

# 1. Setting the scene: the evolution of EU transport regulation

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## 1. INTRODUCTION

In this chapter, we want to give an overview of how European transport regulation has evolved since it began to be liberalised in the early 1990s. While transport regulation has followed a very sectoral approach, we can nevertheless identify an underlying broader objective of creating a single European transport area, considering in particular that transport is one of the key types of infrastructure that enables an innovative and competitive Europe. Therefore, in the first section, we recall the role of transport in the European single market, more precisely the underlying EU project to create a single European transport area as an integrated transport market. We then present the main steps towards creating this market at the service layer in the four transport modes: air, maritime, rail and road. In the third section we focus on the remaining infrastructure monopolies, and in particular on how regulations address them. In the fourth section we outline the EU policies aimed at developing seamless intermodal transport infrastructure. In the conclusion we show how newly emerging trans-sectoral issues, namely decarbonisation and digitalisation, are challenging but also reinforcing EU efforts towards a single European transport area.

## 2. THE MAIN POLICY STEPS TOWARDS A SINGLE EUROPEAN TRANSPORT AREA

Transport plays a pivotal role in facilitating the single European market (SEM). Its importance was already recognised in the Treaty of Rome back in 1957. Transport is not only critical to ensuring the economic development of Europe, but it is also crucial for guaranteeing the free movement of goods, people and services. Article 9 of the Treaty of Rome implies that rail, maritime and air

transport have an essential role in moving goods from one country to another. One can observe, in Article 48, the role of transnational transport in allowing migrant workers to move to other states for work. In addition, Article 59 of the Treaty of Rome spurred the liberalisation of transport in general.

After the Treaty of Rome, the next significant step was the Single European Act (SEA) of 1986, which explicitly stated that the SEM should be established by 1993. At that time the EU had 12 member states and the core idea of the SEA was to change the relations among them, evolving from a (European) community to a (European) union, mainly by removing obstacles to trade and by harmonising laws. This was achieved by way of a more collaborative legislative process, by strengthening the role of the European Parliament and by allowing qualified majority decisions in the Council. It is in this context that the main sectoral liberalisation – de- and re-regulation – initiatives in the various transport sectors and also in energy and communications were initiated. We present the main steps in the liberalisation of the four major transport sectors – rail, maritime, air and road – in detail in the following sections.

Thirteen years later, the Treaty of Lisbon 2009 – also called the ‘Treaty on the Functioning of the European Union’ (TFEU) – integrated developments in the different transport policies and made them a shared competence among the member states and the EU (Art. 4). Subsequently, the SEM became an area without internal borders (Art. 26), thus guaranteeing that goods and people could move freely throughout the entire EU territory. Building on this, in 2011 the European Commission published a white paper entitled ‘Roadmap to a Single European Transport Area – Towards a competitive and resource-efficient transport system’. This white paper was a significant next step in EU transport policy because it sought not only to incorporate the growing concerns about global warming in transport policy but also to use decarbonisation as a lever to strengthen and accelerate the single European transport area (SETA). More precisely, its stated aims were decarbonisation of transport (at that time a 60 per cent reduction in CO<sub>2</sub> emissions from transport by 2050, a target that would be tightened later on), which was to be achieved by electrifying transport, a modal shift from road freight to rail and waterborne transport, and developing high-speed rail networks for passengers, along with internalising externalities (an effort also called ‘efficient pricing’). At the same time transport policy was also somewhat refocused (and corresponding investments were accordingly prioritised) from transport in general to transport routes that are essential for EU integration, namely what is now called the Trans-European Transport Network (TEN-T), which at that time was mainly limited to transport corridors.

While multi-modal transport and technological developments (in the areas of electric vehicles, cleaner fuels and smart mobility more generally) were mentioned in the 2011 white paper, the next step in EU transport policy was

not until 2020 with the EU Smart and Sustainable Mobility Strategy (SSMS), which reflected not only the growing climate urgency but also a heightened preoccupation with digitalisation. Regarding climate, the SSMS is a direct translation of the 2019 European Green Deal, which aimed to make Europe a climate-neutral continent by 2050. ‘Sustainable mobility’ was one of the building blocks of this Green Deal. As a result, transport emissions now have to be reduced by 90 per cent by 2050 (up from 60 per cent less than 10 years ago). A modal shift, high-speed rail networks, electrification and the internalisation of externalities (efficient pricing) are again called for but now have to be accelerated. Interestingly, digitalisation is given a more prominent role in transport by way of new concepts such as smart traffic management, innovation, artificial intelligence (AI), big data, automated vehicles and connected mobility, thanks to smart mobility solutions. Modes of transport are now more and more seen as an interlinked mobility system thanks to digitalisation, and in this context there is also a new focus on urban mobility and resilience, both significantly enabled, again thanks to digitalisation.

