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Trans-European transport network and cross-border governance

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Abstract

This article looks at the implementation of trans-European transport corridors in the EU and the influence it has on governance within EU member-states. It considers the implementation of such a scheme in the context of cross-border cooperation and discusses the system of governance necessary for coordinating knowledge, efforts and solutions across several national systems. In order to understand this governance setting, one needs to understand the specific quality of transnational governance in the EU, which is neither purely international nor federally integrated. The transport corridor between Malmö and Hamburg is taken as a case for discussion. Cross-border governance is analyzed within a multi-level policy network approach including actors from supranational, national and subnational levels, in order to determine the existence of a policy network across the borders. The main finding is a depiction of the actual state of integration of the cross-border networks related to a green corridor strategy and its implications for the region.

This article is an exploratory study of cross-border cooperation related to the implementation of the Ten-T strategy, taking the regions around the Fehmarn belt strait as a case study. It aims to understand the structures of cross-border cooperation triggered by this policy in the region. It also aims to discern the organizational challenges such a cross-border cooperation entails. The initial question is whether there is a consistent network allowing for the exchange of resources and the coordination of policies necessary for the implementation of a green transport corridor along the target area. A second underlying question is how it plays together with the corridor implementation scheme of the Ten-T strategy? A policy network analysis to orientate the research and discusses the green corridors concept in practice. It then ends with a discussion on preliminary observations and further research.

Transnational transport in the EU

The Ten-T strategy aims at developing a consistent trans-European transport network in the EU, however, transportation planning authorities operate in a national system of reference (both administratively and culturally), and transnational cooperation in the EU still occurs in a rather chaotic semi-international context where the sheer number of relevant actors makes coordinated actions a challenge.

Transnational transport in the EU is vital for the cohesion of its territory and for the consolidation of the single market. However, long-distance transportation also has a significant impact on the

environment and on the EU's consumption of fossil fuels. Because of this economic and environmental impact, the EU has a strong interest in developing a 'continuous' trans-European transport system, which can transport freight and people efficiently, and at the same time does not generate an increase in environmental impacts and fossil fuel consumption.

These considerations are discussed in the most recent white paper: *Roadmap to a Single European Transport Area* (European Commission, 2011), which outlines the aims of a 60% reduction in CO_2 emissions by 2050 and a massive switch from road to rail and water transportation. According to this strategy, 30% of freight transport in the EU should be done by train in 2030 and 50% in 2050. The White paper points at the challenges posed by the lack of coordination across the member-states, which might result in diverging strategies in neighboring Member States, and calls for a strategy to remedy to this problem.

Indeed, if a country opted exclusively for electric vehicles and another for biofuels, it would destroy the concept of a single space in the EU (European Commission, 2011). This is why the roadmap proposes the establishment of a core network of coordinated transport corridors in the EU. This consistent core network has been formulated in the Ten-T strategy, which establishes trans-European transport corridors integrating air, land and water transport networks in one co-modal system focusing on efficiency and cohesion. Where transport networks within national boundaries are developed by a single governance structure, the cross-border sections of those corridors remain a problematic question (Decision No 661/2010/EU).

At first sight, the supranational level seems to be the best level for such a policy since it requires the coordination of transport systems between 28 different governance systems, each dealing with their own domestic issues. Implementing such plans across the EU requires bridging the gaps across borders, which have been created by hundreds of years of national governance. When looking at the complexity of this system, which includes supranational, national and local authorities as well as private operators and businesses, it becomes necessary to look more closely at how cross-border planning happens in practice, in a union still composed of 28 national planning systems. Moreover, in such a multi-level governance system, the question of which level is most appropriate for which task remains a fundamental one.

Transport planning in a cross-border perspective

Since the mid-1980s, the EU has developed the Trans-European Transport Network (TEN-T) policy in order to develop transportation, communication and energy infrastructures, which could support the smooth functioning of the single market and the economic, social and territorial cohesion of the EU (COM(2011) 650 final).

