Inclusive Democracy, Sustainable Democracy?

Implementing descriptive and substantive representation through participatory mobility planning to increase legitimacy beliefs

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Abstract

The reorganization of mobility infrastructure in urban spaces often requires participatory elements. The goal is to incorporate citizens' ideas and needs into planning decisions and to mitigate potential negative impacts on public acceptance, which are crucial for the success of the mobility transition. This study specifically focuses on the role of inclusivity in the decision-making process and its impact on legitimacy beliefs. Legitimacy beliefs are considered a key factor in stabilizing contemporary democratic systems, which, when strong, are more likely to be sustainable and endure over time.

Consultation, as a method of participatory involvement, is often used by local municipalities to improve citizens' satisfaction and understanding of political processes. However, while such consultative participation may seem promising, it can be biased, as with most forms of political participation. Social inequalities significantly influence who participates, and those who do ultimately shape the outcomes. This raises the risk of marginalized voices being underrepresented or even excluded from the decision-making process, despite the appearance of broad public consultation.

This work aims to explore these dynamics within the context of urban mobility planning, focusing on how legitimacy beliefs can be supported by public administrations, while acknowledging the tension between social and ecological sustainability that can endanger democratic stability. I do this by working on **representation** as a key element of inclusivity that should be explored. Following Pitkin's (1972) idea on representation and Barber's (2004) idea of participatory democracy, I arrive at two blocks of questions worth answering in the broader context of local consultation, representation and legitimacy beliefs.

(1) *Do levels of representation interact in consultative policy making processes?*
    a. *Does descriptive input representation (DIR) increase substantive through- and output representation (STOR)?*
    b. *Does substantive through- and output representation (STOR) increase substantive outcome representation (SOR)?*
(2) *How does representation through consultation shape local legitimacy beliefs?*
    a. *Does descriptive input representation (DIR) increase local legitimacy beliefs? (Procedure)*

b. *Does substantive through- and output representation (STOR) increase local legitimacy beliefs? (Procedure)*
c. *Does substantive outcome representation (SOR) increase local legitimacy beliefs? (Outcome)*

I chose this approach to distinguish between the relevance of the procedure and its inclusiveness for the outcome, and the relevance of the procedure and its inclusiveness for legitimacy beliefs. At the same time, I aim to identify the effect of changing living conditions (outcome) on legitimacy beliefs.

To address these questions, the study uses data from the CIMT project (Citizen Involvement in Mobility Transitions), which examined five local case studies between 2020 and 2023. A large sample (n = 978) will allow for the estimation of the perceived effects of general participation in local consultations, the overall perception of being heard through political procedures, and the general perception of needs fulfillment in urban spaces. A smaller sample (n = 150), focusing solely on the case study “freiRaum Ottensen“, will additionally facilitate analyses of changes in local legitimacy beliefs and substantive outcome representation (SOR) before and after the process. Participation (DIR), the perception of being heard (STOR), and the perception of changing living conditions (SOR) are specifically linked to “freiRaum Ottensen“ rather than to all possible consultations.

The study finds that participation (DIR) does influence the feeling of being heard (STOR), but has a limited impact on changes in the living environment and living conditions (SOR). Also, the feeling of being heard through a process (STOR) translates into the perception of a positive change in living conditions for the respondent (SOR). Regarding local legitimacy beliefs, the study suggests that substantive outcome representation (SOR) plays a key role. This indicates that participation can indeed enhance legitimacy beliefs, but only if it is used to identify citizens' wishes and ideas and incorporates them into planning outcomes. Pseudo-participation can have the opposite effect and lead to disillusionment among citizens.

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Abbreviations

DIR	Descriptive Input Representation
STOR	Substantive Through- and Output Representation
SOR	Substantive Outcome Representation
CIMT	Citizen Involvement in Mobility Transitions
PoC	People/Person of Colour
LGBTIQ*	Lesbian/Gay/Bi/Trans/Inter/Queer*

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1. Introduction

1.1. The Challenge of Climate Change and Consultative Participation

Climate change is a serious issue that needs to be addressed by policy makers around the world. CO2 emissions in the transport sector are extremely relevant. They account for a large proportion of the CO2 that fuels climate change (Georgatzi et al., 2020). In order to address these issues effectively, major urban transformation strategies need to be developed on the communal level. These transformation strategies tend to address resource conflicts and are highly polarised (Sonnberger et al., 2020, p. 26), because ecological and social sustainability do not always go hand in hand. At the beginning of these transformative processes it is often clear that not everyone will profit from the measures necessary to reduce CO2 emissions. And those for whom the measures are not beneficial may feel let down by political actors. This can even turn into stronger dissatisfaction when one's options of moving through a city are seriously reduced.

Is this a threat to democracy? It certainly has the potential to be damaging. Conflicts over transport policy can never be resolved by finding the best options for everyone involved. These conflicts tend to be over the limited resource of space - a conflict that is exacerbated in urban areas, where there is even less space to share among even more people. And conflicts become visible in everyday life every time a cyclist shouts at a car driver for overtaking too close or for other manoeuvres that supposedly put the cyclist in danger. Ongoing social conflict is linked to manifest conflicts in the desired transport policy, an issue widely discussed between political actors and the public. While nearly all democratic parties are convinced that climate change is an existing struggle and transport policy an important area to tackle problems, populist try to occupy these spaces since people that lose privileges may often be more vulnerable to their strategies. While it remains necessary to reduce the privileges of car users in order to tackle climate change, it is also important not to lose their support to anti-democratic parties. This could lead to a situation where democracy is at stake.

The potentially critical impact of planning decisions in the context of urban sustainability strategies makes municipalities interested in finding ways to address this polarisation in order to resolve conflicts and gain acceptance for controversial decisions. Typically, local authorities will assume that incorporating participatory elements into decision making can help to reduce dissatisfaction. There are reasons to believe that this may be the case (Kubicek et al., 2011). If involvement through consultation increases satisfaction with the results, then consultation could be seen as a great complement to traditional policy making. Not only because it will inform decisions that will help reduce CO2 emissions in the transport sector, but also because it will enable these decisions to be made, while at the same time contributing to public acceptance - an element that is considered important for the stabilisation of Western democracies.

Clearly, social justice is a central issue in these reorganization strategies, as ecological and social sustainability do not always align. In this respect, eco-lifestyles that include, for example, regular commuting by bicycle, represent an upper class habitus (Hudde, 2022). Argumentation strategies about "ignoring the common people" through measures to reduce car traffic in cities are part of the populist oeuvre and are employed in the strategies of anti-democratic movements. At the same time, it is evident that consultation processes, in their current form, are heavily biased. Those who participate in discussions about ideas for a socially just transition to more sustainable mobility in cities are typically from resource-rich social groups. Consultation processes are far from inclusive. Even when local authorities aim to include as many voices as possible, they still fail to achieve true inclusivity. From the outset, it is clear that not everyone will have the same opportunities to participate (Dalton, 2017; Phillips, 2020; Schlozman et al., 2010; Verba et al., 1995; Walgrave et al., 2022; Young, 2010). This results in a higher likelihood of systematic bias between groups that experience the purported acceptance-enhancing effects of consultation.

