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Can parliament govern the transport transition? How the German Bundestag scrutinizes rail projects

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Abstract

Background: The paper aims to elucidate to what extent the German Parliament exerts control over rail planning. Parliament has the budgetary right, but information asymmetries vis-à-vis the railway company Deutsche Bahn and the Ministry of Transport make parliamentary control difficult.

Methods: Recently, Germany has instituted a parliamentary review process that allows the Parliament to take up concerns by the public affected by rail projects. We use the principal-agent theory to model this new institution. Parliament delegates rail planning to the Deutsche Bahn, while the Federal Railway Authority serves as a budget watchdog, and parliament uses input from public participation as a deck-stacking procedure. The paper first situates the institutional innovations—the new parliamentary oversight procedure—against the former logic of railway planning. Second, based on the documentation of parliamentary oversight, we analyze for which demands by the affected public the Parliament uses its power to change rail projects.

Results: The paper showed that public participation matters. The German Parliament introduced expensive changes to rail projects. In particular, demands that had been voiced in well-institutionalized public participation (that is, when municipalities, regional associations, etc., were engaged in long-term institutionalized dialogues with the Deutsche Bahn) were more likely to be addressed. An Extra budget was then allocated to, for example, noise-regulating measures.

Conclusions: To sum up, the German Parliament uses information gained in public participation in combination with its budget rights to exert control over railway planning for conflictual projects. Thus, Parliament takes a more active role in railway planning. Whether this also leads to more acceptance for rail projects, is an open question.

Keywords: Rail, Planning, Parliament, Transport transition, Principal-agent

Background

Parliaments have a vital interest in steering infrastructure projects. These projects are important for economic growth and prosperity. At the same time, they affect many people and are often contentious [1].

However, parliamentary control is hard to achieve. First, the chain of delegation to the ultimate agent planning and building the infrastructure, is long. Often, governments do not plan infrastructures themselves, but delegate this task to private actors [2]. Second, the chains of delegation are often complex, as not only does the federal government have a say in infrastructure construction, but so do other actors, such as agencies or substate units. This situation of "multiple principals" causes control problems [3]. Third, information asymmetries are large. Infrastructures are complex projects,

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and parliaments often do not have enough information to meaningfully decide about projects [4].

A notable attempt to ensure parliamentary control over transport infrastructure planning is the German procedure of "Parliamentary review of rail projects" (Parlamentarische Befassung mit Schienenwegen). In this procedure, the German parliament (the *Bundestag*) deals with new rail projects or the expansion of existing rail projects. Having the budget authority, parliament can allocate additional funds to satisfy demands by municipalities and other stakeholders, e. g. for additional noise control measures. Parliament thus has the possibility to scrutinize comprehensive rail projects proposed by the DB Netz AG, and modify them by agreeing to finance-specific demands.

Our question is how the German parliament uses this review institution. Does it modify the rail project planning by the DB Netz AG, and if yes, according to what logic? We do not aim for a normative assessment of the procedure: We do not know whether the procedure leads to more acceptance or speedier planning procedures at the end of the day. Our aim is more modest: We simply want to know how the procedure is used by parliament.

As our questions concern the relation between parliament and actors to which it has delegated tasks, the article uses the principal-agent theory The latter is widely used to model problems of parliamentary control [7, 8]. As it concerns precisely the issues that plague infrastructure policy—long delegation chains, agents whose preferences deviate from their principals´ preferences, and information asymmetries—it has often been applied to this policy field [9, 10].

We argue that the parliamentary review procedures can be modelled as a principal-agent relation. Parliament is the ultimate principal, the DB Netz AG is the agent tasked with developing proposals for rail projects. The Federal Railway Authority (Eisenbahnbundesamt) and the Federal Ministry for Transport assume the role of trustees who contribute signals about the cost efficiency of the projects. Early public consultation allows the public to voice their demands in the process. This "stacks the deck" [5] in favour of local demands, who get an institutionalized way into parliamentary decision making.

We derive three hypotheses regarding when parliament accepts demands by the public and, therefore, deviate from the proposal made by the DB Netz AG: First, parliament might accept demands that are low-cost; second, parliament might accept demands that have strong public support and third, parliament might accept demands that fit the criteria laid down in the decision founding the review procedure. The null hypothesis claims that there is no systematic explanation for parliament's adoption or rejection of public demands.

As our hypotheses concern parliamentary decisions, our dependent variable is parliamentary acceptance of the demands voiced in the early public consultation procedure. These demands form our cases, on which parliament decides. These cases, in turn, are nested in four rail projects. Each project can contain several demands, i.e., several cases.

The analysis unfolds in three steps: First, we delineate the rules of parliamentary review and early public consultation and elucidate in an institutional analysis how they alter the delegation relationship between parliament, Federal Railway Authority, Ministry of Transport, and DB Netz AG. Second, we present descriptive statistics on the extent to which the parliament accepts demands derived from early public participation. Third, we zoom in on the individual demands and analyze which of those are accepted or rejected.

We find that hypothesis 2 best captures which demands are adopted by the German parliament. If demands emanate from well-institutionalized, long-standing dialogue fora, parliament is more likely to accept these demands and grant funding. Thus, deck-stacking seems to work as hypothesized. Other aspects such as total costs (hypothesis 1) or fulfilment of criteria defined ex ante (hypothesis 3) play only a minor role.

Our findings demonstrate that there is no necessity for infrastructure planning to be dominated by the executive. By installing a review procedure, the German parliament has created an institutional pathway for intervening even in details of infrastructure planning. The procedure is designed to systematically allow local demands to influence the planning process, with parliament as the gatekeeper for these demands. As already indicated: we do not claim that this means that the procedure is more legitimate or efficient than the old planning institution. In the conclusion, we outline some criticisms that mostly concern the case-by-case basis of parliamentary decisions, and the lack of a general decision rule. However, if one sees parliamentary control as a cornerstone of democratic governance, then the parliamentary review of rail projects strengthens the democratic quality of the decision-making process.