Since the Single Market cannot be fully realized without removing the national barriers, which isolate national systems from each other, the Single Market and the Cohesion policies are deeply interrelated and often overlapping. Today, the EU has a well-developed transportation infrastructure, but it is still very fragmented geographically, administratively and modally (COM(2011) 650 final). Many of the disruptions in the network occur at cross-border points because most transport networks were developed within national perspectives. This lack of integration between transport systems is not limited to infrastructures. The entire transport planning and regulation system of the EU is fragmented into national blocks.

In order to palliate the barriers between national systems of governance, the EU has developed a series of policies tackling intergovernmental and cross-border cooperation. What interests us in this case, is the strategy tackling interregional cross-border cooperation. Indeed, even though EU transport policies can be coordinated at the EU level, its implementation happens often at other levels. The European Commission is aware of the problem and has addressed it in *Roadmap to a Single European Transport Area* (European Commission, 2011).

EU legislations and policies set the goals, but do not always state which particular technical solution should be adopted. Even for specific regulations such as freight corridors, proposed routes for transport corridors in the core-network are flexible (Regulation (EU) 913/2010).

In order to discuss the challenges linked to cross-border planning, this article will look at the "corridor planning" approach of the latest Ten-T policy in a region from Hamburg to Malmö, where this concept is actively used by national and subnational authorities.

Theory and method

Transnational transport corridors cross national systems of governance of both centralized and federal states of very different sizes. Because of administrative discrepancies, the partners involved in transnational transport projects have different competencies in their respective countries. It is therefore important to conduct contextual studies of such occurrences in order to find methods, which can help the coordination strategies. There are no systematic studies of the impact of this type of cross-border cooperation on transport and infrastructure planning in the EU, but it is possible to find systematic studies of administrative systems in the EU (European Commission, 2000), of cross-border cooperation in terms of market integration (Bergs, 2012) and from a Cohesion policy point of view (Heinelt & Lang, 2011). Moreover, there are multitudes of case studies of cross-border cooperation based on the institutionalization of cross-border cooperation (Perkmann, 2003; Leibnath & Knippschild, 2005; Perkmann, 2007; Knippschild, 2011; Deppisch, 2012).

In an environment without a formalized structure of coordination, the implementation of a "coherent" policy throughout the system is uncertain, because it requires the coincidence of many independent variables at the appropriate time in the appropriate place. In order to unravel potential structures where there are none, this article mixes a multi-level governance approach as defined by Hooghe and Marks (2001) with a network governance approach looking beyond formal hierarchical and open market modes of governance (Sørensen & Gudmundsson, 2008; Hall, 2011; Peterson, 2003). In other words, it sees the establishment of transnational transport corridors happening through transnational cooperation based on *networks of relevant actors* in a *multi-level governance context*.

Multi-level Governance (MLG) characterizes a new governance structure, which has developed in the EU in a way that clearly differs from a traditional hierarchical conception of governance (i.e. government). Hooghe and Marks (2001) developed this theoretical approach in the nineties. Despite its relative novelty, it was rapidly adopted as an analytical framework by a number of scholars of EU studies (Bache, 2007; Stephenson, 2013), but also used as a normative tool by political actors such as the European Commission (Bache, 2007), the Committee of the Regions (2009) or for example Region Skåne in Sweden[1].

MLG was introduced while conducting an analysis of policy networks involving supranational, national and regional actors' negotiations within the Structural Funds (Marks, 1993). It developed as an answer to the question of the International Relations characteristic of EU governance and was proposed as a hybrid model, between international relations and federal governance, neither of which could satisfactorily characterize the evolution of the EU governance system (Stephenson, 2013). MLG is "an approach that recognizes state power but does not consider it the whole story" in a context where heavily institutionalized ways of doing politics are less predominant, and alternative social actors have entered the policy-making process (Warleigh, 2006).

