German river ports and their rail freight subsidiaries.

These 4 pages contain the central topics covered by a paper that was given at the AIVP International Conference given at Nantes and St Nazaire, 18 – 21 June 2012

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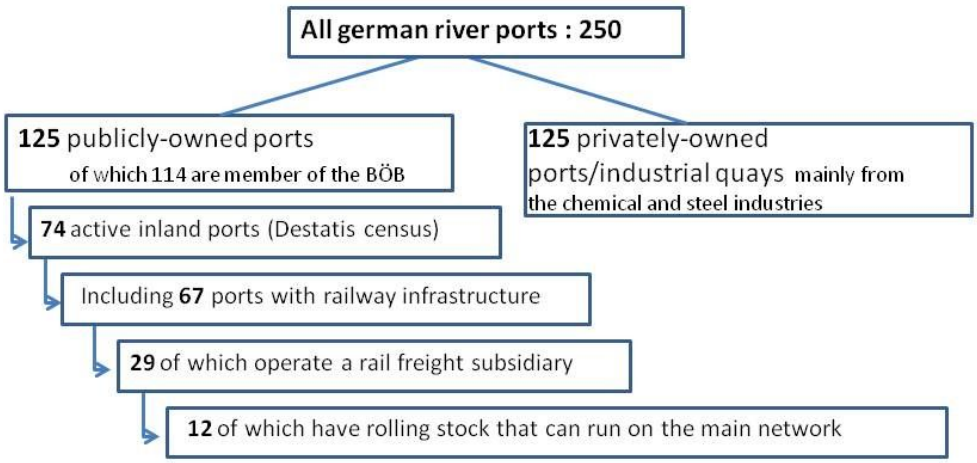
The German port system has one feature that has received little attention until now. About fifty of its seventy river ports own a rail subsidiary. In many cases these are over a hundred years old, were for a long time only allowed to operate within the area managed by the port administration. The liberalization of the sector which began in 1994 and ended in 2004 when access to the railway infrastructure in inland ports was opened up to third parties, raises quite different development prospects. The port authorities have now realized the potential the expertise of the railway companies holds for diversifying and integrating their logistical activities as well as developing regional or even national transport services.

1. A preliminary classification of the port rail freight operators.

In 2011, Germany had 125 publicly-owned river ports, of which 74 are genuinely active, according to the Federal Statistics Office (Destatis). In most cases, the 74 active publicly-owned inland ports are managed by companies that are in turn controlled by local and regional government (municipalities, districts and Länder). It should also be mentioned that in some cases railway companies manage ports. This less common arrangement mainly involves the railway subsidiaries of major groups in the steel or chemical industry when either the ports have come under their control or a previously reserved port access has been opened up to a third party. Last, there is the case of associations where the local government entity that owns the port infrastructures enters into an agreement with a private sector service provider that operates the terminals, as is the case in Bonn.

Figure 1. Distribution of German river ports according to the characteristics of their railways (Source: BMVBS, BÖB, VdV, count by the author).



