

Development of rail freight in Europe: What regulation can and cannot do

Belgium Case Study

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1. Introduction

The European rail environment clearly is in movement. The White Paper on Transport (European Commission, 2011) aims at increasing rail market share. By 2030, 30% of all freight transport over distances of more than 300 kms is to happen via rail or water. By 2050, that should be 50%. As this paper focuses on Belgium, where 300 kms means crossing the entire country, the above pan-European policy objectives have immediate relevance for the analysis of the Belgian rail freight market. Moreover, still according to the European Commission (2011), the rail image of the past, more in particular a rail sector that evolves slowly, both in the areas of infrastructure, operations, capacity and terminals, needs to be cleared out. Furthermore, the rail sector also suffers from a lack of investment, coupled with a high cost structure and high price levels.

For a European port region or nation, like Belgium, with an important need for rail capacity for handling their hinterland-bound port traffic, all rail developments have an impact on the logistics competition debate. In the first place, the efficiency of the transport system can be tackled, among others in the field of mode split. Think about the possible consequences of introducing a kilometre charge for road freight transport. Next to that, there are also derived, sometimes unexpected effects. For instance, a far-reaching trend towards consolidation can lead to monopolistic or oligopolistic behaviour of railway operators, both in terms of pricing and capacity allocation. That can have important consequences for the rail freight competitive landscape, especially for a small country like Belgium.

This paper deals with the possible evolution of the market structure in the rail freight sector, with a focus on Belgium, but framing the developments in a wider European context. This can be very relevant for a country like Belgium, as explained later in this paper. The paper limits itself to freight transport. Section 2 analyses the demand for rail freight, while Section 3 reviews the supply-side. Section 4 reviews the existing regulatory context and the operators' competitive strategies. Section 5 considers possible scenarios for the European railway sector and their implications for rail freight in Belgium. Section 6 sets out current and future issues for rail freight policy. Section 7 draws a number of conclusions based on the analysis set out in the previous sections.

2. Demand for rail freight transport

Rail freight transport does not have a prominent position in Belgium, compared to other European countries. The period 1991-2012 saw an absolute volume growth, and overall an increase of market share, with the exception of the years 1993-1995, 2000-2001 and 2009 (see Figure 1). According to the latest Eurostat statistics¹, rail freight share in Belgium has grown

¹ http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsdtr220&plugin=1

marginally since 2009, but, at 17.5% in 2012², remains low when compared to inland and road transport. The reasons for the low market share are, among others, the perception among the customers that rail transport offers insufficient quality. Those customers want reliable and flexible transport, preferably with high average speed (Blauwens et al., 2010). Operators experience difficulties to meet the expected service levels³. The lack of European interoperability adds to that, raising organizational problems at the country borders.





Source: Eurostat (2014)

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Rail freight transport in Belgium can be subdivided into four transport forms: parcel loads, wagon loads, complete trains and intermodal transport. For parcel load transport, in most cases, a number of boxes or pallets are being transported, that do not make up a full wagon. In practice, this kind of load is no longer expedited by train in Belgium, but the transport was taken over by road transport. The wagon load transport happens when companies cannot fill a full train. The separate wagons are picked up at the supplier so as to be sorted and combined at a central location, and sent off to a point of destination. With full trains, one producer can fill a full train, whereby the goods can be transported directly from the producer to the buyer. The intermodal segment comprises all dispatches that require a transfer between different transport modes. Implied is in particular the inland transport relation between road and rail.

The transport of complete trains is the easiest to execute and is, thanks to its high operational speed, often very profitable. This was the segment that attracted, after the liberalisation, the

² The 2012 figure is an estimate by Eurostat. The latest measured data available is for 2011, with a 15.2% modal share for rail freight.

³ SNCB Logistics heavily worked on the reliability of freight trains. A registration in March 2011 showed that 76% of bloc trains arrived with less than 30 minutes of delay. The Single Wagon Load quality lags behind, but evolves positively (Pauwels, 2011).

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first new operators in Belgium, in particular linked to the presence of large, volume-generating seaports. Sorting and combining wagon loads is very time-consuming, which leads to long transit times. Hence, wagon load transport experiences enormous competition from road transport. Since about 50% of the total rail freight volume consists of wagon loads, the European Union has an interest in avoiding this share being taken over by road transport⁴. However, empirical evidence for Belgium shows that wagons loads are the first to disappear from the rail freight market, as none of the private entrants really seems interested in them. Once the 'intermodal' cherries are picked by private entrants, the remaining basket of rail freight products is even less profitable, and therefore is prone to shifting to road.

Intermodal transport mainly deals with containers. Container transport experienced the largest growth during the last decade, as a consequence of the growing world trade, and this is also reflected in the intermodal transport. Nevertheless, intermodal transport is the most profitable segment, if at all, in Belgium, as a consequence of the big competition with road transport. This has two causes. First of all, distance plays a big role. In intermodal transport, rail transport is, especially at longer distances, less expensive than other transport modes, due to the latter extra transfer costs. However, goods often need to be transported over shorter distances. Furthermore, intermodal transport over land is much more expensive than intermodal transport via inland waterways. Table 1 summarises the characteristics of the different train segments as observed in the Belgian market.

Segment	Raw materials	Total volume transported by rail (%)	Competitive environment	Profitability
Wagon loads	Chemical products Cars & machines	±50%	Competition from road transport Complex production process with high access barriers	Loss-making
Complete trains	Bulk material Building material	±35%	Competition from traditional inland navigation Competition between the different rail companies Price reduction	High
Intermodal transport	Finished products Containers	±15%	Big competition from road transport Subsidised in different regions	Loss-making

Table 1: Characteristics of the different train segments

Source: Xrail, 2010

As mentioned, a particular generator of freight transport are the seaports, with Antwerp and Zeebruges as the prime ones in the area of intermodal transport, while again Antwerp but also Ghent account for a lot of the parcel and wagon load traffic.

⁴ The EU among others particularly stresses on co-modality, where each mode plays its strengths. That implies road transport for the short distance before and after an intermodal train journey.

Figure 2 shows the international character of the port traffic for Belgium, with a prominence of Europe for both inbound and outbound traffic. That implies that a lot of the port-bound traffic comes to or leaves the port via land.

Of that land traffic, only the smallest share is handled by rail (Figure 3). Road clearly is dominant, followed by inland navigation. Nevertheless, this still leaves a volume of more than 200,000 containers per year handled by rail transport with pure seaport origins or destinations.



Figure 2: port traffic by origin/destination

Source: Steunpunt Mobilo (2013)

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Figure 3: Mode share at Belgian seaports

Source: Steunpunt Mobilo (2013)

Two developments offer potential for growth for rail freight. In the first place, there is the European Commission policy that actively tries to reach a modal shift, away from road transport, in the direction of other modes, among which rail. The European rail liberalisation Packages are to contribute to that. An observation though is that subsidies within rail transport and inland navigation have often led to those two modes competing with each other, and hence less with road transport. For the future, there is a need for an approach that avoids this kind of effects. Coupled with that, there is the strong future growth of transport volumes that is to be expected. Figure 4 gives an idea of the estimated growth volume for the period till 2018 in Belgian freight transport, based on data since 1990.

Forecasts build on the principle of the derived transport demand, whereby future freight transport is a function of the economic growth, social trends and the bilateral trade relations between the different Member States. For a small country like Belgium, the latter is of crucial importance. A remarkable observation is that, historically, freight transport grows at a rate comparable to that of the GDP, but after a certain time, one sees a slow decoupling of freight volumes and GDP, a consequence of the increasing share of services in supporting GDP growth. One thing is clear: also in the future, there will be an important increase for the volume of commodities to be transported. The question is what share of that rail transport will handle.