Originally, MLG was developed as a hierarchical model aiming at conveying the entanglement between domestic and international levels in the EU (Stephenson, 2013), but later on, Marks and Hooghe (2003) began to distinguish between MLG 1 and MLG 2. The MLG type 1 refers to a rigid and hierarchical structure resembling a federalist organization, where several levels of governments are hierarchically linked in a non-intersecting, purpose-specified structure with a clear institutional set-up. On the other hand, the MLG Type 2 is looser. The number of potential jurisdictions is vast and they have no clear demarcation, so that overlapping occurs between and within policy processes. This model was better at describing cross-border cooperation, allowing for the understanding of differing cross-border

[1] Example of the use of multi-level governance can be observed in Interreg projects like Transbaltic (http://www.transbaltic.eu/about/) and BSR transgovernance (http://www.transgovernance.eu/)

policy networks, where hierarchy is no longer a fundamental element.

Network analysis

MLG 2 is best understood within the concept that gave birth to it: policy networks. Studying policy networks is a recent, but well-developed activity within political sciences (Rhodes, 2006). The main idea behind it is to provide ways of understanding the relations between different actors in a given policy area where no governmental set-up structures them (Ashead, 2002). A policy network is a "set of actors who are linked by relatively stable relationships of a non-hierarchical and interdependent nature" (Kenis & Raab, 2003). Although the concept was not originally created for this purpose, it is very useful for studying policy processes occurring outside of a national system of governance.

According to Marsh and Rhodes (Marsh & Rhodes, 1992), policy-networks vary along a continuum according to the strength of the relationships between its members, from cohesive policy communities to loose issue networks. On one end, policy communities involve tightly bound relationships, while on the other end, issue networks involve much looser interactions. This approach also recognizes the importance of institutionalization, but rejects formal institutions as the key element. It advocate for the use of variables such as the stability of membership to the network, the insularity of the network vis-à-vis outsiders, and the strength of the resource dependency between members, in order to discuss the strength of the network and the probability it can reach coordinated policies (Peterson, 2003).

Policy-network analysis provides a tool for mapping the relations between actors in a given policy area. However, there are two different ways to define those members: they can be institutions or individuals (John, 2004). European inter-organizational policy network analysis focuses on institutions and their structural relations as vital for the homogeneity of policy outcomes (Bevir, 2007). The present study follows that approach. However, institutions and experts are seen as interrelated since institutions serve as vessels for experts while at the same time participating in the establishment of accepted knowledge and practices.

Policy-network analysis in a cross-border context can be used as a tool to assess the emergence of a complementary system of governance connecting the national ones. It can be used to better understand the degree of connectivity, the type of connectivity and the arrangements in place where a national governance system is absent. Moreover, this concept is more efficient in a context where interdependencies are high and policy resources very dispersed, which is the case of transnational transport planning (Peterson, 2003).

From a methodological point of view, this article is an empirical analysis based on the theories and concepts presented above. The case chosen is the "Fehmarn belt corridor", which refers to a portion of the Scandinavian-Mediterranean corridor that the Commission has been working on for several years now. This case can be useful for discussing corridor implementation in practice since it presents an above-average use of the green corridors concept linked to the Ten-T strategy and can serve as a basis for observing this strategy on the ground. The data used in this article has been collected through the analysis of EU legislation and publications, the observation of formal cooperation, interviews with selected actors and participant observations. This data is used to assess if an effort/intent of collaboration exists between given institutions and if it can form the basis for a policy network. All sources are analyzed qualitatively in order to evaluate the condition of this cooperation.

Finally, following a policy network approach allows for a discussion about the state of the transnational epistemic community in this policy field and its potential anchoring/growth in the functional processes of the network. By epistemic community, I refer to Haas' (1992) definition of a network of knowledge-based experts or groups with an authoritative claim to policy-relevant knowledge. Their position within the administrative system makes them key actors for the coordination of policies across borders, and the more integrated this community is, the stronger chances are that a coordinated activity will take place on both sides

Analysis: Green corridors and cross-border networks in context

A major turn in the recent development of transport corridors in northern Europe is the rise of the concept of green corridors. This concept is particularly active in the Scandinavian area and clearly influenced how networks of actors develop across the borders.

