The Consideration of Local Preferences in Transport Infrastructure Development: Lessons from the Economics of Federalism

Hansjörg Drewello

Abstract The construction of large public infrastructure projects of national importance, such as nuclear power plants, wind farms, electricity, highway or railway lines, regularly leads to mass protests in the population. The main problem is the impact of negative external effects on the people living nearby, which are not taken into consideration during the planning process by the national builders. Democratic coordination processes fail in solving the challenge, for here the problem of 'institutional incongruence' usually arises. This means that the policy makers responsible for the provision of public infrastructure, its users or those affected by it as well as the taxpayers, who finance these services, are not the same people. If the competencies for decision-making, use and financing are separated from one another, then incentives arise to live at the expense of others. The article examines the case of the expansion of the Rheintalbahn on the southern Upper Rhine using the Coase Theorem, and analyses the conditions under which negotiations between the parties involved can lead to an efficient result when building public infrastructure.

1 Introduction

Railway infrastructure planning is a very complex and interdisciplinary challenge. Against a background of scarce resources and limited public budgets, efficiency should be a major objective of political decision-makers and planners. In view of the endless needs and demands of regions as well as a growing lack of infrastructure in times of increasing freight transport, economic rationality requires a selection and prioritization of the most important infrastructure projects. If this is to be done well, the realization of an infrastructure project must also be the object of efficiency

H. Drewello (✉)
University of Applied Sciences Kehl, Kinzigallee 1, 77694 Kehl am Rhein, Germany
e-mail: drewello@hs-kehl.de

H. Drewello, B. Scholl (eds.), *Integrated Spatial and Transport Infrastructure Development*, Contributions to Economics, DOI 10.1007/978-3-319-15708-5_17

considerations. One specific aspect, which is frequently ignored, is the impact of a new or larger transport infrastructure on the regions concerned. In particular, the prevention of negative effects in the region can hardly be successful without the participation of local authorities and the citizens involved. Recent opposition of the German population to major transport infrastructure projects illustrates well the need to implement regional provisos and knowledge into the planning process.

This article focuses on the results of a case study that analyzed the planning process for the enlargement of the Rheintalbahn from two to four tracks in the Upper Rhine Valley. The first part deals with considerations from the economic theory of federalism. Then the German planning process for the implementation of new railway infrastructure is described. Finally, possible changes in infrastructure planning, especially the organization of negotiation procedures, are discussed in order to optimize this process by including regional expertise.

2 The Economic Theory of Federalism

A number of European countries are characterized by a federal structure. Countries such as Belgium, Germany, Austria, Switzerland, Spain or Bosnia-Herzegovina are shaped by a political system in which political power is exercised at different levels. Usually these are the central government level, state government, province or regional governments as well as the local level. The boundaries here between federal and centralized systems are fluid. The structure of all European countries testifies to the development of federal elements, at least to some degree. Even countries like Italy and France, with a rather centralized structure, have gone through processes in the last few decades whereby political power has been decentralized. Beyond that, the Member States of the European Union have given up political power to a "higher level" of jurisdiction.

If there are federal elements in a country, then the question arises as to which political powers are to be exercised at which level. The economic theory of federalism examines "whether there is an ideal federal structure for a political system" (Neumann 1971, p. 493), which public goods should be provided by which level of the federal structure (Oates 1999, p. 1120) and how any existing inefficiencies can be reduced (e.g. Koppel and Lichtblau 2007, 18ff).

Traditional economics assesses the provision of public goods solely on the basis of their costs and benefits. The provision of public goods is only worthwhile from a macro-economic point of view if the resulting benefits exceed the costs. Along with the costs for the utilization of resources, the economic theory of federalism additionally takes so-called "expected external costs" (Buchanan and Tullock 1962, p. 115) or "preference and frustration costs" (Biehl 1994) into consideration. These are caused by an incorrect or insufficient supply of public goods to the population.

2.1 The Provision of Public Goods in Countries with a Federal Structure

The argument for a decentralized provision of public goods is mainly that preferences for public goods and the benefits resulting from them vary from region to region in a heterogeneous society. Smaller units of self-government, therefore, can be more responsive to individual and local preferences than a central government (Oates 1972, p. 54). If decisions on the provision of public goods are made in smaller units, frustration costs tend to decline.

Increasing returns to scale in the production of public goods and the economies of scale associated with them make the central provision of public goods appear advantageous. In addition, there are benefits of joint usage (sharing economies) as purely public goods can be used by other individuals without causing additional costs (Blankart 2007, 62ff.). So-called "resource, decision or organization costs" (Breton and Scott 1977) must also be taken into account. These costs increase with increasing decentralization of decisions (see Fig. 1).