Figure 4: Transport activity growth for Belgium

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Figure 5 shows with short-run forecasts that the total volume in the period 2010-2015 at European level will increase by about 20%. Including Europe is important, as Belgium is a small and very open economy, impacted more by economic growth and freight transport evolution in neighbouring countries rather than in its own economy. Figure 6 proves the latter by highlighting the increasing volume of transit traffic, and the high shares of imports and exports.

In 2013, the transport volumes of 2008 are reached again. The average annual growth is 3.4%. In the first years of the considered period, the growth percentage is bigger though than at the end of 2015, where it only amounts to 3.1%. The cause is the expected revival of the heavily affected freight transport after the economic crisis of 2008 (Datamonitor, 2011, p.35-36; Gasparic, e.a., 2009, p.3).

If the rail sector wants to consolidate its market share, and enlarge it, hard work will be needed on the weaknesses and threats. Typical examples are the low operational speed, the different degree of liberalisation in the Member States, and possible fragmentation of volumes due to too many suppliers, which leaves part of the economies of scale unused. Each of them is an element that negatively impact on the generalised costs through time and/or out-of-pocket costs.

Source: Meersman, 2013



Figure 5: Prediction of freight transport in Europe in the period 2010-2015

Source: own processing of Datamonitor, 2011

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Figure 6: Destination of Belgian freight transport



Source: Steunpunt Mobilo (2013)



3. Supply on the rail freight market

Within rail freight transport, historically executed by the former nationally controlled railway companies (SNCB, NS, SNCF, DB, FS, etc.), a monopoly was present. That may imply decreasing average costs, with marginal costs below the average costs. Under that condition, a market tends towards one sole supplier. The reason for that natural monopoly was the high capital cost for building infrastructure. That, together with the fact that newcomers were kept out, gave the national railway operators a monopoly for rail transport, but not for transport as such.

With its liberalisation measures, the European Commission also wanted to end the monopolistic power of the traditional railway operators, through a division of the components. The cause of the decreasing average costs, the very high infrastructure cost, was split off. In executing train services, competition is possible, while issues like signalling and infrastructure management are non-competitive.

What can be learnt from this for the eventual need of a regional rail policy? The rail mode can without a doubt perfectly be integrated into a policy that is directed, among others, towards efficient transport, combined with a modal reallocation. That requires though that the same rail mode, conforming to European legislation, gets liberalised in such a way that on the one hand European targets are reached, and on the other hand rail transport gets restructured in an efficient and competitive way. That way, each Member State is free in choosing its own separation regime, as long as the EU Directive's conditions are met. Belgium needs to check that the European targets get met and that no undesired effects emerge that put Belgium's competitive position as a logistics hub at risk.

The introduction of the European rail directives raised resistance. After more than 150 years of monopoly power, it was for the various national rail operators not evident that they would wish to share that power with other players. One of the targets of the Second Rail Package was to create a quick and efficient freight transport by means of so-called 'freight freeways'. That implies opening up the network to rail freight capacity suppliers, which leads to strong resistance by the incumbents.

In what follows, the paper assesses for Belgium and the most important surrounding countries the market structure, to get an insight into the current market structure. Including the neighbouring countries is not only useful for benchmarking, but also necessary, as the open Belgian economy also implies that many international rail freight trips take place, more and more often operated by neighbouring operators. Moreover, especially for port-related traffic, there is huge international competition. In case the port hinterland transport in a specific country can benefit from a liberalised market, with better operational conditions, ports in that country may attract traffic from ports in other countries, thereby also diverting the related rail hinterland transport. In that sense, there is strong competition between the seaports of Antwerp, Rotterdam, Hamburg, Bremen and Le Havre.



3.1 Market structure in Belgium

Through the law of 21 March 1991, the status of SNCB changed from a state company to public limited company with an independent management. SNCB became more independent, although it remained fully owned by the Belgian State. In this law, the tasks of public service provision are described. Freight transport and international passenger transport do not fall under that rule of public service provision (Van Looy, 2005).

European Directive 91/440 only required an accounting separation between the network and the operations. In Belgium, the separation in the first stage was limited to a strict, but at the same time minimal respect of the Directive, whereby the SNCB became an integrated company that was in charge of managing the infrastructure*strictu sensu*, and next to that it performed the tasks of a rail operator. Safety tasks were handed over to other accountable entities. This organisational structure only survived for a number of years(Mistiaen, 2005; Van Looy, 2005; Willems, 2001).

In 2005, the former SNCB got transformed into a holding company, maintaining the existing legal status of a public limited company (see Figure 7). Three autonomous state companies made up the entity; SNCB Holding, as the parent company, and two daughter companies, Infrabel and SNCB. Infrabel was put in charge of the infrastructure, and SNCB was responsible for the transport services. The holding structure met the European Directives' criteria for accounting separation. As opposed to the former integrated company, safety tasks could still be executed within SNCB holding (Mistiaen, 2005, pp. 22-23; Van Looy, 2005, pp. 71-72).

Apart from the holding structure, a Fund for Rail Infrastructure was set up. The traditional railway companies often had built a high volume debt towards the State. The Member States were therefore requested to write off the railways' debts or put them on hold temporarily, so that the free market system could work without too many burdens from the past. In Belgium, the old SNCB debts were managed by the Fund for Railway Infrastructure. The fund owns certain estates, and rents them to the infrastructure manager, Infrabel (Willems, 2001, p. 38).

Figure 7: Holding structure SNCB 2005-2013



Source: SNCB, 2011a

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Through the organisational change towards a holding structure, Belgium met the minimum requirement of the Directive of the European Union. However, one can wonder whether this form of liberalisation is sufficient for meeting the objective of an efficient and competitive market. Through the years, this structure turned out to give rise to problems related to security (among others caused by rail accidents or near-accidents), responsibility and contact point for customers, and keeping an integrated management. Add to that the still dominant; albeit decreasing, market share of SNCB as to rail freight (Table 2). Therefore, the Belgian Federal Government decided at the beginning of 2013 to transform the holding structure, leaving only an infrastructure manager (Infrabel) and a rail operator (N-SNCB), with the holding company removed. In order to secure the position of the staff, and with that secure industrial peace, one common social secretariat will be established (HR Rail). The latter would provide job selection and training to both N-SNCB and Infrabel (Infrabel, 2013). The structure is operational as of 2014.

Each rail operator needs to possess a rail license and a safety certificate. The request for the rail license needs to take pace in the Member State where the transporter is located, but it is valid in all EU Member States. The safety certificate is being issued per Member State. In Belgium, those are being issued independently by DVIS (Service Safety and Interoperability of the Railways). DVIS belongs to the Federal Public Service Mobility and Transport administration and allocates a certificate as soon as the required safety limits of the country where the operator wants to be active are met.

In 2011, twelve companies fulfilled all the conditions for operating freight trains on the Belgian rail network⁵. Not all were active. Within SNCB, freight transport is being executed by SNCB Logistics, which is since 2011 an autonomous company and freight transporter. The commercial

⁵ As far as freight is concerned, apart from SNCB Logistics, licensed operators are Crossrail Benelux (CH), SNCF Fret (FR), TrainsporT (BE), ERS Railways (NL), Captrain Belgium (BE), DB Schenker Rail Nederland (NL), RURTALBAHN BENELUX (BE), Rotterdam Rail Feeding (NL), Euro Cargo Rail (FR), Europorte France (FR) en Railtraxx (BE). CFL Cargo (Lux), as opposed to the past, does no longer have a safety certificate.

