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SEPTEMBER 2025

Policy Notes and Reports 98

Local Resistance to International High-Speed Rail Projects – Lessons for a European Silk Road:

A Comparison between Resistance to the Brenner Base Tunnel Project in Germany and Austria

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This study was conducted as part of the 'Policy Lab' course at the Department of Public Policy at CEU. This is an optional course that aims to provide students with practical experience in policy research. Students work in small teams together with an external client to produce policy-relevant research for the client. The clients include civil society organisations, research centres and international organisations. This Policy Lab project was conducted for the Vienna Institute for International Economic Studies; the mentors from CEU's Department of Public Policy were Andrew Cartwright and Linda Mellner. The lead contact at the Vienna Institute for International Economic Studies was Mario Holzner. Thank you all for your valuable inputs to this project.

Abstract

This report investigates the issue of local actors resisting the implementation of high-speed rail (HSR) routes through the example of reactions to the Brenner Base project in Germany and Austria. In order to understand the causes of significant resistance, the report contrasts reactions to the Brenner Base Tunnel (BBT) in Germany, where resistance and consequent delays are substantial, with reactions to the BBT in Austria, where resistance and delays are more limited. After tracing the evolution of local resistance in both countries, we confirm an important contrast between resistance in Germany and Austria. Our interviews with six Deutsche Bahn (DB) employees and an analysis of local news sources enable us to identify the politicisation of the project by local politicians as a primary cause of greater resistance in Germany.

Our interviewees also pointed out the role of policy changes in tackling the problem of local resistance. It was highlighted that changes such as the 2017 Requirements Plan Implementation Agreement – which increased national authority over this kind of large-scale infrastructure project – may help to simplify future projects and reduce resistance to them.

Learning lessons from failures in constructing large cross-border infrastructure is instrumental for the planning of bold, trans-European rail projects, as envisaged in the European Silk Road initiative.

Among these lessons is the importance of anticipating and integrating localised dynamics and concerns into the planning process. Equally crucial is ensuring the early and balanced involvement of all key countries, as this fosters shared ownership and helps to reduce asymmetries in stakeholder engagement.

Keywords: Brenner Base Tunnel, high-speed rail (HSR), European Silk Road, Trans-European Transport Network (TEN-T), Scandinavian-Mediterranean (SCAN-MED) Corridor, passenger transport, train network, social challenges

JEL classification: H54, L92, O18, R41, R42

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Local Resistance to International High-Speed Rail Projects – Lessons for a European Silk Road: A Comparison between Resistance to the Brenner Base Tunnel Project in Germany and Austria

1. INTRODUCTION

Twenty years ago, Italy and Austria signed an agreement to build what was supposed to become the world's longest railway tunnel: the Brenner Base Tunnel (BBT) (BBT SE, 2024a). The BBT links Innsbruck in Austria and Fortezza in Italy and was initially planned with a 'Southern access line' connecting the tunnel to Verona (FS Group, n.d.). To this plan was added in 2012 a 'Northern access line' (ibid.), connecting Innsbruck to Munich (Davies, 2018). The BBT is at the heart of the Scandinavian-Mediterranean (SCAN-MED) Corridor, which is one of the EU's flagship railway projects and considered to be 'extremely important for European economy and mobility' (BBT SE, 2022). As the core of this Corridor, the BBT is a 'very high-priority project for the EU' (ibid.).

However, the BBT project has faced several delays in the planning and construction of the project, and the estimated completion date has been delayed from 2032 to 2040 (Fender, 2021b; Reich, 2024). The main reason for this delay is the Innsbruck-Munich access route, construction of which has not yet started (DB InfraGO AG, 2024). The majority of this route (47.5 km out of 54 km) is situated in Germany, and therefore falls under German responsibility (*Railway Pro*, 2021). In contrast, construction work has been ongoing on the Southern access line (FS Group, n.d.) and on the tunnel itself (BBT SE, 2024c). For the central part of the BBT, there is about 50 km left to excavate on the Austrian side of the tunnel and only final lining to complete on the Italian side. There is therefore quite a contrast between the advanced state of the project in Italy and Austria and the relative lack of progress in Germany.

As pointed out by an expert from the magazine *Railway Technology* (Davies, 2018), 'the biggest stumbling block' to the realisation of the project has been resistance by German people in the affected regions. The question remains as to why this phenomenon has been particularly significant in Germany. To provide answers, this report examines local resistance in Germany and Austria, by focusing on the following research questions: *How does local resistance to the BBT project compare in Austria and Germany? How can these differences be explained?*

It is important to note that this investigation is conducted as part of the European Silk Road initiative. The idea of the creation of a European Silk Road – a high-speed rail (HSR) link connecting Eastern and Western Europe – arose as a way to connect the 'industrial centres in the west with the populous, but less developed regions in the east of the continent' (Holzner et al., 2018). The reasoning behind that project is that such connections would generate growth and development, as well as improve living standards and drive political, economic and cultural cooperation (wiiw, 2019).

Previous research by the Vienna Institute for International Economic Studies (wiiw) found that such an investment would also have significant environmental benefits. Its 2022 study on the environmental impact of a European Silk Road on a northern route, starting from Lyon and extending north-eastwards, found that such a passenger transport project could result in carbon emission avoidance of up to 10% of annual net EU27 emissions (Weber et al., 2022). A 2023 study found that the construction of the proposed European Silk Road along a comparable line could reduce CO_2 emissions from freight transport by the annual equivalent of almost 24% of overall EU transport sector emissions (excluding air transport) (Arsenev et al., 2023).

Major routes of the European Silk Road HSR network could connect the bigger agglomerations in the European Union along existing and projected lines. Figure 1 presents three possible lines that could form the core of an HSR network, connecting major capital cities in the north-west, industrial agglomerations in the centre and urban areas in the south-east with high-growth-potential: one from the south-west of the continent to the north-east, crossing the Pyrenees; another from the north to the south, crossing the Alps; and a third one, from the north-west to the south-east, crossing the Carpathians.