Institutional background

Infrastructure policy is a thorny issue for parliaments. This is due to several factors. First, infrastructure is a policy field dominated by technical considerations. The information asymmetries between the actors building and running infrastructures and parliaments are considerable [11]. Second, infrastructures are expensive. The

financial gain is often diffuse and accrues only in the far future. Third, however, the political costs are concentrated and immediate: Citizens do not want large-scale infrastructures close to their homes, for reasons of noise, encroachment of the landscape, environmental problems, and loss of value of their property [12], and protests can have a considerable impact on both concrete projects and overall policies [13]. Fourth, planning and building infrastructures is often not done by the government, but by formally privatized former state monopolies [14, 15].

These properties of infrastructures, on the one hand, offer a strong motivation for parliaments to exert political control, and on the other, the options for political control are very limited.

All these properties of infrastructures also apply to rail projects in Germany. The German parliament has a vital interest in political control over projects. However, the actual planning and construction of railway lines are technically complex, so that these tasks have been delegated to the DB Netz AG.[1]

The policy field is characterized by executive dominance. Every 10–15 years, the Federal Ministry of Transport and Digital Infrastructure develops a master plan ("Bundesverkehrswegeplan") for railway lines. The more specific demand plans ("Bedarfsplan") are updated every 5 years. These plans determine which railway lines should be constructed or expanded, and the overall funding allocated to these projects. The Federal Railway Authority as an independent regulatory agency carries out the planning approval procedure for the actual projects as well as the funding process.

For a long time, the German parliament had a very limited role in supervising rail policy. Its task was both to transform the demand plan to law (mostly unchanged), and to approve of the overall budget for railway construction as indicated by the ministry.

However, since 2018, Germany can conduct a parliamentary review of rail projects. This procedure is a reaction to the fact that the old planning institution could not deal with demands going beyond what is mandated by law (übergesetzliche Forderungen), thus with a kind of "gold plating" [16, 17] in the national context. The problem is that, for example, residents demand more noise control measures than specified by law. On the one hand, those measures can increase acceptance of a rail project. On the other hand, the principle of efficiency and economy[2] requires that the additional costs of measures going beyond the law cannot be financed from the federal budget. Thus, the DB Netz AG faces a dilemma: If their measures do not satisfy the demands, popular protest and acceptance problems will arise, if they satisfy the demands, they cannot receive compensation. To remedy this problem, policymakers sought a way to gain more flexibility to adapt budgetary constraints to new demands. As parliament has the ultimate budgetary sovereignty, it has got an important role in deciding which demands should be satisfied (and financed).[3] Thus, parliamentary review does not concern the question of whether a given rail project is to be built—that is the purpose of demand planning—but how a given rail project is to be implemented.

The parliamentary review of railway projects is representative of the institutionalization of an informal procedure. Between 2011 and 2016, parliament had agreed on a case-by-case basis to finance measures costing an additional 1.6 billion € to achieve acceptance of the contentious Karlsruhe–Basel high-speed railway.[4] These decisions satisfied MPs from the areas adjacent to the railway line, but MPs from the rest of Germany demanded a fair procedure to ensure that their regions could also profit from additional measures. Thus, in cooperation with the executive, parliament created a new institution, the parliamentary review of rail projects.[5]

This review is depicted in Fig. 1 and works as follows: First, the DB Netz AG proposes a "preferred version" of a railway project, basically, the proposed railway line to be built. Second, it performs a public participation regarding this project. This participation is not uniformly institutionalized, but can range from single presentations of the project in the affected regions to long-term dialogue fora between the DB Netz AG and stakeholders. During this public participation, affected stakeholders can voice their demands for changes to the proposed project.[6] Third, the Federal Ministry for Transport prepares a report for parliament. The report contains: (a) the project proposal by the DB Netz AG and its justification, (b) a summary of the new demands by the affected municipalities and stakeholders, (c) an assessment by the Federal Railway Authority of whether the new demands can be met within the given budget, (d) an assessment by the Ministry of the broader fiscal consequences of the demands (e. g. their impact on the overall budget allocated for railway building).

[1] § 3 I Nr. 2 Gesetz über die Gründung einer Deutsche Bahn Aktiengesellschaft (DBGrG).

[2] § 7 BHO.

[3] BT-PlPr. 19/170: 21358.

[4] BT-Drs. 17/11652: 2; 18/7364: 3 – 4; BT-PlPr. 17/217: 26920.

[5] BT-PlPr. 18/152: 14988 – 14989, 15036.

[6] BT-Drs. 19/18075: 39; 19/19500: 85 ff.