Men and people with higher socio-economic status are generally more likely to be involved in politics and dominate processes when they are present (Coffé & Bolzendahl, 2010; Dalton, 2017; Pfanzelt & Spies, 2019; Verba et al., 2003; Walgrave et al., 2022). They are also the ones who benefit from the current built environments in terms of infrastructures meeting their mobility needs. Marginalised groups, such as the elderly, non-males (Greed, 2011), people with disabilities (Reis & Freitas, 2021b), and people with low education/income (Rozynek, 2024), are less represented in processes and

worse off when it comes to using mobility infrastructure. General and mobility inequalities suggest that the responsiveness of the local political system to individual needs may be relevant. Unequal participation leads to unequal opportunities to be mobile, which will foster social problems. In the worst case, however, it is not only mobility behaviour and opportunities that are affected by unequal participation. If inclusion does indeed affect legitimacy beliefs, unequal participation may lead to systematically different legitimacy beliefs. This could become a serious problem for democracy. From this point of view, I try to argue that only a democracy that tries to be inclusive of all citizens can be sustainable and, in the end, exist through crisis. This study attempts to address the issue of current inequalities in consultative participation, which is a key strategy chosen to strengthen local authority decision-making. It will also try to frame how inclusivity can help to reach this goal.

1.2. Inclusiveness through Participation as Key to Local Legitimacy Beliefs

The problems of inequality within participation are not new. They have been the subject of much research over the past year, particularly in the area of parliamentary research (Phillips, 2020; Pitkin, 1972; Schwindt-Bayer & Mishler, 2005). In addition, inclusivity plays an important role in democratic theory (Barber, 2004; Pateman, 1970; Young, 2010). Furthermore, issues of representation of marginalised groups seem to be gaining relevance in public debate (e.g. Blätte et al., 2022) and research (Clayton et al., 2019; Pow et al., 2020). Although there is widespread interest in issues of social inequality and political participation, as well as the dynamics of representation this research has not yet taken consultation into consideration. This is unfortunate, as democratic theory suggests that inclusive political participation has the potential to increase acceptance of government and strengthen local democracy (Barber, 2004; Pateman, 1970). An additional potential of consultation compared to direct democratic approaches lies in the possibility for a local municipality to add missing perspectives to the actual planning decision. It seems worthwhile to investigate the conditions under which consultation can be inclusive and whether this inclusivity can increase local legitimacy beliefs among participants. This is important since higher legitimacy beliefs may result in a more sustainable democracy that endures over time. The benefit of this study lies in a more thorough consideration of potential participatory formats. It will additionally benefit political practice by helping them to develop suitable formats to get the most out of the consultation they offer. Against this background, this study seeks

to frame dynamics of inclusion in consultation and the effects for local legitimacy beliefs.

The focus will be on **representation** in consultation as one supposed key aspect that I consider relevant to strengthening local legitimacy beliefs. To start with, I will look in detail at the interdependencies of the three aspects of representation, which are descriptive input representation (DIR), substantive through- and output representation (STOR) and substantive outcome representation (SOR). This is important to understand the mechanisms behind representation, which are relevant since they currently play a huge role in both public discussion (see the current discussion on citizen assemblies in, for example, Charim, 2024) and research (Clayton et al., 2019; Pow et al., 2020) . At the same time, they have not been included in evaluations of consultative participation even though especially public authorities seem to treat evaluation results different depending on their supposed representativeness (Migchelbrink & van de Walle, 2019). A clear theoretical framework for consultation procedures and representation dynamics on different levels of these procedures is useful for research and practice, since it helps understanding separate but linked advantages of introducing consultative elements into policy making. In addition, a detailed analysis of data from real-life consultation processes helps to identify how participation and representativeness can be used to increase local legitimacy beliefs.

Research questions on **representation** in local consultations can thus be summarized as follows:

(1) Do levels of representation interact in consultative policy making processes?

- *a. Does descriptive input representation (DIR) increase substantive through- and output representation (STOR)?*
- *b. Does substantive through- and output representation (STOR) increase substantive outcome representation (SOR)?*

The study explores how participation in the input phase of a political process (DIR) relates to the feeling of being heard in the through- and output phases (STOR). It also examines whether these **procedural aspects** of representation increase the likelihood of having one's needs reflected in the outcome (SOR).

There is reason to believe that all of these factors can influence **local legitimacy beliefs**. I argue that representation plays a crucial role in shaping local legitimacy beliefs. The focus of my second set of questions is:

(1) *How does representation through consultation shape local legitimacy beliefs?*
    a. *Does descriptive input representation (DIR) increase local legitimacy beliefs? (Procedure)*
    b. *Does substantive through- and output representation (STOR) increase local legitimacy beliefs? (Procedure)*
    c. *Does substantive outcome representation (SOR) increase local legitimacy beliefs? (Outcome)*

I suggest that two distinct mechanisms are key to explaining how **representation** influences **legitimacy beliefs**. One is the **procedural aspect**. The participatory policy-making process represents a decision-making model that diverges from the parliamentary model. It is possible that simply inviting people to participate (DIR) may increase local legitimacy beliefs. Similarly, being heard in the process (STOR) could be significant. At the same time, the substance of the decision itself (SOR) is likely to play a major role in shaping local legitimacy beliefs.

The inclusiveness of consultative participation is approached by conceptualising ideals of descriptive and substantive representation for participatory policy making. The focus is on the interdependencies between **descriptive input representation**, **substantive through- and output representation**, and **substantive outcome representation**. The distinction between the *process itself as a democratic tool* and the *substance of the outcome of a process* will be the key question of my evaluations. While I describe representation through the process (in input and through- and output) as *procedural mechanisms for increasing legitimacy beliefs*, the outcome dimension clearly relates *to substantive mechanisms for increasing legitimacy beliefs*.

In a perfect participatory policy-making setting, individuals can express their ideas throughout the process if they choose to engage. These interests can become part of the policy outcome if they are considered important by local authorities. Descriptive input representation (DIR) is assumed to increase substantive representation in the through- and output phases (STOR). In turn, substantive representation in the through-

and output phases (STOR) positively influences substantive outcome representation (SOR). Simply put: The needs of those who choose to participate are more likely to be incorporated into the outcome developed by local government. Participation is worthwhile – individuals benefit from being active.

While this approach seems straightforward, research has not yet fully clarified whether this is the case. The focus of representation studies has traditionally been on parliamentary work and the effects of descriptive representation on substantive representation (i. e. Schwindt-Bayer & Mishler, 2005). While this is certainly important, especially considering the opportunities representatives have to 'act for' others, consultation processes offer a distinct context. In consultations, citizens do not have the same capacity to 'act for' others. Local authorities retain the final decision-making power, thus balancing interests. This adds a layer of complexity to the question of whether consultation processes can enhance local legitimacy beliefs, especially when decisions from consultations are non-binding.