Figure 1 / Possible routes for a European Silk Road high-speed rail network

Source: GEOATLAS.com; own route design.

It is reassuring that these ideas are less utopian than those of a few years ago. Given recent geopolitical and geoeconomic shifts, as documented by Mario Draghi's report 'The future of European competitiveness' (Draghi, 2024), the EU's new strategic direction is slanted more heavily towards large (infrastructure) investment that should heat up the economy and thereby increase productivity. More specifically, Enrico Letta's report 'Much more than a market' (Letta, 2024) suggests the establishment of a comprehensive, pan-European HSR network, seamlessly linking EU capitals and major urban centres. Based on this, the new Von der Leyen Commission and the European Commissioner for Sustainable Transport and Tourism, Apostolos Tzitzikostas, initiated an Implementation Dialogue on HSR in Europe in April 2025. As a consequence, the Commission has put the long-delayed Madrid-Lisbon HSR line at the top of its transport priorities, aiming to get it operational by 2030 (Mokrani, 2025).

Earlier, several commercial initiatives had tried to establish HSR links. For example, an Italian rail group aimed to launch these between European cities (Wright and Georgiadis, 2023). A report by EY (2023) also advocated an HSR network. More recently, an initiative comparable to the European Silk Road was launched by the think tank 21st Europe (2025), named Starline. Thus, there is no shortage of HSR initiatives for Europe. Also, financing is not the main stumbling block. Holzner (2019) has proposed a number of possible funding options. Often, the problems lie in the detailed specifics of the implementation of HSR projects, across regional and national borders.

Our report aims to complement the literature, by expanding knowledge about the obstacles to international HSR development, specifically by addressing the impacts of local resistance. After providing some background information on general challenges in the HSR sector, the report introduces local resistance as a currently less explored issue in the literature and highlights the BBT as a notable example of that challenge. The methodology section presents the research design, before the report provides an analysis of the Brenner case, with a focus on how local resistance to the BBT unfolded in Germany and Austria. This is followed by an analysis of the nature of the significant resistance in Germany, highlighting how local political interests seem to have played an important role in this contrast. The report concludes that resistance has been much stronger in Germany, and that a key underlying factor is the greater politicisation of the issue by local politicians in that country.

2. RESEARCH BACKGROUND

In recent years, the improvement and expansion of European HSR routes has become a priority for the EU (European Commission, 2023). This is notably reflected in the EU's Green Deal objectives and in the Sustainable and Smart Mobility Strategy, which aims to double high-speed passenger traffic by 2030 and to triple it by 2050 (European Commission, 2023). In Europe, high-speed trains can often compete with air travel, especially in terms of travel from city centre to city centre (Railway-News, 2018). On the environmental front, switching to HSR as an alternative to air transport is key as it is much more energy-efficient and thus has significant potential to reduce carbon emissions (European Commission, 2023).

However, the development of an HSR network in Europe faces many challenges, which may affect the development of a European Silk Road. For example, in their 2018 audit of the European HSR network, the European Court of Auditors identified challenges to maximising its efficiency. These challenges included coordination in planning and construction among member states, varying regulations and requirements for construction and operation of trains in Europe, and the low priority placed on

international railway projects by national governments (European Court of Auditors, 2018). Understanding the challenges that international HSR development is facing in Europe is key to implementing changes to encourage development.

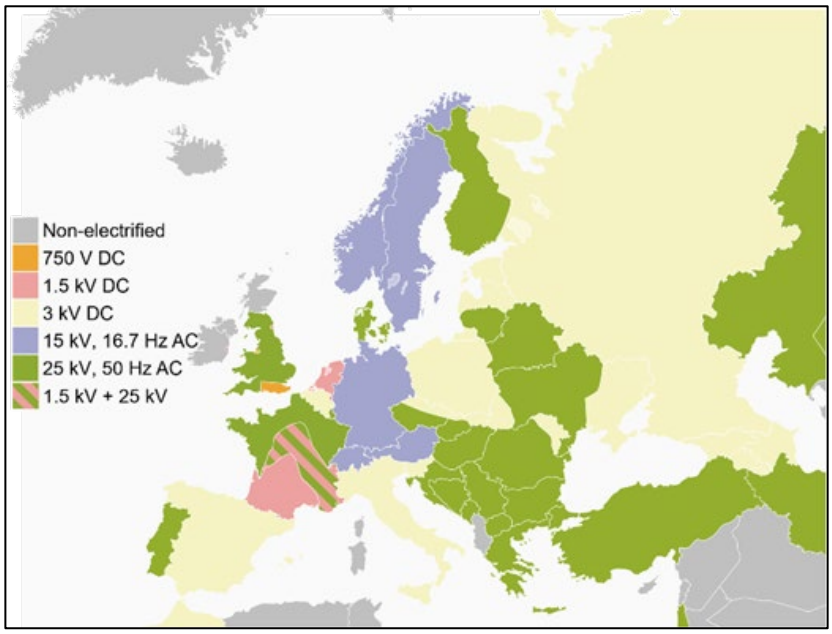
2.1. Challenges to international HSR expansion in Europe

This section aims to give an overview of the challenges to international HSR development in Europe, as defined in the literature and highlighted by our interviews. It also aims to justify the focus of the report on the question of local resistance as a barrier that was mentioned by our interviewees, but an issue that is currently under-researched. We have organised the primary challenges into three categories, to facilitate understanding of the more general dimensions which affect rail development in Europe. The categories used in this overview are technical, administrative and social barriers to international HSR development in Europe.

2.2. Technical barriers

This report defines 'technical barriers' as barriers which relate to technological or practical constraints and limitations that impede the physical development, implementation and operation of railway systems. Several examples of this have been highlighted during the interviews. Throughout Europe, there are many technical differences between the railways. One of the most important of these is the difference in overhead power line systems, which impacts adversely on the ability of trains to cross borders (Postma, 2022). For a train to have the ability to operate on different systems, specialised locomotives must be used (European Union Agency for Railways, 2022). However, there are limits to how many different systems each locomotive can handle. This is an additional challenge when attempting to establish international rail lines (ibid.)