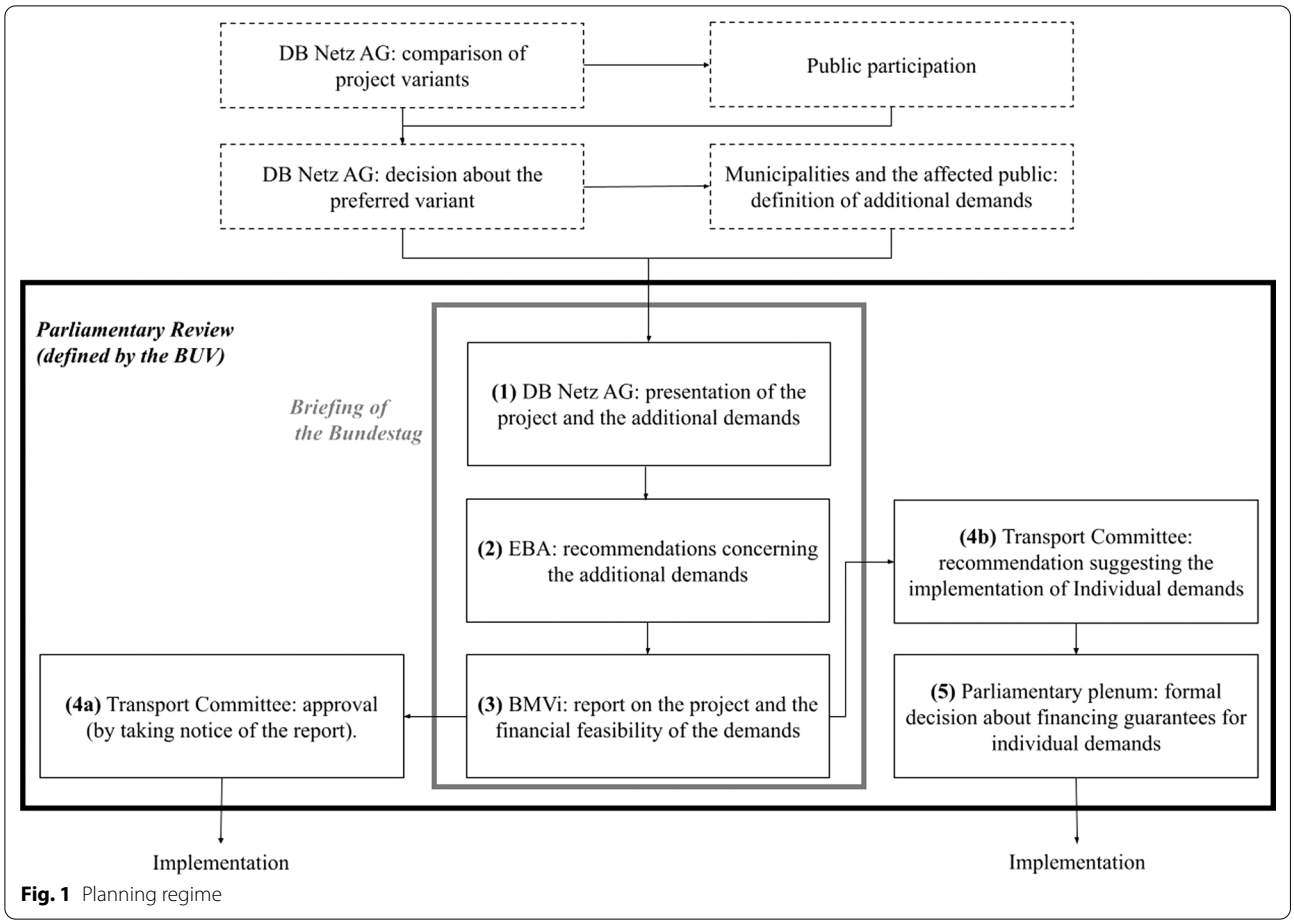

Fig. 1 Planning regime

The fourth step is essential for our purpose: Given this information, the transport committee of the parliament decides whether the original project proposed by the DB Netz AG should be pursued, or if parliament approves the additional demands and allocates additional funding from the overall budget to cover these demands. In a formal fifth step, the parliamentary plenary decides upon the committee's recommendation.

In a nutshell, parliament can use its budget authority to decide between competing proposals for railway lines. This begs the question: How has parliament used this new power to govern the German transport transition?

Theoretical background

Hence, the aim of this article is to explain how the German parliament uses its new review procedure for rail projects.

As our focus lies on the relation of parliament to other actors, to which it has delegated tasks, we choose the principal-agent theory as a plausible starting point and conceptualize parliament as the ultimate principal of railway planning. In parliamentary democracies, the relations between actors can be conceptualized as delegation chains [8]. In delegation relations, principals delegate authority to an agent to decide in their name. In a stylized way, the delegation chain in parliamentary democracies is as follows: The electorate as the ultimate principal delegates authority to the parliament, which in turn delegates executive competencies to the government. Within the government, the ministries are again hierarchically structured into relations of delegation and accountability.

There is rich literature available on the role of parliament as a principal in general, but there is no literature available on the role of parliament as a principal in the traditionally executive-dominated field of infrastructure planning. However, we can use general principal-agent reasoning to derive hypotheses about the role of the German parliament in the review procedure for rail projects.

The starting point of our argument is the literature that seeks reason regarding the principal's behavior in the overall logic of the delegation relation. Delegation relations can exist between a principal and an agent or a trustee [18]. In relation to an agent, the principal

delegates could reap efficiency gains, for example if an agency has more information and specialized personnel and can thus fulfil a task better than the principal. The purpose of the delegation relation is that the agent fulfils the principal´s preferences closely. In relation to a trustee, the idea is one of credible commitment. The principal wants to credibly commit to a line of action, but knows that it has an incentive to deviate from that aim. Thus, the purpose of the independent trustee is to follow an abstract mandate—for example, monetary stability—and not be under close control of the principal.

The central issue in the relation between principal and agent is how the principal can ensure that the agent is responsive to the principal´s preferences. Institutional solutions include first ex ante screening of the agents for their preferences, second contract design so that the incentives of the agent are to follow the principal´s preferences, third the use of competing agents ("institutional checks"), and fourth the institutionalization of reporting obligations for the agent and supervision opportunities for the principal.

In the relation between a principal and a trustee, all these measures would be counterproductive, as the purpose of a trustee is to be insulated against short-term interference by the principal [18].