Green corridors concept[2]

The concept of green corridors in Scandinavia started with the European Commission's Freight Transport Logistics Action Plan in 2007, which introduced green corridors as transport corridors "marked by a concentration of freight traffic between major hubs and by relatively long distances of transport. Along these corridors industry should be encouraged to rely on co-modality and on advanced technology in order to accommodate rising traffic volumes while promoting environmental sustainability and energy efficiency" (COM(2007) 607 final). The main goal was to stimulate a switch to greener freight transportation modes (i.e. rail and waterways) and the development of green transport technologies. This communication triggered the *Swedish Initiative to Green Corridors* in 2008, consisting of representatives from the Swedish administration, academia and industry working with the transport sector. It eventually formulated an initial six-point definition of green corridors that strongly influenced the following initiatives in the region (Engström, 2011; Kyster-Hansen, Thisgaard, Henriques, & Niss, 2011)

The Swedish initiative was paralleled by a number of EU financed Interreg projects dealing with green freight transport corridors such as the Supergreen project, East West Transport Corridor, Scandria, Sonora, and Transbaltic. Many of these projects use the same definition based on a greening of freight transport through co-modality and efficiency (Engström, 2011). One pioneering project was the Supergreen project, which worked on identifying green freight corridors within the European transport network, and later became a basis for the future development of green corridors at the European Commission (Schulze,

Figure 1. Ten-T corridors and case region

2013). The governance model found in the Green Corridor Handbook of the Supergreen project actually mirrors the governance structures established by the latest version of the Ten-T strategy for corridor management (Panagakos, 2013; REGULATION (EU) No 1316/2013, 2013). This corridor management organization brings various national actors responsible for rail planning in their respective countries together in working groups, so that they can discuss how the Ten-T regulation could be implemented in practice. It is the background for one of the networks in the region focusing on rail freight (cf. corridor 3 in figure 2). This model mainly focuses on the coordination of national authorities in the rail sector, and it does not appear that the European Commission plans to extend such a governance structure beyond this sector in the near future.

Nonetheless, the Ten-T policy has a strong impact on other actors dealing with infrastructure

[2] For an overview on the concept of green transport corridors, see publications from supergreen.com and stringcorridor.org

and regional development in the respective territories. While the green corridors concept originally developed around the transportation of goods over long distances, another branch of projects came to look at the integration of transport corridors in regional economies. Such projects, like COINCO North and Scandria, considered that green transport corridors should not be limited to transport planning but should include territorial and socio-economic impacts. One such project targets our case region: the Green STRING corridor.

The Green STRING corridor keeps the original definition of green corridors, but is concerned with the impact of such a transport corridor on the region and how such corridors can be used for regional development. In our case, it addresses questions such as what the impact of increased and concentrated transport flows on regions will be, how peripheral regions will be affected by increased connectivity with metropolitan centers, and how to ensure the participation of local and private actors in such a project.

Cross-border governance networks in the region?

The following section looks at cross-border networks that formed following the development of a transport corridor in the region around the coming Fehmarn belt tunnel. It observes a dichotomy between an intergovernmental and an interregional development of the TEN-T corridors.

The green corridors concept in Scandinavia has strongly developed through Interreg funding and regional actors, while the implementation of related EU regulations on transport corridors is anchored at the national/federal level. This analysis uses the theoretical model described above in order to locate continuous cross-border networks dealing with the implementation of the Ten-T policy and green corridors and to find which administrative level they belong to. Doing this, we obtain a picture of a fragmented implementation with different strategies from country to country and level to level.

An analysis following this approach results in the diagram of figure 2, which shows relevant institutions according to their system of governance and their cross-border cooperation. Colorful links indicate that formal policy collaboration exists between institutions through networks. This diagram does not aim to normatively model cross-border governance for transport planning, but to illustrate the administrative anchoring of cross-border networks dealing with transport corridors in the selected region. It serves as an illustration for the discussion in the analysis and conclusion. It does not show the intensity of cooperation, but indicates that formal cooperation occurs. It also illustrates the two levels of networks triggered by the Ten-T strategy. On one side, a formal cooperation between national authorities in the rail sector takes place at the supranational level. This network coordinates the implementation of EU regulations dealing with a rail freight corridor (in red on the diagram). On the other side, inter-regional cooperation takes place in relation to a transport corridor approach, which has developed at a regional level within the overarching Scandinavia-Mediterranean corridor that crosses the region from north to south. As we can see on the illustration, a regional network has become well developed on the Scandinavian side.