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freight activities of SNCB Logistics were divided into two groups: IFB (Interferryboats), which mainly works in the intermodal market and maritime container transport, and Xpedys, which provides logistics solutions, mainly for transporting bulk, raw materials, agricultural and steel products. Since July 2011, Rail Force, part of Xpedys, operates in the transport of consumer goods and freight for the chemical sector and the car industry. Co-operation agreements with Italy and Germany are named respectively Sibelit and Cobra. In Northern France, SNCB Logistics operates under the name OSR. Traction is mainly preformed in-house, although on some international trajectories there is co-operation with both incumbents and private operators (Pauwels, 2011). In 2008, SNCB Logistics' market share was still 93%, but it then decreased to 89.31% in 2009 and 86.62% in 2013. (European Commission, 2009 and 2014; Infrabel, 2011)⁶.

	Share in train-kilometres (%)		Share in tonne-kilometres (%)	
2008	Private	6,97	Private	5,66
2008 -	SNCB	93,03	SNCB	94,34
2000	Private	10,69	Private	9,50
2009 -	SNCB	89,31	SNCB	90,50
2010	Private	13,60	Private	12,21
2010 -	SNCB	86,40	SNCB	87,79
2011	Private	13,31	Private	11,71
2011 -	SNCB	86,69	SNCB	88,29
2012	Private	15,74	Private	13,38
2012 -	SNCB	84,26	SNCB	86,62

Table 2: Market shares, SNCB and private operators

Source: Own processing of Infrabel, 2011 SNCB

An interesting observation in relation to ports is that seaports themselves have started taking a very active role in port hinterland connection development by rail. The Port of Antwerp, for instance, is involved in two ways:

- The setup of Antwerp Intermodal Solutions. Together with a number of freight handlers, the Port Authority launched the AIS project (Antwerp Intermodal Solutions) in 2009-2010; AIS is a collaboration in which existing freight volumes are grouped and then transported to the hinterland. Rail operators are able to bid for the grouped volumes of shippers and 3PL service providers, which further expands the rail offer via new connections. In 2010, this resulted in no less than eight additional rail connections;
- At the same time, the Port Authority is actively investing in close co-operation with hinterland hubs (Genk, Grobbendonk, Liège, Brussels, Geleen) to group rail volumes from and to consumption, production and distribution centres (Port of Antwerp, 2013).

⁶ The dominant position of the SNCB group especially in the first years led to a number of problems. According to ERFA, the representative of the private railway operators, Belgium, together with Poland and Italy, is on top of the list of complaints of private operators on the lack of fair market functioning (Tonon, 2011). The first years, there were conflicts in particular about the operations at the terminals, and about the training modalities of Belgian train drivers.

The issue of certificates for train drivers was a point of discussion in the first years of liberalisation in Belgium. But after the setup of the different training institutes, like SNCB Logistics Rail Training Institute, Crossrail Training Centre, Advies R&C, this is no longer an issue. There is still a strong link between the official organisations and the former monopolist SNCB. An example is the knowhow of the OOIS (Research Entity for Accidents and Incidents on the Railways) Service that does research on the serious operational accidents that happen on the Belgian rail network. The know-how came until 2009 directly from SNCB Holding. After that, a list of specialists in the matter was drafted. The historical ties will however survive for a while longer, until the liberalisation really matures.

3.2 Market structure in a number of neighbouring European countries

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In all European countries, the rail freight market was in the meantime liberalised, even though 14 years elapsed between the first and last liberalisation (Figure 8). Greece is the only European country where momentarily no private player is active yet.

In The Netherlands, the liberalisation was continued further than technically required by the European Directives, even though the latter obeys the spirit of the law. Especially in freight transport, big changes took place. Rail freight transport in The Netherlands has been fully liberalised. The former cargo division of the Dutch railway operator was bought by DB Schenker. Along with that, there are eleven inland and foreign operators on the Dutch rail network. In 2008, the market share of DB Schenker Rail Netherlands was about 64% (European Commission, 2014). The Dutch rail market has hence truly transformed since the liberalisation, much more than the Belgian market.

France has never been a supporter of liberalisation of the rail freight market, and has only introduced modifications that comply with the minimum requirements of the EU directives. The infrastructure manager still belongs to the SNCF group, which may rise questions on its independence in allocating infrastructure. The rail network manager, RFF, used to outsource a lot of tasks to SNCF. Despite the accession of a number of new players, SNCF maintains its dominant position. In 2013, its market share was about 68% (European Commission, 2014). This high market share goes together with big losses in the freight division 'Fret SNCF'⁷. Fret SNCF is now an active player also on the Belgian market.

⁷ SNCF also replaced a number of times its CEO and with that also its strategy. The latest years, an expansion policy was maintained towards Belgium, where SNCF operates its own trains to the Port of Antwerp, and also conducted different takeovers in e.g. Germany and Italy. These takeovers were transformed in 2010 into Captrain. In logistics, SNCF took over Geodis. SNCF offers intermodal logistics operations.

Figure 8: Liberalisation progress in selected European countries



Where exact dates are not available, they have been set to the appropriate year.

Source: Independent Regulators' Group - Rail, 2013

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Germany was one of the precursors in liberalising. Thorough reforms were introduced. The choice was made for a holding model with Deutsche Bahn AG as the parent company, and five independent daughter firms, among which was DB Cargo AG for freight transport (Mistiaen, 2005). In 2000, Railion emerged from the merger of DB Cargo with the freight division of the Dutch Railways. In the years that followed, various takeovers followed in other countries. In 2009, the name was changed into DB Schenker Rail, after the takeover of the large logistics player Schenker.

The German Federal Government is in charge of infrastructure investment. The different German states have authority over the non-Federal rail operators and are in charge of regional transport. A large number of new operators got a license to operate on the German rail network. Still, the current holding structure is questioned by some, in particular in relation to the assignment by DB Netz AG of rail slots on the infrastructure. Through the holding structure,

the infrastructure manager is still a part of Deutsche Bahn⁸. The headline fee for using the infrastructure is also considered by some as being high, with advantageous tariffs for large transport volumes, which may favour large operators⁹¹⁰. One does observe in this respect that, while in general there is a large diversity of charges among countries, access charges in Germany for freight are not among the highest in Europe (Figure 9).



Figure 9: Average infrastructure charge

Despite the many new operators, DB Schenker Rail still has the largest share on the German market, with a market share of 71.4% in 2013 (European Commission, 2014). DB Schenker has also built a strong position on the European rail market through a series of takeovers and joint ventures. DB Schenker takes a major share now among foreign operators on Belgian territory.

We can therefore observe that, within Europe, the liberalisation process resulted in different market outcomes. Some countries experienced a faster market liberalisation, which led to a growing market share for the new, private players, as shown in Figure 10. Belgium has had an average experience with market liberalisation, with a still dominating market share for the incumbent (the former national monopolist). While Belgian legislation has opened the market to newcomers, the specifics of the market, with a lot of parcel and wagon load traffic, makes it

Source: Independent Regulators' Group – Rail, 2013

⁸ The German (and Austrian) governance structure was confirmed to be in line with EU law by the European Court of Justice judgments of 28/02/2013.

⁹ This is not, however, a clear cut issue, since volume discounts, while favoring large operators, also reward investments in scale, and contribute to lowering the effective infrastructure access fee.

¹⁰ Deutsche Bahn also possesses a number of power plants, which also impacts on the market functioning.

overall an unattractive market to enter. An exception is the Belgian intermodal market, a majority of which is now in foreign hands.