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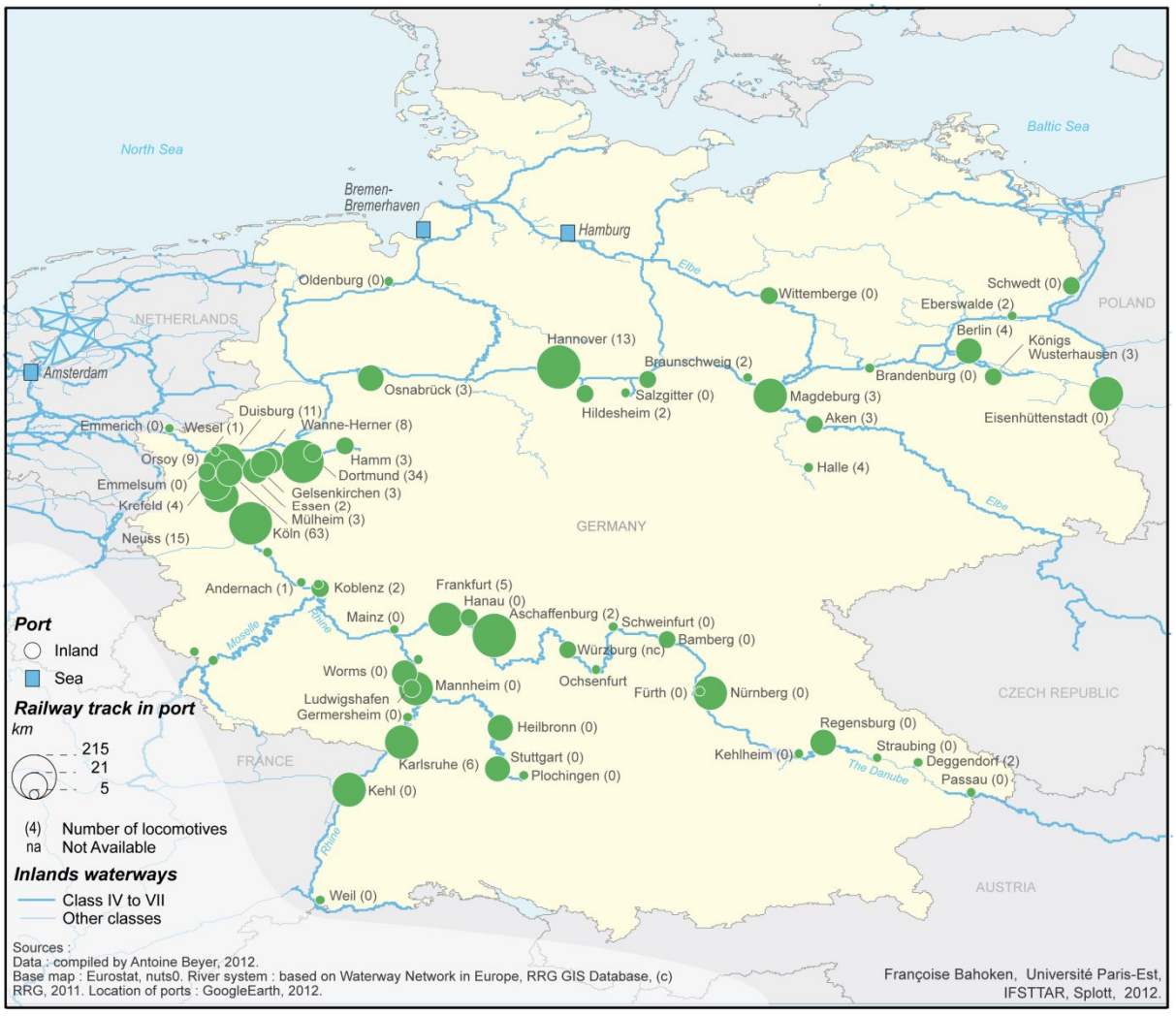
In general, we can make a distinction between the south of the country where it is exceptional for ports to have a rail freight subsidiary and the northern half of the country where this is more common. This is no doubt due to the presence of heavy industry in the north and the fact that the public authorities, whose role has been taken over by the national rail operator, are much more closely involved in the Länder of the south. The great majority of the rail freight subsidiaries of river ports nevertheless have a limited locomotive fleet (see Fig. 2), which indicates the predominately local nature of their activities. However, the most powerful port operators clearly show the importance and dynamism of the lower Rhine ports: in order, HGK (Cologne) with 63 locomotives, is followed by Dortmund with 34, Neuss with 15 and Duisport Rail with 11. These numbers should nevertheless be compared the potential capacity of Captrain, the German subsidiary of SNCF-Géodis which has 182 locomotives, or Deutsche Bahn with 3437.

