ETR 460 trains; despite their use, these trains were included solely at the Northern Line, which has been undergoing modernization since 1997 to adapt its tracks to HSR standards. Alfa Pendular has become one of the most reliable services of the rail carrier Comboios de Portugal, ranking with a highest satisfaction rate among the company passengers (Comboios de Portual 2016: 29).

Additionally, the HSR strategy of the Portuguese government can be tracked back to 2000, when the state-owned company REFER (i.e., the National Railway Network) participated on the creation of a specialized agency—the High Speed Rail Network (*Rede Ferroviária de Alta Velocidade S.A. [RAVE]*); its main aim was to allow for the conduction of preparatory studies that would define the existing, and allow for the creation of new, HSR corridors.[4] Moreover, in 2003, Portugal agreed on establishing international links with the government of Spain, which were coordinated by the newly created Spanish-Portuguese agency named High Speed Spain-Portugal – (*Alta Velocidad Espana-Portugal [AVEP]*) (For the planned connections and work scheduling, see Tribunal de Contas 2007: 29-30).

As defined by the European Commission in 2005, the connection of Lisbon and Porto with a HSR line constitutes an elementary component of the high-speed axis of southwest Europe (Directorate-General for Energy and Transport and European Commission 2005). The strategy outlined integration aims on the regional and European scale but no direct economic incentives. Notwithstanding, the existing Portuguese plans for the development of completely new HSR corridors in the Northern Line have faced both financial and logistic problems. One of the biggest obstacles were the results of the economic decline due to the financial crisis and following cuts in the budget. Although the Portuguese economy has gradually recovered from its long crisis, the construction of new HSR corridors has yet to return to the government's agenda; instead, the Portuguese government has facilitated the progressive update of the existing rail tracks, thereby enabling for a considerable acceleration in multiple parts of the Northern Line. Through these updates, the line eventually became an HSR track, with 99 out of its 337 km currently already permitting a speed of 220 km/h. Namely, this is the fastest among Portuguese national lines, with a travel time of 2 hours and 50 minutes between Lisbon and Porto.

Despite these advances, from a logistics point of view, uncertainty prevails about the location of the new corridor for the Northern Line; the three main projects related to this

[4] Following the budget cuts in 2011, the enterprise was eventually merged with the Infraestruturas de Portugal, S.A., a public company covering both the railway and road infrastructure in Portugal.

line highlight the problem of the cluster of highly dispersed small- and middle-sized cities— between Lisbon and Porto—that could receive a station of the line in order benefit from the new connection (Repolho, Antunes and Church 2013: 336).

Current state and visions

By 2018, Germany had completed almost all the Transportation Projects of German Unity, including the Berlin–Hannover and –Hamburg lines; since 1991, the cost of these projects rose to the final number of 322 billion EUR, which were mainly paid by the Federal Government. In 2019, the opening of the last project—the Berlin–München line—marked the end of more than 25 years of development for the transport network in eastern Germany (Der Beauftragte der Bundesregierung für die neuen Bundesländer 2019). Thus, since both parts of Germany were introduced to regular parameters regarding the planning of transport development, transportation-related processes are now standardized in the country—no longer being subjected to interference of different political or ideological backgrounds.

The development of HSR lines and the construction of the whole German transport system is now being managed by the Federal Plan of Transport Ways (i.e. *Bundesverkehrswegeplan*); this plan, in turn, follows national and European priorities regarding transportation network development and oversees the economic conditions for each project that must be fulfilled (Deutscher Bundestag 2016). Amid the development of the German transport network, the HSR lines are perceived as the means of connecting the country with other European countries and have the purpose to make railway transportation viable and competitive, potentially even becoming viable substitutes of short-range and national flights. In this regard, the capacity of HSR transport proved to be a viable competition to air transport because it can substitute some feeder flights within hub-and-spoke systems (a 'hub" is a central airport via which flights are routed, and a 'spoke" is a route that connects an outlying point to the central 'hub" airport); meanwhile, the HSR represents a great opportunity for the integration of rail and air transport.

Currently, the AIRail—a service operating in the German Frankfurt–Cologne and Frankfurt–Stuttgart areas—is the best example of intermodal substitution through air–rail integration, and a report can provide evidence to this statement; reportedly, Lufthansa (a major German aviation company) understood the benefits of this form of cooperation, thereby stopping its operations on these routes (Deutsche Bahn Gruppe 2020). Accordingly, there have been recent discussions about implementing an idea similar to the AIRail for the new Berlin-Brandenburg airport—a troubled project that was the subject of construction defects and mis-management, causing a delay of nine years for its opening—given that the original Berlin-Schönefeld airport had already been serviced by a local rail train station (i.e. the *S-Bahnhof*). Specifically, the latest topics discussed by local Berlin politicians relates to the introduction of a completely new high-speed service operated by either an ICE train (Aero.de 2020) or a completely new maglev track which would be based on the phenomenon of magnetic levitation (Tagesspiegel, 2020).