Principal-agent reasoning helps us to formulate expectations about the behavior of the German parliament. First, the principal profits from relying on competing agents [6]. In our case, parliament can compare the reports by DB Netz AG and the Federal Railway Authority. Second, deck-stacking can be used to change the logics of decision making [5]. With deck-stacking, the principal designs the decision-making process in a way that systematically includes stakeholders in the process: "alterations in procedures will change the expected policy outcomes of administrative agencies by affecting the relative influence of people who are affected by the policy." [5] In our example, early public participation functions as deck-stacking. Stakeholders comment on the proposal by the DB Netz AG, and the German parliament can decide on this basis whether it wants to deviate from the initial proposal. Third, deck-stacking induces stakeholders to demonstrate how important an issue is for them by sending costly signals [5]. The principal needs to assess whether the information delivered is suitable to inform a good decision. We know from the literature that those affected by infrastructure projects tend to use participation frameworks for voicing their discontent rather than contributing useful information [19, 20]. In our case, costly information would be public demands that accurately meet the criteria defined by parliament when setting up the review procedure.

In light of this discussion, three hypotheses can be formulated. The dependent variable of interest in either case is whether the German parliament accepts the preferred solution from the *DB Netz AG* without any changes or whether, and to what extent, parliament accepts demands for gold plating. Thus, the dependent variable is on the level of the single demands voiced within the overarching rail projects.

The first hypothesis builds on the logic of competing agents: The Federal Railway Agency is tasked with securing cost efficiency of railway projects, and the Ministry of Transport forwards the Agency's position to parliament. The demands from early public participation are always more expensive than the initial proposal by the DB Netz AG. Therefore, the Federal Railway Authority and the Ministry consistently recommend adopting the initial proposal by the DB and not engaging in any gold plating. Adopting an economic perspective, the German parliament would be more likely to accept additional demands, if these incur only marginal additional costs. High costs for gold plating railway projects restrict budgetary leeway for other purposes and must be justified.

Hypothesis 1 *(cost efficiency)* The higher the costs for gold-plating demands, the less likely it is that the German parliament accept these demands.

The second hypothesis builds on the deck-stacking argument, which stipulates that the German parliament uses information from early public participation to decide on gold-plating demands. According to this logic, those affected by the respective project get privileged access to the decision-making process and can signal to the principal what their preferences are. The broader the participation, the clearer the signal for potential political and implementational problems: "The […] provisions assure that the agency learns who the relevant political interests are to the decision and something about the political costs and benefits associated with various actions. That participation is not universal (and may even be stacked) does not entail political costs. Diffuse groups who do not participate, even when their interests are at stake, are much less likely to become an electoral force in comparison with those that do participate."[5]

Hypothesis 2 The more encompassing the participation in the early consultation process for a railway project, the more likely the German parliament will accept gold-plating demands from this consultation process.

Hypothesis 3 does not regard the quantity of participation but the quality of the demands raised. As argued above, the principal has reason to consider signals if they

are costly, thus demonstrating that the signalling party is well-informed. In our case, costly signals are such demands that correspond to the criteria for potentially acceptable demands as formulated in the parliamentary decision to set up the review procedure for railway planning in 2016. Namely, this concerns projects being part of the Trans-European Network of Transport (TEN-T) as well as demands addressing noise protection.

Hypothesis 3 The better the gold-plating demands correspond to the criteria initially formulated by the German parliament for such demands, the more likely parliament will accept these demands.

The hypotheses correspond to the different logics discussed in the context of principal-agent relationships. According to hypothesis 1, parliament follows the logic of efficiency as propagated by its trustee, the Federal Railway Authority. According to hypotheses 2 and 3, the parliament follows competing signals from early public participation either in terms of deck-stacking or in terms of the accuracy of fit of the information provided.

All hypotheses stress an underlying pattern of parliamentary reactions to gold-plating demands. Still, it is possible that such a pattern is not discerned empirically. It is conceivable that e. g. regional background of MPs, electoral cycles, or package deals influence the incorporation of gold-plating demands. All these possibilities are difficult to study, but could render an explanation based on the principal-agent framework inadequate to grasp parliamentary behavior.

Null hypothesis The probability for parliamentary acceptance of gold-plating demands is neither related to costs nor to the scope of early public participation nor to the accuracy of fit of the arguments presented in the early public participation.

Methods: rail projects and public demands

The aim of this paper is an analysis of the underlying logics used by the German parliament to determine whether to accept and fund gold-plating demands in the context of rail-infrastructure planning or whether to reject them. We put forward three hypotheses that suggest that the level of costs, participation in early consultations and the quality of the information from these consultations play a role. For the purpose of testing these hypotheses, we proceed in three steps.

To bridge the gap between the theoretical framework and individual policy decisions made by parliament, we start with an analysis of the legal provisions governing the parliamentary review procedure as a first step. The objective is to reconstruct the formal rules shaping the actors involved in the parliamentary review procedure and, thereby, the character of the delegation relationship at hand.

In a second step, we present descriptive results concerning the question as to how the Bundestag is actually using the new decision-making mechanism. The data are gathered from the first four instances, where parliament reviewed railway projects within the formal framework of the new institution. In May 2020, parliament decided on the extension of the railway lines Lübeck–Schwerin in the north of Germany, and Hanau–Gelnhausen in the southwest of Germany near Frankfurt. Two months later, the decisions on the new construction/extension of the railway lines Hamburg–Lübeck–Puttgarden in the north, and Wallauer Spange in the southwest near Frankfurt ensued.

The dependent variable is whether parliament agrees to grant funding for the implementation of demands from early public consultation. Therefore, we examine as cases the 18 demands with accompanying cost estimates that were brought up as part of the four review instances.[7] That means we use the most fine-grained level of analysis that is available from the reports submitted by the DB Netz AG, the Federal Railway Authority, the Federal Ministry of Transport and the Parliamentary Transport Committee. These reports contain the cost data of the demands that were raised and granted, respectively, and constitute—alongside with the protocols of the plenary debates and decisive resolutions—our source material.