Figure 10: European market shares of incumbents (2011)

Source: Independent Regulators' Group – Rail, 2013

3.3 Xrail: alliance or cartel?

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On 18 February 2010, the alliance Xrail was launched, with the goal of reinforcing the customer friendliness and the efficiency of international rail freight transport. The transport of wagon loads¹¹, in particular over an international stretch, is at this moment not competitive. It suffers from very high fixed costs. Road transport has no similar fixed costs. Xrail consists of seven European freight operators: SNCB Logistics (Belgium), DB Schenker Rail (Germany), CFL Cargo (Luxemburg), Rail Cargo Austria (Austria), CD Cargo (Tszechia), Green Cargo (Sweden) and SBB Cargo (Switzerland)¹².

Xrail uses the existing infrastructure of the TEN-T network in order to transport wagon loads internationally. Despite the existence of the alliance, the different rail operators keep on competing with each other in price and customer service. Moreover, the intention is to allow in other members from additional Member States in the future, so that a reliable and transparent transport of wagon loads throughout the entire European continent can be guaranteed. In the

 $^{^{11}}$ With wagon loads, wagons from or for several customers are being grouped and/or brought to the same destination.

¹² SNCF was the only incumbent that did not step into that structure, as they do no longer believe in single wagon loads.

end, the type of alliance building illustrated by the Xrail case shows a way in which the traditional market structure of the rail industry can evolve towards an industrial/economic structure that is comparable to that of other modes (cfr. alliance formation in sea and air transport). Such alliances, we think, can have a particularly big impact on small markets like Belgium, even though its own national incumbent, SNCB Logistics, is part of the alliance, due to the larger traffic volumes handled by its bigger members, such as DB.

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The implementation of the liberalisation Directives differs by Member State, a consequence of the fact that the countries were free to choose their restructuring model. This has impacted on the market power that national incumbents have in each Member State, giving some of them, through the handling of large traffic volumes, access to big economies of scale, which in turn can then be exploited in adjoining markets.

Due to its small size, the Belgian rail freight market is especially vulnerable to such forces. Most of the countries considered in this paper have opted for a holding structure when reorganising their national rail operators. Under this approach, the independence of the infrastructure manager in assigning slots on the infrastructure can be questioned. Here, the question emerges as to whether the regulator can and does ensure non-discrimination. This problem does not arise, for example, in The Netherlands and the UK, where the infrastructure manager is an independent entity. Belgium lately followed this example by abandoning the holding structure in 2013.

Both the national and the international rail freight markets have been liberalised. Hence, in most Member States, new freight operators have entered the market, private ones as well as other national rail operators. The difference in scale of the operations is remarkable. DB Schenker Rail is the largest rail freight operator in Europe. In 2010, the company carried 105 bn tonne-km in Europe, while the other large player, Fret SNCF, carried only 33 bn tonne-km (Niederhofer, 2011). DB Schenker has been able to expand its share through acquisitions and takeovers, and through co-operation agreements with other rail enterprises in the various European Member States (Kerr, 2010).

The European Commission has continuously taken during the last years initiatives for establishing a free, liberalised European transport market (Blauwens et al., 2010). In rail transport, numerous directives and regulations were approved, with a view on harmonising the legislation at European level. Each Member State has to align its national legislation with the European directives before those can take effect. For regulations, that is not the case, since those are directly applicable to all Member States and binding in all their components (e.g. access to the market). The transposition into national legislation can instead lead to a different interpretation in the different countries. This is because Directives are actually only binding as to

the result to be achieved and not as to the way in which this is to happen (e.g. technical and fiscal harmonisation).

As far as rail transport is concerned, the European Commission has, through its interventions, systematically tried to make the structure and organisation of European rail transport more transparent, and to improve the financial position of the rail companies (Blauwens et al., 2010). This section digs deeper into a number of important steps in relation to freight transport and how they have been translated into actions by Belgium.

A first series of regulations dates back to 1969 and 1970. They mainly dealt with the conditions and modalities for granting financial state intervention. For Belgium, this meant that the national rail operator could be kept, but under strict public spending regulation.

For decades, rail companies were subject to strict government regulation. With a view on greater efficiency and an improved competitive landscape, the European Commission wanted to work on the generation of different structural approaches. A first breakthrough in the liberalisation process came with Directive 91/440 of 29 July 1991. The goal of that directive was fourfold (Blauwens et al., 2010):

- Guarantee the managerial independence of the rail companies;
- Cater for a clearly divided management of rail infrastructure on the one hand, and of the actual operation of transport services on the other;
- Financial sanitation;

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• Guarantee access to rail infrastructure, such that foreign companies get access to the national rail networks¹³.

To get access to the rail network, certain permits are needed, and slots need to be requested from the manager of the rail infrastructure, to whom furthermore also the slot user fees need to be paid. This was arranged through two supporting Directives in 1995 (Directive 95/18 and Directive 95/19), that needed to cater for, on the one hand, an honest and non-discriminatory allocation, and on the other hand an efficient and optimal usage of the infrastructure (Blauwens et al., 2010). In Belgium, this led to the setup of Infrabel as the infrastructure manager.

In July 1996, the European Commission published its White Paper 'A Strategy to revitalise the railways in the Community', with a number of strategies for stimulating rail transport. That involved the continuation of the efforts to make the rail operators financially stronger, the introduction of market principles and the integration of the different and independent national rail systems. Priority was given to the open access of the rail infrastructure for international freight transport. Based on the above-mentioned White Paper, the European Commission came out in July 1998 with a First Railway Package, with a number of amendments to existing

¹³ In a first phase, the opening-up of the national railway networks was limited to international co-operation agreements of rail companies, and to railway companies that offer international combined transport (article 10 of directive 91/440).

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directives. This package came into force on 15 March 2003. Increasingly, also in Belgium, the traditional national railway operator experienced competition from new companies (Rail4Chem, DLC, currently Crossrail, ERS Railways, etc.).

A next important step was in 2001 the European White Paper entitled '*The European Transport policy till 2010: time to choose*'. Worth mentioning are three action points that were explicitly meant to revitalise rail transport: elaborating a correct charging system for all transport modes, further developing Trans-European Networks (TEN), with special attention for rail transport, and achieving an open European rail market.

Based on that same White Paper, the Commission launched in January 2002 its Second Rail Package which got approved in April 2004. It contains five measures, in the field of liberalisation and technical harmonisation, increasing safety and operability, with a view on a quicker expansion of the rail freight market. Important in view of a faster growth of the infrastructure is Directive 2004/51. As of 1 January 2006, the full European rail network, including the Belgian one, opened to international freight transporters. From 1 January 2007, that was also the case for cabotage.

At the end of 2008, the European Commission came up with a new proposal for a European rail network, now through the creation of rail freight corridors, based on three so-called business cases. That requires a better equilibrium on the international rail market between the products 'passengers' and 'freight', and also a better connection with other modes.

Since 2011, Europe focuses its policy on three broad axes: market functioning, infrastructure, and interoperability, based on the 2011 European White Paper (European Commission, 2011b). The latter aims at revitalising the European rail sector, through striving for a healthy financial basis, freedom of access to all services, and integration of the national systems. That White Paper then was transformed into the proposals for a Fourth Rail Package that the Commission put forward in early 2013. It proposes tackling rail management, opening up the market for domestic passenger traffic, introducing competitive conditions for public service contracts, and giving a new role to the European Rail Agency. This Rail Package is now being discussed in the Council, after being adopted by the European Parliament early in 2014..

Given the legislation and regulations at the Europpean level, It is hence clear that a rail policy for the separate countries and regions will always be a derived policy. For a port region like Belgium, with a high share of international traffic, both inbound and outbound, it is important that European legislation and, in particular, its transposition into national legislation have no adverse effect on the competitive position of the Belgian logistics sector and its users.

