

Article

Public Participation and Airport Development: The Case of the Site Selection for Berlin Brandenburg Airport (BER) in Germany

Thomas Sedlin ^{1,*}, Volker Beckmann ^{1,*}  and Rong Tan ² 

¹ Faculty of Law and Economics & Institute of Botany and Landscape Ecology, University of Greifswald, Soldmannstr. 15, D-17487 Greifswald, Germany

² School of Public Affairs, Zhejiang University, Yuhangtang Road 866, Hangzhou 310058, China; tanrong@zju.edu.cn

* Correspondence: thomas.sedlin@gmail.com (T.S.); volker.beckmann@uni-greifswald.de (V.B.); Tel.: +49-(0)30-4404-6201 (T.S. & V.B.)

Received: 29 November 2020; Accepted: 14 December 2020; Published: 16 December 2020



Abstract: Airport projects can have a significant impact on sustainable development. In Germany, as in many other developed countries, airport development is confronting a dilemma because, on the one hand, airports are important infrastructural components and, on the other hand, airport development faces strong resistance from local populations and interest groups. Thus, uncertainties and long time periods, up to 20 years from the beginning of planning to breaking ground, are quite normal. To ease airport development in Germany, administrative procedures and public participation were enhanced. Nevertheless, even with improved public participation, siting decisions in the case of Berlin Brandenburg Airport (BER) were lengthy as usual and remain controversial today due to the selection of Schönefeld as the site. Against this background, it seems that public participation in the case of the BER site selection did not particularly deliver the hoped-for results, but why? To answer this question, Creighton's principles of effective public participation are employed as benchmarks. Moreover, the benchmarking indicates that public participation was not effectively applied. Thus, the possible benefits of public participation could not or could only be partly reaped. Furthermore, from a broader politico-economic perspective, the analysis exposes that public participation was just "a small cog in the machine" of the BER site selection process. It seems that other factors had a more substantial influence on the siting decision than public participation and led decision makers, in addition to regular challenges, into a predicament that might have made Schönefeld the only possible siting solution. In this context, different counterfactual scenarios are discussed to show under which circumstances other outcomes might have occurred regarding the BER site selection.

Keywords: effective public participation; Creighton's principles; airport development; site selection; Berlin Brandenburg Airport; Germany; counterfactual scenarios

1. Introduction

Airports can have far-reaching impacts on sustainable development [1] and decisions concerning the construction and expansion of airports in Germany, as in most countries in the world, are under the responsibility of the state. In Germany, governments and public authorities at the state level and partly at the level of the Federal Republic represent decision makers, regulatory bodies and often airport shareholders [2]. Such a high level of integration should, in principle, ease decision making and implementation. However, as recently described by Niemeier [3] or Becker-Ritterspach [4],

German airport development, as in many other developed countries (see, e.g., [5,6]), is facing a dilemma that is already occurring in developing countries as well [7]. On the one hand, airports are important infrastructural components and contribute to economic growth with increasing rates of passengers and volumes of cargo, and on the other hand, they must cope with capacity limits and often strong resistance from local populations and interest groups who oppose any extension activity because of negative environmental effects, e.g., the loss of land resources, and especially because of noise emissions. In addition to the fact that airport noise is costly, airport sites are usually associated with lower prices for adjoining property [8]. Thus, airport development is questioned at the local level and often turns into a typical case of “not in my back yard” (NIMBY) conflicts (see, e.g., [9,10]) or for even more fundamental criticisms, e.g., regarding climate change [11].

To moderate such circumstances and because developers of German airports regularly face the problem of significant uncertainties as well as very long planning periods, up to 20 years from the beginning of planning to breaking ground, politicians in Germany have tried to simplify the administrative procedures and enhance public participation [4] (p. 2f.). It is a common perception that public participation should have a positive effect on decision making regarding infrastructure project implementation because it can improve decision quality, create consensus, reduce conflicts and generate public acceptance. Nevertheless, with regard to German airport development projects, sharp tongues still claim that “outcomes are certain” and public participation is not really meaningful or consequential [12]. For that reason, we investigate the public participation process in the case of the Berlin Brandenburg Airport site selection, which is one of the largest infrastructure projects in Germany since German reunification. Although extensive public participation took place early in the process, almost none of the expected benefits have occurred. The final decision to select the site of the municipality of Schönefeld for the new capital Berlin Brandenburg Airport (BER) by upgrading the former Schönefeld Airport remains controversial. To date, a considerable number of dissidents exist within the local population, as well as statutory bodies, and the entire BER project has been accompanied by ongoing confrontations and legal conflicts, a loss of credibility and legitimacy and an increase in costs and significant delays. When BER finally opened on 31 October 2020, almost 30 years after the initial planning and in the middle of the COVID-19 pandemic-related crises of civil aviation, the opening was still accompanied by protests of environmental NGOs and the local population.

Thus, public participation in the case of the BER site selection did not deliver the hoped-for results, but why, and why was the highly controversial Schönefeld location chosen after all? We aim at answering both questions, because, on the one hand, the analysis of the case and the related embedding in the broader political–economic context has shown that their contents are interdependent and difficult to separate. On the other hand, this approach has allowed us to better substantiate our findings and create a new, more comprehensive perspective on the case.

To answer the research questions, we aspire to review public participation as it was applied in the BER site selection process and to evaluate it in terms of characteristics and benefits. Our evaluation is based on Creighton’s principles [13] and his proposed characteristics and benefits of effective public participation. His principles are generalizations derived from his and the experience of other practitioners [13] (p. xv) with hundreds of cases of public participation and could be regarded as a theory of effective public participation derived from induction. He claims that benefits are not certain and depend on characteristics that must be fulfilled to make public participation an effective contribution to decision making [13] (p. 18f.). Public participation is defined as “... the process by which public concerns, needs, and values are incorporated into governmental and corporate decision making. It is two-way communication and interaction, with the overall goal of better decisions that are supported by the public” [13] (p. 7), with the constraint that “people cannot participate unless they receive complete and objective information on which to base their judgments” [13] (p. 9). To the best of our knowledge, the approach to systematically and comprehensively use Creighton’s principles for a qualitative micro-level case ex post evaluation of the effectiveness of public participation has not been implemented in this way to date. Thus, we also contribute to theory development by testing and

redefining Creighton's principles of effective public participation. Applying Creighton's principles required a comprehensive analysis of the role of public participation in the entire process of site decision making in the case of BER, from start to finish, including all planning procedures with and without public participation, as well as the role of internal procedural factors and external context factors. In this way, the various steps and dynamics of public participation and the overall site decision could be recapitulated and analyzed in detail.

In the remainder of this paper, we first give an overview of the relevant scientific literature on public participation and airport development, followed by an introduction to the theory of effective public participation and the principles of Creighton [13]. We then explain our materials and methods and afterwards describe our results. The results include a detailed description of the site selection process in the case of BER, including the role of public participation in it, and an evaluation of the public participation process according to Creighton's principles. We thereafter discuss our analysis, including the use of counterfactual scenarios. Finally, we draw conclusions and give some recommendations for future public participation theory and policy development.

2. Public Participation and Airport Development—A Review of the Literature

Public participation in airport development has been investigated by a number of studies in different contexts and at different times. We briefly review this literature mainly in chronological order with a focus on methods, locations and findings.

For the analysis of public participation in airport development, the case study is a widely used approach, probably because the topic is very complex and could therefore only be studied in depth to create new insights. Within each case study, mostly qualitative methods were used to collect and analyze data. A quite early study was done by Szyliowicz and Goetz [14]. They investigated the relevance of the rational choice model in decision making by using the case of the construction of the new Denver International Airport in the United States and concluded that power played an essential role and that the rational planning model cannot therefore provide a sufficient explanation for the decisions made. In this context, they stressed, *inter alia*, that the active participation and involvement of all groups within the affected community was essential to successfully counter the so-called "not in my back yard" (NIMBY) syndrome. Ng and Sheate [5] conducted three case studies regarding public participation in the environmental impact assessment (EIA) of airport development, including Heathrow Terminal Five and the Manchester Airport second runway in the United Kingdom, as well as the Replacement Airport at Chek Lap Kok in Hong Kong. They gathered information based on an opinion survey among the participants and concluded that public participation in all cases was insufficient because there were no mandatory requirements for early consultation. They also mentioned that the quality of public participation and the use of lay terms for the ordinary public should be considered. In addition, they criticized that the long period of time required for the implementation of large-scale projects can lead to newer concepts not being taken into consideration, such as the concept of sustainable development. In 2004, Soneryd [15] investigated public involvement in the EIA in the case of the Örebro airport extension in Sweden from the perspective of local residents with the help of a qualitative data analysis. She found out that local residents found other creative ways to act, both outside and within formal public participation arrangements, to be able to make an impact, e.g., the employment of professional lawyers, individual negotiations with politicians, the development of a protest group or the establishment of a new political party. In the case of the Minneapolis-St Paul International Airport expansion, Cidell [16] studied the conflicts over airport noise between the ones who measured it and the ones who suffered from it, resulting from different experiences and knowledges. Against the background of the critical cartography and critical geographical information system that considered political and other subjectivities, she did a qualitative data analysis. One of her key findings was that local knowledge remained anecdotal and without significant influence because the mapping process prescribed by the federal government was too inflexible. May and Hill [6] investigated airport expansion in the case of Canberra International Airport in Australia through

qualitative data. Regarding community group participation, they concluded that it was, amongst other aspects, of critical importance for improving and protecting the quality of a community's life. In the context of the sustainability principles for an aerotropolis, i.e., a region whose center of economic development is an airport, Freestone [11] mentions that air traffic must be included in the visions of cities and communities and that it is important that there exists a partnership and an open dialog between the airport and the wider community. Annoyed communities living near airports are a limiting factor for the capacity and operability of airports, as analyzed by Suau-Sanchez et al. [10]. Due to a qualitative study, they investigated the case of the socio-environmental conflict between Barcelona Airport and the Gavà Mar community and their results showed that, among other things, a lack of trust between the parties, a lack of opportunities for civil society to speak and difficult access to information increase the anger of the airport's neighboring communities. However, they were also able to expose that communities do not always simply complain and take an anti-attitude position, but also proactively make proposals and help to find solutions. Thus, they concluded that local residents seem to be fundamental stakeholders who must be actively considered in any airport planning or operational decision. Against the background of the United Kingdom airport master planning, which recommends improving public participation, Rawson and Hopper [17] initially examined the development of public participation through two airport case studies and qualitative data analysis. They identified that while airports have followed the consultation requirements, their approaches and techniques utilized did not fully include interactive engagement, which could increase public trust and reduce resistance. On the basis of his experiences and observations on public participation in the case of airport development in the Rhine-Main area in Germany, Treber [12] came to the conclusion that the various participation possibilities only gave the impression to the different interest groups that they could have a say in airport development, while politics and the economy implemented their initial ideas and plans practically unchanged. Mexico City's entire airport project failed, because, among other things, the worst features of the top-down decision making were far too dominant and local and national authorities disputed the importance of public participation in project development [7]. In the case of the planned third runway of Munich Airport, the communication between the stakeholders has partly failed, too, so that the discussion about the project continues and is characterized by strong, unresolved conflicts between the public and the airport, which have only got worse over time. As a result, the airport's reputation has suffered considerably and the basis for a trusting relationship between the airport and parts of the public seems to be irrecoverably shattered at present [18]. An analysis of the management of airport construction at Frankfurt a. M. and of the BER showed that participatory and authoritative or authoritarian forms of participation were mixed and that in both cases political actors used their decision-making power without involving those affected. In general, the involved actors exploited their room for maneuver opportunistically or strategically in regulatory proceedings by reacting in an avoidant, defiant or manipulative manner in order to achieve their goals. This further hampered the implementation of the airports. In a comparison of the two airport cases, this happened at BER more clearly or extremely than in Frankfurt a. M. [4]. Based on a qualitative analysis of various participative approaches of the regeneration of the former airport Berlin-Tempelhof in order to promote the understanding of the functioning of resistance in planning, Hilbrandt [19] developed a concept of "insurgent participation". She found out that the participatory methods allowed participants to criticize and shape the engagement, question planning approaches and present alternatives, although the participatory methods were intended to mobilize support for the predefined agendas. However, for her, the given spaces for thinking in participation were too narrow and the assertion of depoliticization in civic participation hampered the development of an understanding of how cities or planners may adapt their participatory strategies to meet competition in participation processes, because participation also triggered disputes and mobilized power and did not only help to regulate communities. One of the last studies conducted in the field was done by Brombal et al. [20]. They evaluated public participation in the Chinese EIA in the case of the New Beijing Airport with the help of their integrated public participation index based on a multi-criteria decision analysis. They used the index to measure to

which degree the participation process fulfilled different conditions, e.g., timeliness and sustainability of the participation process, completeness, understandability and accessibility of information, results' inclusion in the EIA report, etc. In this way, they could demonstrate the inconsistencies that exist between the defined objectives of public participation by policy makers and, e.g., the objectives of developers. Moreover, they could show how different procedural attributes matched the effectiveness of participation and thereby that a comprehensive provision of information and broad consultation could not guarantee meaningful participation if they were not linked to a careful selection of participants and if the results of the consultation were not adequately taken into account.