In democratic theory, it is easy to justify the importance of offering citizens genuine political inclusion. This inclusion is also believed to address a common concern for local authorities when organizing consultations: generating support for decisions. According to political theory on participation (not only consultative), it is likely that political support—whether at the local or broader level—is strengthened through citizen-inclusive decision-making (Barber, 2004; Pateman, 1970). At this point, local legitimacy beliefs, such as the acceptance of local political systems, become central, as they are considered the foundation of a sustainable and stable political system (Easton, 1976). However, it remains unclear whether representation in the process itself—through consultation—can enhance local legitimacy beliefs, even though local authorities hope this is the case. It is also uncertain whether representation in the outcome of a process—such as improvements in individual living conditions—can effectively influence an abstract concept like local legitimacy beliefs.

1.3. Approaches to Participatory Policy-making and Descriptive and Substantive representation

In order to answer these questions, I will begin with an overview of democratic theories that are helpful in framing (local) legitimacy beliefs in relation to participation. After a brief introduction to the concept of legitimacy beliefs in political research (Beetham, 2009; Easton, 1976; Lipset, 1959), I move on to participatory theories such as those of Barber (2004) and Pateman (1970). These are particularly helpful in framing the potential that participation can have for the long-term stability of political systems. They are also the most suggestive when it comes to a possible positive effect of (consultative) participation on the long-term stability of democratic systems.

The levels of a participatory policy-making process observed are input, throughput, output and outcome level. While input, throughput and output are part of the consultation process, the outcome is part of a wider decision-making context where local authorities and planners decide on a planning outcome referring to the consultation results. An overview of Scharpf's (1999) and Schmidt's (2013) frames of input, throughput and output legitimacy can explain the mechanisms at the different levels where more effective representation is likely to induce higher legitimacy beliefs. The measurement approach for local legitimacy beliefs itself is constructed by referring to Easton's (1976) conception of the regime as a possible object political attitudes are directed at. It is refined by adding ideas and looking at empirical analyses from the anthology “How Europeans View and Evaluate Democracy” edited by Ferrín and Kriesi (2016). They refer to a measurement from the European Social Survey ERIC (2013), which introduces a approach covering individuals' expectations and evaluation of the actual political structure. The later construction of the measurement approach for *local legitimacy beliefs* will use this evaluation-expectation approach.

When referring to potential enhancers of local legitimacy beliefs I will chose to work with the ideas of descriptive and substantive representation on different levels of the policy making process. Theories that frame descriptive and substantive representation are discussed in Chapter 3. In particular, the theoretical work of Pitkin (1972) will play an important role in the definition of representation through consultative participation. The idea of representation in politics is discussed as a general theoretical construct, starting from the fact that there is an idea of descriptive representation that refers to

the ideal that all social groups are equally involved in policy-making processes and able to represent themselves. Substantive representation is often assumed to be driven by descriptive representation, but is not necessarily linked to it. Consultation in a policy-making process is considered from two different angles. First, substantive representation in the participation process - that is, the way in which interests and opinions have been “spoken for” during the process. Secondly, I will look at the importance of substantive representation in the outcome. Consultation is not a process with a binding decision generated by citizen. Political actors consult citizens. The outcome may include fewer (or more) perspectives than those included in the consultation process. The notion of being substantive represented in the outcome relates to the question, who political authorities ‘act for’ (Pitkin, 1972).

Chapter 4 attempts to identify how this 'acting for' can be operationalized, especially when it is linked to highly habitualised behaviour in everyday life. Previous research has done this by observing how marginalised groups in parliaments try to achieve equal rights (Bönisch, 2021; Reynolds, 2013; Schwindt-Bayer & Mishler, 2005). I see everyday mobility as an area of hidden social inequality. Yet patterns of mobility behaviour are highly habitualised. I argue that these patterns are structured according to socio-economic principles, using approaches from the theory of social practice (Bourdieu, 2017a; Bourdieu et al., 2013; Manderscheid, 2019; Reckwitz, 2003, 2020; Wilde, 2014b). I am able to identify needs that make mobility options more convenient for different social groups. I call these mobility needs. Non-fulfilment of mobility needs will be the key to measuring misrepresentation in the result of a participatory planning process. If an individual's needs are improved as a result of the process, I will consider that person to have been substantially represented, as it means that the local authorities have 'acted for' that person.

The mobility needs are grouped and hierarchically ordered along the dimensions of **basic needs**, **time-efficiency needs** and **individualist needs**. In a sense, this relates to Maslow's (1943) theory of the needs pyramid, that is modified in many ways to make it applicable to the operationalisation of mobility inequalities. While basic needs enable people to move around the city, time-efficiency needs are particularly relevant when it is important to move around the city in a certain amount of time, or: with a certain amount of flexibility. Individualist needs are more important to satisfy when other needs are already satisfied. The definition includes elements such as pleasure and comfort.

While Chapter 4 looks in detail at socio-economic differences in the chances of having one's mobility needs met, Chapter 5 combines previous theories into a theoretical framework and integrates hypotheses. The first half of this chapter explains the relationship between participation and the likelihood for substantive representation in the outcome. It introduces categories relevant to marginalisation in urban space and how the presence of different groups of people can diversify a discussion. This helps to find out how this diversification can influence the outcome if local authorities include citizens' ideas in the results (with the help of for example Mansbridge, 1999; contrasted by the perspective of Young, 1997). I outline the mechanisms between the aspects of (1) being in the process (DIR), (2) being heard by the process (STOR), and (3) getting better living conditions from the process (SOR).

The second half looks at the mechanisms behind representation increasing local legitimacy beliefs. I look at representation on the different stages of the participatory policy making process. Input, throughput and output stage are linked to the consultation process not the result. This means that the mechanisms through which higher legitimacy beliefs are generated are rather procedural than substantive (Schwindt-Bayer & Mishler, 2005). Will people have higher legitimacy beliefs because they feel they have been given the chance to participate or have been seen through the process, whatever the outcome? This is what some local authorities hope when they offer a consultative process to support a decision-making process. And it seems plausible. First, because participation increases people's understanding of the complexity of these processes, but also because citizens learn about other perspectives on a particular issue and can empathise with positions (Barber, 2004; Bogumil & Holtkamp, 2013). However, a substantive mechanism behind consultation that increases local legitimacy seems more straightforward - even if it is not as desirable from a normative point of view. This substantive mechanism means that local legitimacy beliefs are increased mainly because the outcome of the policy-making process makes it easier for people to move through cities (Arnesen, 2017; Arnesen & Peters, 2018).

The data used to test these ideas were collected by the project "Citizen Involvement in Mobility Transitions" at Heinrich Heine University Düsseldorf. The project was funded by the federal ministry for education and research (BMBF). They offer a good basis for evaluating how participation can increase the feeling of being heard, how the feeling of being heard can increase the perceived representation in the built environment, and

whether procedural or substantive aspects increase legitimacy beliefs more. Chapter 6 describes the five case studies of consultative participation in decision-making processes that were researched and the process of data collection. The data are always linked to real participatory events, which were constant in some aspects (all modes of transport were involved in the process, the aim was to reorganise cities for more sustainable mobility) but varied in others (size of the project, conceptual versus operational projects). This has the potential to produce more robust results that consider a variety of infrastructure contexts, even if they do not appear to be representative of the variety of contexts.