Both national and regional activities form distinct networks, though they both take their source from the same EU policy and therefore share several of the same traits. Regional cross-border cooperation based on a corridor approach is anchored in the Green STRING corridor and the STRING political network. All public authorities of Green STRING corridor, but one, are also part of the Øresund region, a cross-border network focusing on the Øresund Bridge. The Green STRING corridor (green) focuses on a transport corridor from Malmö to Hamburg crossing the Fehmarn belt strait where the coming fixed link will be built and thus avoiding territories in western Denmark. It connects Region Skåne in Sweden, the Capital Region of Denmark and Region Sjælland together with the Swedish national authority for road, rail and infrastructure (Trafikverket) and with municipalities from both Denmark and Sweden in a multi-level system. Green STRING corridor illustrates the parallel but disconnected development of Ten-T related projects and policies at national and regional levels. It is issued from a cross-border political body, STRING network, constituted of the 5 regions/länder between Malmö and Hamburg. The Green STRING approach builds on the existing green corridors concept but anchors it locally and

thus focuses much more on the territorial and economic impact of the Ten-T strategy.

The STRING political network includes Region Skåne, the Capital Region of Denmark, Region Sjælland and the two German federal states of Schleswig-Holstein and Hamburg. Both networks are strongly motivated by the coming Fehmarn belt fixed link, and anchored to Region Sjælland. An analysis of those networks on the Scandinavian side shows a significant level of connectivity, which could support a space for coordinating efforts. The German states are not part of the transport corridor process, but are connected to the Danish and Swedish regional authorities in the STRING network. The cross-border coordination is done both at the operational level (secretariat) and at political levels. It is noteworthy that German states have specialized EU offices for this form of Cooperation. However, interviews show that the corridor strategy is not present on the German side and remains a Scandinavian enterprise.