Figure 2 / Overhead power systems in Europe in 2022



Source: Postma (2022).

Another technical barrier highlighted in our interviews is the differences in track gauge. For example, Spain and the Baltic states have different gauge structure: the Iberian and the Russian gauge (ibid.) This issue can be overcome using equipment such as gauge-changing wheelsets, but it remains a barrier for the establishment of international HSR lines as it complicates both the construction and the operation of the routes (ibid.).

These types of technical barriers have been identified as an issue for the development of international HSR in Europe by both the EU's Agency for Railways and the European Court of Auditors. In a 2022 report, the EU's Agency for Railways addressed the possible removal of 'technical and interoperability barriers'. The study recommends further harmonisation of national rules and of the Technical Specifications for Interoperability (ibid.). The European Court of Auditors, in its 2018 special report on the European HSR system, also highlighted technical differences as a key challenge that severely reduces the interoperability of European railways. One example given in its report is that trains are forced to stop at borders to make technical changes, such as changing the locomotive to fit with the system of the destination country, which can increase travel time and frequently leads to delays (European Court of Auditors, 2018).

2.3. Administrative barriers

The term 'administrative barriers' refers to institutional challenges associated with the cooperation, coordination or organisation of the railways or their development. This includes issues such as differences in train regulations between countries, national requirements such as language competence, and international variations in planning and construction regulations.

Language requirements were a challenge raised by our interviewees. In contrast to the aviation industry, the European railway area does not have a designated language that can be used for all connections. As a consequence, train drivers and other staff are often required to attain a level of proficiency in the local language in order to work in a country (International Railway Safety Council, 2023) . During cross-border services, staff on the train may be required to speak multiple languages; this can cause recruitment difficulties as the number of qualified candidates can be limited (ibid.).

Another administrative barrier highlighted in our research refers to the differences in regulations and planning procedures between countries. One such issue is different rules regarding train braking (European Union Agency for Railways, 2022). In Europe, there is no standardised requirement for braking performance, and so countries use their own national requirements. This is a challenge for international connections, as at border crossings trains may need to stop for changes to the braking set-up to comply with national rules regarding braking performance, which adds to travel time (ibid.). On the current connection through the Brenner Pass, the European Union Agency for Railways estimates that, on average, travel times are extended by 20 minutes owing to the need for trains to stop to make changes due to different braking requirements (ibid.).

A similar issue emphasised is the need for technical background checks at borders. There are several border crossings in Europe where trains are forced to stop for technical checks to be conducted (Packroff, 2022). This increases travel time. At the Brenner Pass, technical checks cause significant delays, with the time lost to these checks and the change of braking regime averaging approximately

50 minutes for freight transport (ibid.). On the border between Bulgaria and Romania, the problem is even more significant, with technical checks required by national regulation taking between six and nine hours (ibid.).

Another administrative barrier highlighted in the literature is the varying regulations and procedures for planning and constructing railways in different countries. The European Court of Auditors highlights administrative issues such as language barriers, different regulations on tendering documents and contracts, and varying accounting systems, which make it difficult to construct cross-border railways (European Court of Auditors, 2018).

The European Court of Auditors recommends the creation of 'one-stop shops' – bodies designed to streamline decision-making and cooperation during development of cross-border rail networks (ibid.). It also highlights that the current lack of administrative coordination results in trains having to stop at borders, limiting the benefits of a high-speed railway (ibid.).

2.4. Social barriers

Finally, this report defines 'social barriers' as barriers that occur due to sociological, political or human reasons. Two major social barriers were highlighted during our interviews: lack of government prioritisation of international railway projects and public resistance.

Interviewees highlighted the issue of government priorities, stating that national governments are likely to prioritise the development of the national railway infrastructure over international connections. Not only does this reduce the initiations of such projects, but it can also impact the funding of international connections, as governments may devote more funds to national projects. Although the EU plays an important role in funding international HSR projects in Europe, this is still a major challenge.

The issue of local resistance as a barrier to international HSR development in Europe has received too little attention. Public resistance has been mentioned in the literature, especially concerning Germany, but its impacts remain underexplored. They were, however, frequently highlighted during interviews for this project. Specifically, high levels of resistance to railway development by local communities were highlighted by our interviewees at Deutsche Bahn as a cause of both delays and overspending during projects. The aim of this report is to expand on the understanding of local resistance as a barrier to international HSR development.

The report focuses on the Brenner Base Tunnel (BBT) project. As is well known, the project has faced very significant delays. Currently, the aim is to complete construction in 2032. However, some estimates indicate that the completion of the Northern inlet route might be delayed until as late as 2040 (OECD, n.d.). Local resistance has been identified as an issue causing delays and conflicts, particularly in Germany, where it has been highlighted as one of the main bottlenecks of the project (Davies, 2018). The Brenner Base project therefore provides a good opportunity to compare the impacts of local resistance between the countries involved in the same project. This report compares the cases of Germany and Austria.

3. METHODOLOGY

The research for this report consisted of two key stages. The initial part focused on gaining insights into potential problem areas for international HSR development in Europe. After a review of academic and professional literature, we conducted interviews where the issue of local resistance was repeatedly highlighted, although largely absent from the broader literature review. We thus identified this issue as a relevant research gap to fill. The second stage allowed us to investigate local resistance through an in-depth case study analysis. The case of the Brenner Base project was used to analyse the importance of local resistance in Germany and Austria. This comparison allowed for a deeper understanding of how local resistance can have different origins and consequences in different situations.