Data collection took place between 2020 and 2023. I worked with two samples. A random sample was drawn from the general population. I also worked with a sample of people who took part in the consultation offered by the cities. This procedure was chosen to increase the power to detect differences between participants and non-participants. The case studies observed were Hamburg-Ottensen and Hamburg-Altona, Wuppertal-Heckinghausen, Marburg and Offenburg. Distinct analytical samples are used for analysis. The first sample is a **general sample** derived from all cases. These models try to measure the interrelationships between the concepts on a general level. To model these interrelationships I use a Dummy regression to make sure to subtract most context (Wooldridge, 2014). The second sample is called a **specific sample**. The “freiRaum Ottensen” case study is used to model changes in substantive outcome representation and local legitimacy beliefs as dependent variables and adds a longitudinal perspective.

Chapter 7 describes the findings in chronological order of the research question. First, looking at the interdependencies between representation at different levels of the policy-making process and second, observing which aspect of representation can fundamentally influence citizens' local legitimacy beliefs. For the relationship between representation at the input level (being there, or: participation) and representation at the through- and output level (feeling heard) I find mostly positive results. Those who are present in the procedures feel more heard than those who are not.

In a second step the relevant influences for substantive outcome representation are measured. There is no clear effect of DIR in local consultations on need satisfaction in mobility in both models. It can be concluded that participation itself does not suffice to

increase substantive outcome representation. However, observable is a positive influence by the perception of being heard through the consultation. This suggests that there may be an indirect effect of participation on need fulfilment. Participation has positive impact on the feeling of being heard, and being heard often translates into greater contentment with the outcome.

And how can representation help local legitimacy beliefs? This was approached by naming procedural mechanisms and substantive mechanisms that could help increasing local legitimacy beliefs. The relationship between participation and local legitimacy beliefs do not appear to align with expectations. Participation seems to have negative implications for local legitimacy beliefs. It is also notable that there is no significant increase of local legitimacy beliefs through perception of being heard during the process. This study cannot show that the procedure itself benefits local legitimacy beliefs. Nevertheless, there is a possibility that participation may prove an effective means of enhancing local legitimacy beliefs, although this is likely to be an indirect outcome of the policy-making process. The incorporation of citizens' ideas into the result demonstrates the strongest positive effects of consultation on local legitimacy beliefs. A higher level of need fulfilment following the process may result in a corresponding increase in local legitimacy beliefs. This means that participation helps increasing the feeling of being heard, whereas the feeling of being heard increases the perception of being represented in the outcome. It is the perception of being represented in the outcome that holds potential for increasing local legitimacy beliefs and finally, strengthening democracy.

This suggests that consultation plays a multifaceted role in supporting the mobility transition. An outcome that is responsive to the needs of citizens is indeed found to enhance local legitimacy beliefs. Other parts of the process do not influence legitimacy beliefs directly, but account for a positive perception of need fulfilment after the procedure. This means that there are conditions under which consultations can help to stabilize democracy. They do this by establishing outcomes that are responsive to needs of individuals that are important factors influencing legitimacy beliefs. This means that participation must be taken seriously to be considered a possible cure for a weakening political system.

2. Legitimate and participatory Democracy, stable Democracy?

Starting an explanation of how consultation and legitimacy beliefs of individuals may be linked it seems useful to offer a description of the aspects **legitimacy beliefs** and **political participation**. Legitimacy beliefs and political participation are crucial aspects for democracies. Research, as well as local municipalities, usually argue for citizen inclusion in (especially local) political contexts to strengthen and stabilize political systems in the long-term – attempting at making them more resilient (Bertelsmann Stiftung, 2019; Kubicek et al., 2011). This study tries to elaborate on the usefulness of inclusive consultation processes. Therefore, I will first draw a picture of **legitimacy beliefs** on an individual micro level as a key dependent variable able to capture political attitudes towards a democratic system. I will frame **participation** in the political process as key to increasing **legitimacy beliefs** (Barber, 2004; Pateman, 1970, 1971) and take a closer look at possible biases in political participation. This will help linking ideas on **legitimacy beliefs** to dynamics of political and social (in-)equality (Arendt, 2011; Dahl, 2000). I argue that social (in-)equality weakens democracy and that inclusivity is important. Thus: **representation** is key to understanding the range of effects current participatory procedures can have on legitimacy beliefs.

While we might usually consider Western democracies as being rather stable political units, we currently find antidemocratic voices constantly threatening their stability (Nations in Transit, 2021). In most Western European party systems populist parties gained support during the last decade (Nations in Transit, 2021). Even in Germany, where right-wing populists did not manage to get much public attention until 2013 (Arzheimer, 2015; Arzheimer & Berning, 2019), the antidemocrats of the AfD managed to gain votes in national elections during the last years. Along antidemocrats (and in populist parties) we can assume lower legitimacy beliefs (Pesthy et al., 2021). A key element of the election campaign of these parties is usually linked at strong defamation of elites and current political orders, which was very present during the COVID pandemic in Germany (Lehmann & Zehnter, 2022). Populist parties pose a threat to democracy. Accounting for stability of legitimacy beliefs of individuals will become one of the main task democracies have to fulfil to secure their democratic order. Local municipalities tend to use inclusion of citizens into policy-making processes as a tool to reach this even though research can only partly confirm positive effects of citizen involvement

on legitimacy beliefs at this point. This makes legitimacy beliefs specifically worth researching in the context of public participation.

Currently, the inclusion of citizens into the political process is mostly restricted to the act of voting representatives – but can potentially involve some top-down organized possibilities for local level participation[1]. There are reasons to believe that democratic systems can be more resilient, stable and sustainable when participatory options beyond voting are increased (Barber, 2004; Pateman, 1970; Young, 1997, 2010). Research e.g. on Switzerland by Bauer and Fatke (2014) shows that the availability to be included into the political process may indeed increase trust, while the actual inclusion may have a more negative effect[2]. In a replication of this study, Kern (2017, 23ff.) does not find the same effects but can at least refer to a positive effect of availability and use of direct democratic[3] options on external political efficacy – meaning: the perceived responsiveness of a political system.

While the idea when looking at participatory procedures is that everyone gets the chance to make decisions, these usually do not reach their full potential in liberal democracies. Participatory procedures are still prone to biases along lines of social inequalities. Low education and low income are still the main explanatory factors for non-participation even with more direct democracy (Kern & Hooghe, 2018, p. 733). This will yield unequal results from direct participation for different societal groups. While the already resource rich will likely be included in political processes by participatory tools the same is not true for the resource poor (Schlozman et al., 2010; Verba et al., 2003). This is a problem, since political equality is often considered democracies' foundation and participation is expected to yield political influence (Dalton, 2017, pp. 3–25).

I argue that in a democratic system you cannot reach stability and sustainability by offering options to participate only. Balancing interests to include groups with less

[1] There are bottom-up ways of participating in the political process. As these are often forced by the public and rarely deliberately encouraged by local authorities, they will not be discussed in this study. In addition, bottom-up opportunities cannot always be classified within the same process model as that used to study top-down processes (see Figure 1) and must be studied separately.

[2] Obviously, the Swiss model of including citizens in the policy-making process differs from the non-binding concept of consultative participation, which will be discussed later in this study. Nevertheless, it remains relevant to examine the Swiss model in the context of existing research.