### 3. COMPETITION AND COMPETITION REGULATION AS THE UNDERLYING PRINCIPLE AND TOOL

Competition – along with regulation to create and sustain competition – was the underlying principle and the main tool for creating a SETA. To recall, competition in transport, as in all other network industries, needs to overcome the traditional market structure, that is, national state-owned monopolies in each of the modes of transport and in each of the member states. Liberalisation, understood as introducing competition in the provision of transport services, and where feasible in the operation of transport infrastructure, was and continues to be considered *the* instrument to overcome national monopolies. Consequently, transport service providers would no longer limit their operations to their national boundaries but would be free to serve passengers and shippers across borders, and in doing so compete against one another, thus unleashing the benefits of the market, namely lower prices, better quality and innovation.

Introducing competition in the various transport sectors required adopting a harmonised regulatory framework to make it possible. Three areas were key: first, defining market entry rules to make competition possible. Second, defining rules for the use of infrastructure, which was mostly a monopoly, by the different and hopefully competing transport service providers. Third, and most challengingly, defining rules about subsidies that remained necessary in order to ensure public services without, however, distorting competition. As liberalisation gradually took hold in the different transport sectors, regulations in these three areas became ever more sophisticated.

Indeed, the EU has defined specific rules in these three areas for each mode of transport. These rules follow a common underlying logic, be it in enabling market entry, access to infrastructure, public service obligations or passenger rights and so on. In fact, the same regulatory toolkit also applies to telecommunications, postal services, electricity, gas and sometimes even water. However, the degree of sophistication of these regulations varies considerably by sector, owing to the original market structure, technological specificities, pace and stage of liberalisation, and degree of politisation of the sector etc. It is beyond the scope of this chapter to go into all the details of this regulatory sophistication, sector by sector, so we therefore only highlight the main stages, often called packages, in this EU-wide liberalisation in each of the transport sectors.

### **3.1 Aviation**

On aviation, three packages were adopted in 1987, 1990 and 1992, and the liberalisation of the single aviation market was completed in 1997. It was the most successful transport liberalisation process, with vibrant competition in the market, new business models, a reduction in fares and a remarkable increase in the number of passengers. Competition in airports remains, however, limited, even though airports are increasingly managed as commercial undertakings. National monopolies, mostly state-owned, are still the norm in the provision of Air Traffic Management services.

In 1987, the so-called first aviation package somewhat reduced the power of the member states when it came to the market entry of newcomers. It also allowed more flexibility in bilateral agreements between member states. However, the new rules did not put an end to such agreements.

In 1990, the second package, and in particular Regulation 2343/90, reduced restrictions in bilateral agreements and allowed European airlines to carry unlimited numbers of passengers and amounts of cargo between their country of establishment and any other airport in the Union. In the parlance of the International Civil Aviation Organisation (ICAO), the 3rd and 4th ‘freedoms’ were introduced.

In 1992, the third and final package, and in particular Regulation 2408/92, opened up all routes between airports in the Union to competition for all carriers with a European licence (the so-called 9th freedom). A five-year extension was granted for cabotage services (services carrying traffic between airports within the same member state by a transport operator from another country) so that full liberalisation was finally completed in April 1997. A European licence was created (Council Regulation 2407/92) and airlines were free to set fares (Council Regulation 2409/92).

Regarding external relations, in 2002 the Court of Justice invalidated the bilateral agreement discriminatory provisions and emphasised the need for a unified EU approach to external aviation relations (e.g. Case C-466/98, *Commission v United Kingdom*). The judgment led to the Commission negotiating bilateral agreements with third countries on behalf of the whole Union.