Since the liberalisation of the international freight transport in 2006 and the national freight transport in 2007, next to the existing national railway operators, many private rail freight operators have started operating. The question is to what extent this has influenced the competitive strategies within the railway sector.

A subdivision is to be made between the national, private, and public-private rail enterprises. Especially in the latter group, private enterprises of which the national rail operator owns part of the shares, the prominence of DB Schenker Rail Transport and SNCF can be observed, thanks to a series of takeovers and joint ventures in other Member States pursued by these two companies. From a Belgian point of view, the latter is of crucial importance, as will be discussed in Section 5. Additionally, we can also observe that a significant proportion of the new private rail enterprises are from Germany.

Still, there is a big interaction between the different train segments. In more than 70% of the cases, for complete trains or for intermodal transport, recourse needs to be made to wagon load services for the last mile. Before the liberalisation of the rail market, the national railway companies used the profits from complete train transport (block trains) for financing the loss-making segments, in particular wagon loads and intermodal transport. Through the liberalisation of the market, new players entered the profitable segment of complete train loads, a form of 'cherry picking'. Hence, average prices dropped, and thus also the profits for the traditional railway operators, which made the total operation even more loss-making. That is the reason why railway companies build alliances, where also SNCB is involved. Bringing together volume makes wagon loads into train loads, a market segment which is still profitable (CER, 2006, p.25-27).

Table 3 compares the market segments which SNCB is focusing on with a number of important railway companies in Europe. It can be observed that the national railway operators offer train loads in the three distinct segments. SNCF has limited the transport of wagon loads to profitable lines.

	Wagon loads	Complete trains	Intermodal transport
SNCB	Х	Х	Х
DB Schenker Rail	Х	Х	Х
Fret SNCF	Х	Х	Х
Trenitalia	Х	Х	Х
Veolia Cargo			
Captrain		Х	Х
Europorte	Х	Х	Х
Crossrail		Х	Х

Table 3: Summary of trainloads

CERRE

Source: Own processing of operator input

The smaller rail operators, with the exception of Europorte, limit themselves to intermodal transport and the transport of complete trains. The main reasons for this are, as already indicated, the large growth potential of intermodal transport, and the profitability of the block trains.

DB Schenker Rail is at this moment clearly the most prominent player, both as to transported volume and the solid capital structure, and has pursued an aggressive acquisition policy.

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Especially the capital structure of the parent company, Deutsche Bahn, is stronger than that of SNCB Logistics¹⁴. In 2009, the SNCB freight division still attained a solvency of 47.1%, notably more than that of the previously mentioned holdings. But the overall picture is less positive. Because of the 2008-2009 economic crisis, but also in the years before, SNCB Logistics suffered from a decrease of freight transport volumes, which resulted into a sustained loss. As a consequence, the group was not able to build or keep reserves. In 2012, transport volume decreased by another 17% when compared to the year before, up to 34 million tonnes. The loss decreased (€69,9 million in 2012 as compared to €185 million in 2011), with an operational loss that remains at €30,5 million. In 2013, the traffic and results seem to have improved slightly again. Most likely, that is due to the restructuring plan the company introduced.

SNCF has a healthy capital structure, with sufficient volume of reserves, but has a significantly lower solvency than Deutsche Bahn (16.10% in 2010). Fret SNCF, the group's freight division, experienced also a decrease in volumes during the period 2005-2009.

The private railway operators overall fare well. Operators like Crossrail and Veolia have or had a different capital structure, with limited equity. They experience good growth figures. Crossrail in particular has in the period 2005-2009 experienced positive growth, and this is reflected in the strong increase in revenues. Except for the disastrous 2008¹⁵, there was always a positive cash flow and corresponding operational benefit. Growth is high. Crossrail itself states that it generated more international traffic than the Belgian national railway operator (expressed in tonne-km).

The above analysis indicates that in the period 2005-2009, large changes have occurred in the liberalised railway market. In the future, more shifts will occur¹⁶, in particular on the Belgian market. The next section deals with that.

5. Potential scenarios for the Belgian market

The question now is how the market structure on the Belgian market will evolve in the future. That will depend in the first place on the strategies that the different concerned actors will adopt. Those strategies will without a doubt also be influenced by the growth of the economy and the derived transport volumes.

It is important for the railway operators to improve their financial situation again after the earlier losses of 2008 and in particular of 2009. This can materialise through reducing costs and removing inefficiencies. These strategies can more easily be adopted by private operators, while

¹⁴ The solvency of Deutsche Bahn in 2010 was 27.53%, as opposed to 16.4% for SNCB in 2009.

¹⁵ In 2008, a concordat was installed, whereby Crossrail could change its debt position and shareholder structure. A too ambitious growth plan and strongly decreasing volumes brought the company to the limits of bankruptcy.

¹⁶ In 2009, Veolia Cargo got taken over by SNCF Fret and Groupe Eurotunnel. The majority of the European activities was renamed 'Captrain'.

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for the traditional national railway companies is more difficult, mainly due to the continuously present strike threat (Gasparic, e.a., 2009), coupled with political and union influence¹⁷.

A potential, negative, future evolution is that not enough qualified train drivers are available. The scarcity on that market, also as a consequence of the good wage conditions within the former monopolists, combined with a sustained growth in train-kilometres, means that many private operators have difficulties attracting staff. Many of them, like Crossrail, have started training train drivers themselves (Crossrail Training Center, 2011).

Another evolution that needs to be taken into account is that of rolling stock. Through the creation of the European railway market, it became possible to request international slots without too many obstacles. Many companies did however experience sustained problems with homologating their long distance locomotives. Because of the many national signalling and electrification standards, a homologation procedure is time-consuming. Even though the national network managers have agreed a so-called 'cross acceptance', problems do still arise. To avoid such problems, many operators opt for long-distance diesel locomotives (i.e. Class 66), which however is not beneficial for the ecological impact of rail transport.

Three possible scenarios of future development that are crucial for the Belgian market are considered below. A first scenario starts from the expectation that the current market remains as it is. In a second scenario, DB Schenker can re-enforce its dominant position, which generates a de facto monopoly. In a third scenario, a duopoly between DB Schenker Rail and Fret SNCF emerges. For each of them, the implications for the Belgian market are considered.

5.1 Scenario 1: the market structure remains unchanged

In a first scenario, the current market structure continues to exist. This market structure most closely approaches that of pure competition for some segments (for instance intermodal long-distance transport), while for others (for instance wagonloads), it resembles more closely a situation with a dominant or even monopolistic player. A market with free competition is first of all characterised by a large number of suppliers and demanders. Due to the liberalisation of the railways, next to the national railway operators, a number of new rail operators have accessed the market.

Offering a homogeneous product is a second condition for pure competition. Rail freight transport can be considered a homogeneous service provision, at least within the respective segments.

In the third place, there can be no barriers to market entry. The different rail packages have catered for a liberalisation of the rail market. Because of this, everybody who disposes of the necessary certificates can operate on the rail network and offer rail freight transport.

¹⁷ Nevertheless, early 2011 and 2014, there were various strikes at the German operators. The train conductors wanted an equalized wage to that of Deutsche Bahn conductors.

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Finally, all market participants need to dispose of similar ('symmetric') and full information. In rail freight transport, there is market transparency, but the latter is not perfect.

Because there are many suppliers, a change of supply conditions by one railway company will not have a substantial effect on the overall supply conditions. The price level is reached on the basis of the market equilibrium. It is thus for rail operators not recommended to supply freight transport at rates higher than the applicable market price. The competition offers the same services in a cheaper way, whereby the company loses customers.