As mentioned in the background, this research started off with a more general focus on challenges to international HSR connections. To identify those, we conducted a review of the literature. We gathered information from various sources, notably academic journals and institutional reports. Moreover, we interviewed the federation ALLRAIL and a member of the European Court of Auditors. This was especially useful in gathering an up-to-date overview of the core challenges from different perspectives.

As we came across the case of the BBT and decided to focus on the under-researched challenge of local resistance, we adapted our data gathering accordingly. After conducting our review, we found that academic literature and institutional reports on the topic remain scarce. We included all relevant reports we could find. However, one should note some content concentration as they mostly come from EU agencies, Galleria di base del Brennero - Brenner Basistunnel Societas Europaea (BBT SE) and Deutsche Bahn (DB). The bulk of our literature analysis on local resistance to the BBT thus comes from magazines and newspapers providing high-quality analysis of rail-related news. These include *International Railway Journal*, *Railway Technology*, *Rail Target*, *Railway News* and *Railway Pro*. We also relied on relevant articles from *Der Spiegel* and *Kronen Zeitung.* This allowed us to get a better grasp of the perspective of local people on both sides of the border.

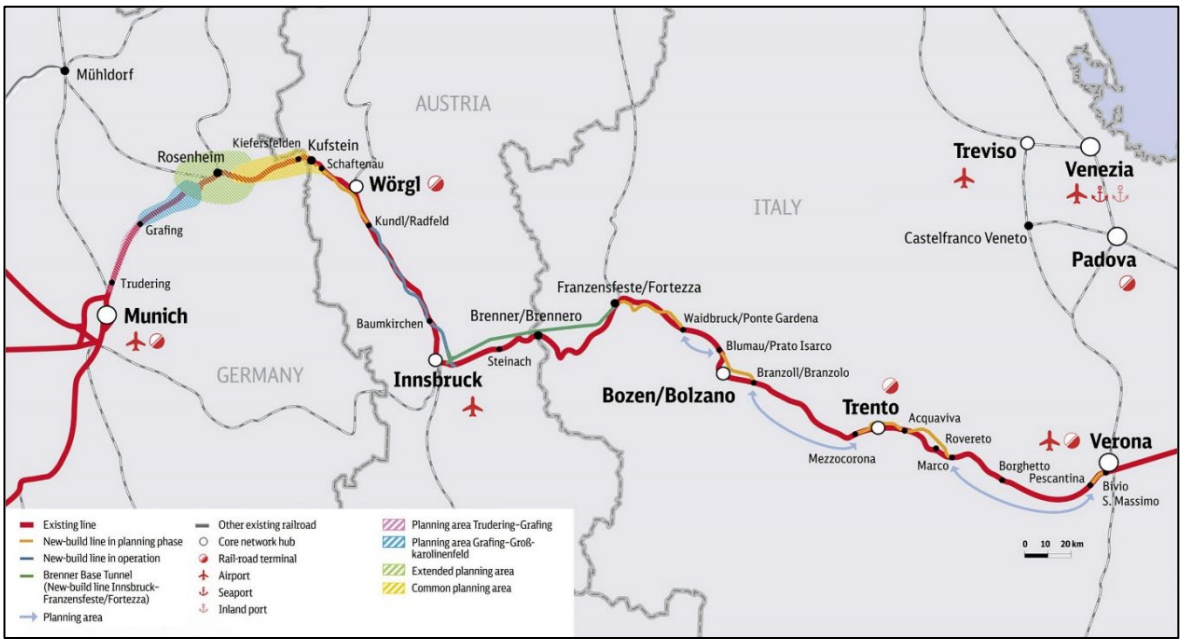
To gain a deeper understanding of why local resistance to the BBT was so important in Germany, we also interviewed six people working for the branches of DB that are relevant to our project. Interviewees 1 and 2 provided us with more general information about the challenges facing high-speed international connections in Europe. Interviewees 3, 4 and 5 told us more about DB's involvement in the BBT and local resistance to the project. Finally, Interviewee 6 enabled us to draw some parallels with DB facing similar resistance in another of its international HSR projects – the Fehmarn Belt fixed link. Our interviews were useful in indicating particular aspects to investigate, as well as in identifying specifics that were not mentioned in the literature.

4. COMPARISON OF LOCAL RESISTANCE IN GERMANY AND AUSTRIA

4.1. The Brenner Tunnel

The Brenner Base Tunnel (BBT) is a 55-km tunnel from Innsbruck in Austria to Fortezza in Italy (BBT SE, 2024b). As highlighted in the introduction, the tunnel not only forms a connection between the two countries but is also a part of the EU-prioritised Scandinavian-Mediterranean Corridor (BBT SE, 2024b).

Figure 3 / The Brenner Base Tunnel



Source: DB Engineering & Consulting (2021).

The idea of creating a tunnel under the Brenner pass was first proposed by Italian engineer Giovanni Qualizza in the late 1840s (BBT SE, 2024a). However, owing to the difficulty of the project, it was not until 1971 that his idea was picked up by the International Union of Railways, a global organisation focusing on the development of rail transport. The International Union of Railways commissioned a study to look at the feasibility of a railway base tunnel under the Brenner pass (BBT SE, 2024a). In the 1970s and 1980s several feasibility studies were completed and in 1989 the planning process for building the tunnel got under way. In 2004 Italy and Austria signed a treaty to build the tunnel and together set up the project company BBT SE. The construction started in 2008 in Italy and in 2009 in Austria.

In 2012, Germany became involved in the project, tasked with building the Northern inlet route to the tunnel (the Munich-Innsbruck access route). In 2024 construction was continuing in four sites: one in Italy and three in Austria. In Germany, the project is still in an initial planning phase, and construction has not yet started. The construction of the tunnel is scheduled to be completed by 2032, but there has been speculation that it will not be completed until 2040, with the delay largely attributable to the slow progress in Germany (ibid.; OECD, n.d.).