In Portugal, the slow economic recovery undermined the original governmental plans to create new international HSR lines between Porto and Vigo, Lisbon and Madrid, or between Faro and Huelva; instead, even regular train services between Madrid and Lisbon have been heavily reduced. Moreover, despite the European Parliament and the European

Council having supported, in April 2004, the creation of a new international HSR line between Lisbon and Madrid as an strategic initiative, the project—which had been scheduled for completion in 2010—was delayed. Accordingly, in early 2018, the Portuguese Prime Minister António Costa declared—in the context of the statements of the European Commissar of Transportation, Violeta Bulc—that the Lisbon-Madrid track was an essential part of the Trans-European Transport Network, thereby remarking that it should be finished before 2030. Such a statement allows for the inference that strategies to modernize rail transportation between major metropolitan areas in Portugal may have come back to focus.

In fact, the Portuguese National Investment Program 2030 delineates the development of a new line between Lisbon and Porto that will reduce the travel time between both cities to under two hours, and that about 80% of the costs for this track should be covered by European funds—specifically, the Connecting Europe Facility and the Multiannual Financial Framework (Cipriano 2020: 23). The travel times between other Portuguese cities should be considerable thanks the proposed Lisbon-Porto high speed line too, as estimated by the agency Infraestruturas de Portugal in the table 1 (André 2022).

Table 1. Estimated travel time between Coimbra and major Portuguese cities today and in 2030, according to data of Infraestruturas de Portugal

	Coimbra	
	2022	2030
Aveiro	0h 26m	0h 19m
Leiria	1h 07m	0h 20m
Porto	1h 15m	0h 30m
Lisbon	1h 30m	0h 51m
Caldas da Rainha	1h 52m	1h 12m
Braga	1h 53m	1h 18m
Guimarães	2h 19m	1h 29m
Guarda	2h 23m	2h 07m
Viana do Castelo	2h 28m	1h 43m
Setúbal	2h 37m	2h 00m
Covilhã	3h 09m	2h 51m
Évora	3h 35m	2h 30m

Source: Mário Rui André (2022), 'Apresentados detalhes da futura linha de alta velocidade Lisboa-Porto: país vai ficar mais pequeno [Presented details about the high speed line Lisbon-Porto: the country will become smaller] ", Lisboa para pessoas 18 March 2022, https://lisboaparapessoas.pt/ 2022/03/18/linha-de-alta-velocidade-lisboa-porto-detalhes/ (accessed 14 December 2022).

The table 1 clearly shows significant time savings between distatant cities such as Coimbra and Évora in the future. However, it does not highlight the importance of the

proposed line crossing the Francisco Sá Carneiro Airport in Porto which has a potential of collecting high number of passengers from the Northern and central Portugal for both its European and long distance flights.

Concomitantly, the postponed plans to connect the Portuguese coast with the Spanish capital, Madrid, have been recently revived with plans for the Sines-Madrid axis (República Portuguesa XXII Governo 2020).

Conclusion

This article revealed that within the EU, two member countries (i.e. Portugal and Germany) from different regions in Europe have, for decades, been following common strategies regarding HSR development. We indicaed political motivations as the primary impulse for the construction of HSR in both countries. As shown by the description of the individual steps taken by the German and Portuguese governments, economic profitability was not the primary idea when these started to plan reaching advanced velocities in the national rail networks.

For example, in the 1970s, in West Germany, the policy related to rail modernization was deeply connected to the competition brought by road transport and individual vehicles to rail transportation, which then led to the development of advanced rail tracks that allowed for trains to reach a speed of 200 km/h. During the same period, in Portugal, the main strategy was to enhance the availability of a convenient and fast rail transportation on the main track that linked the most important national urban agglomerations; Lisbon and Porto. The economic recoverability of the modernization investments was not considered as a vital motive but faster train connections have contributed to comfort and satisfaction among passengers.

We used an extensive historic excourse into the early days of railway construction in order to underpin the important milestones for a new level of rail planning: for Portugal, the accession to the European Community in 1986; for Germany, the reunification in 1990. For Portugal, acceding meant becoming the member of a family comprised by countries that were far more developed; with the availability of European funds, the country started to modernize its infrastructure, improving its existing connection between Lisbon and Porto, creating new rail connections to Spain, and new connections to the rest of the EU territory.

In the case of the former East Germany, the territory underwent overall economic re-structuring; owing to its unification with West Germany, it became not only a part of the EU but also of the most developed European economy. Specially, it was the Federal Government funding that updated the transportation infrastructure reminiscent from East Germany, connecting the New States of Germany with the rest of Germany via restored or completely new HSR lines.

Despite these advances, the tasks related to the restructuring and development of rail transportation proved to be overwhelming for both countries; both were subjects to projects with ever rising costs, to public opposition against the HSR strategy, and to delays in the completion of the new lines. Moreover, the economic problems faced by Germany—in the end of the 1990s—and by Portugal—during the financial crisis of 2008—represented another burden in the realization of these impressive plans. We hope

that the issues which both Germany and Portugal have faced during the last thirty years can serve as a good guide for other EU countries which have yet to start the construction of their own HSR network but remain committed to playing their part in the Trans-European Transport Network.

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