On the horizontal axis, Fig. 1 shows possible decision levels: neighborhoods and urban districts, cities and municipalities, districts and counties, regions, federal and national states, European Union. The curves for the opposing frustration and resource costs result in a total cost curve with a minimum. This minimum reveals information about the type of decentralization to select at the lowest cost. In the example above, the minimum of TC_1 might represent the level of a federal state. Higher frustration costs (FC_2) lead to a total cost minimum at a comparatively decentralized decision level, e.g. a region.

Realistically, this theoretical justification for the provision of public goods at the different levels of a federal structure of government is not sufficient to carry out a concrete assignment of public tasks to individual government levels. Blankart points out two other methods by which this problem can be solved (Blankart 2007, p. 68). On the one hand, the principle of subsidiarity states that the respective public task can always be assigned first to the lowest level of government, e.g. the municipality. If it cannot fulfill the task or can only do so inadequately, then the next higher level is called upon, e.g. the district. The higher-level authority must demonstrate that it can perform the task better. The problem with this method is that higher-ranking government levels are interested in attracting more and more tasks for reasons of power politics. Another method is the practice of direct democracy. Here the political system and administration first decide which level of government performs which public tasks. If this distribution does not meet with the approval of the voters, they can bring about a change by means of a referendum. Both methods can also be combined.

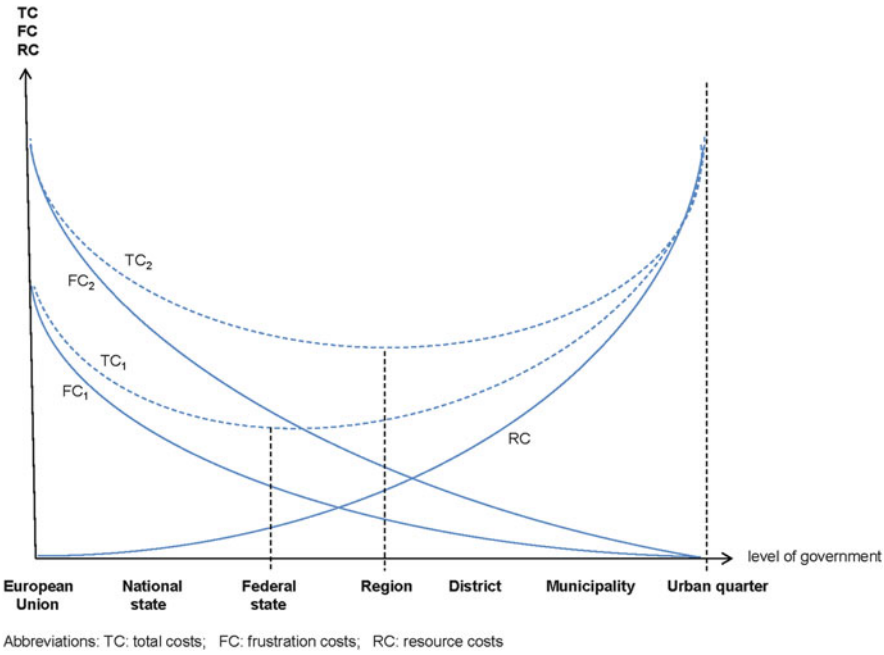

Fig. 1 Basic model of economic federalism. *Source*: Based on Hausner (2005) and Biehl (1994)

2.2 *Institutional Congruence as an Efficiency Criterion for Federal Systems*

Institutional congruence exists if those who make decisions about the provision of public goods, their users (or the people affected) and the taxpayers who fund the supply are located within one area of the federal structure (Blankart 2007, p. 69). If the competencies for decisions, usage and funding are separated, then there are incentives to live at the expense of others. The scope of a public commodity can be larger than the area of responsibility of the decision-makers. This results in spatial externalities (spillovers) in the form of a performance or cost export. In the case of a performance export, one can expect a shortage of the public commodity (spill-out). If the scope of the benefit of the public commodity is smaller than the area of responsibility, then an oversupply can arise (spill-in) (Neumann 1971, p. 506). The supply of public goods will, therefore, be too high or too low under institutional incongruence.

This can be easily understood by looking at the example of public transportation. If the citizens of just one city decide and fund the public transportation provided in a county, then this will turn out to be rather inadequate. If all the citizens in the county take part in the funding but the decision-making authority remains with the city, then incentives are put in place for providing too much. Institutional congruence

also results in fiscal equivalence. Each level of the federal system bears the costs of its own decisions.