3. The Theory of Effective Public Participation and Creighton's Principles

3.1. The Theory of Effective Public Participation

The theory of (effective) public participation starts with the typology of public participation in "A Ladder of Citizen Participation" by Arnstein [21]. She (p. 217) distinguishes between eight types of participation and nonparticipation. Nonparticipation comprises (1) Manipulation and (2) Therapy, with the aim that people do not really participate. Type (3) Informing and (4) Consulting already belong to participation, however, they are valued as a kind of "tokenism", because participants do not have any decision-making power. Just a higher type of tokenism is (5) Placation, hence participants can give advice, but still lack decision-making power. The next types give participants increasing decision-making power. In (6) Partnership, the participants can bargain and engage in trade-offs with the ones in power and, at the highest types, (7) Delegated Power and (8) Citizen Control, participants are the majority in decision making or rather have full managerial power. Since then, there have been various modifications of Arnstein's ladder as well as newly developed typologies, but there is no coherent set of ideas that could be called participation theory, although there is a need for such a theory because public participation itself must also pass the public interest test [22]. In recent years, theoretical knowledge has essentially changed to the extent that principles, guidelines or determinants have been scientifically identified which should be taken into account in the development of a theory of public participation or which should be incorporated into a theory. Webler [23] sees the two questions of "why" and "how" public participation should take place as the main challenges of the research field. In order to be able to answer these two questions and to derive meaningful explanations from them, both empirical and theoretical knowledge must be considered and more closely linked in case studies. Against this background, he argues that theorists could develop guidelines for conducting case studies to enable cross-case comparisons. To promote learning, reflecting and inclusive thinking, he also considers a dialectical argumentation process to be helpful, which combines knowledge and experience of the craft and theory of public participation. He reveals the strong interaction between practice and theory development of public participation, for example, through writing: "Handbooks are, of course valuable for providing 'how-to' advice to new practitioners. But, because they try to capitalize on experiential knowledge, they also give a special insight into the state of development of the field. As such, they are on the front line of generating knowledge and theory about public participation" [23] (p. 57). To Webler and Tuler [24] (p. 185), it is obvious that a theory of public participation in environmental decision making should take the following four points into consideration:

- "how preconditions and other moderating variables affect the process
- how specific participatory techniques perform,
- which intermediary outcomes can stand in for long-term outcomes that cannot be measured because of delayed effects, and
- pluralistic notions of what is appropriate or successful".

Lane [25] shows that the extent of public participation offered is determined by the definition of the planning problem, the knowledge applied in planning practice and the conceptualization of the planning and decision-making context. Accordingly, the effectiveness of public participation

can only be understood embedded in its context of decision making. Bryson et al. [26] designed twelve guidelines or iterative tasks for public participation. In doing so, they necessarily keep the guidelines general to address the complexity of designing participation processes and thus to be able to focus on important questions of process design and show practical ways of responding to them. The guidelines are as follows: (1) assess and fit the design to the context and the problem, (2) identify purposes and design to achieve them, (3) analyze and appropriately involve stakeholders, (4) work with stakeholders to establish the legitimacy of the process, (5) foster effective leadership, (6) seek resources for and through participation, (7) create appropriate rules and structures to guide the process, (8) use inclusive processes to engage diversity productively, (9) manage power dynamics, (10) use technologies of various kinds to achieve participation purposes, (11) develop and use evaluation measures and (12) design and redesign. In 2016, Quick and Bryson [27] examined the theories of public participation in governance and discovered two areas in particular where theory development is needed. The first area concerns the extent to which participation is desirable and practicable, and the second area relates to the possibilities of public participation under the effects of increasingly diffuse systems of governance. Additionally, Webler and Tuler [28] stress that good process design for public participation in risk decision making is not sufficient on its own. It also needs to be learned at different levels—individuals, organizations and the broader social and political context—to deal with violations of democratic norms and social mistrust, because if the parties involved are not willing to listen to each other, to learn from each other and to identify the common good, but remain stuck in the idea of having to defend and enforce their private interests, then it will be of no use to determine whether the process is appropriate for the context or not. Bobbio [29] sees in the literature as well as in practice a split into two clusters of dilemmas between a world of participation and a world of deliberation. The clusters face each other in the following series of components: participation vs. deliberation, online vs. on-site, open-door settings vs. mini-publics, decision making vs. consultation and hot deliberation vs. cold deliberation. Many combinations or hybrids are possible between the individual components of the series. The cluster on the left, the world of participation, then essentially stands for arrangements based on places with free access, in which, for example, interest groups can also assert their formal power or decision-making powers in confrontations, and the cluster on the right, the world of deliberation, then essentially stands for arrangements based on affected, ordinary citizens who concentrate more on exerting influence and rational considerations and less on their formal power.

In summary, it can be said that no clear theory of effective public participation has emerged to date, which, among other things, contributes to the fact that the evaluation of participation methods suffers from the “lack of an optimal benchmark” [30] (p. 24) as well as “the diversity of concepts” [31] (p. 74f.) and that there is no clear answer regarding the question “... how to design an effective public participation program in any one discipline” [13] (p. xv). Put differently, no commonly accepted benchmark or reference framework exists for investigating public participation, nevertheless, they are needed for analysis. Acknowledging that other concepts exist [31], we apply Creighton’s principles [13], because, on the one hand, they match quite well with several of the theoretical statements mentioned above or can be easily adapted to them, especially with or to those of Webler and Tuler [24,28], and therefore provide a clear theoretical basis for analysis, and, on the other hand, his principles are well established and have been used several times to support the argumentation of scientific studies on public participation in major infrastructure and construction projects, especially to define public participation, as well as to justify—the most challenging questions according to Webler [23]—“why” and “how” public participation should be applied (see, e.g., [32–44]).

3.2. *Creighton’s Principles—Characteristics and Benefits of Effective Public Participation*

As already mentioned, Creighton’s principles can be regarded as a theory of effective public participation in the sense of if-then considerations. To achieve the overall goal of better decisions through public participation, for Creighton [13] (p. 21ff.), certain characteristics must be fulfilled. These characteristics are as follows:

1. *Public participation is viewed as the way decision makers receive the mandate they need to act.* For effective decision implementation, the decision cannot be based on only technical feasibility and fiscal responsibility; it also must be sufficiently accepted by the public. Thus, project managers must also acquire skills to be able to involve the public successfully and to implement decisions on the basis of sufficient public acceptance.
2. *The public participation process is well integrated into the decision-making process.* Thus, the public must understand why the interaction is taking place, can be sure that their needs are considered and discussed, and knows that their comments have an impact on the corresponding decisions being made.
3. *The interested public is involved in every step of the decision-making process.* Final or important decisions result from many smaller, incremental decisions during the implementation process. Even when the public is not completely satisfied with the result of the final decision, it accepts the decision because the public was able to participate at each previous stage of decision making, which ultimately led to the final decision.
4. *Programs are targeted* to ensure the involvement of all stakeholders who perceive themselves as affected because if people feel unrepresented or left out during the process of public participation, they will not accept the outcome and will try to find other ways to influence the decision, e.g., by filing court actions or turning to elected officials.
5. *Multiple techniques are used*, which are aimed at different audiences. In other words, there are several activities with an individual design to complete a specific task and that are appropriate for different interested individuals and groups.

Against the background of the characteristics' fulfillment, public participation might lead to various benefits in decision making [13] (p. 18f.), as illustrated in Figure 2. The possible benefits are as follows:

1. *Improved quality of decisions:* Consulting the public can help to clarify the objectives or requirements of, e.g., a project or policy, to find the most effective solutions or new alternatives and to provide crucial information about existing conditions and how the decision should be implemented.
2. *Minimizes costs and delays:* As shown in Figure 1, decision making with public participation does not alienate interested individuals and groups and therefore does not provoke resistance in the long run, even when unilateral decision making is the quickest approach in the short run.
3. *Consensus building:* Due to the process of public participation, agreement and commitment among different interested individuals and groups is created.
4. *Increased ease of implementation:* Once interested individuals and groups are integrated into the decision making, they want to see the decision be implemented after it was finally made.
5. *Avoiding worst-case confrontations:* Interested individuals and groups can express their needs and concerns so that potential conflicts can be identified at an early stage and adversaries as well as decision-making deadlocks can be avoided.
6. *Maintaining credibility and legitimacy:* Due to the public's involvement, more transparency is established regarding decision making, as well as the reasoning behind it.
7. *Anticipating public concerns and attitudes:* Decision makers develop an increasing sensitivity regarding how the public perceives their procedures and decisions and how the public will respond to them.
8. *Developing civil society:* People learn how their governments and decision-making processes work and why. Moreover, public participation trains interested individuals and groups to work together effectively, to build coalitions and to lead them, to influence others and finally to solve problems.

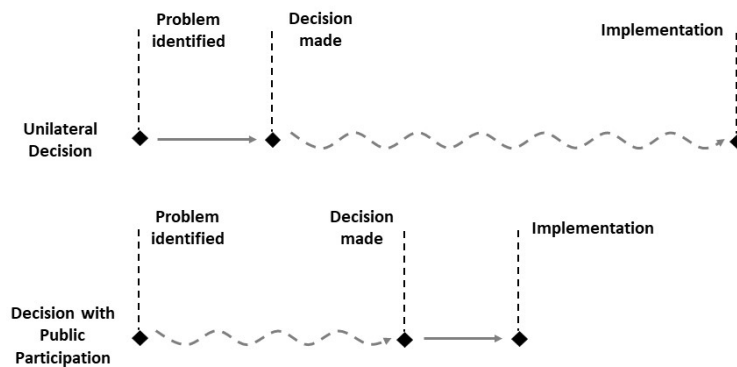


Figure 1. Comparison of length of time: unilateral decision versus public participation. Source: adopted from [13] (p. 18).

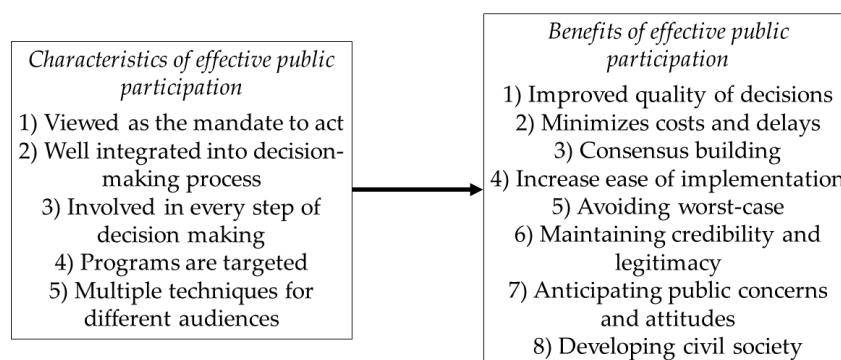


Figure 2. Causality between characteristics and benefits of effective public participation based on Creighton’s principles of effective public participation.

The characteristics and benefits serve as benchmarks in this paper to evaluate the process of public participation in the case of the BER site selection process. The underlying hypothesis is that the benefits of public participation did not occur, because the characteristics of the public participation process were not effectively developed.

4. Materials and Methods

As an object to investigate the effect of public participation, we used the case of the site selection of BER—“a specific, complex, functioning thing” and “an integrated system” [45] (p. 2). With an area of approximately 1470 ha, two runways of 3600 m and 4000 m in length and a gradual increase in passenger capacity to approximately 55 million by 2040, BER will be one of the largest airports in the world [46]. However, it will probably also be the airport with one of the longest implementation periods, of almost 30 years, which makes it comparatively expensive. For the analysis, we used a single-case study design for qualitative data collection and triangulation, which, on the one hand, corresponds to the form of our research questions—“why” [47] and, on the other hand, is a fairly widespread method for analyzing public participation in airport development. The data collection was carried out during the period of 2015–2018 and was based on different methods, including literature review, public document reviews, site visits and six semi-structured interviews with different stakeholders, each of which took approximately two hours, as already presented in Zhou et al. [48] (p. 3), as well as in Table 1. A semi-structured interview is a method of interview that is located between unstructured interviews, in which general questions are asked, to keep interviews running and to reach depth, and structured interviews, in which pre-coded categories of questions are asked with no attempt to gain great depth [49] (p. 168ff.). Taking into account the different interests and expertise in the case, interviewees were chosen purposefully and not representatively. Additionally, for short enquiries, e.g.,

to collect some factual data, we contacted further stakeholders via email. Furthermore, we applied the process tracing method to create a thick description of the BER site selection process. By using a detailed, case-internal empirical analysis, process tracing can identify causal mechanisms and determine how a causal process or causal dynamics impacts a specific case. Moreover, it can find generalizable causal mechanisms in order to link causes and outcomes in a population of causally identical cases [50]. Our scientific findings result from an abduction. It “... merely suggests that something *may be* (may-be and may-be not)”, while „deduction *explicates* and proves that something *must be*” and “induction *evaluates* and shows that something *actually is* operative” ([51] (p. 51), based on Peirce CP 5.171, 6.475, 8.238). In other words, through abduction explanatory hypotheses are formed (Peirce CP. 5.171 in [51] (p. 9)), according to the essence: “The surprising fact, C is observed. But if A were true, C would be a matter of course. Hence, there is a reason to suspect that A is true” (Peirce CP 5.189, cited in [51] (p. 8)). In the sense of our two research questions, this means:

1. Although politicians in Germany have tried to enhance public participation, and extensive public participation was carried out early in the process of BER’s site selection, almost none of the expected benefits of public participation—highlighted by Creighton—have occurred and the siting decision remains controversial to this day. Hence, there is a reason to suggest that the necessary characteristics—highlighted by Creighton—to effectively carry out public participation still may not have been sufficiently fulfilled during siting of BER.
2. Although Schönefeld was evaluated by experts more than once as a relatively unsuitable site, in comparison to other alternatives, in particular because of the relatively high proportion of citizens negatively affected by noise emissions, it remained in the selection process and was finally selected for the new capital airport through a political decision. Hence, there is a reason to suggest that corporate and political decision makers had reasons from the outset to leave Schönefeld in the selection process and finally decide in favor of it.

Table 1. Main information regarding data collection.

Organization	Respondents	Type	Date of Interview
Joint Spatial Planning Department Berlin-Brandenburg (<i>Gemeinsame Landesplanungsabteilung Berlin-Brandenburg</i>)	Federal State officials	Semi-structured interview and public document review	10.2015
Berlin-Brandenburg Airport limited liability company (<i>Flughafen Berlin Brandenburg GmbH</i>)	Department managers	Semi-structured interview and public document review	10.2015 and 06.2017
Neighboring communes (district and municipality)	Local officials	Semi-structured interview and public document review	11.2015 and 02.2016
Neighboring resident groups	Citizen representatives	Semi-structured interview	11.2015

Source: adapted from [48].