Later, the three packages were consolidated into Regulation 1008/2008 as part of the smart regulation exercise, so as to make the wording clearer and to facilitate enforcement of the regulation by the member states. In addition, the rules on price transparency and the financial viability of airlines were strengthened.

Competition in aviation is vibrant and it has transformed the market with lower prices and new services. After some bankruptcies and mergers, legacy carriers have mostly consolidated into three groups, namely Lufthansa, AirFrance/KLM and AIG. They are often referred to as 'network carriers' due to the hub-and-spoke model they implement around their main airports, where connections are available both for short-haul and long-haul services. New entrants, on the other hand, have mainly specialised in the provision of low-cost point-to-point services, creating a high number of new city pairs, thus increasing the aviation market. Regional airlines have specialised by providing connectivity, often to islands and small airports. The success of liberalisation in terms of the increase in the number of passengers has created new tensions, due to high CO<sub>2</sub> emissions, noise around some airports and over-tourism in some destinations.

As for airports, they are increasingly managed as commercial enterprises under competition rules. The key pieces of legislation governing airports are Directive 2009/12/EC on airport charges and Regulation 1073/2009 on slot allocation. Even if state aid for the operation of airports was supposed to gradually fade away, it remains relevant for a high number of small and medium-sized airports (European Commission, 2008).

### **3.2 Maritime Transport**

Regarding maritime transport, two packages were adopted in 1986 and 1992 to remove obstacles to the provision of transport services, both for goods and passengers, with the liberalisation of the single maritime market being completed in 2004 (Pallis, 2017). In 1986, freedom to provide maritime transport services between ports in different member states and between ports in the member states and third countries was introduced with Council Regulation 4055/86. The regulation required the elimination of all discriminatory conditions imposed by member states, such as extra charges for non-national vessels. Bilateral agreements with third countries would be gradually adjusted or phased out. The regulation, however, did not liberalise cabotage services.

In 1992, restrictions on the provision of cabotage services (coastal shipping within one single member state) were eliminated with Regulation 3577/92. Derogations, however, allowed various special transitory regimes (cruise services until 1995, transporting strategic goods until 1997, regular passenger services until 1999) and national derogations for islands and small vessels, which expired in 2004, when the market became fully liberalised.

Liberalising port operations, however, has been more challenging. Since the publication of a 1997 green paper on Sea Ports and Maritime Infrastructure, the Commission has struggled to generate harmonised legislation on ports in the EU. It was only in 2017 that Regulation 2017/352 was adopted, and this regulation only applies to ports that are part of the comprehensive TEN-T policy. Ports can be managed by a state-owned entity under transparency rules for state funds. Port authorities must guarantee the freedom to provide services inside their premises, such as bunkering, cargo handling, mooring, passenger services, collection of ship-generated waste and cargo residues, pilotage and towage. This creates the possibility of having intra-port competition. However, the regulation still allows some restrictions on the freedom to provide these services.

### **3.3 Railways**

The process of introducing competition in railways was particularly difficult, and it therefore took longer than for the other modes of transport. The process started in 1991 and it was only completed in the 2020s after more than 30 years and four legislative packages. The reasons for the difficulty are: (1) a natural monopoly in exploiting rail infrastructure, which is very expensive both to build and to maintain; (2) persistent state funding for the operation of passenger rail services; (3) strong competition from road transport in both the cases of freight and passenger services; and (4) a weak financial position of incumbent operators, with large workforces and often hefty debts.

Even when completed, competition in Europe is not unified and takes various forms. Full competition is expected in commercial services, mostly in freight and long-distance passenger services (so-called ‘competition in the market’), although it is still not fully realised. However, a more limited version of competition, a so-called ‘competition for the market’, has been designed for services under public service obligations, that is, mostly suburban and regional passenger services. In this case, competition is limited to the process of national authorities awarding public service contracts allowing different railway undertakings to operate in any given member state. However, these railway undertakings will not face competition in the provision of their services once the contract is awarded to them (Finger & Montero, 2020).

Liberalisation in railways started with adopting Directive 91/440/EC. This foundational directive set the rules for the evolution of the market as follows: (1) accounting unbundling between the management of the infrastructure and the provision of rail services; (2) an independent legal status of railway undertakings, even if state-owned; and (3) rules about access to railway infrastructure by railway undertakings. However, the directive was very timid in terms of opening market segments to competition, as only newcomers to the international combined goods transport and international groupings were allowed into the market. Parallel directives set the rules on licensing (Directive 95/18/EC) and access to infrastructure (Directive 95/19/EC).