In federalism, there is often no institutional congruence. Public swimming pools are funded by the individual municipalities, however, they are also used by citizens from outside the municipal boundaries. Decisions on town planning are made in each individual city, but the ensuing costs are often financed through allocations from the state budget. The decision to increase accommodation in nursery schools is made at the federal level. The municipalities must provide the funding. There are many examples of public spending that are subject to institutional incongruence.

In the case of the construction of railway infrastructures, one can also assume that institutional incongruence comes into play. In Germany, decisions about upgrading and new construction of railway lines are made at the federal level. As a general rule, funds for rail projects are provided by the federal budget (cf. Sect. 3.2). Users of the improved infrastructure are companies and people throughout Germany. In that regard, institutional congruence exists. However, the people in the regions where the construction of the infrastructure is implemented are particularly affected. They are confronted with negative externalities, above all in the form of noise but also in land use. These effects correspond to the above-mentioned frustration costs. They are caused by institutional incongruence. If these costs are high enough, they will lead to resistance in the population.

2.3 The Coase Theorem: A Possible Solution for Institutional Incongruence

The Coase Theorem (cf. Blankart 2007, p. 73) points to a solution for institutional incongruence. Coase shows that external effects can usually be resolved in an efficient way by the market participants themselves in the course of negotiations (Coase 1960, 5ff.). This is subject to the condition that the negotiations can be conducted without transaction costs and with clear property rights. A simple example based on Coase, which illustrates the situation well, are the external effects in the form of noise, which arise when mowing the lawn. Suppose the two neighbors A and B are not in agreement as to the proper time to mow the lawn. In the summer, A can only mow his lawn on weekends. His neighbor B feels disturbed by the noise. In this situation, one has to consider carefully whether or not the benefit that A has by mowing his lawn on the weekend exceeds the costs of B, which are caused by the noise. Two cases must be distinguished:

1. The benefits of A are lower than the costs of B.
   Suppose A can mow on weekends. By mowing the lawn, he has a benefit of 20 €. This is the price that a gardener would charge per week for mowing the lawn. B suffers damage in the amount of 40 € due to his neighbor's noise. If B now offered his neighbor A 30 € so that the latter dispenses with mowing on weekends, then both would be better off if A took the money offered. Neighbor A

would thus have a benefit of 30 € instead of 20 €—for example, he could hire a gardener to mow during the week. B would only have costs of 30 € instead of 40 €.

Suppose that A is not allowed to mow on weekends and B had the right to force A into complying with this rule. A negotiation between A and B with the aim of A being allowed to mow cannot lead to a win-win situation. The result is the situation as before. The efficient solution would be that A does not mow on weekends.

2. The benefits of A are higher than the costs of B.

Suppose A is not allowed to mow on weekends. He has an additional benefit of 40 € by mowing the lawn. B suffers damage in the amount of 20 € due to the noise of his neighbor. Similar to Case 1, A can now offer B money so he can be allowed to mow on weekends. B will accept the offer if A offers him more money than the costs he has due to the noise. They negotiate a settlement at a price between 40 and 20 €. Neighbor A can mow.

If A were allowed to mow on weekends, a negotiated solution with the aim of A not mowing would not be reached. The result would again be the efficient solution that A mows on weekends.

This example shows that a legal regulation that assigns one party the responsibility for external costs can only be efficient if this party can deal with the problem at the lowest cost. In the other cases, economic efficiency can also arise through a negotiated solution. Thus, state regulation is not necessary at all to obtain an overall cost-efficient solution.

When applying the above considerations to the situation in the construction of rail infrastructure, one can make the following assertions: The construction of rail infrastructure creates benefits which, simply put, benefits all the citizens of the country. The negative external effects, however, are borne only by the local population. The denser the population is, the higher the frustration costs are. Negotiations between representatives of the government levels concerned are, as follows from the Coase Theorem, a suitable tool for creating an efficient situation.

3 The German Planning Process for Rail Infrastructure: The Case of the Rheintalbahn

The Rheintalbahn (Rhine Valley Railway) is a double-track, electrified mainline railway running through the German federal state of Baden-Württemberg. Its route takes it from Mannheim via Heidelberg, Karlsruhe, Rastatt, Baden-Baden, Offenburg and Freiburg im Breisgau to Basel. It was originally financed and built by the state railway of the Grand Duchy of Baden. The first section to be completed, between Mannheim and Heidelberg, was opened in 1840. By 1855, the line had been finished, a section at a time, as far as Basel (Dumjahn 1984). The line grew in importance for international traffic, particularly after the First World War.