In addition, to underline our scientific findings, we partly use the method of counterfactual analysis. Fearon [52] (p. 1) argues that “counterfactual conditionals, propositions that take the generic form, ‘if it had been the case that C (or not C), it would have been the case that E (or not E)’” are fundamental to evaluate hypotheses regarding the causes of a study’s phenomena and are often necessary “where analysts have ‘few cases and many variables’—that is, in ‘small-N’ work” to create the causal significance of a variable. Thus, for example, when we observe a certain kind of public participation, we can ask what would have happened if public participation had been organized differently or not at all. In the case where we observe no public participation, we can ask what would have happened if public participation had been applied. In this way, not only the presence and absence of public participation but also the presence and absence of any other determining factor can be assessed. Moreover, we used—where, based on the facts, it was possible for us—ex ante and ex post costs of public

participation as indicators for its effectivity. Although the number of interviews is limited, their content is valuable because stakeholders from all sides have been interviewed. The essential information was extracted from the material and marked in the text, e.g., by brackets. However, against the background of case specificity, the small number of interviews, and the qualitative data, it was not meaningful to analyze the results in a quantitative form. Nevertheless, some analytical generalization can be drawn with regard to Creighton's principles, and the study can be used for comparisons or meta-studies with other cases of the same dimension.

5. Site Selection of Berlin Brandenburg Airport (BER)—A Chronology of Processes, Events and Outcomes

This section will present the site selection for BER and the role of public participation therein in chronological order. We believe that for enhancing the understanding, it is necessary to introduce the historical background and the exact sequencing of events.

On 3 October 1990, Germany and Berlin were reunified. The former German Democratic Republic (*Deutsche Demokratische Republik* (GDR)) became part of the Federal Republic of Germany (*Bundesrepublik Deutschland* (FRG)). At the same time, six federal states were newly established in East Germany, including the states of Berlin and Brandenburg. Berlin became a city state surrounded by the mostly rural state of Brandenburg. Moreover, Berlin became the new capital of the Federal Republic of Germany.

Immediately after the German reunification, initial thoughts and plans were made regarding a new capital airport within the Berlin-Brandenburg region, although three smaller civil aviation airports already existed in the metropolitan region, Tegel (TXL) and Tempelhof (THF) in the state of Berlin and Schönefeld (SXF) in the state of Brandenburg. Those airports were regarded as insufficient to meet the expected future aviation demand. Thus, the site searching for a new large single airport began with the further intention, at the back of the developer's mind, to close the three existing civil aviation airports in return.

The entire BER site selection timeline can be determined in alternate ways. A broader timeline ranges from 1990 to 2006 and a narrower timeline ranges from 1993 to 2004. The first timeline also includes non-legally required planning activities, the legally required ex ante planning procedures and ex post court decisions. It ranges from the first ideas regarding construction of a new airport to the final settlement of legal disputes about the siting decision. The second timeline includes only the regular steps of the legally required planning procedures. These steps constitute the regional planning procedure (*Raumordnungsverfahren*), including the environmental impact assessment (*Umweltverträglichkeitsprüfung*), the state development program (*Landesentwicklungsprogramm* (LEPro)) and the planning approval procedure (*Planfeststellungsverfahren*).

Table 2 provides an overview of the four planning procedures—step (1) site surveys to prepare a regional planning procedure, step (2) regional planning procedure, step (3) state development program, step (4) planning approval procedure—and their characteristics, such as the procedure's legal requirement, purpose, nature of decision making, normal duration, duration in the case of the BER, legally required public participation, public participation in the case of the BER, responsible public authorities and, finally, the number of considered alternative sites during the procedure. As usual, the number of alternatives decreases step by step, from seven, to three, to two and finally to one. At this point, some observations can already be made. Normally, the legally required procedures of airport site selection take 7 years. In the case of the BER, they took 11 years. Normally, public participation has a legally required role only in step (4), the planning approval procedure; however, in the BER case, non-legally required public participation, voluntarily commissioned by the Ministry of Environment, Nature Conservation and Land Use Planning of the state of Brandenburg (*Ministerium für Umwelt, Naturschutz und Raumordnung des Landes Brandenburg* (MUNR)),—the so-called "Citizens' Dialog"—also occurred alongside step (2); the regional planning procedure; and partly between steps (2) and (3), the state development program. In the following, we will explain the site selection process in more detail and provide some background information about the individual topics.

Table 2. Planning procedures and public participation in the case of the Berlin Brandenburg Airport (BER) site selection process.

Procedure	(1) Site Surveys to Prepare Regional Planning Procedure	(2) Regional Planning Procedure	(3) State Development Program (Including Its Different Plans)	(4) Planning Approval Procedure
Procedure's legal requirement regarding BER's implementation	Not legally required	Legally required	Legally required	Legally required
Purpose	Advising purpose	Advising purpose	Legally binding	Legally binding
Normal duration	Undefined	1 year	3 years	3 years
Duration in the BER case	1991/92	1993–1994 (1 year)	1997–2006 (9 years)	1999–2006 (7 years)
Legal requirement of public participation	None	None	None	Public participation in two phases according to § 72 Administrative Procedure Act Phase 1: Public display of planning documents, including the opportunity for affected stakeholders to object within a certain time period (but three months at maximum after the display began) Phase 2: Hearings for stakeholders who timely objected so that they can explain their concerns
Public participation in the BER case	None	1993–1996 Mediation procedure “Citizens’ Dialog Airport Berlin-Brandenburg International” (<i>Mediationsverfahren “Bürgerdialog Flughafen Berlin-Brandenburg International”</i>), voluntarily commissioned by the Ministry of Environment, Nature Conservation and Land Use Planning and developed by the firm MEDIATOR—Center of Environmental Conflict Research and Management GmbH	None	Phase 1: In 15 May 2000, and 11 October 2000, public displays of 49 portfolios of planning documents in neighboring municipalities of the Berlin Schönefeld Airport through the Public Display Authorities of the Ministry for Infrastructure and Agriculture of the state of Brandenburg (MIL) to display them publicly for four weeks. Phase 2: Hearings and explanations from 23 April 2001 to 10 May 2001, with public agencies (authorities, unions, clubs, churches, etc.), and until 11 December 2001, with affected citizens and communities through MIL's Hearing Authority

Table 2. Cont.

Procedure	(1) Site Surveys to Prepare Regional Planning Procedure	(2) Regional Planning Procedure	(3) State Development Program (Including Its Different Plans)	(4) Planning Approval Procedure
Responsible authority	Ministry of Environment, Nature Conservation and Land Use Planning (<i>Ministerium für Umwelt, Naturschutz und Raumordnung des Landes Brandenburg</i>) and Ministry of Urban Development, Habitation and Traffic of State Brandenburg (<i>Ministerium für Stadtentwicklung, Wohnen und Verkehr des Landes Brandenburg</i>) commissioned planning companies to execute	Applied by the Berlin-Brandenburg Airport Holding GmbH and executed by the State Development Department Brandenburg	Ministry of Infrastructure and Regional Planning Brandenburg (<i>Ministerium für Infrastruktur und Raumordnung</i>) and Senate Administration of Urban Development (<i>Senatsverwaltung für Stadtentwicklung</i>) (with the help of courts of law)	Applied by Airport-Berlin-Schönefeld Company and executed by the Planning Approval Authority, including (1) Public Display Authorities (2) Hearing Authority (with the help of courts of law)
Site alternatives	Seven	Three	(State Development Plan Location Safeguarding Airport (<i>Landesentwicklungsplan Standortsicherung Flughafen</i> (LEP SF)): One); State Development Plan Airport Location Development (<i>Landesentwicklungsplan Flughafenstandortentwicklung</i> (LEP FS)): Two	One
Nature of decision making	Political	Corporate and administrative	Political (and judicial)	Corporate and administrative (and judicial)

5.1. Preparatory Steps and Regional Planning Procedure (1990–1995)

In March 1991, the state of Berlin, the state of Brandenburg and the Federal Republic of Germany founded in Schönefeld the Berlin Brandenburg Airport Holding Ltd. (*Berlin-Brandenburg Flughafenholding GmbH* (BBF)) with themselves as shareholders to search for a new single airport site. Since it was clear that a new airport could be built only on the territory of the state of Brandenburg, in 1991/1992, the Ministry of Environment, Nature Conservation and Land Use Planning of the state of Brandenburg and the Ministry of Urban Development, Habitation and Traffic of the state of Brandenburg (*Ministerium für Stadtentwicklung, Wohnen und Verkehr des Landes Brandenburg* (MSWV)) commissioned planning companies to prepare the regional planning procedure by searching for adequate locations to build a new airport within the region. Based on the planning companies' results, the BBF again commissioned planning companies to conduct additional site selection surveys within a radius of 60 km around Lehrter Railway Station (*Lehrter Bahnhof*, today, the Berlin Central Railway Station) [53] (p. 5). At that time, seven different possible alternatives were evaluated based on five criteria: (1) environmental impact, (2) profitability, (3) traffic connection, (4) technical airport planning and (5) regional development. The criteria had differing weightings within a multicriteria analysis; while (1) was weighted with 30%, (2) and (3) were weighted with 20%, and (4) and (5) had a weighting of 15%. According to the overall evaluation, the Sperenberg site was ranked first, Jüterbog-East second, Borkheide third, Tietzow fourth, Jüterbog-West fifth, Michelsdorf sixth and Schönefeld seventh.

In other words, Schönefeld took the last place in the ranking, although it must be noted that it was ranked first for the criteria of profitability and traffic connection [54] (p. 18f.). The alternatives are presented in Figure 3. Despite the negative overall evaluation, in 1993, Schönefeld, as well as the Sperenberg and Jüterbog-East locations, were chosen for legally required evaluation within the regional planning procedure, including an integrated environmental impact assessment. The regional planning procedures were applied by the airport company and executed by the State Development Department of Brandenburg (*Landesplanungsabteilung Brandenburg*). The responsible regional planning authority of the state of Brandenburg, the MUNR, closed the regional planning procedure on 16 November 1994. The results indicated that Sperenberg and Jüterbog-East were well suited for a major single airport, while Schönefeld was declared unsuitable mainly because of the many negatively affected citizens due to aviation noise [53] (p. 7).

The results of the regional planning procedure only fulfilled an advising purpose for the developers and other planning authorities. However, the results must be recognized by all subsequent planning authorities and were deemed valid for four years. In addition to the professional site evaluation of the planning companies from 1991 to 1992, the Ministry of Environment, Nature Conservation and Land Use Planning commissioned the firm MEDIATOR—Center of Environmental Conflict Research and Management GmbH (*MEDIATOR—Zentrum für Umweltkonfliktforschung und -management GmbH*) at the Carl von Ossietzky University Oldenburg in October 1992 to develop a concept for mediation at an early stage of the airport project. The mediation process was initiated voluntarily by the ministry for the purpose of facilitating the airport project and was not predetermined by law. It was implemented for three main reasons: (1) to implement strategies for public participation and to bring together as many affected stakeholders and their interests as possible as soon as possible, (2) to create legitimacy for the new airport as early as possible and (3) for economic reasons, as well as to save time (Berlin, Senator für Verkehr und Betriebe 1992 in [4] (p. 255f.)). Between October 1992 and March 1993, several discussions took place within the mediation process “Citizens’ Dialog Airport Berlin-Brandenburg International” (*Mediationsverfahren “Bürgerdialog Flughafen Berlin-Brandenburg International”*) between authorities, BBF, business representatives, employees’ associations, citizens’ initiatives, environmental unions and municipalities (Zilleßen 1995 in [4] p. 257)). However, the mediation process did not officially begin until July 1993. Between July 1993 and the end of 1994, the mediation was conducted to support the preparation and execution of the regional planning procedure regarding the Jüterbog-East, Sperenberg and Schönefeld locations. The mediation process partly increased the available information; however, it did not reach any conclusive result [55,56].



Figure 3. Map of alternative sites for the new single capital airport (in contrast with the text, the map only shows six, not seven, sites, because the marked site Jüterbog represents Jüterbog-East and Jüterbog-West). Source: own map based on Esri, H.E.R.E.; DeLorme, U.S.G.S.; Intermap; NRCAN, E.; Meti, E.; Esri Korea, E.; MapmyIndia, N.G.C.C. OpenStreetMap contributors & the GIS User Community (n.d.). Map of Metropolis Region Berlin and Brandenburg, November 2016.

5.2. The “Consensus Decision”, the State Development Program and the Planning Approval Procedure (1996–2006)

After the completion of the regional planning procedure, bargaining occurred among politicians of the state of Brandenburg, the state of Berlin and the Federal Republic, as well as the BBF’s chairman of the supervisory board. In addition, in a summit talk, on 10 February 1995, the parties first excluded Jüterbog-East from the list of alternatives (Barbian et al. 1998 in [4] (p. 269)). Then, according to Appenzeller [57], four important events turned the cards in favor of the expansion of the existing Schönefeld Airport: (1) on 12 February 1995, the Federal Court of Auditors criticized the planning for a new airport as unreasonable and instead recommended the extension of the existing Schönefeld Airport. (2) On 20 April 1995, a poll was published finding that 77% of Berlin’s population was in favor of an airport close to the city. That was Schönefeld Airport. On 17 May 1995, a similar poll was published finding that 80% of Brandenburg’s population preferred a similar result. (3) On 2 June 1995, the three governments agreed that Schönefeld should be expanded at least as an interim solution.

Finally, (4) the merger between the states of Berlin and Brandenburg into one state, Berlin-Brandenburg, failed. This merger process took place alongside the planning process for the BER.