The gradual opening of the market was achieved by way of so-called railway packages. In 2001, the first such railway package was adopted. Directive 2001/12/EC opened the provision of freight services over a limited part of the network to competition, that is, the Trans-European rail network. In 2004, the second railway package was adopted. Directive 2004/51/EC set 2007 for the introduction of competition in freight services in all the territory of the European Union for both cross-border and cabotage services.

In 2007, the third package, Directive 2007/58/EC, opened the provision of cross-border passenger services to competition, which became effective in 2010. Part of the package was Regulation 1370/2007 on public service obligations in road and rail. This directive set the rules for public service obligations (PSOs), that is, awarding public service contracts for the operation of services with exclusive rights (no competitive tendering yet required), and the calculation of compensation. The existing directives were recast into Directive 2012/34/EU, governing licensing, access to infrastructure, access charges and remaining market issues.

Finally, the fourth package was adopted in 2016. Directive 2012/34/EU was amended to introduce full competition, in particular in domestic commercial passenger services in December 2020 and competition for the market in public service contracts as of 2023. With the fourth package, the liberalisation process was completed.

However, competition in the market is, at best, uneven. After three decades, there is a high number of freight railway undertakings competing with national incumbents, which now often have less than a 50 per cent market share. Competition in freight services, however, has not increased the modal share of rail against road and other modes of transport. Competition in the provision of passenger services is very limited. There is strong competition in the provision of high-speed services in Italy and Spain, and it is emerging in France. Competition exists in the main routes in Czechia, Sweden and Austria, and to a very limited extent in Germany. This amounts to a very limited proportion of passenger services in the EU. In the segments with competition,

prices have been drastically reduced, frequencies have increased and so has the total number of passengers on many routes.

Competitive tendering for the awarding of public service contracts was only required in 2023, with exemptions and transitory periods potentially lasting until 2033. However, some countries had been experimenting with tenders earlier on (Germany and Sweden) and, starting in 2023, also France. The cost of state compensation for the provision of services often decreased as a result of tendering. However, a high number of member states have not started to organise tenders.

### 3.4 Road

The liberalisation of road transport has faced several difficulties, such as traditional overcapacity in the industry, a weak financial situation for many small players and, as a consequence, sometimes vicious competition based on poor working conditions for drivers, especially ones from Eastern Europe. Cross-border services are liberalised both for freight and passengers, but cabotage services are subject to restrictions, both in freight transport and especially in passenger transport.

Regulation 1072/2009 allows for the provision of cross-border services between member states. Quotas are not allowed and as a general principle tariffs are set through private agreements between hauliers and customers. However, certain restrictions on price, such as brackets of minimum and maximum prices, can be admitted if they are necessary to meet public interest criteria. Conditions were set by the Court of Justice (C-184/13, *API*).

Council Regulation 4059/89 was the first piece of legislation on cabotage in freight services. However, this regulation was invalidated by the Court of Justice due to an error in the legislative procedure (C-65/90, *Parliament v Council*). A new Regulation 3118/93 was adopted, temporarily opening cabotage services to competition. The temporary nature of cabotage service competition was necessary to differentiate between the freedom to provide services by an undertaking established in another member state and the freedom of establishment. This difference is key in road transport, as substantial differences exist among national laws regarding employment and drivers' rights. Even though driving times and other conditions have been harmonised, social protection and salaries still largely diverge between member states.

The current legal framework for cabotage freight services was established in Regulation 1072/2009 (Bernadet, 2009). As a consequence, a haulier has the right to provide cabotage services if a previous cross-border service has been provided. The cabotage service can be provided in the member state of destination or in another member state. However, the number of services is

limited to three, and the maximum period is seven days after unloading in the international service previously provided.

As for passenger services, Regulation 684/92 classified coach and bus services into the categories of regular services, occasional services and special regular services (van de Velde, 2013). Occasional and special regular services were liberalised, while regular services were subject to authorisation by the member states, which could be refused if the service would directly compromise an existing domestic rail or bus passenger service. This classification was interpreted by the Court of Justice (C-47/97, *Clarke & Sons and Ferne*). Regulation 12/98 liberalised certain cabotage services (called occasional services).