The Rheintalbahn is one of the most important and most heavily trafficked railway lines in Germany as regards both passenger and freight trains. This is due not only to local passenger services, but also, inter alia, to international freight and passenger trains to and from Switzerland and France. All long-distance passenger trains have stops in Mannheim, Karlsruhe, Freiburg and Basel Badischer Bahnhof, and some of them also stop in Heidelberg, Wiesloch-Walldorf, Bruchsal, Rastatt, Baden-Baden and Offenburg. The stations at the two ends of the Rheintalbahn are Mannheim and Basel. These both have marshalling yards, which are among the largest in Europe.

3.1 The Rheintalbahn Expansion

Now, an upgrading and partial new building of the line is intended to increase its capacity quite considerably and to shorten travel and transport times. Once all this work has been completed, there will be four tracks throughout, making it possible to improve the structuring of train movements. As the project from Karlsruhe to Basel is over 182 km, the rail line was divided into 9 sections with a total of 21 sub-sections (Nied et al. 2007, pp. 506–512).

With regard to routing, there are major differences between the Deutsche Bahn Netz AG (German railway infrastructure provider) and the affected municipalities. The Deutsche Bahn favors a route along the existing tracks. The frustration costs in the affected regions and municipalities are manifested in the protest of the residents between Offenburg and Basel against the plan. Various citizens' action committees have been set up. By the end of 2009, a total of 170,000 objections to the expansion of the Rheintalbahn were brought before the Regional Commission in Freiburg.[1] The residents particularly fear high noise levels. They are calling for a new route along the A5 freeway (Fig. 2).

3.2 The Planning Process

The planning process for railway infrastructure measures in Germany can be roughly divided into four planning steps.

1. The basis for the development and upgrading of transport infrastructure is the Federal Transport Infrastructure Plan (FTIP, German: Bundesverkehrswegeplan). It is revised at regular intervals (ca. 10–15 years). In the FTIP, all the project plans for upgrading and new construction of railways, waterways and

[1] Badische Zeitung, 170.000 Einwendungen gegen Ausbau der Rheintalstrecke, 4 December 2009; http://www.badische-zeitung.de/freiburg/170-000-einwendungen-gegen-ausbau-der-rheintalstrecke-23703348.html, accessed 18 June 2015