June 1995, a state treaty was agreed to by both state parliaments with a two-thirds majority of the votes, and both states decided to call for a public referendum that was held on 5 May 1996. In Brandenburg, 62.7% of votes cast were NO, and in Berlin, 53.4% of the votes were YES [57]. As a consequence of the failed merger, two days after the referendum, the government of Berlin announced that it must accept that cooperation with Brandenburg failed, and henceforward, it must consolidate its own interests as a location for large projects, e.g., by evaluating the inner-city supply of industrial real estate as well as avoiding out-migration and the consequent loss of tax revenue [58]. According to interviewees, the rule of thumb is that one million air passengers create about one thousand jobs in the airport region and that the communities around BER already benefit from the airport, even though it is not operating. However, the airport is located in Brandenburg's territory, and thus, the tax revenue of the airport itself goes to the state of Brandenburg and not to the state of Berlin. Moreover, the BER is the largest airport in Germany for direct traffic and was also not planned to be a hub, like the airports in Frankfurt/Main or Munich, in order not to present too much competition on the international flight market for the latter two airports. In other words, BER was primarily designed to handle "point-to-point" passengers who arrive at the airport, leave it quickly and do not stay there for longer time periods waiting for a transfer. Therefore, the proximity to Berlin's city center was definitely an important location factor.

Subsequently, on 28 May 1996, the three governments reached the so-called "Consensus Decision" with Schönefeld as the location for the new airport. The consensus was integrated into the Common Recommendation of the Federal Ministry of Traffic, the Governing Mayor of Berlin, and the Prime Minister of the State of Brandenburg regarding Airport Concept Berlin-Brandenburg (*Gemeinsame Empfehlung des Bundesministeriums für Verkehr, des Regierenden Bürgermeisters von Berlin und des Ministerpräsidenten des Landes Brandenburg zum Flughafenkonzept Berlin-Brandenburg*). During the period of political negotiations, the Citizens' Dialog continued as part of the administrative responsibilities of the Ministry of Urban Development, Habitation and Traffic of State Brandenburg, and from 1995 until August 1996, the Citizens' Dialog was used to support the planning approval procedure. However, when Schönefeld was finally selected, financial support for the Citizens' Dialog was stopped. To ensure that the "Consensus Decision" became legally effective, in 1997, the states of Berlin and Brandenburg closed the state development program and the Common State Development Plan of the Rural Suburban Zone (*Gemeinsamer Entwicklungsplan engerer Verflechtungsraum* (LEP e.V.)). The state development program came into effect on 1 March 1998, and the LEP e.V. came into effect on 2 March 1998. Both treaties included statements concerning BER's new location in Schönefeld. A year later, on 23 April 1999, the State Development Plan Location Safeguarding Airport (*Landesentwicklungsplan Standortsicherung Flughafen* (LEP SF)) also came into effect. However, in the same year, the state development program and the LEP SF were challenged in court by Schönefeld's neighboring municipalities and had been revised by airport developers before a verdict was returned. Meanwhile, the state development plans were created, and no public participation took place directly involving citizens. The planning approval procedure were initiated on 17 December 1999, when the Airport-Berlin-Schönefeld Company (*Flughafen-Berlin-Schönefeld GmbH*), a subsidiary company of the BBF, submitted the planning approval application (*Planfeststellungsantrag*) including Schönefeld as the site for the new capital airport. Subsequently, public participation phase 1 (*Bürgerbeteiligung Phase 1*) occurred gradually on two dates, 15 May 2000, and 11 October 2000, and continued every time for four weeks. The airport company submitted 49 portfolios of planning documents to the Public Display Authorities (*Auslegungsbehörde*) of the Ministry for Infrastructure and Agriculture of the state of Brandenburg (MIL) to display them publicly in affected communities. Then, and against the background of affected stakeholders' objections, as well as the public agencies' statements, public participation phase 2 (*Bürgerbeteiligung Phase 2*) followed in the form of explanations, organized by the MIL's Hearing Authority (*Anhörungsbehörde*), first, from 23 April 2001 to 10 May 2001, with public agencies

(authorities, unions, clubs, churches, etc.) and, second, until 11 December 2001, with affected citizens and communities. Public participation phase 2 led to 133,684 objections of over 60,000 objectors [59] and approximately 4000 individual lawsuits from citizens, communities and statutory bodies [4] (p. 298). From among the individual lawsuits, four were chosen as legal test cases (*Musterklagen*) by the Federal Administrative Court (*Bundesverwaltungsgericht*) in Leipzig for consideration [60]. However, for the time being, nothing changed regarding the decision to upgrade Schönefeld Airport. Instead, on 24 August 2001, the Highest Administrative Court of the Federal State of Brandenburg (*Oberverwaltungsgericht des Landes Brandenburg*) revoked the determined Schönefeld location within the LEP e.V., and on 7 March 2002, the verdict was approved by the Federal Administrative Court. On 28 October 2003, the states of Berlin and Brandenburg enacted the State Development Plan Airport Location Development (*Landesentwicklungsplan Flughafenstandortentwicklung* (LEP FS)). After comprehensive considerations and examinations, the authorities decided, on 13 August 2004, to upgrade the Berlin-Schönefeld Airport. The decision was made on the basis of the BER planning approval decision (*Planfeststellungsbeschluss*), which was sanctioned previously by the MIL's Planning Approval Authority (*Planfeststellungsbehörde*). After the public exhibition of BER's planning approval decision, from 6–20 September 2004, thousands of affected actors filed lawsuits against the decision until 18 October 2004. Moreover, on 10 February 2005, the LEP FS was declared void by the Highest Administrative Court of the Federal State of Brandenburg on the basis of a judicial review of its constitutionality (*Normenkontrollverfahren*). Finally, on 16 March 2006, the Federal Administrative Court authorized the upgrading of the Berlin-Schönefeld Airport to the Berlin-Brandenburg International capital airport (BBI, later renamed BER) by quashing the verdict about the LEP SF of the Highest Administrative Court of the Federal State of Brandenburg and by dismissing predominant parts of the four legal test cases [60].

6. Evaluation of Characteristics and Benefits of Public Participation in the Case of the BER Site Selection Process

6.1. Characteristics of Public Participation during the BER Site Selection Process

6.1.1. The Way Decision Makers Received the Mandate to Act

The nature of the decision making in the case of the BER site selection changed during the process, as described in Section 5 and summarized in Table 2. As already mentioned, the process is based on four procedures: step (1) site surveys to a prepare regional planning procedure, step (2) regional planning procedure, step (3) state development program, step (4) planning approval procedure. Public participation was only applied in step (2) and step (4). The nature of decision making for the individual steps are as follows: step (1) resulted from a political decision, step (2) was initiated by a corporate decision, the airport company, and executed through an administrative decision, step (3) was based on a political decision that was reviewed through judicial decisions and step (4) was again initiated by a corporate decision, executed by an administrative decision and again reviewed through judicial decisions.

Public participation was not the way corporate, political or administrative decision makers received their mandate to act, although the Citizens' Dialog was considered a way to fulfill the characteristic. The administrative decision makers received their mandate to act through the planning approval application submitted by the BBF and the political decision makers—the governments of the states of Berlin and of Brandenburg as well as the Federal Republic—received the mandate to act from the general public through the regular government elections and the polls in 1995. However, due to the failed merger, the governments of the states of Berlin and Brandenburg lost the mandate to act in favor of Sperenberg. Thus, finally, it can be assumed that the opinion of the general public in Berlin and Brandenburg significantly affected the decision making in favor of the extension of Schönefeld Airport.

6.1.2. The Integration of Public Participation into the Decision-Making Process

Public participation was applied discontinuously. It took place only during the regional planning procedure and partly during the state development program in the form of the Citizens' Dialog, and during the planning approval procedure as public participation phases 1 and 2. It is unclear to what extent the Citizens' Dialog influenced the regional planning procedure; nevertheless, the results from both the Citizens' Dialog and the regional planning procedure merely fulfilled advisory purposes to be recognized by the developers. Moreover, later, the Citizens' Dialog was no longer financed and was discontinued before it could reach firm conclusions, presumably because it made no further sense for the corporate and political decision makers to involve the public at this stage. In contrast, public participation phases 1 and 2 are legally required parts of the planning approval procedure. However, phases 1 and 2 were conducted at a time when corporate and political decision makers had already opted, for various reasons, in favor of Schönefeld and did everything to make their decision legally effective because it seemed to be the most reasonable or maybe the only possible solution for them. Hence, it can be said that public participation was weakly integrated into the decision-making process because it took place discontinuously in the planning process and its results were not legally binding, or it was applied at the end of the planning process, at a time when the corporate and political decision makers were most likely not interested in a public dispute about a fundamental site change.

6.1.3. The Involvement of the Interested Public in Decision Making

All crucial siting decisions were predetermined, at least in part, for the public by corporate and political decision makers. This concerns the decision in which sites were investigated through the site survey to prepare the regional planning procedure, the decision in which sites were evaluated with the help of the regional planning procedure, the "Consensus Decision" and the implementation of the state development program and the decision regarding for which site the planning approval procedure was initiated. Nevertheless, most of the time, even when public participation was not carried out, the public had the opportunity to inform themselves because public documents, e.g., the state development program, were not secret. However, after the explanations of public participation phase 2, the State Office for Construction, Transportation and Road Sector (*Brandenburgisches Landesamt für Bauen, Verkehr und Straßenwesen*) complained that not enough planning documents were submitted regarding the presentation of site alternatives. Therefore, the Airport Holding had to complement existing planning documents [4] (p. 297). Furthermore, phases 1 and 2 were criticized because affected citizens had to follow their regular duties in life and could participate only irregularly. Thus, it was difficult to gain complete information about the procedure by oneself. Regarding phase 2, members of a citizens' initiative complained that the keeping of the minutes was not done completely and that the content had been incorrectly reproduced in part or too inaccurately by responsible organizers. To ensure public availability of complete minutes, one of the members saw themselves forced to keep the minutes and digitize them independently by attending and taking notes of nearly every activity of phase 2, as well as gathering minutes from affected municipalities (the interview was conducted in November 2015). Additionally, citizens and neighboring municipalities cooperated with each other, and citizens felt that it was necessary to organize themselves into citizens' initiatives to provide enough resources to receive sufficient judicial and professional support, to understand the content of the airport project, to defend their legal rights and to get an opportunity to advance their interests. In summary, the public were not involved in every step of the decision making and it seems that they partly had to work hard to achieve serious access.

6.1.4. The Targeting of the Programs for Involving the Stakeholders

When implemented, public participation was targeted. The Citizens' Dialog included three kinds of public: (1) the organized public, (2) the local public and (3) the common public. It consisted of the "Regional Airport Forum" (*Regionales Flughafenforum*) and three coordination groups (from February

1995, only two coordination groups). The “Regional Airport Forum” was responsible for the organized public, including organizations, unions and interest groups. The three local coordination groups corresponded to the three potential sites Sperenberg, Jüterbog-East and Schönefeld (from February 1995, only Sperenberg and Schönefeld). The groups were responsible for the directly affected public in each of the site alternatives’ municipalities as well as for the interested common public. Additionally, for the common public, the “Citizens’ Office Airport BBI” (*Bürgerbüro Flughafen BBI*) in Teltow was created, and public information events were organized by MEDIATOR (Zilleßen 1995 (p. 14f.) in [4] (p. 259ff.)). The arrangement of the Citizens’ Dialog is valued by Becker-Ritterspach [4] (p. 261) as “open”. She writes that its design could be described as citizens’ forum “round tables”. The Airport Holding, responsible authorities and advocates, as well as opponents of the airport project, should attend the round tables. However, the number of participants should not be larger than 30 to 35 persons (Zilleßen 1995 (p. 16) in [4] (p. 261)). The information exchange between the forums was conducted through mutual notice of meeting protocols, as well as through the fact that participants took part in the meetings of every forum, and the mediator himself took part in every meeting [55] (p. 1). Public participation phase 1 started with the public display of the BER planning documents in neighboring municipalities provided by the Airport Holding, and every interested citizen had access to them. However, as mentioned above, the Airport Holding was criticized because the provided planning documents were not sufficient. Within a certain period, public agencies, environmental associations and other entities were called upon to give their statements. Against this background, affected stakeholders could make objections. In summary, when executed, public participation was targeted to ensure the involvement of all stakeholders who perceived themselves as affected.

6.1.5. The Techniques That Were Used to Aim at Different Audiences

Different techniques were used for public participation. As mentioned above in Section 6.1.4, the Citizens’ Dialog involved three types of public using round tables. Between the forums was an information exchange. Moreover, for the common public, an office was established, and public information events were organized. During the planning approval procedure, public participation was divided into phases 1 and 2. In phase 1, planning documents were submitted to neighboring municipalities by the Airport Holding and were displayed publicly so that affected stakeholders could raise objections and make statements within the deadlines. In phase 2, objections and statements were explained publicly. In summary, when executed, public participation was based on multiple techniques aimed at different audiences.

6.1.6. Summary—Characteristics of Public Participation

Although programs were targeted and multiple techniques were used, based on the overall evaluation, the characteristics for effective public participation in the case of the BER site selection were only weakly fulfilled because, first, public participation was not the way decision makers received a mandate to act and, moreover, overall public participation was discontinuous and consisted of a combination of non-legally required and non-binding, as well as legally required, parts. Additionally, public participation was not completely integrated into the decision-making process, affected stakeholders were not continuously involved and all crucial siting decisions were made by administrations and politicians or their authorized representatives. The evaluation of the characteristics is summarized in Table 3.

Table 3. Effectiveness of public participation in the case of the Berlin Brandenburg Airport (BER) site selection process.