4.2. Justification of case studies

The report compares Germany with one of the other countries involved in the BBT project. Therefore, a selection had to be made between Italy and Austria as to which would be the better candidate for a resistance comparison with Germany. Austria was chosen because it has similarities with Germany that make it a more relevant case for comparison. Importantly, Germany and Austria both have a similar federalised system of governance in which powers are delegated to subnational entities: the *Länder* or states. Italy, on the other hand, is a union state, albeit with federal elements. The Italian province bordering to the south of the Brenner pass is an autonomous, mostly German-speaking entity – Südtirol/Alto Adige. Nevertheless, the general difference in structure played a central role in our study as we were looking at the reactions of local actors, which are very much influenced by the countries' politics. Comparing resistance to the project in Germany with a country that also has *Länder* was thus more relevant because it allowed us to have a better grasp of *what* exactly made the impact of *Länder* politics different in both countries.

5. GERMANY

In 2012, Austria and Germany agreed on the construction of two new railway tracks as the Northern access route to the BBT (Davies, 2018). However, since then, very little progress has been made on the German side. After six years of route planning, the route for the Ostermünchen-Schaftenau link was decided upon in 2021. However, construction has not started yet (DB Engineering & Consulting, 2021).

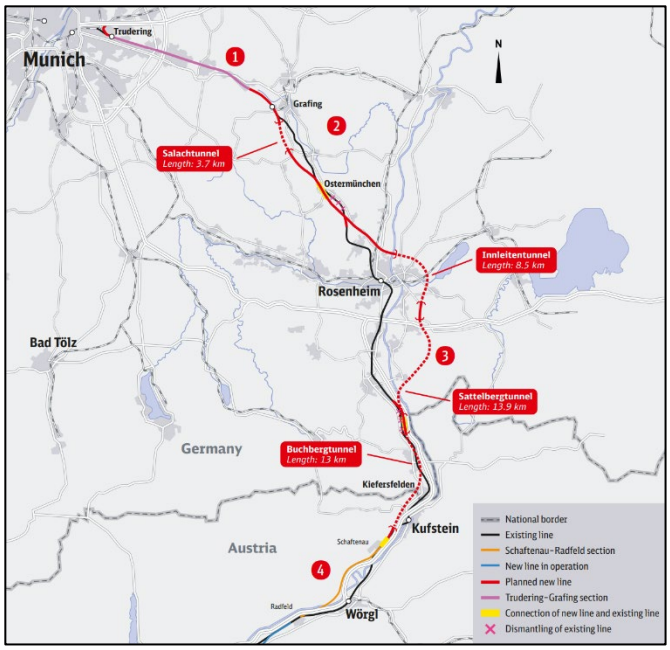
Meanwhile, construction on the Southern access and on the main tunnel is well on its way in both Austria and Italy (BBT SE, 2024c). Some excavation work remains to be done on about 50 km on the Austrian side. On the Italian side of the tunnel, there is only final lining left to undertake as excavation on the Mules 2-3 section (the largest section of the BBT, with its 65-km tunnel system) was completed in March 2023 (*Railway Pro*, 2023). After opening a connection from the Innsbruck bypass to Radfeld in 2012, the Austrians started operations to build the Radfeld-Schaftenau connection and completed their part of the Northern access route (TrasportoEuropa, 2024). On the Southern access route, the Italians are making good progress, 'starting with the priority variant between Fortezza and Ponte Gardena, which has already been contracted and is under way' (ibid.).

Delays occurred everywhere, mostly as a result of technical difficulties, problems concerning funding, and contract cancellation (Fender, 2021a). This caused the tunnel completion date to be put back to 2032. However, it remains clear that Austria and Italy 'overtook Germany years ago' (Reich, 2024). So, why does a nation that is driving European economic growth face such delays in building railway infrastructure?

The articles we could find on the topic and our research with Interviewees 3-6 point to the same main reason: significant resistance to the project by local actors: 'Already significantly behind schedule, the German railways now face additional delays due to objections from local committees against the project's design from Munich to Austria' (TrasportoEuropa, 2024). People are making their concerns about the Northern access route heard, both directly and through the intermediary of committees, which delays the realisation of the project.

Since the project was made public, Bavarian residents have voiced significant concerns about the noise pollution the project could bring, described as 'the idea of thundering freight trains scheduled to double from 200 to 400 a day' (Davies, 2018). Protests have been quite intense and at times have 'boiled over into scuffles between police and protesters' (ibid.). This causes major delays as the project is put on hold and has to be adapted. As reported by a Tyrolean daily newspaper, the Grafing-Kufstein section has been 'particularly contentious' (TrasportoEuropa, 2024). To try to defuse opposition, DB started planning an alternative route around Rosenheim in 2022, as shown in Figure 4.

Figure 4 / Brenner Northern access route



Source: DB InfraGO AG (2024).

Such resistance by local communities is expected to 'further delay decisions on the project' (ibid.), which is 'increasingly seen as unlikely to be completed by the 2032 deadline and might be delayed up to 2050 according to sources from the Bavarian Ministry of Transport' (ibid).

Deutsche Bahn claims to have put dialogue with local actors at the centre of the project right from the start (DB Engineering & Consulting, 2021). As stated on the website of this DB subsidiary, 'over 200 representatives of towns and cities, communities and interest groups have been involved in the route selection process since 2015'. The route choice took up to six years as noise concerns led to over 100 potential variants to be considered (Fender, 2021a). Interviewee 3 added that, in the run-up of the route decision, DB invited local actors to no fewer than '174 working meetings and 33 plan exhibitions in the region' and that '110 specific suggestions from municipalities, citizens' initiatives and private individuals have been incorporated [into the plan for the Northern route]'. Despite those efforts, the BBT's Northern access route remains controversial.