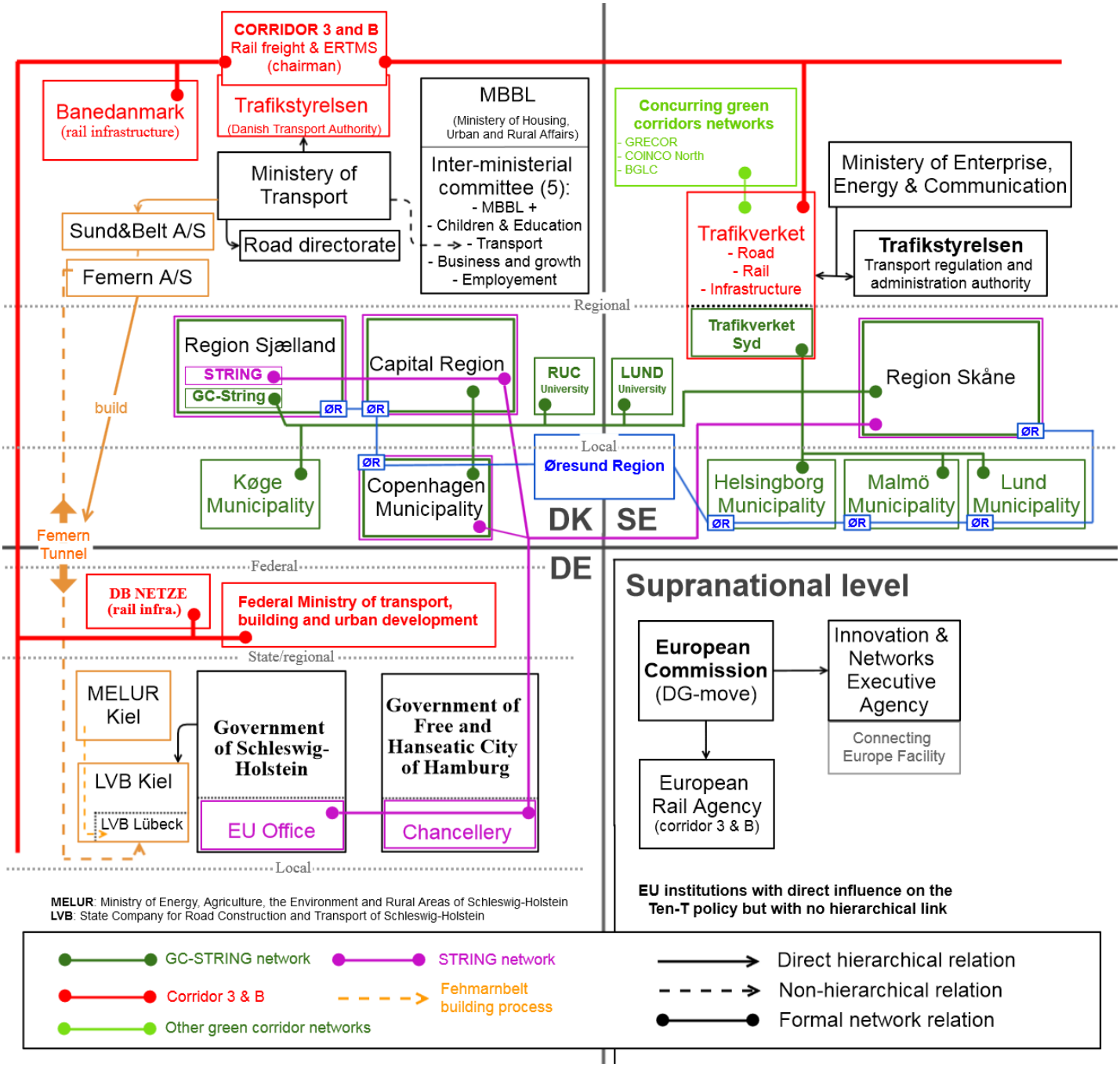

Figure 2. Networks of public actors dealing with cross-border transport planning in the region (cf. appendix 1)

Both networks are anchored regionally, but include only one national transport authority in Sweden. The national transport planning apparatus of the Danish state is out of the network and, because of the structure of the Interreg IVA program in the region, German institutions are excluded as well. This network is thus very much focused on the Scandinavian perspective and Region Sjælland appears to be a central actor for both the STRING network and the Green STRING corridor. The common political space and knowledge exchange is therefore limited to the Scandinavian part of the corridor. On the German side, there is no such corridor development network. On a side note, Swedish transport authorities seem much more interested and advanced on this question since they are both present at the national and regional levels and participate in several other green corridor projects with other neighboring regions.

On the national/supranational level, the focus is on the implementation of EU regulations linked to inter-operability, rail freight and ERTMS[3]. This cooperation follows a corridor form of cooperation and includes delegates from transport authorities and national rail operators from each of the five countries on the corridor 3 (Sweden, Denmark, Germany, Austria and Italy). It is organized around the Danish Transport Authority, which chairs the executive board of the corridor and manages its secretariat. This network is solely in charge of coordinating the implementation of rail freight corridor 3, of the ERTMS corridor B, of the coordination of related infrastructure investments, of the administration of capacity and of the establishment of the "One-Stop-Shop" of the corridor.

Beside the implementation of the rail corridor regulations, it does not appear that national transport authorities in the region have specific policies regarding the corridor. There seems to be a disconnection between national/federal and subnational levels, especially in Denmark and Germany, where national authorities are disconnected from the process at play in regional networks. However, on the Danish side, it is interesting to note that the government has established a ministerial commission led by the Ministry of Housing, Urban and Rural Affairs representing the Ministries of Transport, Employment, Business & Growth and Children & Education, which focuses on the regional impact of the Fehmarn belt tunnel in general and the opportunities for adjacent territories. However, the focus is on the potential and threats for the territories between the tunnel and Copenhagen (Palludan, 2013), and does not follow a corridor approach nor appear to have network ties with other national/regional Danish authorities concerned by trans-European transport networks.