Procedures and Public Participation Characteristics	(1) Site Surveys to Prepare Regional Planning Procedure	(2) Regional Planning Procedure	(3) State Development Program (including Its Different Plans)	(4) Planning Approval Procedure	Public Participation's Overall Evaluation Regarding Individual Characteristic
Can public participation be viewed as the way decision makers received a mandate they needed to act?	No, because public participation was not applied.	No, although the Citizens' Dialog was, at that time, considered a way to receive a mandate to act, it was not legally required and binding and was discontinued before reaching firm conclusions.	No, because public participation was not applied.	No, although public participation was a legally required part of the planning approval procedure, it was only consultative and did not need to result in public acceptance.	No, because decision makers got through other ways the mandate to act, e.g., elections.
Was its process well integrated into the decision-making process?	No	No, although the Citizens' Dialog provided information for the public administration, it took place in parallel, was not legally binding and its results did not have to be taken into account.	No	Yes, public participation was legally required and decision makers needed to review and weigh objections.	No, because public participation in step (2) took place in parallel and overall public participation was discontinuous. Although it provided information, it had no crucial influence on the siting decision.
Was the interested public involved in every step of decision making?	No	No, although the Citizens' Dialog led to an information exchange between the public and decision makers, it took place in parallel. In addition, finally, the regional planning procedure fulfilled only advising purposes (no decision power).	No	Yes, public participation led to an information exchange between the public and decision makers, however, the siting decision in favor of Schönefeld was pre-fixed.	No, because overall public participation was discontinuous and all crucial siting decisions were predetermined, at least partly, for the public by corporate and political decision makers.
Were the programs targeted to ensure the involvement of all stakeholders who perceived themselves as affected?	No	Yes, because it targeted three kinds of public: (1) the organized public (public agencies, environmental associations and other positions), (2) the local public (Sperenberg, Jüterbog-East, Schönefeld) and 3) the common public.	No	Yes, because it targeted the local public and organized public (public agencies, environmental associations and other positions) of Schönefeld and neighboring municipalities.	Partly, because, when executed, the programs were targeted.

Table 3. Cont.

Procedures and Public Participation Characteristics	(1) Site Surveys to Prepare Regional Planning Procedure	(2) Regional Planning Procedure	(3) State Development Program (including Its Different Plans)	(4) Planning Approval Procedure	Public Participation's Overall Evaluation Regarding Individual Characteristic
Were multiple techniques used aimed at different audiences?	No	Yes, because there were two citizens' forums that included the three kinds of public through round tables. Mutual notice of meeting protocols between forums. Participants took part in the meetings of both forums. Mediator took part in every meeting. "Citizens' office Airport Berlin Brandenburg International (BBI)" for the common public. Public information events.	No	Yes, because there were Public displays of planning documents in neighboring municipalities of Schönefeld. Statements given by public agencies, environmental associations and other entities. Explanations of objections during public hearings.	Partly, because, when executed, multiple techniques were used.
Public participation's overall evaluation regarding individual procedure	Public participation was not considered by decision makers.	Public participation was voluntarily introduced as a Citizen's Dialog in order to receive a mandate to act; its execution was targeted; however, it took place in parallel, was not legally binding, its results did not have to be taken into account and it did not reach firm conclusions.	Public participation was no longer financed by any decision maker and therefore was not further applied.	Public participation, as a consultation process, was legally required, professionally executed and provided information for both sides; decision makers need to pay attention to and review objections and statements.	Public participation was applied discontinuously and was partly not legally required. Only two out of five characteristics were partly fulfilled, three were not.

6.2. Benefits through Public Participation during the BER Site Selection Process

6.2.1. Improvement of the Decision's Quality through Public Participation

Because it is difficult to assess the quality of decisions such as the siting of airports, we do not want to assess the overall quality of the siting decision in the case of BER. We rather want to determine whether public participation improved the decision.

Although the Citizens' Dialog generated information that could support the regional planning procedure, it is very likely that the regional planning procedure would have arrived at the same recommendation without the Citizens' Dialog because the regional planning procedure actually reinforced the assessment that was already available before the Citizens' Dialog started. Thus, the Citizens' Dialog did not actually improve decision making. Additionally, before the Citizens' Dialog reached firm conclusions, it was discontinued. Public participation phases 1 and 2 clearly affected the planning approval decision. Many objections could be addressed by adjusting the details of the construction plans, allowing for many fine-tuned adjustments in the decision, which can be regarded as improvements. However, the fundamental, controversial siting decision remained the same. Therefore, it can be stated that public participation improved only the quality of decision making after the site was pre-fixed. The representatives of the citizens' initiative were of the opinion that they could only achieve something through judicial procedures, because the decision makers only wanted to get rid of the citizens and their ideas (the interview was conducted in November 2015). The representatives of the authorities, on the one hand, see it as difficult to "take the public with them" during planning procedures, because the public "does not really know what is happening", especially at the beginning, when many things are still very unspecific. On the other hand, they have observed that a high level of professional competence can have a destructive effect because it reduces the willingness to reach a consensus. In general, they would like to have more constructive communication and argumentation (the interview was conducted in October 2015).

6.2.2. Minimizing Costs and Delays through Public Participation

The BER site selection process experienced large costs and delays. The question here is whether public participation decreased the costs and delays compared to site selection without public participation at different stages. Thus, we need to assess the duration and costs with and without public participation. We first consider the timeline and the issues leading to delays.

Referencing Creighton's scheme [13] (p. 18) about the "Comparison of length of time: unilateral decision versus public participation", as presented in Figure 1, the BER siting decision sequence appears as a combination of two decisions, as presented in Figure 4. The first decision is more of a decision with public participation, and the second decision is a unilateral decision. The first decision took approximately eight years and started in 1990, with the first ideas about the new capital airport, and ended in 1998, with the implementation of the state development program. In 1990, a problem was identified, and until 1996, a "discussion" took place about site alternatives (wiggly lines), incorporating expert knowledge from surveys to prepare the regional planning procedure as well as from the regional planning procedure itself and public knowledge through public participation in the form of the Citizens' Dialog. In 1996, a siting decision—the so-called "Consensus Decision"—was made in favor of Schönefeld and was implemented in 1998 (straight line). The second decision, a unilateral decision, took approximately ten years and started in 1996, with the "Consensus Decision", and ended in 2006, with the court order to upgrade Berlin-Schönefeld Airport. In 1996, again, a problem was identified, and the siting decision was implemented in 1998 (straight line). Subsequently, again, a "discussion" about siting decisions took place using public participation and court procedures until the decision's implementation was finally verified in 2006 (wiggly line). If both decisions are evaluated individually, they fit quite well into Creighton's scheme. In other words, the second decision, the unilateral decision in the case of the BER site selection, took more time to be implemented. However, the scheme can be misleading. First, the two decisions of the BER siting decision sequence

cannot be easily separated because they have a decisive overlapping time period from 1996 to 1998, which makes the two decisions mutually dependent on each other. Second, no public participation occurred between 1990 and 1993, only expert surveys, and only court procedures occurred between 1998 and 1999. Nevertheless, against this background, one can assume that, in the beginning, the corporate and political decision makers followed the strategy of decision making with public participation and then—in the time period from 1996 to 1998—changed their decision-making strategy by making a unilateral decision. The question at this point is whether the Citizens’ Dialog accelerated or decelerated the process before the “Consensus Decision” took place in 1996.

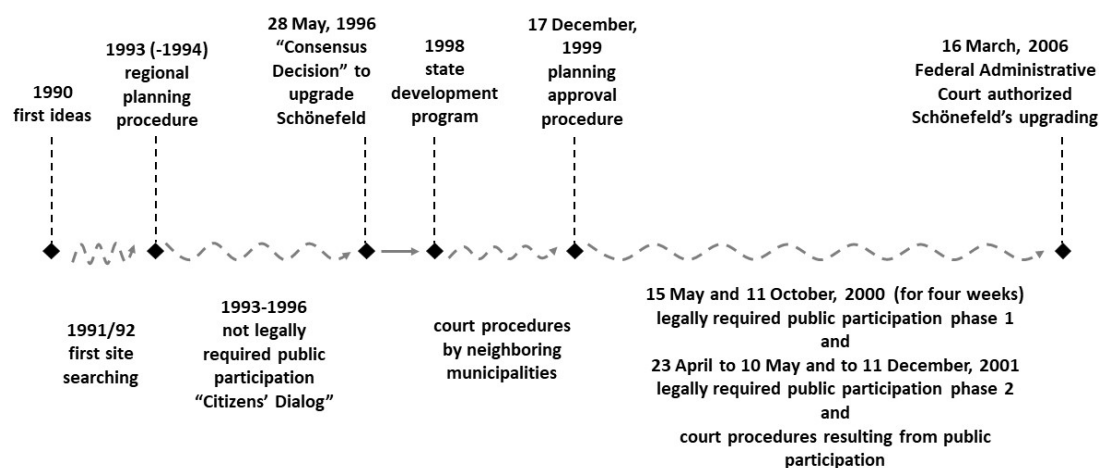


Figure 4. Public participation sequence in the case of the Berlin Brandenburg Airport (BER) site selection process.

Actually, even without the Citizens’ Dialog, it is likely that the decision making would have taken the same amount of time because the regional planning procedure ranged in a regular timeframe. The delay between the end of the regional planning procedure and the “Consensus Decision” was mainly caused by political deadlock that was most likely caused by the failed merger between the states of Berlin and Brandenburg. Later, the Citizens’ Dialog did not accelerate the process but instead might have contributed to delays because many expectations of the public were not fulfilled.

Regarding phases 1 and 2, an assessment is difficult to make since the right to litigate is connected to public participation itself. Only individuals who raise their voice and object during public participation have the right to litigate if they believe that their concerns were not adequately addressed. If the planning approval procedure had occurred without public participation, time might have been saved. However, if objections had not been possible, the number of litigations might have increased, and settling more litigations might have taken even more time than reviewing objections. Thus, we cannot ultimately conclude whether public participation phases 1 and 2 accelerated or delayed the decision making.

With regard to costs, we need to distinguish between the direct costs of public participation, such as the time, money and other resources spent by public authorities and stakeholders, and costs related to conflicts, such as the time and resources spent on litigation, conflict resolution or demonstrations by citizens and public authorities. It is also useful to think about the ex ante and ex post costs of siting decision. To reduce the overall costs, the increase of the ex ante costs must be weighted by a reduction in the ex post costs.

The Citizens’ Dialog caused significant ex ante direct costs; however, it was not able to reduce the ex post costs. The initial expectations of corporate and political decision makers were to reduce the ex post costs by initiating the Citizens’ Dialog. From today’s perspective, the Citizens’ Dialog increased only the overall costs. For example, the fees for mediation add up to approximately DEM 500,000 per year, including all the mediation events and the citizens’ office (according to email correspondence

with MEDIATOR GmbH from 22 January 2018. However, it was stressed that the mediation process was carried out a long time ago). According to the counterfactual scenario introduced above, it is quite likely that public participation phases 1 and 2 decreased the ex post costs because we can assume that objections decreased the number of litigations. Moreover, objections led to adjustments of the planning approval decision and thereby led to a decrease in ex post conflicts.

In summary, it is certain that the Citizens' Dialog did not accelerate the siting decision but caused additional ex ante costs, while public participation phases 1 and 2 saved some ex post costs due to adjustments on the site. However, public participation ultimately did not provide a solution for the fundamental siting conflict, including all ex post costs and delays associated with it.

6.2.3. Consensus Building through Public Participation

At no point in time was a broad consensus about siting built through public participation. During the Citizens' Dialog, citizens, experts and public administrations were almost able to reach a consensus in favor of Sperenberg, however, the main political decision makers could not reach a consensus. When the "Consensus Decision" was reached between the governments in 1996, expert knowledge in favor of Sperenberg from the regional planning procedure was neglected. When public participation phases 1 and 2 were implemented, public participation did not result in a broad consensus between corporate and political decision makers and affected stakeholders, and siting decisions remained controversial.

In summary, if there ever existed a reasonable effort to build a consensus through public participation, it was finally destroyed when the Citizens' Dialog was discontinued and the governments reached the "Consensus Decision" just by themselves. However, presumably, the governments perceived the results from their (re-) elections and the polls as broad consensus and therefore as their mandate to act in favor of Schönefeld.

6.2.4. The Increase in Ease of Implementation through Public Participation

The ease of implementation is inversely related to resistance to the siting decision. In other words, the "ease of implementation" is seen in this study as the "absence of resistance" during site selection. On the one hand, public participation provided additional information and helped to avoid additional lawsuits. However, on the other hand, public participation—through the finally discontinued Citizens' Dialog, not reaching firm conclusions—drew additional public attention to site alternatives other than Schönefeld. Furthermore, the organization of phases 1 and 2 were partly perceived as insufficient and, therefore, generated distrust among some participants and accordingly more resistance. From this point of view, public participation has clearly led to results that have influenced the ease of implementation, both positive and negative. From an overall perspective, many stakeholders were not satisfied with the implementation of the siting decision and the resistance even increased over the last years.

6.2.5. Avoidance of Worst-Case Confrontations through Public Participation

Worst-case confrontation could be considered as violent conflicts, riots or complete standstills in the implementation of the decision. There exist several cases of airport projects that did lead to worst-case confrontations. For example, in the case of the Frankfurt-Main Airport, in 1987, there were riots, and in the end, two police officers were even shot when the decision was made to build the west runway [61]. The third runway in the Munich Airport is an example of a standstill. The runway's construction was stopped by a referendum of Munich's citizens in 2012 [18]. Another example is the halting of the construction of the new international airport through an executive order in Mexico City, which was provoked by ongoing protests and several weeks of violent conflicts in 2002 [7]. In the case of the BER site selection, no worst-case confrontation occurred. The final siting decision in favor of Schönefeld was implemented, and the BER site selection was not accompanied by a violent protest culture [4] (p. 379). The outcome can be partly explained by the Citizens' Dialog because the introduction of mediation procedures beforehand helped facilitate discussion of the various interests

and avoided confrontations [4] (p. 3f.). Additionally, public participation phases 1 and 2 were platforms through which different interests were disputed and certain conflicts were solved. Nevertheless, it is difficult to judge how much other factors influenced the outcome, e.g., local stakeholders' peaceful mentality and protest culture.