In 2009, a further review took place with Regulation 1073/2009 stating that regular cabotage services are not open to competition. Cabotage services in the course of an international service have to be authorised, and the authorisation can be refused if the principal purpose of the service is not to carry passengers between stops located in different member states or if the service would seriously affect the viability of a comparable service covered by a public service contract. A new proposal to fully liberalise the service through an amendment to Regulation 1073/2009 was launched by the Commission in 2017, but it has not yet been adopted.

#### 4. TRANSPORT INFRASTRUCTURE AS REGULATED MONOPOLIES

Creating competition among the different modes of transport is the hallmark of the EU ambition to achieve a single European transport area. While liberalisation of transport services has been completed for most modes of transport, the introduction of competition in the case of transport infrastructure has been far more complex. It is usually accepted that potential competition in infrastructure services is somewhat limited, if not impossible, because of their natural monopoly features. In addition, member states tend to perceive infrastructure to be closely linked to public policies in matters of territorial development, and in some cases even to national sovereignty. Consequently, competition cannot be the leading instrument for building a single European transport area as is the case in the provision of transport services.

Under these circumstances, EU-wide harmonised regulation to substitute the pressure of effective competition can be introduced to provide the right incentives for the management of transport infrastructure. Such regulation should not only create a level playing field among different member states, but it should also increase efficiency and meet objectives such as environmental and social protection. This is particularly relevant as inefficiencies, market

distortions and discriminatory access to infrastructure also pose a risk to the liberalisation of transport services.

In addition, the construction of a single European transport area requires both technical and economic harmonisation in construction, maintenance and operational standards to ensure interoperability and more generally a level playing field. The Commission has therefore developed a toolkit to reform transport infrastructure management, although opposition by the member states has been an obstacle to its full implementation. To begin with, exclusive rights in the management of infrastructure have to be limited to the minimum number of necessary segments, unbundling them from other ancillary services in which competition is possible and must be introduced (e.g. port services and ground handling in airports, see section 4.1 below). However, there may be good reasons for limiting the number of actors providing such ancillary services at a port or an airport. Second, access to infrastructure by transport service providers (e.g. shipping companies, airlines, railway undertakings and trucks) needs to be ensured on a fair and non-discriminatory basis, usually through regulation, particularly when infrastructure is congested. Access to airport slots and railway tracks must be regulated, just as in the case of access to telecoms and energy infrastructure. Access charges have to be supervised to avoid exploitation of market power (e.g. predatory pricing) while ensuring the financial sustainability of the infrastructure and at the same time the competitiveness of downstream transport services. Third, other factors need to be taken into consideration, such as public service obligations related to connectivity and support for the local economy, social issues (working conditions), environmental concerns, safety and security.

#### **4.1 Airports**

Airports are a typical example of monopolistic infrastructure and therefore the EU regulated them early on. Regulation was facilitated by the fact that international agreements within the framework of the International Civil Aviation Organization (ICAO) and the International Air Transport Association (IATA) had already ruled on access to airports (i.e. slots) and airport charges. However, it has been challenging for the EU to create a more harmonised and stringent regulatory framework on top of these international agreements. Moreover, over time, airports have evolved into ever more commercial enterprises.

The key pieces of legislation governing airports are Directive 2009/12/EC on airport charges and Regulation 1073/2009 on slot allocation. In addition, even though state aid for the operation of airports was supposed to gradually fade away, it is always relevant for a high number of small and medium-sized airports (European Commission, 2008).

Airport slots are defined as permissions to use the full range of airport infrastructure necessary to operate an air service on a specific date and time for the purpose of landing or take-off. Congested airports (also called coordinated airports) therefore require rules to determine which airline has the right to use a specific slot. The EU Slot Regulation (Regulation 95/93) had to acknowledge the previously existing guidelines drafted by the IATA, which granted so-called 'grandfathered rights', which somewhat limited the ambitions of the EU (European Commission, 2008). When an airport is considered to be congested, a procedure to allocate slots has to be implemented. The first step is to define the coordination parameters, that is, the slots available during a given period of time at the airport. The next step is for the airlines to provide information about their plans for the next timetable (either winter or summer). Then the airport coordinator (an independent natural or legal person) allocates the slots for the timetable. Airlines that have used more than 80 per cent of the slots allocated in the previous timetable have priority in the allocation (grandfathered rights, or the 80/20 rule). Of the remaining slots, 50 per cent are reserved for new entrants, as defined in Article 2 of the regulation. The others are allocated on a first-come-first-served basis.