Through the liberalisation of the rail market, the national railway companies lost their monopoly in rail freight inside each Member State. In order to survive in a liberalised market, these enterprises needed to lower their price to the current market equilibrium. Railway operators that have negative results during a longer period will hence disappear from the market.

In general, it can be stated that the current rail freight market indeed shows many characteristics of pure competition. It needs to be remarked though that the long run equilibrium is not yet reached. Some companies, among others Crossrail, registered a profit, while others, like SNCB Logistics, suffered large losses. Since the rail freight market has only been liberalised for a few years, there will be more changes in the coming years in the rail freight market, so as to get to the long run equilibrium.

5.2 Scenario 2: a *de facto* monopoly

A second possible scenario lets the situation evolve towards a *de facto* monopoly. The prominence of DB Schenker Rail in the European rail freight transport could lead to a *de facto* monopoly, given the competitiveness and economies of scale and scope thay it can enjoy. In the beginning, also other operators will still be active on the market, but these are so small that they are little to no competition to the monopolist. Because of that, the monopolist could ask a price that is higher than the market price that would prevail in case of pure competition and, as a consequence of the price increase, there will be less production in comparison to a situation of pure competition. However, it has to be said, pricing power will always be limited by competition from other modes, especially road, so the overall effect on price and quantity supplied is uncertain.

At this moment, there is no monopoly power for this operator. Indirectly, a number of developments can give an advantage to this operator¹⁸. However, based on the profit figures, it can be concluded that DB Schenker Rail is not today in a monopolistic, or dominant, position.

¹⁸ The European Commission started infringement procedures against various countries. Germany comes back often, but is ranked third in the 2011 IBM Rail Liberalisation Index. There were procedures against Germany for not respecting, or not implementing quickly enough in national legislation, different Directives, like e.g. 91/440/EEC, 2001/14/EC, 2008/57/EC, 2008/110/EC, 2009/131/EC and 2011/18/EU. In February 2013, the European Court of Justice has fully rejected all claims that the EC had raised against Germany.

Table further 4 shows that DB Schenker sets a price that is not higher than the tariffs of other rail enterprises¹⁹.

CERRE

Table 4: Average tariffs for freight transport of one loaded wagon over a distance of 100km on a 2-axle train carriage – combined with infrastructure charges

	SNCB Logistics	DB Schenker Rail	Fret SNCF	Trenitalia	Veolia Cargo	Crossrail
Tariff (in €) for 100 km on 2 axles	593	598.5	731	638.5	n.a.	n.a.
Tariff for a 960 ton freight train (Euro/Train-Km)	2 (BE)	2.5 (DE)	2.67 (FR)	2,408 (IT)	2.67 (FR)	2 (BE)
Tariff for a 2000 ton freight train (Euro/Train-Km)	2 (BE)	2.5 (DE)	2.67 (FR)	2,408 (IT)	2.67 (FR)	2 (BE)

Source: Own processing from price lists of the different operators (figures first half 2011); International Transport Forum, 2008 (figures 2007-2009)

As a monopolist, DB Schenker Rail could aim at further horizontal integration, in order to materialise further economies of scale. Through the takeover of other companies, DB Schenker Rail could also expand further its network. Belgium's SNCB Logistics could be a prime target in that respect.

As opposed to other rail operators, DB Schenker Rail has a competitive advantage in that it can offer freight transport throughout Europe in its entirety. That way, the customer is sure that the same service is offered throughout the entire trajectory. Next to that, the company has pursued, through strategic alliances and joint ventures, a form of horizontal integration. Xrail, the cooperation agreement mentioned in section 4.3, that is to favour the competitive power of wagon loads, is a good example of this.

Through all of the above, DB Schenker Rail gets a clear strategic advantage compared with other rail freight operators. For other railway companies, including newcomers, it then becomes very difficult to compete effectively, at least on the same scale. Through that, there is big likelihood that DB Schenker Rail will only reinforce its strong position by buying even more rail operators in the different European Member States, such that larger volumes can be transported over longer distances. That way, DB can evolve into a monopolist in European rail freight transport. However, it has to be said that such evolution would be subject to competition law scrutiny, and therefore the likelihood of it happening is unclear.

¹⁹ The price levels should be qualified to the extent that nearly nobody is using those tariffs. Contracts and corresponding price agreements are made through negotiations. Large volumes can lower the price.



In any case, if such scenario was to materialise, for Belgium it would mean even more loss of 'local capital' control over its logistics sector, which got hit already by the disappearance of a lot of its industry.

5.3 Scenario 3: a *de facto* duopoly

A third possible scenario is that of a *de facto* duopoly develops, with the two current largest suppliers, DB Schenker Rail and Fret SNCF, left as the only large suppliers present in the market. Next to that, there will be other, small railway operators active, but they would not have influence on the decisions of the duopolists. Under this scenario, the market concentration of DB Schenker Rail and Fret SNCF could be sufficiently large so that they would behave as de facto duopolists. Since both rail operators offer the same products, they could determine their prices and production level based on a strategic interaction. However, DB Schenker Rail and Fret SNCF would need to trade off carefully how they would react to each other's decisions, as well as to market opportunities. Only if these two players would be able to get, together, a larger share of the market, prices could be higher. However, as in the case of the previous scenario, two counter-arguments could reduce, or remove, the likelihood of such scenario. Firstly, in terms of price, competition from other transport modes, especially road, will provide an important pricing constraint. Secondly, it has to be said that if the risks of such an evolution were to materialise, it would trigger the scrutiny by competition authorities, particularly at the EU level. Therefore, all in all, the likelihood of it happening, and its impact on prices and supply quantities, is unclear.

DB Schenker as well as Fret SNCF have in the past years bought different private and public rail companies. The most important drivers for that were always an increase of long-distance transport and a growth of market share. Through the takeovers, the rail network on which they can operate enlarges. Because of that, DB Schenker Rail and Fret SNCF offer a better service to their customers. Next to that, the takeovers of private rail operators can also have an additional cause. All railway companies need to reduce their costs and increase efficiency so as to be able to recover from the economic crisis. Private operators work in general more efficiently, as compared to the heavy structure in national railway companies. Through takeovers, certain efficient ways of working can be incorporated in the processes of the public takeover initiator (Gasparic, e.a., 2009). In those cases, one does buy, as a matter of speaking, the know-how of the private sector.

In order to remain competitive in a duopolistic market, the two rail companies would need to release loss-making entities from their company. In this way, for example, Fret SNCF has seriously limited already its activities in the wagon load segment. Next to that, both players are pursuing a vertical integration strategy by adding new business segments that are both profitable and have a growth potential. DB Schenker Rail and Fret SNCF have added logistics service provision to their activities. Next to pure freight transport, the two companies also



perform value added activities now. These operations are in many cases more profitable than the actual rail freight transport (Gasparic, e.a., 2009, p.6-8).

DB Schenker Rail has at this moment bought more European rail operators already than Fret SNCF. But also Fret SNCF is making acquisitions at a high pace. Both companies have a substantial share on their national market, as well as a large number of foreign daughter companies, through which they together hold the majority of the European rail freight transport (Gasparic, e.a., 2009, p.8-9).

With other public freight transport operators that are under financial pressure we do see the reverse move. This has been the case in Belgium where SNCB Logistics, at the beginning of 2013 forcedly sold H&S Container Line GmbH, Haeger & Schmidt International GmbH en RKE nv, that until then were part of the SNCB Logistics Group, and active in inland navigation, to Felbermayr Holding GmbH, Wels (Austria). This move has made the operator weaker, and less competitive, compared to the operators from its neighbouring countries.