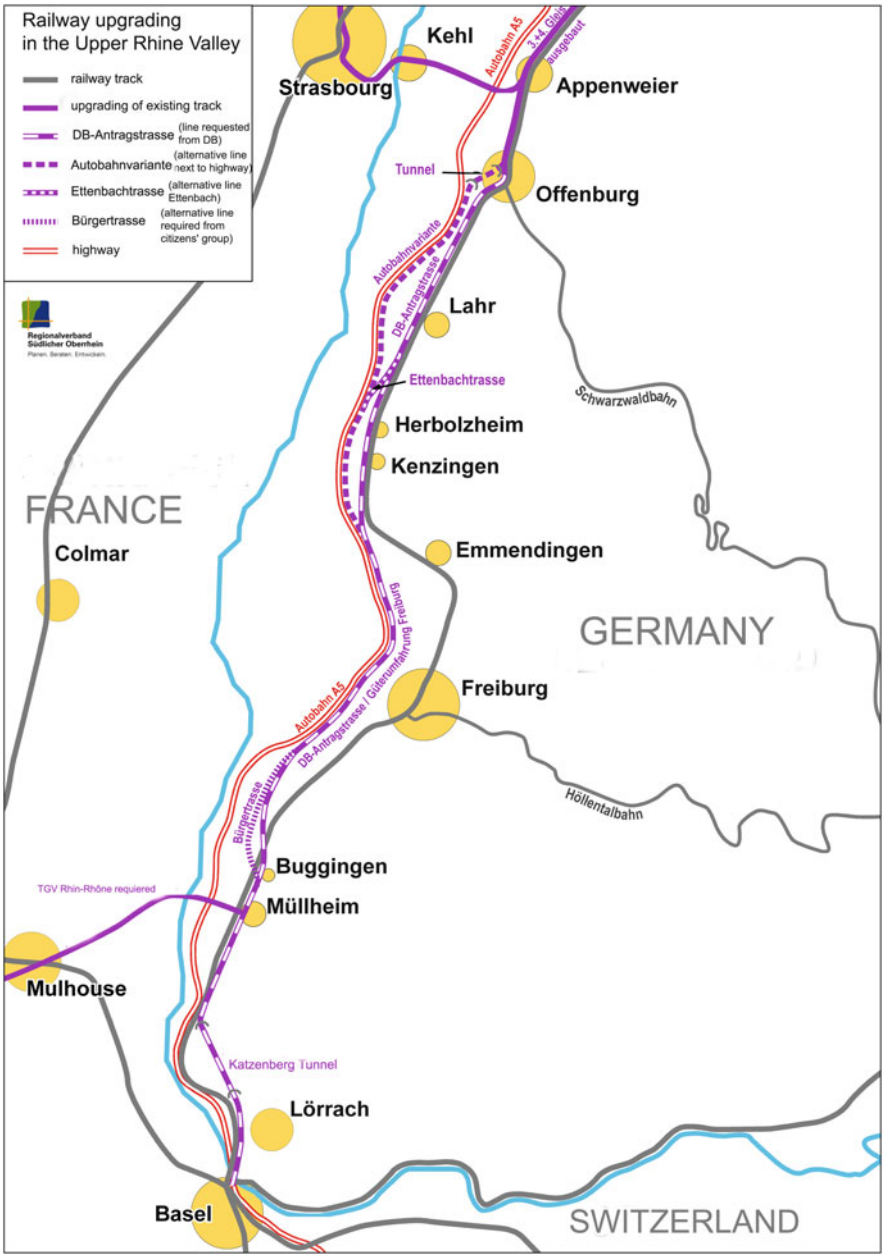

Fig. 2 Alternative railway lines in the Upper Rhine Valley. *Source*: Regional Association Southern Upper Rhine (German: Regionalverband Südlicher Oberrhein, www.rvso.de/de/regionalentwicklung/rheintalbahn/Karte-Bahnprojekte-Oberrhein-Basel-Offenburg.pdf, accessed 19 June 2015

highways are specified and prioritized. The Federal Government must show proof that each project is useful and necessary for the overall economy of the country. The necessity is determined by using forecasts for projected traffic volume (Federal Ministry for Transport, Construction and Urban Development 2014, 54ff.). Projects are usually proposed by the states, the DB Netz AG, associations and members of parliament (Federal Ministry for Transport, Construction and Urban Development 2012, p. 10). Citizens and other lobbyists are granted information and consultation rights during the process (ibid, 6). The projects are prioritized into three levels of urgency. A railway infrastructure project can only be brought into the further planning process if it has been classified as very urgent in the FTIP.

2. Very urgent projects, which are to be implemented by decision of the German Parliament, are taken up in the requirement planning of the construction laws. Subsequently, the DB Netz AG, receives a design contract from the federal government. The planning of the rail infrastructure can begin. The DB Netz AG does feasibility studies and draws up different route variations and further planning documents. These planning processes generally do not include a process of citizen involvement.
3. Afterwards, a regional planning procedure (RPP) can be initiated. In accordance with the law, it must be carried out for new rail lines or for substantial alteration of existing routes (§1, Number 9, RoV, German: Raumordnungsverordnung). The Regional Commission (German: Regierungspräsidium) in Freiburg is the higher regional planning authority (§15, Sect. 1, Spatial Planning Act, German: Raumordnungsgesetz, together with §18, Sect. 1, State Planning Act, German: Landesplanungsgesetz). The Regional Commission evaluates the proposal as it relates to regional planning policy and then determines whether it meets regional planning requirements (§2, Sect. 2, Spatial Planning Act). The principle of sustainability plays an important role here. It means that regional planning should create spatial structures that can also serve future generations (Langhagen-Rohrbach 2005, p. 6). Finally, especially for railway projects, one must find the best solution for routing in terms of land use. In a RPP, hearings are conducted with planning authorities, such as municipalities, as well as with public bodies, such as regional associations and nature conservation organizations. For projects with significant effects on the environment, hearings are conducted with the public, who will then be informed about the outcome of the procedure. The result is the presentation of the spatial compatibility of a project in the form of a spatial planning assessment for all of the possible routes. The spatial planning assessment does not bring about any direct legal effects on others. Therefore, the RPP is not binding on the planning approval authority in the subsequent planning approval procedure. For the section of the plan south of Offenburg, no RPP was carried out, as the construction of the third and fourth tracks is intended to be parallel to the existing line (University of Stuttgart et al. 2008, p. 27). Proponents of the route parallel to the freeway are of the opinion that in a RPP, this alternative would clearly have been the more preferable choice. The waiver of a RPP on the part of the Regional Commission

in 1990 as well in 2002 at the repeated request of the German Railway is today viewed as a planning error (DB Project Construction 28 June 2002, p. 4).