[3] Once again, while the positive effects of direct democracy certainly speak for the advantage of participation this study will look at non-binding participation that has a consultative function.

resources should be considered important when researching citizen participation (Young, 1997, 2010). I argue that this is considerably easier in consultative participation compared to direct democracy. The advantage of consultative participation is that it leaves decision-making power with local municipalities. At the same time citizens are included into the process. Their opinions and every day experiences are collected by the municipalities to include them into decision-making (Fung, 2006; Rondinella et al., 2017). While integrating perspectives from those who want to be heard, municipalities can elaborate on who is missing from the process. This gives them the possibility to balance out interests.

But what exactly are the legitimacy beliefs, that may be increased by stronger political integration? How can they be measured? How do they relate to other aspects of political support? Why are they likely to help the longevity of a political system? How can they be usefully measured on a local level? The focus of this work will be to take a closer look at local legitimacy beliefs. I will ask, how they are generated on different levels of the policy-making process and, how we can identify relevant social inequalities on the different policy-making levels. The overall theoretical concept will be tested using data from 5 case studies from German municipalities. In the next chapter, I offer a description of what I mean by the term legitimacy beliefs and how they can be framed and researched as political attitudes.

2.1. Legitimacy Beliefs as Political Attitudes

What is legitimacy and in which way do **legitimacy beliefs** relate to the general concept? How are **legitimacy beliefs** important for stabilising democracy? While there is the assumption that legitimacy is relevant for democratic persistence the concept itself is rather difficult to describe. This is due to legitimacy being an abstract aspect of democratic acceptance. Democracy itself is worth protecting. It is generally “accepted across the world as the most legitimate form of government” (Beetham, 2009, pp. 281–282) and understood as intrinsically valuable by being integrative for humans (Sen, 1999). These aspects can only be maintained as long as democracy is accepted and supported by its citizens. Since support by citizens is such an important aspect for democratic persistence, I will focus on this element when researching local legitimacy beliefs. I do not try to explain normative understandings of legitimacy or how a democracy can be considered legitimate from a political science point of view. Instead, I refer to research on empirical legitimacy that captures **legitimacy beliefs** as attitudes

among individuals**.** While normative legitimacy of systems is indeed expected to yield positive results in terms of **individual legitimacy beliefs**, even the normatively most legitimate states cannot persist if there is no acceptance by the public (Kneip et al., 2020).

Early descriptions define **legitimacy beliefs** as the consent of the governed with the government or the current political structure (Locke, 2012). I argue that voluntary approval of a political structure is an important aspect of a stable democracy that can deal with crisis. Legitimacy as an aggregate secures the existence of democracies (Easton, 1957, 1976; Lipset, 1959). This means that many (not all) individuals in society must have rather high legitimacy beliefs. Legitimacy beliefs are part of a group of political attitudes directed at objects of the political system that can range from a general political community to very concrete political actors. Easton (1976) within his description of political support, refers to three objects that political support of the public can be directed at. These objects are rated by citizens. Citizens either support these objects or do not support them (Easton, 1975, p. 399). These political attitudes will be subsumed under the term “legitimacy beliefs” in this study. Easton (1975) argues that without acceptance of the objects democracy will not be possible. The dimensions can be understood as hierarchically ordered. This conception helped for example Norris (2011) to find measurements for international comparison.

Hierarchically ordered objects are (1) the community, (2) the regime and (3) the authorities of a political system. While all of these objects are important, they are not only ordered in terms of concreteness but also hierarchically organized. The political community a person lives in is accordingly the most important aspect of political support. High support of a political community means that citizens of a state are willing to accept other citizens in a political debate. This is key for every democratic action since it enables joint political action in a democratic system (Easton, 1957, p. 391), e.g. political participation like elections or participation in consultative processes. Thoughts of a political community are often quite closely linked to conceptions of a nation state, which should not be a problem with a civil and non-ethnic understanding of nation states. Even in Western democracies it might be debated, whether this is always the case. With path dependencies in German history the perception and definition of the community is shown to differ from community definitions in other states such as France (Koopmans & Kriesi, 1997). While e.g. France builds its community understanding on

civic understanding of citizenship, the German community identity as understood by some parts of the public is especially characterized by a rather ethnic understanding of citizenship (Kneip et al., 2020, p. 8). This is a problem that arises when using affective attachment to a national state as a measurement strategy (Norris, 2011). On a positive note: These problems are usually given on a national level, but do not persist for local level politics. I argue that basic acceptance of other people and their political views is highly relevant on a local level for establishing democracy and democratic processes. It induces fair public discussion but may also be relevant for acceptance of local level outcomes, organization of the political context and the authorities relevant within the context.

While the discussion of community legitimacy might be continued elsewhere, other dimensions are easier and behave less specific within the German context. These dimensions can also be considered useful for international comparison. The **political regime** is also a relevant part of Easton's (1976) conception of political support. The support of a political regime can be subsumed as acceptance of the “rules of the game” (Easton, 1957, p. 391). By “rules of the game” the author means the acceptance of the arrangements made to enable decision making on a political level or “a set of formal or informal constraints generally accepted in the system” (Easton 1976, S. 436). Non-acceptance of these rules will disable possibilities for effective decision-making. These thoughts directly relate to thoughts on the acceptance of the procedure used in actual evaluations of procedural legitimacy (Clayton et al., 2019).I consider the perception of the **political regime** closest to what I would consider **legitimacy beliefs** since the conception describes a system rather than individual actors within. Easton (1976) describes it as attitudes towards the functioning of a democratic system. These are rather important, since they are likely to increase longevity and stability of democracies, by fostering trust in the process rather than institutions or actors. It will be relevant for individuals in accepting a democratic state even when they are not fond of the current government.

But, what does a democratic regime consist of? Even in political theory there is a broad discussion about relevant aspects. Most researchers can possibly agree on liberal democratic elements such as free speech and free elections (Beetham, 2009; Dahl, 2000). I argue that so far the European Social Survey ERIC (2013) offers a useful approach to consider ideas and understandings of democracy as well as an actual

evaluation to measure attitudes towards a regime on a national level, which can be subsidized under the term legitimacy beliefs (Kriesi, 2013). I call this approach a dyadic approach in the terms that it considers expectations to democracy and the evaluation of democracy. This can be considered a useful strategy (Schoon, 2022). Understandings of democracy of individual people are very disparate between countries and cannot be expected to be equal across one country. Even though there are usually consistent strategies and common cultural understandings within a country context (see differences between countries in e.g. Kriesi, 2013) it is already pretty hard to assume equal expectations among citizens. I argue that this will even be more complicated on a local policy making level, where it is unclear how citizens expect local democracy to be. The political regime will be the main focus of this study.