5.4 The future will be different

A decade after the introduction of the first Railway Package, large changes have occurred on the rail freight market. In the future, without a doubt, there will be more shifts. Since the takeovers in European rail freight transport, in particular by DB Schenker Rail, the current market situation will most likely not remain for long. The Belgian market si likely in the future to, be dominated by a number of large players, so that the rail freight landscape in all likeliness will develop into either a *de facto* monopoly by DB Schenker Rail, or a duopoly with Fret SNCF. Whichever of these two scenarios materialises, for Belgium this will imply a loss of local 'capital' control in logistics, and in rail freight in particular.

To a certain extent, a comparison is possible here with air transport. By liberalising the air transport market, in this market a lot of new companies have emerged too after the liberalisation (both in the US and Europe), to subsequently converge gradually into some three global alliances and a number of large continental low-cost corporations. The latter gradually take over the smaller competitors, who often started up with private equity capital, and integrate them into their own company. A similar process at European scale seems evident for railways, holding a potential 'danger' for smaller countries.

6. Current and future issues for rail freight policy

Transport policy in Belgium has become nearly for all modes of transport and all issues a regional competence, but not for rail transport. Rail policy in Belgium remained a Federal competence. For a country that profiles internationally as a logistics hub, mainly to its three regions (Flanders, Wallonia and Brussels), it is also necessary to have decisional competence on a crucial transport mode like rail transport at the level at which the logistics policy is

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determined, which is regional. That implies being able to have an impact in various fields, from the level playing field, over logistics chain thinking and mode split policy, to actual market functioning. Co-ordination and integrated decision-making over the regions is required of course, but the specific needs of the regions are to be better taken into account.

One first of all needs to care about all European railway measures to be followed up. The recent liberalisation of the European railway market had the goal of creating an efficient mode that can compete at European level with road and inland navigation. A level playing field within the mode and between the modes themselves is paramount. When it appears that unfair competition plays out within the Belgian rail market, there should be no reservations about informing the European authorities. In the short term, there should be a national regulator that investigates market conditions, as proposed in the railway packages and the White Paper recast (Schlickmann, 2011). A policy directed towards further liberalisation of the rail market, like Europe prescribes, and directed towards maximum fulfilment via competition as much as possible, is crucial.

Port and logistics competition takes place more and more within the context of international logistics chains. Either one belongs to a successful logistics chain, or one loses market share. Within that competition scheme, all factors are important that influence the 'generalised costs' of a logistics chain. In the first place, those are the 'out of pocket costs', i.e. the amounts that effectively need to be paid, and time costs. Translated to concrete situations, that means, among others, supplying sufficient transport capacity, also in terms of hinterland transport, to avoid that (expensive) time loss is suffered.

Here, a point of attention arises. A government has an interest in having decisional competence in the area of rail capacity for freight transport. The Belgian rail infrastructure does and will in the future suffer from increasing congestion problems. In Flanders, which has one of the densest railway networks in Europe, bottlenecks will emerge. The ever increasing passenger transport will take away capacity from the freight operators²⁰. The priority rules on the Belgian network give the following priorities: international passenger trains, high-speed passenger trains, local passenger trains, freight trains and others (e.g. operational trains) (Infrabel, 2012).

At European level, work is performed on Rail Freight Corridors. Capacity on those corridors is assigned to rail operators by a specially designated entity. At this moment, the concept is in its infancy, even though the co-operation between the various infrastructure managers does result in quick and punctual freight connections. It should be noted that these international pathways can only seamlessly connect to each other if there is sufficient capacity at each national part of the leg. Moreover, the freight operators will delay each other at junctions (ports, terminals²¹,

²⁰ An infrastructure intervention in passenger transport has, contrary to perception, not only an impact on passenger traffic. Through additional capacity for these trains, possibilities emerge on the net for freight trains (diversion tracks or dedicated routes).

²¹ That way, the connectivity of the Antwerp terminals is already problematic. Practice shows that port shunting does not happen efficiently. The recent accession of the private player RFF (Rotterdam Rail Feeding) can be considered a move in the right direction.

etc.). A clear and transparent division of capacity is then needed. It is therefore important that the Federal Government of Belgium (which is the only competent level in representing Belgian interests at European level) and the regions (who are in charge of logistics and spatial planning policies) follow closely Europe's interoperability plans, and take proactive action where required. Therefore, insight is needed into which division of capabilities is desirable, socially and for the relevant users, in relation to the modes of transport and transport infrastructures, among them the seaports.

For relieving those bottlenecks in the medium- and long term, additional infrastructure will be needed. Infrastructure intervention in rail is a competence of Infrabel. Those interventions are financed by the government or via Public Private Partnerships (PPPs). The Belgian regions, as part of their logistics and transport policies and plans, need to make sure that infrastructure is built where the market requests such infrastructure and where it is socially desirable to do so. That implies that more competences in building and maintaining or renovating railway infrastructure are required at the regional level. To do that, Flanders has developed its Flemish Rail Strategy, which focuses as far as rail is concerned on the completion of missing links in the rail network, and sufficient intermodal terminal capacity and access. Temporary start-up subsidies are therefore considered. Ports are central in the expansion of the rail network on the Flemish territory, just like the Iron Connection between the port of Antwerp and Germany, and the second rail access to the port of Antwerp (Flemish Parliament, 2014).

At the same time, sufficient view on the European infrastructure plans is required. Those momentarily get shaped via above-mentioned Rail Freight Corridors from the European Rail Network for Competitive Freight (European Parliament, 2010), and furthermore also through the Trans-European Network for Transport program. With the latter, the Commission not only aims at establishing corridors, but in particular integrated transport networks. The projects cover all modes, among which also a number of rail projects that are of relevance for Belgium and for freight transport. That involves:

- Rail Freight Corridors 2 (Antwerp-Luxembourg-Metz-Dijon-Lyon/(Basel)) and 8 (Bremerhaven/Rotterdam/Antwerpen-Aachen/Berlijn-Warshau-Terespol/Kaunas);
- Introducing the ERTMS safety system which allows increasing, together with safety, also the capacity of the network.

Rail Corridor 2 moreover is also ranked as a priority project. The latter is important, as the development of the corridors obviously coincides with the necessary funding, partly put forward the concerned Member States, partly by Europe via the Connecting Europe Facility. The initial allocation of the latter suffered from the savings that Europe imposed, with a reduction of the budget as scheduled in 2012 of 15%, for a total amount of €23.174 billion.

More decisional competence implies also that the government can fully execute its modal split policy. Europe strives to transfer part of the growth of road transport to other modes of transport, among which rail. National and regional authorities partly have to fulfil that objective.

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In order to do that, one has to have some discretion over the most important leverages for rail transport, namely pricing and the time factor. The Belgian regions at this moment have a number of important strategic responsibilities in the logistics sector. The ports, as the economic engine of the region, requested and still do request infrastructural measures. An investment in port capacity is being executed with a view on growing freight volume, which then has a direct influence on hinterland connections. For Belgium, this implies not only connections on its own territory, but also on foreign territory, among others German, North-Rhine-Westphalia being an important hinterland origin and destination. Plans as currently being developed by e.g. DB Netz in that respect do not seem to take full account of those hinterland opportunities.

A similar reasoning can be followed as to the possible consequences of a structural evolution in terms of European market structure of rail freight transport. Suppose that the second scenario, as mentioned earlier, materialises, being an evolution in the direction of a DB Schenker monopoly. In the first place, pricing by a monopolist is substantially higher than in case of perfect competition. A monopolist does not only look at marginal costs, but on the intersection of marginal costs and marginal revenues. A higher price implies less rail transport than in case of perfect competition, which is disadvantageous to a policy that promotes a 'better' mode split, with less road transport and more rail and inland navigation. Higher rail prices do cause on average also a worsening of a region's accessibility, and hence also of the competitive position of the region and the companies located there²².