Figure 2. Map of the river ports showing the number of locomotives (2012)

Data: VDV – BÖB – company websites and interviews



2. Local railway services: a pivotal function

In most cases, the transport services provided by the railway subsidiaries involve transporting freight over the "last mile", for shippers or other rail companies. A justification that is frequently given for providing ports with locomotives is that this makes more vehicles available for local needs. The local operations thus consist of forming and splitting up full trains, performing terminal wagon marshalling operations or providing qualified staff. In addition, the companies provide links between ports and serve local clients. As well as transport services, some additional services are also usually available such as loading and unloading wagons (which is facilitated by the use of equipment that is already present at the port), the storage of goods or providing temporary parking facilities. The companies also weigh wagons on arrival and departure, manage (and perhaps hire out) empty wagons, provide fuel for locomotives and perform technical checks at certain points along a route (Krefeld, Cologne). They may also offer training courses for railway workers. It is apparent that it is easier for operators to diversify their activities by providing (and combining) additional services than by geographical extension which in many ways appears to involve a different type of activity and requires large volumes of freight. Organizing traction on regional or national routes is therefore restricted to a small group of firms. In this context, we must not imagine that what is involved is a simple situation where the largest company dominates smaller the ones as in the case of the relationship between DB and its partners. The reason for this is that because of their excellent ties with local players, which may or may not have their premises on port land, small firms are frequently better able to capture traffic for rail which they then pass on the principal traction companies thereby organizing flows while also acting as straightforward subcontractors.

3. A typology of river ports based on their strategies for rail freight

It is possible to classify the activities of inland ports by crossing two variables: the intensity of services and the size of their market area. This allows us to identify several groups of players.

Ports that operate no railway services of their own. This group actually contains ports with several different profiles. Firstly, there are the ports that have not developed any railway services of their own because they have no railway infrastructure. This may be due to the low level of freight flows or their nature. In the case of some recently built river container terminals, as the containers are delivered to and collected from highly scattered locations within a radius of 50 km, rail services would not be justified (the ports of Bonn and Emsland illustrate this). Other ports are connected to the rail network but have traffic levels that are too low to justify the provision of rail services either by the port itself or a third party (for example *Hafenbetriebe Saarland* or the port of Fürth). A third type of port, which is very common in southern Germany, has sufficient levels of traffic and infrastructure but is run by authorities which prefer to leave the initiative to outside operators. Their justification for this is that it enables them to maintain a neutral commercial position with regard to their clients, namely the other railway companies (port of Nuremberg), or, more simply, that they lack the know-how to provide such services

(port of Mannheim). Last, other ports have decided to have a preferential relationship with an established local player which is not necessarily covered by a formal agreement.

Ports that give priority to port modernization. The 67 ports that manage infrastructure include ports that manage a rail subsidiary and ports that do not. The priority for an increasing majority of them is to improve the quality of the rail infrastructure rather than to provide services of their own. The reason for this is that the growing number of rail operators means that it is less urgent for port companies to become involved in services, while investment in infrastructure is essential in order to make the ports attractive. This is necessary not only to make up for decades of minimal maintenance but also to cope with rising volumes and modern operating conditions. The most dynamic ports are attempting to improve the regularity of electricity supply (*Stromgrenze*). It is also apparent that by improving reliability and reducing the costs of changing locomotives, possibly at the expense of its own local activities, the port increases its overall attractiveness to the major rail operators. Electrification improves reliability and reduces the time required to form trains. This challenge has been taken up by the ports of Nuremberg, Ratisbonne, Duisbourg, Karlsruhe and Ludwigshafen. Electrification is frequently undertaken to strengthen combined transport services for which the river port is often the driver.

Ports that reap the benefits of services that are concentrated within the port area. The rail activities of these ports are usually based on existing services, and are limited to movements within the port area. In this case, the port adapts the facilities and equipment that were already at its disposal before the 1994 reform. The creation of new services is more unusual. When this takes place, it is usually because of a need which is not spontaneously satisfied by the market. The port owns two or three locomotives which are shared out between the different users of the port. Such sharing provides the largest operators with less costly services as end haulage is an important expensive operation. Last, in many cases the rail services are only one element of a more comprehensive logistical service which sets out to attract major shippers or secure their loyalty.