Access to infrastructure (slots) is regulated separately from the price of such access, both in terms of legislation (airport charges are ruled on in Directive 2009/12/EC) and competent national institutions. Airport charges are levies collected for the benefit of the airport managing body for the use of airport facilities and services. The scope of Directive 2009/12/EC is limited to airports with more than 5 million annual passengers and the largest airport in each member state, which extends to more than 80 per cent of the commercial flights in the European Union. In addition, airport charges cannot be discriminatory. This does not mean that the same charges should be applied to all flights. Differences, for environmental reasons, to incentivise an increase in passengers or based on differences in quality (specific terminals, etc.) are admitted as long as they are clear and objective. Airport charges must be transparent, which in practice means that airports and airlines have to share information about their services, costs, revenue and financing (airports), along with their requirements and forecasts regarding traffic and fleets. It should be noted that Directive 2009/12/EC does not require airport charges to be proportionate to the cost of the service. On the contrary, the directive merely establishes a procedure to set airport charges (Art. 6). Changes to the system or the level of airport charges are made in an agreement between the airport managing body and the airport users. This procedure is not compulsory if charges are determined or approved by an independent supervisory authority.

Not all services at an airport are under the monopoly of the airport managing body. Directive 96/67/EC imposed unbundling of activities inside airports with more than 2 million annual passengers and introduced competition in

the provision of ground-handling services. Freedom to self-handle by airlines and to delegate ground-handling services to third parties was introduced. For a closed list of services, a limitation on the number of suppliers is permitted, and a tender procedure is imposed to select providers. The directive does not exclude the application of rules on competition, and in particular on abuse of a dominant position by the entities managing airports (Frankfurt Airport and Aéroports de Paris decision).

## **4.2 Seaports**

The EU has traditionally faced substantial obstacles in regulating seaports. Legislative proposals initiated by the Commission in 2001 and 2004 had to be withdrawn. The EU subsequently focused its attention on the inclusion of seaports in the trans-European transport network, together with security and environmental issues. Finally, Regulation 2017/352 was adopted. It governs ports and opens port services to competition, although it is subject to relevant exceptions. The regulation applies to more than 300 seaports in the trans-European transport network (which are listed in Annex II of Regulation 1315/2013).

On the one hand, Regulation 2017/352 sets common financial rules for port managing bodies. Public funds made available by public authorities and intermediaries must be visible in their accounts, as is also the case for public service compensation. Ports are obliged to levy a port infrastructure charge for their services.

On the other hand, the regulation unbundles the main port services from the administration and management of the port infrastructure itself. Port services are liberalised, and access to port facilities, installations and equipment for the provision of such services must be ensured under fair, reasonable and non-discriminatory conditions. However, access is subject to four potential restrictions. First, access can be conditioned on minimum requirements such as professional qualifications, financial capacity, availability of equipment, safety conditions, environmental requirements, etc. Second, the number of port service providers can be limited for objective reasons, which are defined in Directive 2014/25/EU. A competitive procedure is to be followed to grant the access right. An access right may be directly granted to an internal operator of the port managing entity, but then a second right is to be put out for tender. Third, public service obligations can be imposed on port service providers to ensure the availability of such services for all port users, at all berths, without interruption, on equal terms, at affordable rates and under specific conditions for safety, security and sustainability, to ensure adequate transport services for the public and to ensure territorial cohesion. Fourth, restrictions

can be imposed to safeguard employees' rights, as the working conditions of dockers have been a traditional obstacle to liberalisation.<sup>1</sup>

Port service charges can be freely set by port service providers, with the exception of charges under special circumstances in which competition is limited, such as, for example, internal operators under a public service obligation, pilotage services, etc. These charges shall be proportionate to the cost of the service.

A procedure to handle complaints between port service providers and port users must be established at the national level under an authority independent of the port managing bodies. The authority has the power to make decisions that have a binding effect and are subject to judicial review. The authority is to decide if the financing of the port managing entity, access to facilities by port service providers, port infrastructure charges and port service charges meet the obligations laid down in the regulation.