4. The planning approval procedure is the approval process for larger infrastructure projects with a concluding decision of approval (official approval of the plans). Here the permissibility of a proposal is determined with regard to the adverse effects on public interests (Hoppe et al. 2011, p. 6). A feature of the planning approval procedure is comprehensive public participation. The possibility for the population to voice objections and conduct hearings with numerous "agencies of public interests" (technical authorities, municipalities, associations, etc.) makes sense because the upgrading and new construction of railway infrastructure involves numerous public and private interests. The process is divided into the following steps: The builder submits the plan to the responsible department. In the subsequent hearing procedure, official comments are obtained. During the following period of public inspection of the documents, the citizens affected can raise objections. After discussions with citizens, builders, approving authorities and other departments, the hearing authority summarizes the results for an approval of the plans. Then the planning approval authority (Federal Railway Authority) issues the approval of the plans. A statement from the Ministry of Transport and Infrastructure in Baden-Württemberg shows how citizens and affected municipalities were involved in the planning approval procedure.[2] In addition to the usual process of conducting hearings, the Regional Commission in Freiburg, in its function as a hearing authority for its area of responsibility, carried out large public information events. Within this framework, citizens were informed about the plans and their rights in the hearing procedure. In addition, tips and suggestions could be found on the website of the Regional Commission.

The entire planning process establishes, within a certain scope, information and consultation rights for the affected residents, municipalities and regions. However, it is not intended that these players should directly influence the planning.

3.3 The Project Advisory Board "Rheintalbahn": An Approach to an Efficient Solution According to the Coase Theorem?

Blankart refers to the possibility of negotiations in the case of institutional incongruence (cf. Sect. 2.3). This raises the question of whether the tool proposed by Coase for internalizing external effects can be applied in the case of the construction of rail infrastructure. Negotiations are called a "form of social interaction"

[2] Statement of the Ministry for Transport and Infrastructure Baden-Württemberg from 18 Dec. 2013, Printed matter 15/4333.

(Thompson and Hastie 1990, p. 99) or a "form of social conflict" (Pruitt 1981) "by which two or more interdependent parties who do not have identical preferences across decision alternatives make joint decisions" (Bazerman and Carroll 1987, p. 252). It is possible that in the negotiation process, a result is obtained which leaves both negotiating partners better off than without the agreement (Voeth and Herbst 2009, p. 5).

Negotiating partners in the upgrading of rail infrastructure are the national and regional level. The aim of negotiations should be, first of all, to examine all aspects of the situation and to provide for transparency. The negotiators of the federal government will try to keep the costs of construction for a predefined performance level of infrastructure as low as possible. In turn, the negotiators of the regional level will work to minimize the resulting negative externalities, in particular, the resulting noise, which will be discussed below.

Ultimately, the negotiation process is a matter of finding out which side can avoid the problem at the lowest cost. One solution might be to reduce the noise as much as possible at its source, e.g. by means of technical requirements for trains passing through. Another solution might be to equip adjacent houses with better soundproofing. Thirdly, the construction of rail infrastructure could take place where the noise does not incur costs. Initially, there is no reason to presume that any one of these solutions is the best one. It is also not absolutely clear whether the residents along the railway line are actually the disadvantaged party because they have to put up with the railway noise in their houses. The railway companies, too, may feel to be at a disadvantage if they are forced by law to implement costly noise abatement measures because people have chosen to live near a railway line.

The key insight from Coase's essay "The Problem of Social Cost" is particularly clear here: externalities are a joint product of the "polluter" and of the "aggrieved party". The main criticism of Coase's Theorem is that a negotiated solution is bound to fail if transaction costs, e.g. caused by lawyers or time-consuming negotiations, are higher than the benefits of an agreement. However, due to the high investment costs for the construction of rail infrastructure, it cannot be expected that the transaction costs of the negotiation will stand in the way of an efficient solution. The negotiations between builders and those affected should, however, take place during the planning process. Once the infrastructure has been built, adjustment measures are sure to cost much more.