6.2.6. Maintenance of Credibility and Legitimacy through Public Participation

At the local level, credibility and legitimacy could not be maintained and were partly or completely replaced by stakeholders' distrust, strong resistance and even a sense of envy, because some profit more from the investments and suffer less, e.g., from noise pollution. A main reason for these feelings was the change in the decision-making strategy by the political decision makers in the period from 1996 to 1998 when the strategy changed from decision making with public participation to unilateral decision making with the sudden exclusion of the public from essential participation in the decision making. However, regarding the Citizens' Dialog, Becker-Ritterspach [4] (p. 262) notes that the decision to use the MEDIATOR company and Horst Zilleßen as a mediator was taken by the Ministry [55] (p. 1). At that time, Zilleßen was a board member of the BBF (Zilleßen 2005 in [4] (p. 262)) and, thus, his closeness to government policy cannot be ruled out, which means that the requirement of neutrality has not been observed [4] (p. 262). From the point of view of representatives of the citizens' initiative, the trust was completely destroyed and an intention to carry out a "true" public participation and to take the "citizen" into account was never given by the responsible authorities, leading to a situation that "will never be resolved again". Regarding the siting procedure, they criticize that "the shareholder, the applicant, the operator and the approval authorities are one and the same person". Citizens, on the contrary, are "the troublemakers". Even the independence of the public prosecutor's office and the press is questioned. In addition, they feel pressured by the behavior of the representatives of the airport company and consider the dealings with the citizens and the compensation to be disproportionate in relation to the investments made, or as "hard-hearted" in relation to human and family destinies. In order to raise the competence and the financial means to be able to oppose this professionally and legally, they had to organize themselves. Additionally, the resistance increased even more rapidly in 2010, after the flight routes were published (the interview was conducted in November 2015). Today, there are about thirty-six citizens' initiatives and associations and their subgroups on the local level [62].

While the siting decision in favor of Schönefeld significantly harmed credibility and legitimacy on the local level, it seems that it did not significantly affect credibility and legitimacy at the state level, if one takes into account the electoral history of the governments of Berlin and Brandenburg. In 1990, the Social Democratic Party (*Sozialdemokratische Partei Deutschlands* (SPD)) presented the mayor in East and West Berlin but, nevertheless, in the same year, the Christian Democratic Party (*Christlich Demokratische Union Deutschlands* (CDU)) was elected and presented the mayor until 2001, with one re-election in 1995. In 2001, after the Berlin Bank Scandal (*Berliner Bankenskandal*), the SPD came to power again and was re-elected in 2006 (and also later in 2011 and 2016). During the same period, in the state of Brandenburg, the SPD presented the prime minister from 1990 and was re-elected in 1994, 1999 and 2004 (and also later in 2009 and 2014). In other words, the electoral behavior of the population in Berlin and Brandenburg remained fairly constant.

6.2.7. Anticipation of Public Concerns and Attitudes through Public Participation

First, public concerns and attitudes were anticipated through the site surveys that prepared the regional planning procedure, as well as through the regional planning procedure itself. Further public concerns and attitudes as well as further details were anticipated through public participation. Thus, for example, it was well known that a siting decision in favor of Sperenberg would have led to many negative environmental effects, while a siting decision in favor of Schönefeld would have negatively affected many local stakeholders. In other words, all decision makers were aware of the consequences when they decided in favor of Schönefeld.

6.2.8. Development of Civil Society through Public Participation

Although distrust was created, the decision makers and affected stakeholders learned from each other as well as from the public participation process through information exchanges. While the decision makers had to adapt the airport project due to objections of participants, participants raised objections and went to court. In addition, the public established a citizens' initiative in different municipalities with meetings, information events and demonstrations. The members of the citizens' initiative independently collected and compiled information and generated and published case-related knowledge, as well as alternative concepts. Furthermore, the citizens' initiative has cooperated with various municipalities in court hearings. It has about 5000 members and the admission of further members has been stopped. Thus, a civil society developed through public participation (the interview was conducted in November 2015).

6.2.9. Summary—Benefits of Public Participation

In summary, public participation in the case of the BER site selection process provided benefits, e.g., increased the information base, improved the decision's quality through fine-tuned adjustments, decreased some ex post costs and helped to avoid worst-case confrontations and to anticipate public concerns and attitudes, as well as to develop a civil society. However, public participation also increased ex ante costs, could not maintain credibility and legitimacy and provoked distrust on the local level. Additionally, first and foremost, it did not fundamentally improve the quality of the siting decision, ease its implementation or lead to a broad consensus, including all ex post costs and delays connected with the decision in favor of Schönefeld. The benefits are summarized in Table 4.

Table 4. Benefits of public participation in the case of the Berlin Brandenburg Airport (BER) site selection process.

Benefits of Public Participation	Benefits of Public Participation in the Case of the BER Site Selection Process
Was the quality of decisions improved by public participation?	Partly, the Citizens' Dialog was broken off without reaching firm conclusions and public participation phase 1 and 2 took place at a time when the corporate and political decision makers had already made up their mind. However, phase 1 and 2 led to many fine-tuned adjustments through statements and objections.
Were the costs and delays minimized by public participation?	No, the Citizens' Dialog caused extra ex ante costs and public participation phase 1 and 2 could not solve the fundamental siting conflict, including all ex post costs and delays connected with it.
Was a consensus built by public participation?	No, at no point in time was a broad consensus about siting built through public participation.
Did the ease of implementation increase through public participation?	No, many stakeholders were not satisfied with the implementation of siting decision and the resistance increased over time.
Were worst-case confrontations avoided by public participation?	Unclear, worst-cases were avoided, however, the role of other factors, e.g., stakeholders' peaceful mentality, remains unclear.
Were credibility and legitimacy maintained by public participation?	No, they were partly or completely replaced by distrust, strong resistance and even a sense of envy.
Were public concerns and attitudes anticipated due to public participation?	Partly, first, anticipations were done through the site surveys to prepare a regional planning procedure and the regional planning procedure itself, but further anticipations and details could be exposed through public participation.
Did civil society develop through public participation?	Yes, between siting decision's opponents, e.g., a citizens' initiative was established and citizens and communes cooperated, e.g., in legal procedures against the siting decision.

7. Discussion

Against the background of our analysis, three main aspects must be discussed. These aspects are (1) the effectiveness of public participation in the case of the BER site selection process, (2) the applicability of Creighton's principles and (3) counterfactual scenarios about the BER site selection process.

7.1. The Effectiveness of Public Participation in the Case of the BER Site Selection Process

The outcome of public participation can be explained with the help of Creighton's principles. According to the principles, the characteristics of public participation in the case of the BER site selection process were decisively underdeveloped, especially when we focus on the fact that there was no mandate to act for decision makers and the application of public participation was discontinuous. Ng and Sheate [5] argue that public participation in the United Kingdom and Hong Kong is insufficient without mandatory requirements for a consultation at an early stage. In the case of BER, the credibility and effectiveness of public participation suffered a great deal from the Citizens' Dialog, which was applied at an early stage, because it was not legally binding, its results did not have to be taken into account and it was discontinued before reaching firm conclusions, though it provoked many expectations, and, after a period of several years without public participation, public participation phases 1 and 2 were applied at a late stage, when the corporate and political decision makers had already made up their mind. Just recently, Hilbrandt [19] (p. 15) wrote, in the case of the redevelopment of Berlin-Tempelhof airport, "if participation may seek to regulate communities, but works to trigger contention and mobilize power, planners may aim to reconfigure participatory strategies". In the case of BER, the participatory strategy was adapted by breaking off the Citizens' Dialog and had negative consequences. In other words, communication between stakeholders has at least partially failed, thus public trust could not be improved and resistance could not be reduced [17], with a result that public conflicts and annoyances intensified, as in other airport cases [10,18]. However, these circumstances did not lead to a complete termination of the airport project, as, e.g., in the case of Mexico City [7].

The problem of discontinuous and late public participation in German land development was recognized. In 1998, the Spatial Planning Act (*Raumordnungsgesetz*) in Germany was amended and the possibility of public participation in the preparation of programs and plans of the spatial planning at the state and regional level was introduced [63] and, in 2014, the Federal Ministry for Traffic and Digital Infrastructure (*Bundesministerium für Verkehr und digitaler Infrastruktur*) published the "Handbook for a good Public Participation" (*Handbuch für eine gute Bürgerbeteiligung*) [64], suggesting—as was already advised by Creighton—a continuous application of public participation throughout the entire planning process by complementing the planning stages or administrative procedures of infrastructure projects without legally required public participation with non-legally required public participation. At this point, however, it must be stressed that it depends not only on whether public participation takes place, but also on its results being taken into account to a reasonable extent. However, other problems still remain. Quite similar to the case of the BER site selection, for instance, Albrecht et al. [65] (p. 80) also criticize missing judicial and professional support representing stakeholders' interests, as well as confusing and incomprehensible planning documents in planning approval procedures for infrastructure projects. Furthermore, given the very long implementation period of BER, it is questionable whether more up-to-date concepts or standards, e.g., with regard to sustainable development, could be sufficiently taken into account [5].

Similar to the experience from the Minneapolis-St. Paul International Airport in the United States [16], the local knowledge was without significant influence and, ultimately, public participation was quite ineffective in the case of the BER site selection process and the siting decision in favor of Schönefeld. As in the case of Denver International Airport in the United States, (decision) power played a significant role [14] and like in the case of the Örebro airport extension in Sweden [15], the result of siting is to be deduced from influential factors outside public participation, i.e., from the broader politico-economic background, especially from the government (re-) elections, the results of the polls

and the failed merger between the states of Berlin and Brandenburg, which left Schönefeld as the most possible solution for corporate and political decision makers. Nevertheless, such complexities are known and the interplay among direct democracy, public participation and parliamentarianism has been recently discussed by Weber and Nierth [66]. The authors distinguish between public participation and direct democracy. For them, public participation comprises all procedures that involve people in decision making but without making binding decisions, while in direct democracy procedures, people make binding decisions instead of the parliament, e.g., through referendums. The authors notice that lately in Germany, the number of examples in which both types of procedures are combined has been increasing [66] (p. 323). From this point of view, one can argue that, in the case of the BER site selection process, a combination of both procedures also took place. On the one hand, non-legally required and legally required public participation was applied, and on the other hand, through the polls, a kind of “informal” referendum took place. The main conflict, however, is that neither the “informal referendum” nor the combination of it with the public participation had any legally binding basis. These inaccuracies or ambiguities about the role of public participation in the case of the site selection of BER suggest that there are likely inconsistencies in the objectives of public participation between different stakeholders, similar to the case of the EIA of the New Beijing Airport [20]. Against the background that China is an autocracy and Germany is a democracy, this shows that, regardless of a particular constitution, inconsistencies arise between stakeholders over the objectives of public participation and the role of public participation itself remains controversial.

7.2. The Applicability of Creighton’s Principles

Creighton’s principles allow for the employment of a framework that enables a detailed and differentiated analysis, from which clear results can be drawn. Due to the framework’s adaptability, different methods can be utilized and context factors can be integrated, like in our study—an abductive, qualitative ex post case analysis from the perspective of the micro-level, in combination with counterfactual scenarios, about the decision making for the siting of a large infrastructure project over a long time period of approximately 16 years, based on various sequential planning procedures, with and without public participation. As already stressed by Weblar and Tuler [24,28], Lane [25] or Bryson et al. [26], our study has also shown that the embeddedness in a broader political, economic and institutional environment as well as in a legal framework (contextual factors I) and concurring events—supporting or disturbing (contextual factors II)—play a major role in explaining the implementation and outcome of public participation in a decision-making process and that public participation is clearly modified by these various contextual factors. Thus, from our perspective, the framework illustrated in Figure 2, “Causality between characteristics and benefits of effective public participation based on Creighton’s principles of effective public participation”, needs to be extended taking into account contextual factors, as presented in Figure 5 (the contextual factors I and II also influence each other, which is illustrated by the gray-dashed arrows in the framework. However, the arrows have been deliberately gray-dashed because the interrelationship of the context factors is not the core of this study and, if so, it is only dealt with casually).

However, there are also some aspects of criticism. For example, predictability between characteristics and individual benefits is not given. In other words, it cannot be said which characteristics, to what extent, contribute to which benefit. In addition, a clear discriminatory power between the characteristics is also not always given, e.g., characteristic (3) the interested public is involved in every step of the decision-making process, depends on characteristic (2) the public participation process is well integrated into the decision-making process. For characteristics (4) and (5), one may also wonder how targeted programs and multiple public participation techniques are interdependent. In other words, how complex or simple do the techniques have to be in order for the programs to be targeted? In the case of the benefits, a similar argument can be made with a partially unclear discriminatory power. Some benefits include two dimensions, such as the benefit “minimizes costs and delays”. The “costs” dimension of the benefit can be perceived as similar to the “delays” dimension, e.g.,

according to the saying “time is money”, but strictly speaking, “costs” and “delays” are definitely not the same. To put it differently, Creighton’s partly multidimensional representation of benefits using two dimensions that have similarities or interdependencies but are definitely not the same in order to jointly categorize them as one form of benefit increases the risk that a clear discriminatory power will be hindered in the analysis of the benefits of public participation. Another aspect of Creighton’s benefits would be that there exists a trade-off between input benefits, such as cost minimization, and output benefits, such as quality improvement. For example, from the perspective of the economic principle, it is not possible to maximize output while minimizing input at the same time, because the goal and the use of resources remain undetermined and no clearly definable solution can be derived from this. Thus, either the minimal principle can be valid, in other words, a given amount of output is achieved with an input as small as possible, or the maximal principle is valid, where with a given input a maximum amount of output is achieved. This means that from an economic perspective, public participation can either minimize the costs or maximize the quality of the decision, but not both simultaneously. Therefore, a clear distinction between “input benefits” and “output benefits” could be helpful in theory and practice of public participation. Of course, the economic perspective would be different if the maximization of net benefits were to be considered. However, this would presuppose that costs and benefits, or rather input and output, are monetizable.