In a third step, we conduct a quantitative tabulation of the values of the 18 demands on the independent variables that correspond to the three hypothesizes developed in the previous section. Table 1 gives an overview of the independent variables and illustrates their operationalisation. Again, the data are derived from the abovementioned material originating from the different phases of the process. The operationalisation was applied by two researchers who hand-coded the values of the independent variables. We supplement this main inquiry with a category-led qualitative content analysis of the statements made by the Transport committee and individual MPs with the aim of checking the plausibility of the quantitative findings.

[7] The total number of demands brought forward by the affected public is 26. However, the remaining demands lacked cost estimates and, thus, do not provide information on the dependent variable. The eight demands not drawn upon as cases concerned issues of a more general nature (e. g. preservation of railroad stops or more trains running) where estimating costs is hardly possible (compare e. g. BT-Drs. 19/18075, p. 35).

Table 1 Operationalization of independent variables

Hypothesis	Independent Variable	Operationalisation	Example
1 (cost efficiency)	Costs caused by the demands (if implemented)	Costs in Mio € as reported by the Ministry of Transport	Demand "Fehmarnsundquerung": 5,0 Mio € real construction costs (2015 prices) (ABS/NBS Hamburg–Puttgarden, BT-Drs. 19/19500)
2 (deck-stacking)	Intensity of public participation	Sporadic participation, related to individual problems Long-standing participation of various of actor groups	Information tours, house calls (ABS Lübeck–Schwerin, BT-Drs. 19/17945) Roundtables with representatives from municipalities, counties, states, advisory bodies, citizens' initiatives, working groups, economic and other interest groups (ABS/NBS Hamburg–Puttgarden, BT-Drs. 19/19500)
3 (costly signals)	TEN project	Is the project part of the TEN-T core network?	part of the TEN-T core network as part of the larger project "Korridor Mittelrhein" (Wallauer Spange, BT-Drs. 19/18610)
	Demand related to noise protection	Does the demand address noise protection?	Yes: demand to treat the area like a housing area as regards noise protection (Wallauer Spange, Kf 1, BT-Drs. 19/18610) No: demand for barrier-free reconstruction of all stations (ABS Hanau-Gelnhausen, Kf 2.1, BT-Drs. 19/18075)

Results

The parliamentary review procedure for railway projects is an institutional framework that can be modelled as a signalling process. In our first analytical step, we strive to see whether such an understanding is adequate for analyzing relations between the actors involved. The principal we study is the parliament represented by its Committee on Transport. The Committee on Transport decides whether demands from early public consultation should be accepted and funded, the plenary has so far followed the Committee's recommendations.

The parliamentary review procedure is laid down in an implementation agreement for the federal infrastructure requirement plan (Bedarfsplanumsetzungsvereinbarung, BUV) between the federal Ministry of Transport and the rail infrastructure enterprises of the DB group. It names three agents that must contribute information about rail infrastructure projects: DB Netz AG as the prospective implementer, the Federal Railway Authority as the responsible supervisory body, and the Federal Ministry for Transport. The information put together by these three agents forms the basis of the parliamentary review procedure.

In terms of theory, the DB Netz AG is a classic agent: The task of planning and implementing rail infrastructure projects is delegated to the DB Netz AG (§ 3 I BUV). This happens, because it has a higher level of technical knowledge than the principal. The DB Netz AG signals a "preferred solution" to the principal, thus a policy proposal.

The Federal Railway Authority is a classical trustee. It is tasked with cost oversight and must indicate excessive costs (§ 15 I BUV). It is not supposed to respond to specific additional demands, but to strictly focus on cost efficiency (similar to a central bank being outside political reach).

The Ministry for Transport summarizes the information put forward by the DB Netz AG and the Federal Railway Authority and acts as an agent of budget control itself. The ministry is tasked with evaluating the feasibility of funding additional demands in light of general budget restraints. This concerns the availability of funds as well as consequences for the financial feasibility of other projects (§ 5 I BUV).

Consequently, the parliamentary Committee on Transport as the principal receives policy signals from one agent and from two trustees with fixed mandates. Furthermore, the parliament has stacked the deck by introducing early public consultation. The proposal by the DB Netz AG must be put to public consultation. The reactions from these consultations are summarized and included in the report to the Committee on Transport. If there are no objections raised against the proposal, this means that no powerful stakeholders are affected. The Committee on Transport could thus follow the signals by the three agents. If, however, the public raises additional demands, the principal has three sources of information available on which to base its decision: (1) the proposal by the DB Netz AG; (2) the assessment of cost efficiency by the Federal Railway Authority and the

Ministry of Transport; (3) the information from the public consultations.

To analyze the behavior of the German parliament, we have material from four rail projects, for each of which several demands—our cases—were made by the public. From an analysis of the first four rail projects that underwent parliamentary review, we see that the German parliament indeed makes use of its power of the purse. Additional costs of 442.31 Mio € would be incurred by the 18 demands from public consultation for which cost estimates are available if all of them were implemented. In eight cases, the parliament agreed to fund the respective demands. In five further cases, the parliament decided to fund only a part of the estimated costs. In the remaining five cases, the parliament refused any funding. All considered, the parliament agreed to provide 261.1 Mio € in additional funds from the federal budget (see Table 3 in the appendix).

This sum is spread out unevenly among the four projects. The parliament refused all demands (with estimated costs) for the two projects Wallauer Spange and Lübeck–Schwerin. It agreed to fund an additional 29 mio € for the project Hanau–Gelnhausen, which amounts to 51% of all additional costs generated by the demands raised for this project. For Hamburg–Puttgarden, the parliament agreed to fund 60% of the costs associated with additional demands or in a sum of 232.1 mio €.