As set out below, a major reason behind such resistance from Bavarian people is that discontent was amplified by local politicians for political purposes. By making the project a major political issue and taking strong stances over it, Bavarian politicians further politicised the Northern access route and

fuelled resistance. As soon as the project was made public, Bavaria's local politicians and administrators 'entered a state of opprobrium' (Davies, 2018). As reported in *Der Spiegel*, 'mayors and other local administrators have declared a popular uprising, with some threatening to promote the kind of massive resistance triggered by the Stuttgart 21 urban development and railway expansion project' (Neumann, 2012). The latter project led to months of protests in Stuttgart, with people camping out and fighting with the authorities (Crossland, 2010).

In 2017, Alexander Dobrindt, who was the federal minister of transport at the time, promised citizens he would 'review the need for a new route' (Reich, 2024). In 2018, aligning with the demands of the Free Voters electorate, Hubert Aiwanger became deputy minister-president of Bavaria and minister of state for economic affairs, regional development and energy, and similarly argued that: 'For the Brenner access, the need for a new route must first be proven' (Reich, 2024). Such claims are echoed by other politicians in the Bavarian government, including Kerstin Schreyer, who served as transport minister (Bavarian Ministry of Economic Affairs, Regional Development and Energy, 2021).

In a 2021 press release, Ms Schreyer first highlighted that Bavarian authorities had fulfilled their responsibility to conduct the spatial planning procedure, before highlighting that its outcome was for the federal government to decide upon (ibid.). In other words, she emphasised that the actual decision of realising the project was for the federal government to make, thereby shifting accountability away. Ms Schreyer added: 'Bavaria is demanding maximum resident friendliness in the interests of its citizens. This means that noise and landscape protection are needed, primarily through largely underground routes. This is precisely what I am lobbying the responsible federal government for' (ibid.).

Apparent from all those statements is a willingness by local politicians to position themselves as protectors of people's interests against a potentially harmful project. As put by one of our interviewees, it is something like 'okay, I can have a profile and doing something good for the region'. In other words, there is electoral capital behind those positions. People are worried about the disturbance the project could bring to their daily lives, the prime concern being noise (Fender, 2021b). By making the project a major political discussion, questioning its usefulness and taking strong stances against it, Bavarian politicians fuel resistance. Thereby, they significantly contribute to delaying the realisation of the project.

All our DB interviewees said that it is of course normal for people to voice discontent and fears, and that it is important that they are listened to and that efforts are made, where possible, to try to adapt the project accordingly. However, they emphasised that the politicisation of the topic beyond those natural fears was 'really forgetting about the bigger picture... because it is actually good for the region when we're done!' The main reason we found for the especially significant resistance to the BBT project in Germany is the continued politicisation of the issue by local politicians. This conclusion is relevant to address, as it not only creates an image problem for Germany (and the EU), but also delays the arrival of the benefits that the project will bring to the very people who are complaining. The following section examines how a similar issue is slowly being addressed in the context of the Fehmarn Belt fixed link project.

As shown in Figure 5, the Fehmarn Belt link is a project connecting the German island of Fehmarn to the island of Lolland in Denmark (DB Cargo, 2024). Because of its key location, the 88-km rail line would become the 'heart of the new European freight corridor between Oslo and Palermo'. (Interviewee 4).

Figure 5 / Rail connection of fixed Fehmarn Belt link

Source: DB Cargo (2024).

Here also, there has been important resistance from local politicians on the German side. In contrast, the Danes are generally quite supportive, even though most of the construction costs are to be borne by Denmark (Goos, 2011).

The project originates from a treaty signed by both countries in 2008, followed by over a decade of legislation and impact studies (Femern, n.d.). This process was much more complicated on the German side as 'a number of organisations – including ferry companies, environmental groups and local municipalities – appealed against the approval of the project over claims of unfair competition or environmental and noise concerns' (Prisco, 2024). In 2019, about 3,100 written complaints by German organisations and individuals caused significant delays to the environmental impact assessment and project approval (STRING, 2019). Once approved, opponents to the Fehmarn Belt link appealed the decision in court. Although the appeal was eventually dismissed by a federal court in 2020, the drawn-out nature of the process reflects the important resistance of German locals.

We spoke to DB members working on this project and received similar answers as for the Northern route situation. Interviewees indicated being under considerable political pressure from local politicians. They added that resistance was 'extremely political' and that some actors were making the resistance to the project seem much more important than it might be.

The fact that, in both projects, the same issue of resistance amplified by local politicians was highlighted indicates the structural nature of the problem. When asked what could be done in mitigation, our interviewees pointed out promising changes as a consequence of the *Bedarfsplanumsetzungsverordnung* (BUV) or Requirements Plan Implementation Agreement (Eisenbahn-Bundesamt, n.d.). This new law transferred responsibilities to conduct the hearing and approval of high-priority rail projects from the *Länder* level to national authorities. Interviewee 6 was

particularly vocal on this point, emphasising how the transfer of those powers to the national level was so important for several reasons:

> 'You asked what should change, but I think it already did, like this is what it needs. It has to be on a national level. [...] It's needed to put the resources on a national focus on those [high-priority] projects. [...] Now we put national authorities in charge [...], because, of course, in a *Länder* there are different priorities.'

When asked whether they thought the new law could help with the issue of resistance in Germany, Interviewee 6 said that they thought so because the legislation gives DB the necessary political backing to accelerate progress. They added that often, as with the Fehmarn Belt, people seem to mind much less once construction is under way because they can see what it actually is about. Especially, as they phrased it, because:

> 'high-priority projects, they are being done because the state has calculated that there is a positive effect for society. It's not always economically profitable, but... in German, we say *volkswirtschaftlich...* so it's like for the good of society.'

All interviewees strongly emphasised that they understand people's fears and that, in the words of Interviewee 4: 'It is very important that we keep an active dialogue as we are doing'. This was echoed by Interviewee 6, who added that:

> 'It's our responsibility to explain to the people why is this good for the greater good. [...] It's fears and it's normal that something you cannot really see, cannot really imagine you are afraid of it...totally normal I get it [...] but that's also why we have to get into really building stuff. [...] It is really our [DB] responsibility to go explain why we are doing what we are doing. It's not like here we go and go out of the way, but it needs the backing politically'.