This kind of dyadic assessment of attitudes towards a political regime is not only helpful but necessary for taking care of the differences between individuals' understandings of democracy that are induced by their individual normative conceptions of legitimacy beliefs (Kneip et al., 2020). I previously argued that legitimacy beliefs can be derived from citizens expectations of democracy versus their evaluation of the status quo. My idea of legitimacy beliefs is thereby close to the conceptualization in the ESS (European Social Survey ERIC, 2013) and Kriesi's (2013) ideas. Expectations and evaluation taken together can account for the complexity **of attitudes towards a political regime**, or: **legitimacy beliefs**. An example for this can be a person that evaluates a welfare system negatively. This person may have a negative perception of one aspect of democracy. At the same time, it is not automatically plausible that the same person has negative attitudes towards the political regime or: low legitimacy beliefs. For a negative evaluation of the welfare system to result in negative perceptions of the political regime that same person will need to have high expectations towards a welfare system, which may depend on the context or welfare regime (Esping-Andersen, 2013) but may also be induced by personal preferences. **Legitimacy beliefs** encompass two key dimensions: (a) an **assessment of expectations** towards a democratic regime, which can vary significantly across individuals, and (b) an **evaluation of the current political structure**. Legitimacy beliefs are not measurable for authoritarian regimes. In authoritarian systems, acceptance is not contingent on an evaluation of political structures. Furthermore, expectations are not expected to vary in a survey evaluation. Instead, acceptance is hierarchically forced (Schoon 2022).

Both community and regime legitimacy enable effective governance and secure the stability of political systems. Slightly less importance is attributed to the acceptance of the actual government. When regime and community legitimacy is given and high acceptance of the actual government is lower it is possible that a political system remains stable. Still 'political authorities' are a concept worth measuring since stability can also be strengthened by acceptance of the political authorities. We can expect that attitudes towards authorities are influenced by participation. I argue, that this influence is indeed relevant but rather in a short term to strengthen the position of actual politicians in charge. It is no feasible description of legitimacy beliefs, since the consent of the public is only given in terms of current persons in government. Long-term consent may be rather given by a general acceptance and positive evaluation of the regime meaning the rules of the game. Attitudes toward the (local) regime are thus more relevant to answer my research question. Still, political authorities are a noteworthy object of political support and necessary to describe (Easton, 1957, 1975, 1976; Lipset, 1959).

The government or with Easton (1957, 392f) the political authorities are quite often researched when considering short-term effects on acceptance. The object of political support relevant in this context is the question of whether citizens assume that the government at least to some degree fulfils the tasks given to them during the authorization process (Easton, 1957, 392f). Political authorities can also be considered most likely to be influenced positively by a certain political decision, since they are most consciously perceived by the citizens and less diffuse than the other objects. The difference between authorities on the local and national level is easily drawable, since the definition reflects on units that either have local or national competences. Nevertheless, non-acceptance of the political authorities might be possible without a destabilising democracy. Especially believing in the process may induce higher acceptance of political authorities that do not act according to an individuals' ideas or interests. An idea, that will later be disputed empirically.

I argued, that working on **legitimacy beliefs** as attitudes towards a **political regime** is useful. This is especially considered, since attitudes towards a **political regime** tend to be more stabilising than attitudes towards political authorities. They can be considered influential for the longevity of a political system because they will increase acceptance of unliked decisions and describe a consent over the general rules of democracy. When approaching the **political regime** and its features it is useful to take a

closer look at **democratic theories**, since they are able to frame possible ideas of democracy. These ideas or: demands are especially relevant to understand citizens expectations, that make up one part of **legitimacy beliefs**. At the same time democratic theory is obviously useful to frame the role of participation in different ways and approach the question: **Why should (consultative) participation increase legitimacy beliefs?**

2.2. Participation in Democracy in Germany

Even in liberal democratic theory**, participation** is considered a defining aspect. The term "democracy" refers to a rule by the people (Beetham, 2009). Direct participation was more present in early versions of democracy (such as the Greek polis)[4] and has been disputed later. Even though democracies today are a lot less focused on direct (binding) involvement of citizens and a lot more involved in organizing the integration of larger areas, a major role is still assigned to basic participatory elements such as voting in national and local elections (Beetham, 2009; Kriesi, 2013). Especially among citizens this might increase the idea that participation indeed is one of the main elements of democracy.

The role of participation for democracy is especially emphasized when looking at measurements that are used to operationalize democracy. For example, the Freedom House Index (FHI) that is a helpful tool for both political scientist and the general media when trying to find a trustworthy source on whether states can be considered democratic. The FHI conceptualizes participation in general elections as an important factor, which is the most famous participatory democratic element. The FHI focuses on a liberal conception of democracy. It incorporates a set of values most researchers can agree on when it comes to calling a state democratic or not. The FHI additionally manages to make visible that states vary in the degree to which they can be considered democratic. The democratic principles mentioned and rated by the FHI are (1) national democratic government leadership, (2) the election process, (3) a civil society, (4)

[4] This iteration of democracy differs from contemporary systems in several respects. Notably, the population responsible for making pivotal decisions excluded a considerable proportion of individuals residing in the designated area. This example should thus simply serve to illustrate that democracies existed that did not depend on elected representatives alone.

independent media, (5) local democratic government, (6) judicial framework and independence and (7) freedom from corruption (Müller & Pickel, 2007).

While these principles certainly help identifying aspects defining normative legitimacy of a national state, they clarify that current conceptions do not describe consultative participation as important democratic element of national level politics. This does not reflect the local policy making context on mobility in Germany. Here, the importance of consultative participation increased during the last years. They are more and more frequently used to elaborate on decisions when it comes to the mobility transition (Mark et al., 2024). Also, whether and in which ways citizen participation is used or not will vary tremendously between democratic states. This frequency impacts the degree to which citizens consider participatory elements important (Kriesi, 2013). In Switzerland for example it is generally more likely that citizens' understanding of democracy will include ideas of direct democracy while on a national level, this might not be the case for Germany which is due to historical path dependencies (Schiller, 2011). All these cases and differences are examples for how a state's organization and community discussion will shape **expectations towards democracy**, that I argue are a central part of **legitimacy beliefs**.

A strong focus in research when it comes to participatory policy making is usually on Swiss direct democracy. But contexts with less participatory cultures, such as Germany, can be relevant to research, too. This is especially since they focus on informing decision-making rather than substitute decision making. These elements of participation incorporated are usually located on a local level. They are usually not direct democratic approaches but appear in the form of **consultation**. Germany is also a context interesting to research because in normative terms it scores considerably high on measurements like the FHI. It can certainly be considered to be an established democracy (Freedom House Index, 2022). At the same time, Germany is a country where we quite constantly find below average values for legitimacy beliefs. The danger of a destabilization of German democracy is certainly given and the high quality of German democracy does not automatically induce more stability (Kneip et al., 2020, 2ff). Referring to the possible positive influences of participation, local authorities can indeed expect consultation to be useful for increasing legitimacy beliefs. Increasing legitimacy beliefs in systems that fulfil normative standards of a good democracy will be a key element in fighting destabilising mechanisms. Germany's ambiguity makes it a good

case study for identifying the mechanisms by which citizen participation can help to increase legitimacy beliefs, and a good case study for identifying the shortcomings of consultative participation as a source of legitimacy beliefs.