An obvious candidate to explain the variation is pork barrel politics between regional MPs [21]. However, we find no regional bias in these decisions: The parliament granted funds for one project in Hesse and refused funds for another one in the same region. Similarly, it granted funds for one northern German project running through Hamburg and Schleswig–Holstein, and it refused funds for another project in the north of Germany connecting Schleswig–Holstein and Mecklenburg–Western Pomerania.[8]

[8] The representation of regions in the transport committee gives no reason to assume geographical bias either. All regions except for Brandenburg and Thuringia have been regularly represented in the committee (some deputy committee members come from Brandenburg and Thuringia as well). Numbers of regular members per region range from 1 (Mecklenburg-Vorpommern) to 6 (Bayern and North Rhine-Westphalia). Most regions are represented by 2 or 3 MPs, Hessen by 4. None of the MPs whose constituencies are directly affected by the four projects was a committee member. Bearing in mind that the review procedure sprang from the precedent of the *Karlsruhe-Basel* project with the aim to facilitate gold-plating in other regions as well, a generally affirmative stance of the committee can be expected regardless of regional affiliation. As MPs from all regions might one day need the approval of their colleagues for gold-plating demands in their respective region, they might want to opt for an accommodating tit-for-tat strategy.

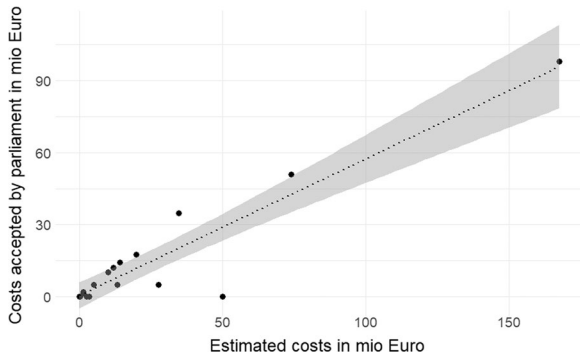

Fig. 2 Estimated costs vs. accepted costs

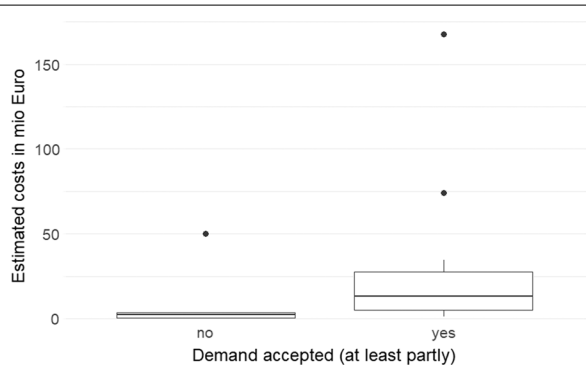

Fig. 3 Estimated costs per demand differentiated by parliamentary acceptance

We can thus note that the German parliament, first, uses its right to accept gold-plating demands from public consultations, but second, does not always do so. There is variation in need of explanation. According to our hypotheses, the variation could be rooted in the different cost levels of the demands raised, their different intensities of public participation, or their different quality of justification.

Discussion

Hypothesis 1 posits that the German parliament is less likely to accept gold-plating demands, the higher the estimated costs caused by these demands. Figure 2 shows that this expectation is not met by the empirical observations: There are no signs that parliament would be more inclined to accept low-cost demands than high-cost ones. In tendency, parliament grants more financial means when the estimated costs are higher with some variation in the area below 50 mio Euro. Figure 3 illustrates that some of those demands with relatively low estimated costs are to be found among those that were not accepted. In contrast, the two most "expensive" demands

Table 2 Categorization of demands

Project	TEN	Demand number	Content	Noise protection	Accepted
Wallauer Spange	Yes	1	Noise barrier	Yes	No
ABS Lübeck–Schwerin	No	1	Noise barrier	Yes	No
		2	Closing times gate	No	No
ABS Hanau–Gelnhausen	yes	1.1	Renewed noise protection	Yes	Yes
		1.2	Design of noise barriers	No	Partly
		2.1 und 2.2	Accessibility	No	Partly
		2.3	Video surveillance	No	Yes
		3.1	Cost transfer from municipal to federal level	No	No
		1.2	Active noise protection	Yes	Yes
		1.3	Lower emission thresholds	Yes	Partly
		1.4	Noise protection measures	Yes	Yes
		2.1	Protection against vibration	No	Yes
		2.2	Protection against vibration	No	Yes
		3.1	Protection against vibration	No	Yes
		3.2	Trough solution/tunnel	No	Partly
		4.2	Station environment	No	Partly
		5	Noise protection *Fehmarnsund* bridge	Yes	Yes

were fully or partly accepted by parliament to receive the funding needed.

Therefore, there is little reason to believe that a trustee tasked with taking care of cost efficiency had much influence with the German parliament regarding rail projects. This becomes most clear with regard to the Ministry for Transport: The Ministry has to keep an eye on the overall budget situation. It voiced its concerns most clearly about the rail project Hamburg–Puttgarden by stating that the additional costs could only be shouldered to the disadvantage of other projects (BT-Drs. 19/19500: 14) and even named a specific project (the Rhein-Ruhr-Express in the densely populated Ruhr area in in the west of Germany) whose completion might suffer. Unfazed by this, parliament agreed to grant the highest share of the estimated costs as well as the highest total sum across all four projects for gold-plating demands in this project. Thus, the only discernible effect of the Ministry's report was that demands without cost estimates by the ministry were never accepted by parliament.