Furthermore, it is worth mentioning that past experience has shown that monopolists or oligopolists can exert much more and stronger influence on regional and international policy bodies. This entails the danger that, through monopolistic behaviour, the independence of regulating bodies is put under pressure.

A supplementary risk, from a seaport point of view, is that the rail freight transport monopolist is of foreign origin and/or is controlled by foreign capital. There could then be a risk that the monopolist also uses the pricing of rail freight, and the assignment of slots, for strategic purposes. A typical example is encountered in port competition. One could determine the pricing in such way that freight flows are pushed in the direction of German ports, instead of Antwerp or Rotterdam. This is not absurd, as it happened in the past too. Not so long ago, Deutsche Bahn conducted a similar policy. With the current structure of international supply chains, where the hinterland gets more important in the total generalized chain cost (van Hassel et al., 2014), such diversion is not unlikely in the future. With scenario 3, an evolution in the direction of a duopoly of DB Schenker and Fret SNCF, there is also a risk. That risk however is

²² A strategic problem has emerged as the most important rail operator in the Belgian ports – SNCB Logistics – is in a cumbersome situation. The operator with more than 85% market share is, in comparison to its European competitors, in a financially very weak position. Even when the management would be able to turn the tide, which it somehow seems to be able to do since 2012, the company does remain a small player in the European railway market. Since logistics flows do no longer depend only on logistics gateways like ports, but on logistics chains (ports + hinterland connections), the weak position of the most important operator seems to decrease the Belgian logistics competitive power.

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smaller, to the extent that the duopolists in their operations do not evolve towards forms of collusion or cartelisation.

Apart from the market structure, a regional government also has an interest in being included in the implementation of the European rail policy. Europe has in its most recent White Paper determined specific goals, among others in the area of rail freight market share. At this moment, the Belgian Federal Government remains responsible for the implementation of all legislation. In order to avoid that disadvantageous or perverse effects emerge for the logistics sector, it is useful to strive here towards an extension of regional competences. More concretely, it is crucial that rail policy keeps on targeting the international gateways, seaports for instance. As seaports are a regional competence in Belgium, and as the Belgian Federal Government has no competence there, it comes to the regions to determine the official Belgian position on the matter. Investments in rail infrastructure, which are a Federal competency, should follow that vision. A typical example is again the concern that there should be sufficient free space on the railway network. That requires integration with the passenger rail segment. The revision of the first Railway Package (Recast) was approved by the European Parliament on 3 July 2012. The most important change that is imposed is the position of the (national) regulator. The latter will need to be assigned more power and means. This seems, in light of the changing market conditions, a good thing. Conflicts would be sorted out quicker, and pro-active intervention would become possible (European Commission, 2012). In the negotiations, a European regulator was also mentioned. That seems to be put on hold for now, which is a shortcoming considering the general effort of preventing a less competitive market structure. Scenarios 2 and 3 have, in our view, a realistic probability for Belgium. In case that an abuse of market power would occur, a European regulator would be stronger than in the case where there is a division of competencies among Member State. The Member States have 30 months to transpose the Directive into national legislation.

Then, the question emerges of how a regional government can make that evolution towards more competences materialise. It is clear that one cannot force things. On the contrary, much better is a phased approach. At this moment, decisions in rail matters are taken at the Federal level in Belgium, and they are also implemented at that level. The regions have little or no degrees of freedom there. In due time, a different way of working is possible. Decisions are taken at regional level, in co-ordination with the other Regions. That kind of co-decision making already happens now between the Belgian Federal Government and the rest of Europe.

It is evident that such sensitive intervention in the way that the rail freight sector is being managed, cannot materialise in just a few months. To give the regional authorities more decision power, a number of things can (further) be allowed in the short term. Typical examples are investments in rail infrastructure, among others in the direction of seaports.

It remains to be seen what the new Government, that just got in power, with a dedicated Minister in charge of both mobility policy and SNCB – including SNCB Logistics – will propose as a policy. In the new Federal Government Agreement, it is in any case mentioned that "Stimulating

rail freight is essential to be able to further develop Belgium as a logistics turntable and at the same time take away trucks from the road. The future of rail freight and combined and wagonload transport in particular is important. For SNCB Logistics, we weigh with open mind all strategic avenues that contribute to a stronger position of the Belgian economy".

7. Conclusions

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Freight transport by rail was in recent years dealt with only marginally, also by decision makers in charge of transport policy, and also in Belgium. That mainly had to do with the negative perception of the rail service, and a rail sector that did not or only slowly did react to the evolving needs in terms of infrastructure, capacity and transit terminals. It is a sector that also gave little attention to the customer or the shipper.

Especially under European pressure, there came a change, which resulted in far-reaching rail liberalisation process. Central concepts were the strict division between rail infrastructure and services, better access to rail facilities, and guaranteeing the independence of the regulating bodies.

This paper treated the possible evolution of the market structure in rail freight transport from a Belgian perspective. Railway policy will for individual countries and regions always be a derived policy, steered first of all by the European Commission and the European Parliament. At stake is the transposition of a European policy aimed at further liberalisation and a reinforcement of the competitive power of the railways. For individual regions, it is of course important that no undesired (by Europe), negative effects emerge for the competitive position of their own logistics sector, including seaports.

The concrete implementation of the liberalisation happens in each Member State in a different way. Because of that, there are still differences in the relationships between the national infrastructure managers and the incumbents. There are many new entrants on the European market, with a notable difference in the scale of their operations. Also the Belgian market features a number of new entrants, but these are totalling less market share than in other European countries, probably due to the specificities of the market: a lot of parcel and wagon loads on the one hand, and concentration of just a few new entrants for intermodal and, respectively, chemical rail transport. The Belgian legislator and regulator have largely remained absent from analysing the evolution of the market, and the potential transfer of part of the competence from Federal to Regional authorities has not helped the matter.

Currently, there are less problems than in the first years after the liberalisation, even though it can be questioned how the capacity allocation will evolve in the future. Will a market with relatively many players remain, or will it evolve towards a duopoly by Fret SNCF and DB Schenker, or even a monopoly of DB Schenker? Uncertainty reigns, although there is a high probability that the number of market players will drop significantly, especially for a small

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country like Belgium. This would impact in particular on the intermodal rail flows, which would get to a higher extent in foreign hands, impacting in turn on competition between ports in different countries.

An evolution in the direction of a duopoly or a monopoly can have important consequences for individual countries and regions such as Belgium: in terms of construction, maintenance and renovation of the railway infrastructure; in terms of assigning railway slots; in terms of operational cost structure; and in terms of modal split. It is to be added that one should prevent economic actors using rail freight to achieve other, specific targets, for instance in the area of port competition.

Rail freight transport is important for, among others, economic development and reaching emission targets. It deserves absolute attention within transport policy. Despite the fact that it makes little sense to fragment from a European angle infrastructure and operations, one has to aim for two crucial policy targets. In the first place, the completion of the required rail infrastructure within, towards and from Belgium. The decision to build Belgian rail infrastructure should be based only on the market demand. Next to that, the guarantee must be given that at each moment, an appeal can be made to a strong, pro-active Belgian and European regulator that guarantee absolute neutrality in the application of the European legislation. The White Paper recast points in that direction. Under those conditions, rail freight can also in the future contribute to a sustained and even reinforced national competitiveness.



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