In this context, it is worthwhile to take a look at the Project Advisory Board Rheintalbahn, which was established in July 2009. The main objective of this body is the balance of interests between the affected residents and the German Railway or the federal government, respectively. This practice has not yet been institutionalized in German infrastructure planning. Instead, the federal government and the state of Baden-Württemberg agreed to establish this board due to the numerous objections to the enlargement and the intense debates about the correct routing of the rail lines. The board is composed of one representative each from the Federal Ministry of Transport, the Federal Railway Authority and the DB Netz AG. Then there are representatives from the state of Baden-Württemberg, the Regional Commission in Freiburg, the counties of Breisgau-Hochschwarzwald, Ortenau,

Emmendingen and Lörrach, the Regional Associations of Southern Upper Rhine and High Rhine-Lake Constance, and finally, a representative from the umbrella organization of citizens' action committees, the Interest Group for Railway Protest on the Upper and High Rhine (IG Bohr). Individual citizens' action committees also work with the regional working groups, whose task is to support the Project Advisory Board with their expertise and to prepare the board's decisions.

The Project Advisory Board should work towards better planning and more consideration for people and the environment. Regional suggestions for improvement are examined and evaluated. Possible solutions are explored.[3] The alternative plans and the demands from the region concerning the disputed area from Offenburg to Weil am Rhein were formulated in six key demands. At the county level, the Project Advisory Board established three working groups located in different areas. Here, in consultation with local experts, the planning proposal of the German Railway Corporation and the regional suggestions for improvement were examined and evaluated with regard to all relevant aspects. Possible solutions were explored, and all of this was reported to the Project Advisory Board.

The first successes of the negotiations are visible at the current time. According to a press release from the Ministry of Transport and Digital Infrastructure, the Project Advisory Board has negotiated an agreement between the DB Netz and the other lobbyists, who have agreed to the construction of a twin-tube freight-train tunnel near Offenburg.[4] However, there were no statements made with regard to funding.

The method of negotiation between the federal government and regional players, which was applied in the Project Advisory Board Rheintalbahn, offers good opportunities to bring about an efficient solution to the problem of externalities in the expansion of the Rheintalbahn. The fact that this method is possible only because of the "goodwill" of the federal government must be viewed critically. The local players are not entitled to negotiations. In fact, one has the impression that the municipalities and regions can only force the federal level to negotiate by organizing mass protests.

The participation of the DB Netz AG as a part of the German Railway Corporation in the negotiations is also not unproblematic. The German Railway Corporation competes with other railway companies, especially in freight transport. It cannot be ruled out that DB Netz AG uses its influence and expertise during the negotiations to create competitive advantages for the parent company.

Another point of criticism is the lack of public negotiations. Transparency and information are important prerequisites for achieving an efficient solution and for its general acceptance.

---

[3] Statement of the Ministry of Transport and Infrastructure Baden-Württemberg from 18 Dec. 2013, Printed matter 15/4333, p. 7.

[4] Press release of the BMVI from 14 July 2014: Projektbeirat Rheintalbahn tagt in Berlin, No. 054/2014. http://www.bmvi.de/SharedDocs/DE/Pressemitteilungen/2014/054-odenwald-projektbeirat-rheintalbahn.html?linkToOverview=DE%2FPresse%2FPressemitteilungen%2Fpressemitteilungen_node.html%23id133508, accessed 6 August 2014.

4 Conclusion

The realization of railway infrastructure projects involves the risk of negative externalities in the form of noise, vibration and the reduction in value of neighboring properties. The externalities trigger institutional incongruence, a separation of decision-making and funding responsibility on one side and the concerns of the people affected on the other. The economic theory of federalism shows that the economic inefficiency associated with that situation can be prevented by negotiations in accordance with the Coase Theorem.

In the course of the enlargement of the Rheintalbahn, an advisory board with representatives of the federal government and the affected regions was established due to the large number of objections to the project. The process offered the opportunity to manage the planning using local expertise in order to achieve an efficient result for the economy as a whole. However, the planning procedure has some weaknesses, such as the lack of public participation, the participation of the DB Netz in the negotiations as well as the fact that the process has not been institutionalized. The experience gained in the course of the negotiation should be included in a final evaluation process. The evaluation results can serve as a basis for the statutory inclusion of negotiations between the federal government, the region and the municipalities when implementing railway infrastructure.

The establishment of a European Grouping of Territorial Cooperation (EGTC), in which the municipalities and regions along the Rotterdam-Genoa transport corridor join together to pursue common interests (cf. Chap. 19), offers the opportunity to coordinate efforts on a regional level. A strong involvement of local players in the planning of infrastructure for European transport projects should become one of the most important objectives of the EGTC.