According to our interviewees, this new law can bring positive change to DB high-priority projects in the future. Transferring the hearing and approval responsibilities to national authorities gives high-priority projects the necessary political backing they need to go forward more quickly. Moreover, they said that the national authorities are much more used to handling large-scale infrastructure schemes – like the BBT and Fehmarn Belt projects – which will contribute to making the process smoother.

This law will probably not have a direct impact on the BBT as it applies only to 'all new projects/plans starting from January 1, 2018' (ibid.). However, the policy lessons that can be derived from our interviews remain very valuable to inform the implementation of the BUV in the future. Moreover, it highlights the importance of monitoring how the BUV is going to impact future projects in order to ensure that changes evolve towards ensuring smoother implementation of high-speed projects while respecting the need to maintain active dialogue with the public.

6. AUSTRIA

As mentioned above, the BBT aims to connect Innsbruck in Austria and Fortezza in Italy. In 2004, BBT SE – the project company for the construction of the tunnel – was set up. BBT SE is a joint venture by Austria and Italy, with each country taking a 50% stake in the company (BBT SE, 2024a). It is therefore important to stress that the Brenner Base project has both a longer history and a greater impact in Austria, and that Austria carries a heavier construction burden than Germany during the project.

Although the Northern access route under German responsibility is still in the planning stage, BBT construction in Austria started in 2009 (ibid.). In 2024 there were three active construction sites in Austria (ibid.). This section analyses the impact of local resistance to the Brenner Base project in Austria to help to clarify whether local resistance there posed similar problems as in Germany.

Conflicts and delays have not been confined to Germany. At the beginning of construction in Austria, local resistance also caused delays in construction (Davies, 2018). In 2009, a local citizens' movement in Tyrol in Austria began to protest against the project (ibid.). The most contentious issue was the financing of the scheme. Originally, Austria's federal government wanted Tyrol to contribute EUR 350m, but local opposition groups regarded this as too high a sum (*Kronen Zeitung*, 2010).

These protests also engaged local politicians. For example, two Tyrolean state assembly members, Fritz Gurgiser (head of the transit forum) and Fritz Dinkhauser voiced harsh criticisms of the project and its cost (ibid.). Another member of the state assembly, Georg Willi of the Tyrolean Greens, stated: 'Without a transfer guarantee and without the simultaneous completion of the Munich-Verona feeder routes with the tunnel, every cent that the state contributes to the Brenner Base Tunnel is thrown out the window' (ibid.).

This resistance led to months of negotiation between the federal government and the Tyrolean state government over Tyrol's financial contribution to the project. An agreement reached in March 2010 reduced the Tyrol payment to EUR 190m. Although this significantly reduced the political resistance, it had less impact on local public opposition to the project, which continued for the remainder of 2010 (ibid.). The interruptions resulting from the political conflict and the local resistance resulted in construction projects being delayed by a further year.

However, while it is important to state that local opposition to the Brenner Base project has surfaced in Austria as well as in Germany, its impact on the timeline of the project has not been of the same magnitude. The delays and route changes in Austria have been considerably smaller in their extent. The magazine *Railway Technology* highlighted that, although resistance has occurred in Austria, the 'biggest stumbling block, however, has been resistance from Germany' (Davies, 2018).

7. ANALYSIS

Comparing the local resistance to the project in Germany and Austria, three major differences are highlighted: its magnitude, its impact and the involvement of political actors.

One of the most vivid differences between the local resistance in Germany and in Austria is its magnitude. In Germany, resistance to the project has been widespread; the Bavaria region was the source of much resistance as it is the most affected by the railway, although opposition also reached the national level, forcing national politicians into action (Reich, 2024). In Austria, on the other hand, there has only been one major local resistance movement against the BBT project (Davies, 2018). This movement was located in the Tyrol region and, although it gained some popular support, it did not draw the same attention as the resistance movements in Germany. Additionally, while the opposition movements in Germany have been sustained throughout Germany's involvement in the project, opposition in Austria has been extremely limited since the conclusion of the Tyrol protest movement in 2010.

It should be noted that the scale of local resistance could be affected by the differing geographies of the railway construction sites. Much of the railway in Austria will be located in tunnels, thereby limiting negative impacts on the neighbouring populations. This might partly explain why the railway has been the cause of less concern in Austria than in Germany, where most of the construction is to be above ground. This may have exacerbated the resistance against the project in Germany. But, as explained later, although this could account for some of the differences in the magnitude of resistance between the two countries, it cannot be the sole explanation for it.

As already pointed out, such stark difference in resistance could have been expected in view of the respective local contexts. This highlights a key lesson: the need to anticipate, at the planning phase, the potential for varied forms of local resistance along different segments of a cross-border project. As localised dynamics and concerns can have an important impact on the project's progress, appropriate anticipation of these can help in the planning process and in reducing local resistance.

Analysing the consequences of the resistance, this report finds that, although local opposition in the Tyrol region did cause a year of delays in the Austrian construction of the BBT, German opposition was the main source of delays in the project (ibid.). German opposition has managed to achieve both significant time delays and re-evaluation of the precise path of the Northern inlet route to the BBT. These delays have been highlighted as one of the major challenges to finish the project at the scheduled time.

Finally, the degree of politicisation of opposition was a major difference between local opposition in Germany and Austria. In Germany, owing to the fears of noise and other kinds of disturbances caused by the railway, politicians were able to successfully mobilise opposition of the BBT into the political arena. In contrast, in Austria, although the funding for the project did briefly become a political issue in the Tyrol, it never gained the same national attention as in Germany. The opposition to the project in Germany involved political actors on all levels, from local actors and mayors to federal-level ministers, such as the then minister of transport, Alexander Dobrindt. Our research highlights that the potential rewards, in terms of political capital, of standing against the project were higher in Germany. In the words of one of our interviewees, it seems like opposing the BBT is seen by some local politicians as a way to 'have a profile' in the region, by enabling them to be perceived as a defender of the people. In other words, it seems like a

way to secure the political spotlight and to be seen positively by local people. This strengthened the opposition in Germany, allowing it to exert much greater pressure on the project.