Finally, interviews indicate that the German side focuses on its connections to the south with the rest of Germany, so that the question of the Scandinavian-German cooperation, without being inexistent, is in concurrence with internal

Figure 3. Corridor 3 and B

[3] ERTMS: European Rail Traffic Management System

cohesion policies at the federal level. This process is thus very much subject to priorities of both German states. Moreover, on the German side, it appears that activities related to cross-border cooperation are led by business associations, which are strong actors on this side, but focus on industrial collaboration rather than on a corridor approach. This parameter should be considered when discussing networks for cross-border cooperation with Scandinavia, where public authorities are stronger.

Conclusion

The implementation of a coherent Ten-T network in the EU has triggered various forms of transnational cooperation. This phenomenon is interesting to look at in the light of the emergence of new governance networks that bridge the boundaries of existing national systems of governance. In order to understand them, one needs to understand the specific quality of transnational governance in the EU, which is neither purely international nor federally integrated. To do so, this article used an approach based on multi-level governance and policy networks, to discuss processes of governance beyond traditional hierarchical governance. It looked at the corridors, which have developed following the Ten-T strategy and evaluated their impact on cross-border transport planning at the interregional level.

To the question whether there is a stable and interdependent network allowing for the exchange of resources, the consolidation of knowledge and the coordination of policies towards the implementation of a green transport corridor policy in the Fehmarn belt corridor, the answer is no. There appears to be no coherent policy network that might work as a platform for exchanges, bargains and coordination. Empirical observations show the high fragmentation of the existing networks. They are usually focused on narrow issues and no holistic network is able to provide a space for devising shared policies regarding the impact such corridors will have on the economy, the environment and the development of the region. It is not possible to exclude the existence of informal networks at the political level that were not unraveled by the applied method, but there was little indication of such networks and they could clearly not involve private stakeholders, planners and experts simultaneously in a stable way. An in-depth analysis of the potential coherence of such hidden networks would require an “access to the field” that has not been negotiated prior to this study. For a policy network to qualify as such, all actors of the policy chain must be connected in a stable interdependent network. At best, the present networks are premature issue networks with very limited institutionalization. However, this case could be an early stage of cross-border network development, which might be strengthen with the functional attraction of the coming Fehmarn belt tunnel. It is thus an interesting case to follow in the coming years.

Empirical observations around the Fehmarn belt strait show a dichotomy between national and regional levels. While national levels implement concrete EU regulations for rail freight, cross-border cooperation at the inter-regional level focuses on potential and impact of the corridor on their territory. They both participate in developing transnational spaces for public authorities to meet, exchange knowledge and coordinate their policies, but national and regional authorities appear to act in separated political spaces.

Coordination at the national level is limited to rail freight and is already challenged by the number of actors involved and their current independence from each other. If traditional management might be considered in such a narrow topic as rail freight operation, it cannot tackle a green transport corridor strategy in the current situation. Considering the quality of international relations between national systems of governance, it is unlikely that a coordinated policy can emerge from the actual governance structure, but informal contacts between German and Scandinavian sides do take place regularly and could participate in the emergence of a kind of local epistemic community, especially on the Scandinavian side. This premature epistemic community might be the first step to focus on. There is therefore a need to pursue the formation of a single political space across the corridor to connect experts and political actors and to consolidate resources across the national borders, in order to structure the randomness with which cross-border contacts occur.

Besides the national/regional dichotomy, there appears to be a Scandinavian/German dichotomy. Interviews have revealed that the green corridor concept and related considerations are very much absent from the German agenda and that this transport corridor may have less importance south of the Fehmarn belt strait. German initiatives related to the development of transport infrastructures on that corridor exist, but due to the low connection between German and Scandinavian actors, stronger coordination is not to be expected as of now. The implementation of freight corridors, ERTMS, ITS, capacity allocation, interoperability and single rail market are being coordinated at the supranational level through decisions and regulations and implemented by the national authorities. However, those EU regulations cannot ensure that the corridors will be used, do not tackle local implementation and the impacts on the regions' environment and economy. This national dichotomy appears as one of the main challenge for cross-border planning in the region since they strongly compartment the actors involved preventing much coordination to happen, except in a random way.