### 4.3 Railways

Railway infrastructure is considered a natural monopoly (Directive 2012/34/EU). As a consequence, competition is neither expected nor encouraged in EU legislation. On the contrary, legislation underlines the need, on the one hand, to provide infrastructure managers with incentives to reduce costs and to manage their infrastructure efficiently and, on the other hand, to ensure fair and non-discriminatory access to infrastructure by railway undertakings (Finger & Messulam, 2015).

Since railways were traditionally vertically integrated, and the provision of rail transport services has been liberalised, there is an evident risk of discrimination in favour of the downstream arm of the infrastructure manager. For this reason, some degree of vertical separation is required. The infrastructure manager has to be an entity that is legally distinct from any railway undertaking, with separate accounting and specific guarantees of separation from the management of transport services. Independence is required for the essential functions of infrastructure managers.

Path allocation is ruled by Directive 2012/34/EU. The infrastructure manager has to publish a network statement describing the resources available for railway undertakings. A procedure for the allocation of railway paths is defined in Annex VII. A national regulatory body has to be established to supervise the network statement, the allocation process and traffic management (Art. 56).

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<sup>1</sup> C-576/13, *Commission v Spain*, ECLI:EU:C:2014:2430.

Railway undertakings have to pay the infrastructure manager charges for the use of railway infrastructure, which are used to fund its business. Charges are to be set at the cost that is directly incurred as a result of operating the train service (Art. 31). However, in order to obtain full recovery of the costs incurred by the infrastructure manager, if the market can bear it, a member state may levy mark-ups on the basis of efficient, transparent and non-discriminatory principles, while guaranteeing optimal competitiveness of rail market segments (Art. 32). The national regulatory body has the power to consider complaints regarding the charging scheme and the level of infrastructure charges (Art. 56).

Railway stations are the entry point for passengers to the railway system, even before they board a train. The EU regulates stations with a combination of legislative measures to create a safe, efficient and accessible environment for passengers and workers. Directive 2012/34/EU clarifies the legal rules applicable to the EU rail sector for improving quality with competition, strengthening market supervision and improving investment conditions. Regulation (EU) 2021/782 protects passenger rights by ensuring that stations are accessible and secure, and that they are provided with clear information. In particular, Commission Regulation (EU) No. 1300/2014 establishes the technicalities of interoperability and station design to ensure the accessibility of railway stations.

#### **4.4 Roads**

Access to roads, and in particular charges for the use of roads, have been prone to conflict in recent decades. Directive 1999/62/EC, as repeatedly amended, rules on charging heavy goods vehicles (over 3.5 tonnes) which provide freight transport services. This directive also differentiates between (1) vehicle taxes (which are imposed by member states on vehicles registered in the relevant member state), (2) tolls (defined as a specified amount payable for a vehicle based on the distance travelled on given infrastructure and on the type of vehicle) and (3) user charges (a specified amount of which confers the right for a vehicle to use the infrastructure for a given period).

No legislation has been adopted on road charges for light vehicles and the Commission has only published a communication (European Commission, 2012). However, in 2017, the Court of Justice declared that Germany, by introducing an infrastructure use charge for passenger vehicles and by simultaneously providing relief from motor vehicle tax in an amount at least equivalent to the amount of the charge paid to the benefit of owners of vehicles registered

in Germany, failed to fulfil its obligations regarding the freedom to provide services and non-discrimination in transport.<sup>2</sup>

## 5. CREATING A SEAMLESS EUROPEAN TRANSPORT INFRASTRUCTURE

The Trans-European Transport Network (TEN-T) is the EU policy framework for the gradual creation of seamless infrastructure covering all modes of transport, that is, railways, roads, inland waterways, maritime routes, ports, airports and intermodal terminals, both for passengers and freight. However, it does not cover Europe's 'air infrastructure', which is dealt with separately under the heading of the Single European Sky (SES) and which had its beginnings back in 1999. We do not cover the SES in this chapter, as the topic warrants a chapter of its own (Finger & Baumgartner, 2014; Finger et al., 2017). In all cases, however, the objective is to interconnect (e.g. connectivity) the infrastructure of the different member states and to connect the various pieces of infrastructure among themselves (e.g. multimodality).