Ports where competitors operate inside the port area. Recently, a new group has started to emerge. This consists of independent firms that provide services within ports. Competition of this type is usually welcomed by port managers who see it as a way of making use of the port more attractive for freight services. Obviously, this is only conceivable in the case of freight flows that are fairly large and dynamic. This situation benefits the port because its infrastructure is used more intensively, the costs of movements within the port are reduced, and overall attractiveness is improved. In this connection the EVB group, which is already very active in sea ports, is developing a specific offer of services (*RailPortFeeder*) in river ports through its subsidiary MWB (*Mittelweserbahn*). This firm has a presence in Nuremberg, Ratisbonne and Stuttgart[3].

[3] There are other examples of operators with a presence at sea ports, for instance Husa-Trans, a Dutch group that has acquired know-how in the areas of terminal operations and the maintenance and hiring out of railway vehicles in the Benelux ports and is now attempting to apply it to inland transport centres.

Ports that make the transition from their traditional activities to the opportunistic expansion of services. Providing rail services reflects a desire to offer a fuller range of services which include transport services (from traction to the routine maintenance and servicing of rolling stock) and the provision of broader logistical services (from storage to property development). In this context, other rail operators are perceived as clients whose needs must be met as well as possible. Diversifying into rail operation is thus one of a varied range of services that broadens the services that are available in order to retain shippers and carriers who already use the port and attract new ones.

Ports that provide regional coverage. Rail operators may be tempted to extend their activities beyond the port area in order to respond to demands from shippers or the carriers which work with them. They may also do so out of a desire to make better use of their vehicles (port of Halle). This development generally takes place gradually even it seems a natural outcome for ports that engage in rail operation. The rapidity with which Duisport Rail has developed in this area is an exception that proves the rule. Unlike many of its neighbouring ports and in spite of its size, this port had no rail operator of its own, but in order to realize its logistical ambitions, it rapidly came to see rail as indispensable for linking its different sites and extending its service provision to the Ruhr.

Ports that advocate a policy of geographical expansion. In contrast to the intensive approach which characterizes most of the cases described above, this category of ports sets out to provide long distance traction services for full trains. There are half a dozen ports of this type, but only two operators genuinely offer more complex and dense services than the others: *Neusser Eisenbahn* based in the port of Neuss-Düsseldorf and *Hafen- und Güteverkehr Köln* based in Cologne. These two companies, like their respective ports, are incidentally in the process of merging to form a single structure (*Rheincargo*), which highlights the importance of size for this category, the new group being in second place in Germany for river activities and fifth place for rail activities.

Conclusion

The rail freight subsidiaries of German river ports are fairly low-key operators, but they nevertheless play an important role in the provision of rail freight transport, both for conventional and combined transport. Their recent development highlights the changes that have taken place in the liberalized rail sector which is reorganizing itself in order better to meet the needs of its customers be they shippers or carriers. River and rail modes have come to be perceived as components of a logistical service that is underpinned by a flexible and highly adaptive cooperative system. Historical factors, the diversity of local conditions and the size of the port provide a wide range of possibilities depending on the potential traffic and the strategies of the ports. The typology that we have put forward covers a very large number of cases ranging from unconnected ports to the development of companies providing traction for full trains at national or even international level. However, these two extremes are quite unusual. The most common cases are ports that just manage infrastructure and those that also provide, or more precisely, are continuing to provide, local transport services. Firms that have started to provide regional services are rarer. These are mostly firms that traditionally possessed independent local networks which the ports have started to work with. Geographical extension makes it possible to

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attain a critical size which is impossible for most ports. It also means that it is necessary to establish new relationships with the major players in the sector, sometimes as competitors, but also sometimes in cooperation with them. In this context we must not forget the importance of their historical situation for the rail policies currently pursued by ports. Adding additional services allows the port operators to transform themselves into complex logistical centres. This enables them to can go beyond the transhipment or intermodal functions and take on an active role coordinating logistical services. In this context, the example of Germany shows us the benefits of considering inland ports as the drivers of a dynamic policy of providing multimodal transport and logistics services, with rail transport as just one component.

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