On the other hand, in Austria the opposition was concentrated at the local level. Although certain local politicians did turn the BBT into a political issue – especially regarding project funding – it never gained significant attention in the rest of the country and was subsequently resolved relatively quickly at the local level. This meant that the impact on the railway construction and the consequent delays were much smaller.

Another potential reason for the higher politicisation of the opposition in Germany is the power of the local governments. As highlighted by Interviewee 6, a major issue behind the major impact of the local resistance in Germany has been that much of the decision-making power resided with the *Länder* governments. Large infrastructure projects needed to be consolidated at a local level even after the federal government had accepted the project. This meant that local decision-makers had the power to demand changes and cause delays. Interviewee 6 highlighted that opposition from local politicians meant that significant changes had to be made, such as re-routing rail lines or increasing noise protection. This can increase both the delays and costs of a project.

Looking into potential solutions to the delays caused by the politicisation of issues in Germany, as highlighted above, one major solution may already have been implemented. Interviewee 6 emphasised that, because of national legislation in Germany in 2017 that implemented the Requirements Plan Implementation Agreement (BUV), the development process for high-priority infrastructure has now been centralised at the national level, which makes it less likely that these projects can be politicised at local levels. As almost all international HSR projects are considered high-priority infrastructure projects, this has an important impact on the ability of local actors to cause delays in the construction and planning process. Interviewee 6 highlighted that, as national priorities tend to differ from the *Länder* priorities, political opposition to projects may be limited by transferring the power to conduct hearings and approval to the national level. This may reduce local actors' ability to use infrastructure issues to gain support on the local political stage. So, although local opponents of rail projects can make demands and attempt to influence the schemes, politicians are less likely to be able to mobilise the issue to gain local support.

Although this change in legislation will not directly affect the BBT project, it may have considerable effects on the impacts of local resistance to future international railway projects in Germany. Understanding the implications of this change in legislation is an interesting area for future research as it could investigate the effects of centralisation on the impacts of local resistance.

However, it is important to note that the Austria/Germany comparison is not perfect as there are several significant differences between the two countries' involvement in the project. The German involvement was limited to the construction of the Northern inlet route, and by the time this involvement began, the planning and construction in Austria and Italy was already in progress (BBT SE, 2024a). Hence, while Austria was part of the project from the beginning and is a key stakeholder in the BBT project construction company, the project's economic and strategic importance is less significant in Germany as it is responsible only for the connections to the tunnel. It is possible that such differences impacted both the magnitude and impact of local resistance.

One takeaway from this is that it might have been better to include Germany more directly at the start of the project – either through its integration into the Austro-Italian project company or more informally through discussions or planning sessions. This experience can inform future cross-border infrastructure initiatives, highlighting the importance of early and equal involvement of all key entities to foster shared ownership and reduce asymmetries in stakeholder engagement.

8. CONCLUSIONS

The aim of this report has been to understand how local resistance to the BBT project compare in Austria and Germany. To achieve this, a review of media reports in both countries was conducted along with interviews with six Deutsche Bahn employees, working for different departments. The research highlighted several differences between local resistance in Austria and Germany, including the magnitude of the resistance, its consequences and the level of politicisation. These differences form part of an understanding why the German side of the BBT project has suffered more significant delays than the project in Austria.

As highlighted above, our research indicates that local resistance to the BBT project in Austria has not reached the same magnitude or impact as local resistance in Germany. One of the main reasons why local resistance in Germany had a bigger impact on BBT planning and construction than in Austria is the politicisation of the issue in Germany. As shown throughout our interviews, the perceived political advantage of opposing the project led politicians to mobilise the BBT project into a political issue. This politicisation resulted in greater pressure, achieving both project delays and route re-evaluation. In Austria, on the other hand, the issue never gained such political significance and so the impacts on the construction process were much more limited. This indicates how politicisation is a key reason behind the contrast in magnitude and impact of resistance between Germany and Austria.

Our research also highlighted the potential of the BUV in mitigating those challenges for similar projects in the future by transferring hearing and approval responsibilities to national authorities. This stresses the importance of continuing policy change in that direction in Germany, and of closely monitoring its impacts to ensure positive results. Moreover, those findings are relevant to inform other European projects facing the same kind of challenges about relevant policy reforms to consider, thereby assisting the expansion of the HSR network in Europe. Lessons learned from past failures in building large cross-border infrastructure are vital for informing the planning of bold, trans-European rail projects, such as those envisaged in the European Silk Road initiative. Among the key takeaways from this report is that success in such ambitious undertakings depends on the early integration of localised dynamics and concerns into the planning process, ensuring that regional sensitivities are addressed from the outset. Equally important is the early and balanced involvement of all participating countries, which helps to foster a sense of shared ownership and mitigates asymmetries in stakeholder engagement throughout the project's development.

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IMPRESSUM

Herausgeber, Verleger, Eigentümer und Hersteller:
Verein „Wiener Institut für Internationale Wirtschaftsvergleiche“ (wiiw),
Wien 6, Rahlgasse 3

ZVR-Zahl: 329995655

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Offenlegung nach § 25 Mediengesetz: Medieninhaber (Verleger): Verein "Wiener Institut für Internationale Wirtschaftsvergleiche", A 1060 Wien, Rahlgasse 3. Vereinszweck: Analyse der wirtschaftlichen Entwicklung der zentral- und osteuropäischen Länder sowie anderer Transformationswirtschaften sowohl mittels empirischer als auch theoretischer Studien und ihre Veröffentlichung; Erbringung von Beratungsleistungen für Regierungs- und Verwaltungsstellen, Firmen und Institutionen.

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