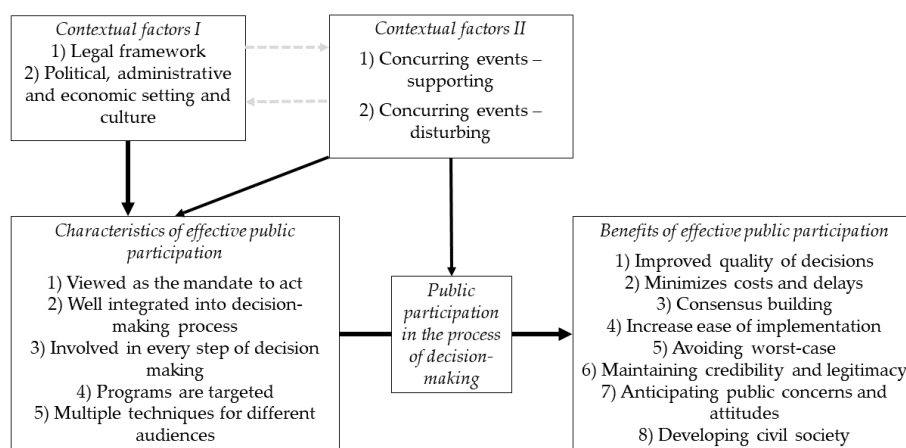


Figure 5. Causality between characteristics and benefits of effective public participation based on Creighton’s principles of effective public participation taking contextual factors into account.

Further criticism can be derived from Becker-Ritterspach [4] (p. 2). She argues that the implementation of airport projects often becomes very difficult and leads to enormous delays because stakeholders are increasingly becoming involved in decision making and also Brombal et al. [20] mention that a careful selection of participants has to be taken into consideration. These statements contradict Creighton’s principles [13] (p. 22ff.) that public participation must ensure the involvement of all stakeholders who perceive themselves as affected to ensure that the benefits from public participation emerge. The contradiction makes it clear that trade-offs exist when implementing characteristics of public participation. For example, Creighton does not consider the costs or spatial dimensions, which raises questions about how to utilize trade-offs and how to measure the costs and benefits of public participation. Moreover, within Creighton’s principles, some aspects regarding quality remain unclear, e.g., regarding the use of multiple techniques. The choice of specific techniques and their quality seems to be decisive for effectively implementing public participation. For instance, Rawson and Hopper [17] argue that, in airport master planning in the United Kingdom, inappropriate techniques are used, such as publishing planning documents on airport websites and including a reporting tool for stakeholders’ views. The authors conclude that the utilization of these techniques limits the potential to generate a mechanism for the broader participation of stakeholders. Additionally, while e.g.,

Schröter [67] (p. 77) criticizes the fact that no theory has been developed to date interpreting public participation as a social situation to determine how public participation works and how its organization influences outcomes, for Creighton, actors' constellations and actors' relations to each other play a minor role, and although the identification of the stakeholders involved [13] (p. 30f.) as well as their goals and objectives [13] (p. 215f.) are important for him, he mainly focuses on the process of public participation, leaving the impression that the main responsibility lies with the initiator of public participation to reach effectivity by involving the affected public with targeted programs and different techniques. However, the question remains as to what responsibility the public must shoulder in public participation if the process is to lead to successful decision making.

7.3. Counterfactual Scenarios about the BER Site Selection Process

To gain more insights into and to give more reasonable explanations about how the BER site selection was reached, we illuminate the case with the help of different counterfactual scenarios from the perspective of public participation and from perspective of the broader politico-economic background.

From perspective of public participation, certain counterfactual scenarios can be derived. These are:

- If public participation had taken place continuously throughout the site selection process, one can assume that the implementation of the siting decision in favor of Schönefeld would have been more difficult because the public would have been better informed and other alternatives would have received more public attention.
- If only the Citizens' Dialog had not been applied, it would have been easier for corporate and political decision makers to choose their preferred site because other alternatives would not have received as much public attention and could have been supplanted more easily.
- If no public participation had taken place and if the public had not been interested and had not informed themselves at all, then site selection regarding every alternative would have probably been much easier for all decision makers because public attention could have been steered deliberately to the chosen site, and other alternatives could have been more easily supplanted.
- However, building on the previous scenario, if the public had been interested and had informed themselves, no public participation might have led to even stronger resistance, more conflicts and to even more lawsuits than in the case of Schönefeld. Thus, siting would have become more expensive and more difficult in the case of every alternative.

From the perspective of a broader politico-economic background, further counterfactual scenarios can be created. These, in turn, are:

- If the merger between the states of Berlin and Brandenburg had been successful, it can be assumed that the selection of Sperenberg would have been more likely.
- In contrast, if no effort had been made to improve the cooperation between both states, particularly no effort to merge them, the selection of Schönefeld would have been very likely from the beginning of the airport planning.
- If the governments, as decision makers, had not been confirmed through (re-) elections or the results of the polls in Berlin and Brandenburg had been different, all decision makers would have likely focused more on information from public participation and adapted their decision making according to this information.
- If Schönefeld, as the site for the new capital airport, was predetermined by corporate or political decision makers to be used as an alternative in case of a failed merger, the Citizens' Dialog would have been useless or even tokenism.
- If Schönefeld, as the site for the new capital airport, was predetermined by corporate or political decision makers because plans already existed to extend Schönefeld Airport before the German reunification in the period of the German Democratic Republic, which were easy to revive, any public participation would have been tokenism.

- If Schönefeld, as the site for the new capital airport, was predetermined by political decision makers to ensure that Berlin's economic performance improves in any way because it is valued as critical in comparison to other federal states in Germany, any public participation would also have been tokenism.
- If the siting polls in Berlin and Brandenburg had been legally binding, e.g., in the form of referendums, the implementation of siting decisions would have been eased, and implementation would have been much faster and less expensive because corporate and political decision makers would have directly received a mandate to act from the public, and it would have been more difficult to challenge the decision in court.
- If the (re-) elections had given the governments more legal decision power regarding the implementation of infrastructure projects, the political decision makers would have received a mandate to act from the public, and the implementation of the BER siting decision would have been eased.
- If the public had been informed from the beginning on the basis of reasonable, professional and publicly and socially accepted arguments that, in the case of a failed merger, Schönefeld Airport would be extended to become the new single capital airport, it would have been easier to implement the siting decision, at least from the legal perspective and it would have made the complete siting decision process more transparent.

8. Conclusions

From the perspective of our analysis, in the case of the site selection of Airport Berlin Brandenburg, public participation did not or only partly deliver the hoped-for benefits for two reasons: (1) because the characteristics of effective public participation were weakly fulfilled, and with that, public participation was not only ineffectively applied, but very likely provoked even more conflicts and stronger resistance, which led again to the wasting of time and money for those concerned, and (2) because, against the broader politico-economic background, public participation was only a "a small cog in the machine", and other factors were much more decisive, especially the (re-) elections of the governments in the states of Berlin and Brandenburg and the results of the polls stating that the majority of the population in Berlin and Brandenburg were in favor of an airport close to the city, both factors from which the politicians got the attitude to own the mandate to decide. Finally, the failed merger between the states, followed by conflicts between the two state governments, which left Schönefeld as the most possible solution.

Our analysis has also shown that Creighton's principles [13] provide a functioning framework for assessing public participation from the micro-level, when adapted to a specific case and its context factors. Thus, we would like to encourage scholars from various scientific disciplines to apply the principles and the extended framework to other cases in order to refine them through their approaches and to advance the development of public participation theory and practice.

Some political recommendations can be derived from our study as well. Firstly, the implementation of projects with strong regional and mutual impacts, such as the BER siting decision and the merger of the states of Berlin and Brandenburg, should be carried out sequentially or brought together in planning from the outset in order to facilitate implementation and avoid complications due to interdependencies. This is particularly important as major infrastructure and construction projects can have strong path dependencies for a (non-) sustainable development of a society. Secondly, if public participation is really to play a role in decision making, its dimensions or levels, cost trade-offs and objectives, as well as the influence of contextual factors on decision making, must be clearly taken into account by planning. Thirdly, once the public has participated in the decision-making process, the strategy of decision making in the implementation process should not be changed top-down and public participation in the decision-making process should not simply be stopped or interrupted, because this can lead to mistrust and possibly more resistance within the public. In other words, public participation should be based on clear rules and transparency throughout the decision-making process, and once it has started

it should be continuous from that point until the end. Otherwise, it seems best to involve the public in the decision-making process from the outset, on the condition that public participation is wanted.

Finally, as far as the case of BER is concerned, it should be mentioned that not only was the siting decision connected with many conflicts and delays, but the construction, which started in 2006, was also characterized by mismanagement and many breakdowns. The opening, originally planned for 2011, finally occurred in October 2020. Overall, BER was tremendously delayed and got far more expensive than initially planned. Ironically, the opening took place in the middle of the COVID-19-related crisis of civic aviation and, once again, the prospects of this formerly prestigious infrastructural project are far from certain [68].

Author Contributions: T.S.: Conceptualization, Methodology, Investigation, Resources, Writing—Original Draft, Project Administration. V.B.: Methodology, Investigation, Writing—Reviewing and Editing, Supervision, Funding Acquisition. R.T.: Writing—Reviewing and Editing, Supervision, Funding Acquisition. All authors have read and agreed to the published version of the manuscript.

Funding: This research has received financial support from the Natural Science Foundation of China through project No. 71573231, the Social Science Foundation of China through project No. 16ZDA020, No. 14AZD028, No. 13AZD012 and No. 14ZDA039, the National Key Research Program through project No. 2016YFE0103100 and the Fundamental Research Funds for the Central Universities.

Acknowledgments: The authors would like to thank the Chair of Economics and Landscape Economics at Greifswald University as well as the Chinese funding organizations for supporting the study. The valuable reports from different anonymous reviewers are also much appreciated.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Stettler, M.E.J.; Eastham, S.; Barrett, S.R.H. Air quality and public health impacts of UK airports. Part I: Emissions. *Atmos. Environ.* **2011**, *45*, 5415–5424. [CrossRef]
2. BVBW (Bundesministerium für Verkehr, Bau- und Wohnungswesen). Flughafenkonzept der Bundesregierung. 30 August 2000. Available online: https://www.bmvi.de/SharedDocs/DE/Anlage/VerkehrUndMobilitaet/Luft/flughafenkonzept-2000-der-bundesregierung.pdf?__blob=publicationFile (accessed on 10 February 2017).
3. Niemeier, H.-M. Expanding airport capacity under constraints in large urban areas: The German experience. In *International Transport Forum Discussion Papers*; OECD: Paris, France, 2013; No. 2013-4. Available online: <https://www.itf-oecd.org/expanding-airport-capacity-under-constraints-large-urban-areas-german-experience> (accessed on 14 December 2020).
4. Becker-Ritterspach, L. *Steuerung der Implementation von Flughäfen—Eine Untersuchung des Flughafenbaus in Frankfurt a.M. und Berlin-Brandenburg*; Springer VS: Wiesbaden, Germany, 2015.
5. Ng, Y.C.; Sheate, W.R. Environmental impact assessment of airport development proposals in the United Kingdom and Hong Kong: Who should participate? *Proj. Apprais.* **1997**, *12*, 11–24. [CrossRef]
6. May, M.; Hill, S.B. Questioning airport expansion—A case study of Canberra International Airport. *J. Transp. Geogr.* **2006**, *14*, 437–450. [CrossRef]
7. Dewey, O.F.; Davis, D.E. Planning, politics, and urban mega-projects in developmental context: Lessons from Mexico City’s airport controversy. *J. Urban Aff.* **2013**, *35*, 531–551. [CrossRef]
8. Nitsch, V. Fly or Cry: Is Airport Noise Costly? Available online: https://www.researchgate.net/publication/45137969_Fly_or_Cry_Is_Airport_Noise_Costly (accessed on 14 December 2020).
9. Ahlfeld, G.; Maennig, W. Voting on a NIMBY facility: Proximity cost of an “iconic” stadium. *Urban Aff. Rev.* **2012**, *2*, 205–237. [CrossRef]
10. Suau-Sanchez, P.; Pallares-Barbera, M.; Paül, V. Incorporating annoyance in airport environmental policy: Noise, societal response and community participation. *J. Transp. Geogr.* **2011**, *19*, 275–284. [CrossRef]
11. Freestone, R. Planning, Sustainability and Airport-Led Urban Development. *Int. Plan. Stud.* **2009**, *14*, 161–176. [CrossRef]
12. Treber, D. Das Ergebnis steht fest: Bemerkungen zu den Verfahren der Bürgerbeteiligung bei Flughafenprojekten in Deutschland. In *Grenzen der Demokratie: Die gesellschaftliche Auseinandersetzung bei Großprojekten*, 2nd ed.; Thießen, F., Ed.; VS Verlag für Sozialwissenschaften|Springer Fachmedien Wiesbaden GmbH: Wiesbaden, Germany, 2012; pp. 163–170.