In part, the decisions of the German parliament are better explained by hypothesis 3. This hypothesis suggests that demands are accepted when they fit the initial criteria set up by the German parliament when developing the idea for the review procedure: Projects eligible for funding of gold-plating demands ought to be part of the TEN-T core network, and the demands should concern noise protection (BT-Drs. 18/7365).

First, it should be noted that only one of the four projects so far put to parliamentary review is not part of the TEN-T core network. For this project, no committee report was produced and thus the preferred solution by the DB Netz AG remained undisputed. Thus, there is no case, where a non-TEN-T project has received additional funding. From the opposite perspective, not all demands regarding TEN-T projects were accepted by the German parliament. This criterion thus is a necessity, but not a sufficient condition. Where demands were assessed positively by the parliament, MPs emphasized the TEN-T nature of the project (e. g. BT-Drs. 19/19406: 8).

As Table 2 shows, there is no difference in parliamentary acceptance between demands related to noise and demands related to other concerns. The German parliament did agree to grant additional funds for five noise-related demands (four completely, one partly). However, on the one hand, it refused two noise-related demands for a TEN-T project, and on the other, it granted additional funding for eight demands that were not noise-related (four completely, four partly). An example is the demand to upgrade accessibility of stations in the project Hanau–Gelnhausen for which the parliament granted an additional sum of 17.6 Mio €. As a result, this implies that the parliament uses its initial criteria only very roughly for orientation.

The best explanation for patterns of parliamentary acceptance for gold-plating demands is provided by

hypothesis 2. This hypothesis posits that the principal will change course when it receives strong signals that the agent's proposal might be problematic. With regard to public participation, we see fundamental differences between the four projects.

Public participation for the projects Wallauer Spange and Lübeck–Schwerin was tailored to individual people concerned. This resulted in information events or house calls. There were no citizens' initiatives or intensive participation of organized interests. This speaks to a low level of conflict, where parliament would gain the impression that the proposal handed in by the DB Netz AG was by and large undisputed.

For the projects Hamburg–Puttgarden and Hanau–Gelnhausen the situation was very different. Since 2011 and 2014, respectively, regular dialogue fora have been convening. This includes institutionalized sub-groups like working groups or advisory councils that bring together different stakeholders in the planning process. The dominant participants in these fora were municipalities and organized interests, but they also included citizens' initiatives that had formed around the respective project. The intensive participation and effort by a number of different actors signalled to parliament that these projects were contentious.

The parliamentary patterns of cost acceptance mirror these differences in participation. The German parliament did not grant any additional costs for the two "silent" projects, it did not even produce a Committee resolution on them. From the 15 demands of the vociferous projects, parliament granted additional funds in 13 cases either completely or partly accepting the demands raised in the public participation process.

The two remaining demands from the vociferous projects do not contradict the hypothesis either. One demand addressed a requirement for the municipal level to shoulder a part of the costs in the context of rail projects (mostly regarding railway level crossings). This requirement was abandoned three months before the Committee decided on the respective demand[9]—it was, therefore, already redundant. The second demand that was not accepted, called for a comprehensive noise assessment. This was already planned for in the coalition treaty as well and the Committee explained that the scientific foundations for such an assessment were just about to be laid out (BT-Drs. 19/20624: 4–5). In the plenary, MPs from coalition parties promised to grant the respective funding once such a comprehensive assessment became feasible. The Ministry of Transport was asked to make that possible soon (BT-PlPr. 19/162: 20204; 19/170: 21312, 2316–2317).

The institutionalized participation fora play an important role in the perception of parliament. MPs from coalition parties stressed repeatedly the positive features of the dialogue fora, such as their long-standing activity and diverse stakeholders (e. g., BT-Drs.19/19406: 3; BT-PlPr. 19/162: 20209–20210). The demands from the dialogue forum for the rail project Hanau–Gelnhausen were "the results of extraordinary public participation" (MP from the SPD, authors' translation), to that transport politicians "contributed a lot […] during the last years" (MP from the CDU, authors' translation, BT-PlPr. 19/162: 20208–20210). In the context of the project Hamburg–Puttgarden, the responsible MP from the SPD emphasized that parliament had heeded the demands by the forum, as in this statement:

"What we decide today, crowns the work of the dialogue forum. […] I thank all participants for the constructive, competent work in the dialogue forum; this is a paramount example for good participation." (BT-PlPr. 19/170: 21316).

All considered, the implicit null hypothesis cannot be strengthened: The behavior of the German parliament with regard to gold-plating demands for rail projects has systematic elements that can be grasped on the basis of theory. The empirical material at hand does not suggest decisions solely based on politics of the day or package deals.

Conclusions

This paper aims at analysing the new parliamentary review procedure in Germany with regard to the parliament's role as a principal. To this end, we derived hypotheses from the principal-agent literature and tested them with empirical material from the first four cases of rail projects that underwent parliamentary review.

The result of an institutional analysis suggests that the concepts from the principal-agent literature are useful to describe the new parliamentary review procedure. Earlier, railway planning was organized according to a logic of trusteeship, where parliament would usually not intervene. The introduction of the parliamentary review procedure for rail projects implies that parliament now acts as a principal that receives signals from its agents as well as from external actors and reaches its decision on this basis.

The hypothesis tests have shown that parliament indeed has stacked the deck to allow affected local actors to voice their concerns. The parliamentary Committee on Transport first and foremost follows the concerns raised by these actors. Signals on cost efficiency and adherence to predefined criteria allow no convincing explanation of

[9] Gesetz zur weiteren Beschleunigung von Planungs- und Genehmigungsverfahren im Verkehrsbereich vom 3. März 2020 (BGBl. I 433).

the principal's behavior. The institutional innovation thus implies a departure from the prior logic that above all stressed cost efficiency.

The analysis of this new procedure on the basis of only four projects provides impulses for several directions of further research.