The origins of the TEN-T go back to the Maastricht Treaty of 1992, in which the idea of Trans-European Networks (TENs) was initially launched. TENs were said to cover telecommunications, energy and transport. As for transport, the first TEN-T guidelines were adopted in 1996, and at that time key transport corridors and corresponding infrastructure projects were identified. With EU enlargement in 2004, additional interconnection projects between member states were defined. A major step forward occurred in 2013 with Regulation (EU) No. 1315/2013, which restructured TEN-T into the core and comprehensive networks.

The core network consists of nine multimodal and two horizontal priorities (the European Rail Traffic Management System and European Maritime Space). They support the completion of the trans-European transport network. Core network corridors are the backbone of the EU transport infrastructure and will have to be completed by 2030, whereas the comprehensive TEN-T network will have to be completed by 2050. The corridors connect major cities, ports, airports and logistics hubs, while the comprehensive network covers all EU regions and reaches beyond the main urban centres. Each corridor involves multiple modes of transport and defines key infrastructure projects such as high-speed railways, modernised ports, inland waterways and logistics hubs.

The next step in this development is the integration of so-called 'urban nodes' – 432 have been identified so far – in the comprehensive network, so

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<sup>2</sup> C-591/17, *Austria v Germany*, ECLI:EU:C:2019:504.

as to link EU-wide transport infrastructure to urban transport infrastructure. This is of particular relevance to the interconnection between active modes of transport that serve to meet sustainability goals and enhance efficiency. The new TEN-T regulation, Regulation 2024/1679, represents a shift in focus on building and optimising urban hubs by addressing challenges associated with railway stations and urban infrastructure. It incorporates various legislative matters, from mitigating climate change to the design of terminals and passenger rights.

The main challenge here is, of course, not regulation but financing this interconnected and multimodal transport infrastructure, both in terms of the amount of money required and also financing vehicles, namely the Connecting Europe Facility (CEF), a Recovery and Resilience Facility (RRF) and more generally public-private partnerships (PPPs). The transport infrastructure not only needs to be built but it also needs to be maintained and adapted to changing mobility needs, ideally by making use of evolving technologies. Moreover, climate and geopolitical shocks are affecting the transport sector, forcing it to become more resilient, efficient, competitive and sustainable. Even though, back in 2021, Regulation (EU) 2021/1153 establishing the Connecting Europe Facility (CEF) for 2021–2027 was adopted, the available funds have already been allocated. Therefore, the Multiannual Financial Framework after 2027 must address these challenges while promoting PPPs as a priority.

## 6. CONCLUSION: SUSTAINABILITY AND DIGITALISATION ARE BOTH CHALLENGES AND OPPORTUNITIES FOR THE SETA

With the European Green Deal and the Smart and Sustainable Mobility Strategy of the 2020s, Europe, and in particular European transport, is to be decarbonised. This is, first of all, a challenge for financing, but more importantly in our context a challenge for regulation. Indeed, green financing should not distort the market and should contribute to enhancing the single market. However, this is easier said than done, as greening challenges the distinction between infrastructure and services and in some cases leads to vertical reintegration as an environmentally more efficient solution.

In addition, creating a SETA was initially a sectoral undertaking in which competition was to be introduced in each of the modes of transport separately. Greening challenges this sectoral approach, for example in the cases of modal shifts and multimodality, thus creating market distortions between the modes of transport and requiring new regulations to address such market distortions.

The same can be said for digitalisation, which also challenges unbundling and the sectoral approach to de- and re-regulation (e.g. smart multimodal mobility). However, competition, and competition regulation, are the DNA of

the EU approach to creating a single European transport area and a single European market more generally. How can decarbonisation and digitalisation be dealt with in a way that does not challenge this very foundation (DNA) of the European project but instead enhances it? So far, we are still witnessing many nice words, such as sustainable and smart mobility, but the challenge is real and not yet fully addressed.

Hence, regulation is an enabler in the transport sector as it sets clear standards and rules for it to be interoperable, fair and efficient. Achieving a fully integrated EU transport system is challenging due to infrastructure gaps, differing national regulations and environmental concerns. Furthermore, in the coming years the EU will also have to address aging infrastructure and vehicles, which further complexifies the above challenges.

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