13. Creighton, J.L. *The Public Participation Handbook—Making Better Decisions Through Citizen Involvement*; Jossey-Bass—A Wiley Imprint: San Francisco, CA, USA, 2005.
14. Szyliowicz, J.S.; Goetz, A.R. Getting realistic about megaproject planning: The case of the new Denver International Airport. *Policy Sci.* **1995**, *28*, 347–367. [[CrossRef](#)]
15. Soneryd, L. Public involvement in the planning process: EIA and lessons from Örebro airport extension, Sweden. *Environ. Sci Policy* **2004**, *7*, 59–68. [[CrossRef](#)]
16. Cidell, J. Challenging the contours: Critical cartography, local knowledge, and the public. *Environ. Plan A* **2008**, *40*, 1202–1218. [[CrossRef](#)]
17. Rawson, R.; Hooper, P.D. The importance of stakeholder participation to sustainable airport master planning in the UK. *Environ. Dev.* **2012**, *2*, 36–47. [[CrossRef](#)]
18. Ruh, F. Munich Airport's Third Runway and Stakeholder Communications. *JEMPAS* **2014**, *2*, 15–22.
19. Hilbrandt, H. Insurgent participation: Consensus and contestation in planning the redevelopment of Berlin-Tempelhof airport. *Urban Geogr.* **2016**, *38*, 537–556. [[CrossRef](#)]
20. Brombal, D.; Moriggi, A.; Marcomini, A. Evaluating public participation in Chinese EIA. An integrated Public Participation Index and its application to the case of the New Beijing Airport. *Environ. Impact Assess. Rev.* **2017**, *62*, 49–60. [[CrossRef](#)]
21. Arnstein, S.R. A Ladder of Citizen Participation. *JAIP* **1969**, *35*, 216–224. [[CrossRef](#)]
22. Wengert, N. Citizen Participation: Practice in Search of a Theory. *Nat. Resour. J.* **1976**, *16*, 23–40.
23. Webler, T. The craft and theory of public participation: A dialectical process. *J. Risk Res.* **1999**, *2*, 55–71. [[CrossRef](#)]
24. Webler, T.; Tuler, S. Unlocking the Puzzle of Public Participation. *Bull. Sci. Technol. Soc.* **2002**, *22*, 179–189. [[CrossRef](#)]
25. Lane, M.B. Public Participation in Planning: An intellectual history. *Aust. Geogr.* **2005**, *36*, 283–299. [[CrossRef](#)]
26. Bryson, J.M.; Quick, K.S.; Slotterback, C.S.; Crosby, B.C. Designing Public Participation Processes—Theory to Practice. *Public Adm. Rev.* **2012**, *73*, 23–34. [[CrossRef](#)]
27. Quick, S.K.; Bryson, J. Theories of public participation in governance. In *Handbook in Theories of Governance*; Torbing, J., Ansell, C., Eds.; Edward Elgar Press: Cheltenham, UK; Northampton, MA, USA, 2016; pp. 158–169.
28. Webler, T.; Tuler, S. Four Decades of Public Participation in Risk Decision Making. *Risk Anal.* **2018**, *1*–13. [[CrossRef](#)] [[PubMed](#)]
29. Bobbio, L. Designing effective public participation. *Policy Soc.* **2019**, *38*, 41–57. [[CrossRef](#)]
30. Rowe, G.; Frewer, L.J. Public Participation Methods: A Framework for Evaluation. *Sci. Technol. Hum. Values* **2000**, *25*, 3–29. [[CrossRef](#)]
31. Dietz, T.; Stern, P.C. (Eds.) *Public Participation in Environmental Assessment and Decision Making*; The National Academic Press: Washington, DC, USA, 2008.
32. Li, H.; Ng, S.T.; Dong, Y. Stakeholder Analysis of Sustainable Construction in China. In Proceedings of the 21st International Symposium on Advancement of Construction Management and Real Estate; Chau, K., Chan, I., Lu, W., Webster, C., Eds.; Springer: Singapore, 2017; pp. 1335–1344.
33. Willems, J.; Van den Bergh, J.; Viaene, S. Smart City Projects and Citizens Participation: The Case of London. In *Public Sector Management in a Globalized World*; Andeßner, R., Greiling, D., Vogel, R., Eds.; Springer Gabler: Wiesbaden, Germany, 2017; pp. 249–266.
34. Ermolaeva, P. Citizens (dis)engagement during assessment of sports mega-events: The case of the 2013 Universiade in Kazan, Russia. *Impact Assess. Proj. Apprais.* **2014**, *32*, 66–71. [[CrossRef](#)]
35. Ng, S.T.; Skitmore, M.; Tam, K.Y.; Li, T.H.Y. Public engagement in major projects: The Hong Kong experience. *Proc. Inst. Civ. Eng. Munic. Eng.* **2014**, *167*, 22–31.
36. Ng, T.S.T.; Li, T.H.Y.; Wong, J.M.W. Rethinking public participation in infrastructure projects. *Proc. Inst. Civ. Eng. Munic. Eng.* **2012**, *165*, 101–113. [[CrossRef](#)]
37. Ng, S.T.; Wong, J.M.W.; Wong, K.K.W. A public private people partnerships (P4) process framework for infrastructure development in Hong Kong. *Cities* **2013**, *31*, 370–381. [[CrossRef](#)]
38. Li, T.H.Y.; Ng, S.T.; Skitmore, M. Conflict or consensus: An investigation of stakeholder concerns during the participation process of major infrastructure and construction projects in Hong Kong. *Habitat Int.* **2012**, *36*, 333–342. [[CrossRef](#)]

39. Li, T.H.Y.; Ng, S.T.; Skitmore, M. Evaluating stakeholder satisfaction during public participation in major infrastructure and construction projects: A fuzzy approach. *Automat. Constr.* **2012**. accepted. Available online: <https://eprints.qut.edu.au/54405/> (accessed on 15 May 2019). [CrossRef]
40. Li, T.H.Y.; Ng, S.T.; Skitmore, M. Public Participation in infrastructure and construction projects in China: From an EIA-based to a whole-cycle process. *Habitat Int.* **2012**, *36*, 47–56. [CrossRef]
41. Özerol, G.; Tacer, A.Ö.; Islar, M. Public participation as an essentially contested concept—Insights from water management in Turkey. In *Water Governance, Policy and Knowledge Transfer: International Studies on Contextual Water Management*; De Boer, C., Vinke-de Kruijf, J., Özerol, G., Bressers, H., Eds.; Routledge: Abingdon, UK; New York, NY, USA, 2013; pp. 128–147.
42. Brabham, D.C. Crowdsourcing the Public Participation Process for Planning Projects. *Plan. Theory* **2009**, *8*, 242–262. [CrossRef]
43. Omar, D.; Ling, O.H.L. Malaysian Development Planning System: Kuala Lumpur Structure Plan and Public Participation. *Asian Soc. Sci.* **2009**, *5*, 30–36. [CrossRef]
44. Özerol, G.; Newig, J. Evaluating the success of public participation in water resources management: Five key constituents. *Water Policy* **2007**, *10*, 639–655. [CrossRef]
45. Stake, R.E. *The Art of Case Study Research*; SAGE: Thousand Oaks, CA, USA; London, UK; New Delhi, India, 1995.
46. BER Flughafen Berlin Brandenburg. Available online: <https://www.berlin-airport.de/de/ber/index.php> (accessed on 25 September 2019).
47. Yin, R.K. *Case Study Research—Design and Methods*, 4th ed.; SAGE: London, UK; Thousand Oaks, CA, USA; New Delhi, India; Singapore, 2009.
48. Zhou, T.; Tan, R.; Sedlin, T. Planning Modes for Major Transportation Infrastructure Projects (MTIPs): Comparing China and Germany. *Sustainability* **2018**, *10*, 3401. [CrossRef]
49. Punch, K.E. *Introduction to Social Research: Quantitative and Qualitative Approaches*; SAGE: London, UK, 2013.
50. Beach, D. Process-Tracing Methods in Social Science. In *Oxford Research Encyclopedia of Politics—Qualitative Political Methodology*; Oxford University Press: Oxford, UK, 2017.
51. Fann, K.T. *Peirce's Theory of Abduction*; Martinus Nijhoff: The Hague, Holland, The Netherlands, 1970.
52. Fearon, J.D. *Counterfactuals and Hypothesis Testing in Political Science*; Working Paper 90-12; University of California: Berkley, CA, USA, 1990.
53. Habermann, B. Chronik des Flughafen Berlin-Brandenburg-International (BBI), Blankenfelde-Mahlow, 31.01.2014.
54. BBF (Berlin-Brandenburg Flughafen Holding GmbH). Ergebnisse der Standortsuche—Phase 1 der Vorbereitung des Raumordnungsverfahrens—Zusammenfassung der Gutachten, Berlin-Schönefeld, Juni 1993. Available online: http://www.tegelschliessen.de/wp-content/uploads/2013/09/Flughafen-BBI_Ergebnisse-der-Standortsuche_Juni-1993.pdf (accessed on 10 February 2017).
55. MEDIATOR GmbH. Mediationsverfahren “Bürgerdialog Flughafen Berlin Brandenburg International”, w.y. Available online: http://www.mediatorgmbh.de/data/downloads/projektblatt_%20mediationsverfahren_buergerdialog_flughafen_bbi%20.pdf (accessed on 10 February 2017).
56. Airport Region Mediation Competence Center. Bürgerdialog Flughafen BBI—(1992–1996), w.y. Available online: http://www.airportmediation.org/jart/prj3/armcc_airportmediation/main.jart?rel=en&content-id=1308751061329&reserve-mode=active, (accessed on 10 February 2017).
57. Appenzeller, G. Die Akte Schönefeld—1989 bis 1996. In *Der Tagesspiegel*; 2011. Available online: <http://www.tagesspiegel.de/berlin/flughafen-ber-die-akte-schoenefeld-1989-bis-1996/5916252.html> (accessed on 3 January 2017).
58. Richter, C. Diepgen schlägt Koordinierungsrat vor/Großprojekte auf Prüfstand—Der Senat will die Interessen von Berlin Stärken. In *Berliner Zeitung*; 1996. Available online: <http://www.berliner-zeitung.de/diepgen-schlaegt-koordinierungsrat-vor--Grossprojekte-auf-dem-pruefstand-der-senat-will-die-interessen-von-berlin-staerken-17463434> (accessed on 3 January 2017).
59. MIRB & SSB (Ministerium für Infrastruktur und Raumordnung Brandenburg & Senatsverwaltung für Stadtentwicklung Berlin). Planungsatlas—Flughafenumfeld Berlin Brandenburg International (FU-BBI). Potsdam, Berlin. 2008. Available online: http://www.mil.brandenburg.de/media_fast/4055/flughafenumfeld-bbi_planungsatlas-teil-a.pdf (accessed on 10 February 2017).

60. Bundesverwaltungsgericht. Pressemitteilung Nr. 15/2006—Grünes Licht für Flughafen Berlin-Schönefeld—aber Einschränkung des Nachflugbetriebs. 2006. Available online: <http://www.bverwg.de/presse/pressemitteilungen/pressemitteilung.php?jahr=2006&nr=15> (accessed on 3 January 2017).
61. Kirn, T. Blutiges Ende eines verlorenen Kampfs. In *Frankfurter Allgemeine—Rhein-Main*; 2012. Available online: <http://www.faz.net/aktuell/rhein-main/polizistenmord-an-der-startbahn-west-blutiges-ende-eines-verlorenen-kampfs-11946906.html> (accessed on 2 January 2017).
62. BERtrug. Liste der Bürgerinitiativen, w.y. Available online: http://www.bertrug.de/Liste_der_B%C3%BCrgerinitiativen (accessed on 4 January 2017).
63. Danielzyk, R.; Knieling, J.; Hanebeck, K.; Reitzig, F. *Öffentlichkeitsbeteiligung bei Programmen und Plänen der Raumordnung*; Bundesamt für Bauwesen und Raumordnung: Bonn, Germany, 2003.
64. Federal Ministry for Traffic and digital Infrastructure (Bundesministerium für Verkehr und digitaler Infrastructur). *Handbook for a good Public Participation—Planning of large Projects in the Transport Sector (Handbuch für eine gute Bürgerbeteiligung—Planung von Großvorhaben im Verkehrssektor)*; Hausdruckerei: Berlin, Germany, 2014. Available online: https://www.bmvi.de/SharedDocs/DE/Anlage/VerkehrUndMobilitaet/handbuch-buergerbeteiligung.pdf?__blob=publicationFile (accessed on 10 February 2017).
65. Albrecht, R.; Grüttner, A.; Lenk, T.; Luck, O.; Rottmann, O. *Optionen moderner Bürgerbeteiligung bei Infrastrukturprojekten—Ableitungen für eine verbesserte Beteiligung auf Basis von Erfahrungen und Einstellungen von Bürgern, Kommunen und Unternehmen*; Universität Leipzig, Kompetenzzentrum Öffentliche Wirtschaft, Infrastruktur und Daseinsvorsorge e.V.: Leipzig, Germany, 2013. Available online: http://www.wifa.uni-leipzig.de/fileadmin/user_upload/KOZE/Downloads/Optionen_moderner_Bu%CC%88rgerbeteiligungen_bei_Infrastrukturprojekten_.pdf (accessed on 10 February 2017).
66. Weber, T.; C. Nierth, C. Wozu Mehr Demokratie? Das Zusammenspiel von direkter Demokratie, Bürgerbeteiligung und Parlamentarismus—Eine Weiterentwicklung. In *Politik mit Bürgern—Politik für Bürger: Praxis und Perspektiven einer neuen Bürgerbeteiligung*; Glaab, M., Ed.; Springer VS: Wiesbaden, Germany, 2016; pp. 317–331.
67. Schröter, R. Quo Vadis—Citizen Participation in Germany. *DEMOSCI* 2016, 4, 67–81.
68. Röhl, K.-H. Ihr Flug hat neun Jahre Verspätung: Die Eröffnung des neuen Berliner Großflughafens Wird von der Corona-Pandemie und finanziellen Problemen überschattet. IW-Report 52/2020. 2020. Available online: <http://hdl.handle.net/10419/225493> (accessed on 14 December 2020).

Publisher’s Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



© 2020 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).