First, the parliamentary review procedure strengthens early public participation while at the same time strengthening parliamentary oversight over the executive. The fact that the German parliament has stacked the deck to formally integrate the demands by affected municipalities into the planning process leads to the expectation that the German parliament will continue to uphold a trend towards more public participation. The signalling construction underlying the parliamentary review procedure is an attempt to increase the relevance of early public participation. By creating a formal path for gold-plating demands from early consultation rounds to enter the decision-making process. Whether this procedure in the end leads to more acceptance and legitimacy of rail projects, is an open question.

Second, the first instances of parliamentary review underscore the parliament's potential for active steering. Starting from the precedent of the Karlsruhe–Basel high-speed railway, the German parliament and the Ministry of Transport have demonstrated that active parliamentary participation is possible in technically complex policy fields. The reduction of information asymmetries is at the core of such procedures. In the newly instituted parliamentary review procedure on rail planning this is solved by introducing reporting obligations for the DB Netz AG, the Federal Railway Agency, and the Ministry of Transport. Again, the fact that Parliament takes an active role does not automatically mean that acceptance and legitimacy are enhanced. This is an open research question.

Third, there is the open question of generalizability to other fields. Early public consultation is obligatory for many infrastructure projects in Germany. Most constellations, where (effectively) private infrastructure planning entities correspond to delegation situations [14, 22] that are similar to that in rail infrastructure planning. A new German case would be the founding of a long-distance road planning company that assumed responsibility for highway planning in 2021. This creates a directly comparable case to that of railway planning with a formally privatized actor doing the project planning and an oversight agency on the federal level. In road planning, similar problems arise as we have witnessed in the rail sector: Affected parties demand higher levels of noise protection than is provided by law, which in turn requires approval on the federal level.

The parliamentary review procedure is also fraught with problems. First, by accepting gold-plating demands the principle of cost "efficiency and economy" (BHO § 7) is diluted. Consequently, the Federal Audit Office has criticized the parliamentary review procedure (Bundesrechnungshof, 2019, S. 36f.). As our analysis demonstrates, the parliamentary review is not economically oriented and does not focus on low-cost demands. Insistence of cost efficiency would have a high potential of frustration for those participating in public consultations. Widening the scope for the implementation of demands that originated in public participation is more often than not bound to incur additional costs. Therefore, cost efficiency and responsiveness to public participation will often be conflicting goals.

Second, the Federal Audit Office has demanded that decisions be based on general regulations rather than on individual cases. According to this reading, the parliamentary review procedure which is inherently case-based damages the principle of equality before the law [23]. Here, the Federal Audit Office picks up critique directed at public participation frameworks, where a relatively small group can achieve a local advantage at the cost of society as a whole. The Ministry of Transport has rejected the demand for general regulations on the grounds that the diversity of individual cases could not be adequately captured by a more general ruling [23]. Following this argument, it might seem ill-advised to copy the parliamentary review procedure to other areas of infrastructure planning. Infrastructure is a field with inherent complexity [4]. Therefore, similar problems are likely to arise in other fields of infrastructure planning.

Third, the Federal Audit Office is critical of officials from the Ministry of Transport and from the Federal Railway Authority that took part in dialogue fora for rail projects. In these roles the officials would participate in shaping exactly those projects for which they later handle approval procedures.[10] This blending of roles could render decisions vulnerable in court. This presents a goal conflict vis-a-vis reduced information asymmetries, as the participation of officials in dialogue fora can be expected to lead to better informed decisions.

At the end of the day, the normative judgment is still open. However, what we can take away from our analysis is that parliament now has a more active role in planning rail projects. Whether this leads to more acceptance and speedier building of railways remains to be seen.

[10] https://www.bundesrechnungshof.de/de/veroeffentlichungen/produkte/bemerkungen-jahresberichte/jahresberichte/2016/langfassungen/2016-bemerkungen-nr-37-amtstraeger-in-projektbeiraetn-koennen-unabhaengigkeit-und-neutralitaet-von-behoerden-gefaehrden-pdf

Appendix

See Table 3.

Table 3 Additional costs for public demands accepted by the parliament

Project	Demand number	Costs in mio €	Accepted costs in mio €	Accepted costs in %	Accepted costs for whole project
Wallauer Spange	1	0.367	0	0	0 € (0%)
	2	k.A	k.A	k.A	
ABS Lübeck–Schwerin	1	2.438	0	0	0 € (0%)
	2	0.1	0	0	
	3	k.A	k.A	k.A	
ABS Hanau–Gelnhausen	1.1	5	5	100	29 mio € (50.7%)
	1.2	27.6	5	18.1	
	1.3	k.A	k.A	k.A	
	2.1 und 2.2	19.8	17.6	88.9	
	2.3	1.4	1.4	100	
	3.1	3.4	0	0	
	3.2	k.A	k.A	k.A	
	4.1	k.A	k.A	k.A	
	4.2	k.A	k.A	k.A	
	4.3	k.A	k.A	k.A	
ABS/NBS Hamburg–Puttgarden	1.1	50	0	0	232.1 mio € (60.7%)
	1.2	1.3	2	153.8	
	1.3	167.5	98	58.5	
	1.4	34.8	34.8	100	
	2.1	12	12	100	
	2.2	14.2	14.2	100	
	3.1	10.1	10.1	100	
	3.2	74	51	68.9	
	4.1	k.A	k.A	k.A	
	4.2	13.3	5	37.6	
	5	5	5	100	

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FJK conceived the idea of the research, collected the data, and described the institution under study. SF (corresponding author) developed and wrote the theory section. FJK and JR analysed the data and wrote the analysis section. All authors contributed to the research design. All authors read and approved the final manuscript.

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