Developing cross-border policy networks

A connection south of the border should focus on supporting the creation of a common political space for the coordination of policies and the dissemination of knowledge between Scandinavian and German sides. An integration of national and regional level in a single network might require to many inter-organizational ties to be stable, but national authorities because of their direct control over transport planning, should definitely keep a steady connection to the developments at the regional level (which could happen in the STRING network for example). It should also help to put the question of the impact of Trans-European transport corridors on the agenda. However, such cooperation is still at an early stage. Multiple competing networks may not be a singularity in policy-making, but in the absence of formal hierarchical structures to ensure collaboration, they are the only transnational arena available, and that complexity becomes the core of the matter. In the face of such complexity, other questions that arise are related to which kind of policy networks would be most beneficial, to their degree of formalization, to the way they might form and evolve and which factors influence participating actors. The introduction of multiple factors like green technologies, socio-economic impact and involvement of stakeholders in the Ten-T strategy poses a new challenge for cross-border planning by involving a lot more actors into this policy, leading to a Type 2 MLG construct that is very challenging to manage from a governance point of view.

Despite the fact that no stable policy network linking Scandinavia and Germany could be observed, collaboration does occur, and issue networks could be the first step toward the integration of both sides. Literature on policy network considers that issue networks are less influential on policy outcomes, but in the absence of continuous policy networks, they seem more feasible, if such a goal was to be pursued. Due to the broad policy aspects involved in the integration of a green corridor to the region it crosses, it does seem relevant to identify functional issues that could serve as a basis for developing specific policies. In that case, the selection of functional issues recognized by both sides of the Fehmarn belt strait becomes fundamental. The focus on a 2.5 hours travel time between Hamburg and Copenhagen of the Copenhagen declaration of the STRING cooperation could be one such functional issue that may trigger the need for further policy integration in the region. Moreover, the challenge in such a project is that of triggering and managing those networks. This discussion is too broad to be addressed within this paper, but the literature on policy network management is abundant and evaluating the feasibility of this strategy in the region could be the object of further study. However, if the Ten-T strategy should be extended beyond freight corridors to include transport technologies, local territories and private entrepreneurs, then the number of actors involved would point at developing a common epistemic community as the most feasible solution.

Regional impact

An approach like the one used in green corridors brings up a discussion on the necessity of developing the Ten-T network without damaging the work of the Cohesion policy itself. If the goal is to ease the movement of people and goods between strong urban centers, there is nothing to ensure that it will not happen to the detriment of

weaker regions. There is no guarantee either that the newly created corridors will be used or that the new transport flows will not have negative impacts on the local environment. Transport is ultimately territorial. It aims at fueling urban centers with physical goods and natural resources. This is why the territorial, environmental and socio-economic impacts of trans-European transport corridors need to be considered within the overall trans-European transport network policy.

The sheer number of national and regional actors for that purpose would make a corridor-wide approach nearly impossible. A narrower approach, as for example the *Green STRING corridor* or *Brenner Green Corridor*, would reduce the number of actors needing to cooperate across national systems of governance. Moreover, they should not be totally disconnected from the general harmonization process at the full corridor level, so that a feedback system between both levels can take place. This 2-layered system including corridor-wide and local levels is the next challenge for the development of a sustainable Ten-T network.

Cross-border planning

Finally, formal international cooperation of public planners is not ordinary. Observing such processes is therefore important for understanding the impact of the EU on traditional systems of governance linked to transport planning and calls for more in-depth studies of transnational cooperation at the operational level. It is important to understand how planers in charge of both infrastructure planning and regional development manage this new situation, how they make sense of those corridors and which factors they use to design strategies. Such a knowledge could help to select which issues and network management tools might be more efficient for cross-border cooperation in that particular case.

A challenge already appeared during the research conducted for this article. Administrative systems and planning procedures differ greatly between Germany, Denmark and Sweden. Because they frame how transport is planned, and the range of solutions available to planners, they should be looked at in more detail.

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