Thereby, in the German case local authorities will most likely operate with consultation on a local level, which is another advantage. Consultation is most often used to collect citizens' ideas without directly having to implement their decision (Fung, 2006). While consultation seems less progressive than direct democracy because of the decisions being non-binding, it may have one major advantage. Within democratic systems that sometimes fail to include people with low socio-economic status into their political processes (Verba et al., 2003), consultation might be a useful tool to include ideas from the public while being able to still secure the rights of minorities and inclusion. It may also enable stronger control on who makes the decisions and who is represented in the decision (Young, 1997, 2010). I argue that this perspective on inclusion via consultation is relevant in a broader context and help us identify mechanisms not only for our German case studies but on a broader more general level.

While participation is a key achievement of democracies it can also be seen as one crucial element in stabilising democratic decisions and democracies. Participation is (in research and practice) assumed to strengthen individual legitimacy beliefs and at the same time high legitimacy beliefs will foster the will to participate (for example, by believing in the outcome of a democratic process) (Barber, 2004; Kubicek et al., 2011; Pateman, 1970). That participation can be considered both (1) outcome of and (2) an influence on political participation makes it especially relevant but also complex to research, since the directionality of effects is unclear. In this section I will reflect on the theoretical mechanisms linking participation to an increase in legitimacy beliefs especially focusing on the relevance of different forms representation for these mechanisms. The forms of representation will either reflect the inclusion during the participatory process (descriptive representation on the processes' input level and substantive representation during the participation) or refer to the inclusiveness of the processes' outcome (substantive representation in the result). In Chapter 3 I will take a closer look at the political science theory behind these types of representation.

Interdependencies between participation and legitimacy beliefs need to be explored because the possibility of being included in the political process (participation) is

necessary for a stable democratic political system. Conversely, citizens will be more likely to want to be included in the political process (participate) if they already have high(er) legitimacy beliefs, for example if they trust the political system more, but also if they have higher expectations of the responsiveness of the political system (for example, there is lower participation rates in citizens' assemblies when there is higher belief of corruption, see Walsh & Elkink, 2021). This interdependence makes the influence of participation on legitimacy beliefs both exciting and difficult to study. While wondering about the mechanisms through which participation is likely to increase legitimacy beliefs, I decided to focus on one issue in particular: social inequality. In an economic system that fosters inequality in resources, inequality in political participation is usually a given (Schlozman et al., 2010; Verba et al., 1995). The systematic failure to include certain groups is the most vulnerable aspect of a democratic system under capitalism. This makes representation relevant in both process and outcome when considering the potential of participation to enhance legitimacy beliefs, and motivates my main research focus.

When looking at the relationships between participation, representation and legitimacy beliefs, I argue that it is relevant to ask whether higher legitimacy beliefs are linked to the mere fact that all relevant groups in society are included in a participatory decision-making process (DIR)? While some approaches indeed focus on the aspect of mere 'inclusion' - no matter the consequence in outcomes - a second research focus incorporates whether higher legitimacy beliefs are induced by offering a space of 'speaking for' all participating groups (STOR). In a last step, I take a closer look at the actual political act that alters living environments of individual people. Here, I ask: are higher legitimacy beliefs induced because of an 'acting for' all relevant groups of society (SOR). Theoretical frameworks suggesting this structure are introduced in Chapter 3. The next chapter discusses the positions in the participatory policy making model that this approach refers to.

2.3. Process versus Substance: The Participatory Policy Making Model

To approach these concepts, we need to refer to a model of the **participatory policy making process**. Common models tend to focus on a policy-making process that reduces participation to voting in elections. Input and output levels are usually organised by professional policy makers, not by the public. This is obviously no longer plausible once consultation becomes part of the process. It is important to remember that

citizens are present during parts of the policy-making process. They are invited to participate at the input level by being there, they are invited to participate at the throughput level by speaking for themselves and being part of a political discussion within the local political community. They also produce their own political output at this stage of the political process. This output should not be confused with the policy decision - the outcome. It is the local authorities, not the citizens, who make the final decisions. This makes it necessary to distinguish between the results of consultative participation (output), which are more closely related to citizens' evaluation of the process, and the measured outcome, which may or may not be a result of participation and is more closely related to citizens' substantive evaluation of their living conditions after the introduction of measures. While professional political actors are involved in a participatory policy-making process, they hardly intervene at the input, throughput and output levels, but they will play an important role for the outcome (for an overview see Figure 1).

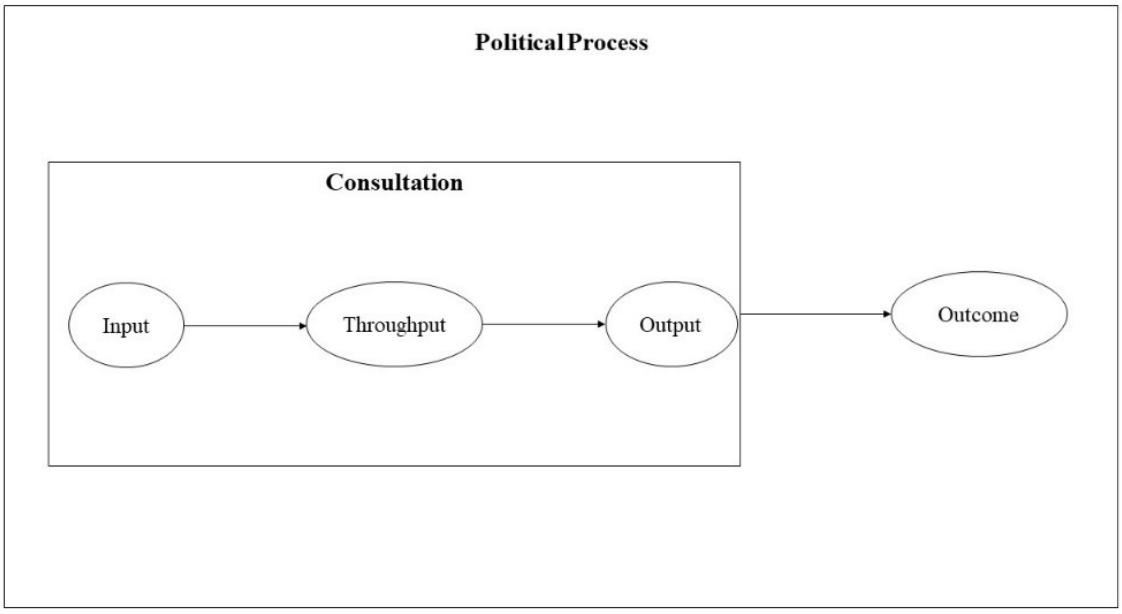

Figure 1 Process Model for Consultative Policy-Making Processes

I argue that citizens will have normative conceptions of each step in the participatory policy-making model. They will have expectations of and evaluate inputs, throughputs, outputs and outcomes. This suggests that a **consultative policy making process**, as shown in Figure 1, can increase **legitimacy beliefs** in more than one way. All aspects

of the policy making process are potentially linked to normative societal/individual conceptions of an understanding of democracy. Most stages of the policy making process will tend to increase **legitimacy beliefs about the political process and its inclusiveness**. While it seems plausible that **outcome favourability** is a strong driver of legitimacy beliefs, effects of opening up the policy making process are not unlikely. I argue that both aspects, process-induced legitimacy beliefs and outcome-induced legitimacy beliefs, are relevant. For long-term stabilisation, outcome favourability alone may not be sufficient, but a positive evaluation of the political process (in relation to an individual's expectation of a political process) must be given.