References

Bazerman M, Carroll J (1987) Negotiator cognition. In: Cummings L, Staw BM (eds) Research in organizational behavior. JAI Press, Greenwich, pp 247–288

Biehl D (1994) Zur ökonomischen Theorie des Föderalismus: Grundelemente und ihre Anwendung auf die EU-Finanzunion. In: Schneider H, Wessels W (eds) Föderale Union—Europas Zukunft? Analyse, Kontroversen, Perspektiven. C.H. Beck, München

Blankart C (2007) Föderalismus in Deutschland und Europa. Nomos, Baden-Baden

Breton A, Scott A (1977) The assignment problem in federal structures. In: Feldstein M, Inman R (eds) The economics of public services. Macmillan, London, pp 344–357

Buchanan J, Tullock G (1962) The calculus of consent, local foundations of constitutional democracy. University of Michigan Press, Ann Arbor, MI

Bundesministerium für Verkehr, Bau und Stadtentwicklung (eds) (2012) Konzept zur Öffentlichkeitsbeteiligung im Rahmen der Erarbeitung des Bundesverkehrswegeplans 2015. Public Relations booklet of the Ministry, Berlin

Bundesministerium für Verkehr und digitale Infrastruktur (ed) (2014) Grundkonzeption für den Bundesverkehrswegeplan 2015, bedarfsgerecht—transparent—herausfordernd. Public Relations booklet of the Ministry, Bonn

Coase R (1960) The problem of social cost. J Law Econ 3:1–44
Dumjahn H-W (ed) (1984) Handbuch der deutschen Eisenbahnstrecken: Eröffnungsdaten 1835–1935, Streckenlängen, Konzessionen, Eigentumsverhältnisse. Vollständiger unveränderter Nachdruck des unter dem Titel: Die deutschen Eisenbahnen in ihrer Entwicklung 1835–1935. Druckschrift der Deutschen Reichsbahn (eds), Berlin, Reichsdruckerei, 1935. Eigenverlag, Mainz
Hausner K (2005) Die ökonomische Theorie des Föderalismus. Wirtschaftsdienst 1(2005):55–60
Hoppe W, Schlarmann H, Buchner R, Deutsch M (2011) Rechtsschutz bei der Planung von Verkehrsanlagen und anderen Infrastrukturvorhaben – Grundlagen der Planfeststellung, 4th edn. Erich Schmidt Verlag, Berlin
Koppel O, Lichtblau K (2007) Föderalismustheorie: Ökonomische Kriterien für die Konstruktion eines föderalen Systems. In: Institut der deutschen Wirtschaft (ed) Föderalismus in Deutschland Ökonomische Analyse und Reformbedarf. Deutscher Instituts-Verlag, Köln, pp 9–44
Langhagen-Rohrbach C (2005) Raumordnung und Raumplanung. Wissenschaftliche Buchgesellschaft, Darmstadt
Neumann M (1971) Zur ökonomischen Theorie des Föderalismus. In: Kyklos: international review for social sciences, vol 24. Wiley-Black, Oxford, pp 493–510
Nied J, Dassler B, Ziege T (2007) Neu- und Ausbau der Strecke Karlsruhe bis Basel. Eisenbahntechnische Rundschau 56(9):506–512
Oates W (1972) Fiscal federalism. Harcourt-Brace-Jovanovich, New York, NY
Oates W (1999) An essay on fiscal federalism. J Econ Lit 37:1120–1149
Pruitt DG (1981) Negotiation behavior. Academic, New York, NY
Thompson L, Hastie R (1990) Social perception in negotiation. Organ Behav Hum Decis Process 47:98–123
Universität Stuttgart, Verkehrswissenschaftliches Institut, IBK Ingenieur- und Beratungsbüro, Technische Universität Kaiserslautern (eds) (2008) Gutachterliche Stellungnahme zur Bewertung der Variantenuntersuchung des Ausbaus der Rheintalbahn im Abschnitt Offenburg – Riegel. Report on behalf of Regionalverband Südlicher Oberrhein, Stuttgart
Voeth M, Herbst U (2009) Verhandlungsmanagement: Planung, Steuerung und Analyse. Schäffer-Poeschel, Stuttgart

Since 2009 **Hansjörg Drewello** has been a professor of economics, first at the University of Applied Sciences Göttingen and now at the University of Applied Sciences Kehl. He is the German director of the European Competence and Research Centre Cluster Management. His teaching and research deal with regional economics, in particular infrastructure development and the regional economic impact of cluster initiatives in a cross-border context. Until 2009 Hansjörg Drewello was the director of the Department of International Commerce, Transportation, Commerce and Tourism at the Chamber of Commerce and Industry Karlsruhe and a member of its management board. He was the lead partner of the study segment “Freight transport and logistics” of CODE24.