I have previously argued that these stages can induce legitimacy beliefs via different theoretical pathways. Here, it is plausible to distinguish a path that induces legitimacy beliefs by increasing the opportunity to express one's opinion (representation) in a process. I refer to this as the **procedural route to legitimacy beliefs** (for a more comprehensive review of the parts of representation in a parliamentary decision-making process that belong to the "procedure", see Schwindt-Bayer & Mishler, 2005). The procedural pathway is more likely to be found at **the input, through and output levels** of a participatory political process. The input and through and output levels represent aspects of the process that may be related to the outcome. However, they are related to the process itself, while not determining the outcome of the process. I argue that these aspects of a participatory political process are linked to ideas of how society can operate in local political contexts and the individual evaluations of these processes in local policy-making. This is not so much about the outcome dimension, which represents a more substantive path in my research framework (referred to as "responsiveness" by the political system in the framework by Schwindt-Bayer & Mishler, 2005, 407ff).

I argue, that the **procedural route** should be considered more important for the long-term stability of a political system. The context of the case studies I examine in this study is appropriate for exploring these aspects through the study of real-life participatory policy-making processes. I focus on consultative participation at the local level in the context of planning. Thus, I argue that the stages of the policy making process that are relevant for decision making are **input, throughput, output** (within the consultative participation) and **outcome** (of the consultative participation plus the decision of the local municipality), all of which can be considered relevant for **legitimacy beliefs**.

A special focus on representation and the potential positive effects of representation on legitimacy beliefs allows for a differentiation between procedural and substantive elements and their potential influences. The argument that a differentiation between separate pathways can help to analyse legitimacy beliefs and how they are produced in a participatory policy-making process necessitates a theoretical reflection on these pathways. I argued, that the in-, through- and output of the participatory policy making process depicted in Figure 1 influence legitimacy beliefs over a procedural path meaning that they are increasing the acceptance of the procedure and thus lead to higher legitimacy beliefs. Describing the mechanisms was part of the work of Scharpf (1999, 2006) and Schmidt (2015), who identified two forms of inducing higher legitimacy beliefs (through the input and throughput) without focusing on a process outcome, but only on procedural aspects.

Understandings of democracy can vary. For some people it may be important to be invited to take part in decision-making, while others may be more concerned with the political positions discussed during the process. A third group may be satisfied with the decision-making process without the involvement of individual citizens. All these evaluations deal with procedural issues of citizen involvement and offer different answers to this question. Individuals may or may not expect elements of consultative inclusion. This makes the mechanisms between the stages of participatory policy-making and legitimacy beliefs rather complicated to grasp - especially when they are closely related to the acceptance. The stages of the policy-making process tend to influence each other. The process and the outcome of each process can be important to individuals (Clayton et al 2020). In what follows, I will formulate the mechanisms for influencing legitimacy beliefs for each stage of the participatory policy-making process from Figure 1 starting with the input, describing the influences of the through and output, and ending with the influences induced by the outcome. I will arrive at a framework explaining **input induced legitimacy beliefs, throughput induced legitimacy beliefs and output induced legitimacy beliefs** in the tradition of Schmidt (2013) and Scharpf (1999).

Starting with the **input dimension**, it is plausible that legitimacy beliefs can be induced by citizens perception of the input. It is also plausible that citizens have an idea of how they imagine the input into a process. Scharpf (1999) identifies one main question for citizens to assess the input level*: Who makes the decisions?* This is important in the context of democratic theory and citizens perceptions of democracy. It becomes even

more important in the context of a participatory policy-making process. Here, the input is not part of the professional policy-making process but the invitation to a space for citizen participation. Especially in local political contexts, this kind of participation becomes a relevant procedural feature. This can be a challenge for municipalities and is closely linked to the question of who should be represented in a political process. Do citizens feel that they are relevant actors in local decision-making, or are they satisfied with the option of voting in elections? Can good decisions be made if there are systematic biases in who is represented? Current debates offer broader notions of participation that may play a role. Do consultations offer a way of involving wider sections of the population, or is the population self-selected in terms of socio-economic status? Are decisions fair if only a self-selected part of the population is involved? From these questions, I argue, that the representation dynamics in the input of a political process will be relevant. By inclusion on the input level legitimacy beliefs can be strengthened, since this type of inclusion can strengthen a pro democratic preference by addressing a key procedural characteristic of democracy: the possibility of political participation (see, for example, Barber, 2004). Participation may increase the perception that the promise of democracy in terms of responsiveness and inclusion holds, which is likely to positively influences legitimacy beliefs (Schwindt-Bayer & Mishler, 2005) .

The next level with potential for increasing legitimacy beliefs is the level of throughput. When talking about this, it becomes clear why throughput can be seen as an important procedural aspect of citizens' evaluation of the political regime. I have chosen to identify the mechanisms accounting for **throughput**-induced legitimacy beliefs. Often throughput induced legitimacy beliefs are linked to an assessment of the process may it be the political process leading to a decision in a multilevel governance system (Schmidt, 2013, 2015; Schmidt & Wood, 2019) or in the context of a participatory political process. Direct inclusion into a process is a tool to procedurally increase the attitudes towards a political process – since opening up the process to citizens will be closer linked to understandings of democracy in which the people have the power to influence decisions (Barber, 2004; Pateman, 1970).The throughput is more directly linked to the decision-making process than e.g. the input. This is due to perspectives, experiences and interests being publicly discussed during the throughput phase. When citizens learn about participatory decision-making processes being included into them this can strengthen the believe that decision-making is usually democratic and fair (Zürn 2000). Researchers describe aspects of accountability, transparency and

openness as especially relevant when evaluating the throughput of a political process (Schmidt & Wood, 2019). A promise of democracy also lies in the inclusiveness of participation that is supposed to account for political equality (Dahl, 2000). Fairness is another factor highly relevant for throughput assessment. Fair decisions are supposed to be made when elaborating on all possible information on the living conditions of individual people in a certain social area – e.g. on the local level a municipality or cities district (Young, 1997, 2010).

An advantage of increasing legitimacy beliefs via the **throughput path** is that an increase in legitimacy beliefs is not only associated with outcome satisfaction. Perceiving throughput as good can contribute to better attitudes towards a political system, even if the outcome is not desired by an individual citizen. It is plausible that representation will play a role. If citizens feel that their interests can be represented in a process and that the process is fair to them, they are more likely to accept the outcome - even if they do not like it – at least in theory. The participatory policy-making model presented in this chapter not only elaborates on the throughput of a participatory policy-making process, but also integrates the output of participation as an important factor. In direct democratic models, this output would have induced legitimacy beliefs because it is the result of a policy-making process. This is not the case with consultation. Rather, the **output** is the aggregated **results of participation** that are integrated into the decision-making process (see Figure 1). It does not resemble the outcome of a process. The output of consultative participation can thus be framed as throughput using the model of Schmidt and Wood (2019). It rather applies to the procedural pathway when increasing legitimacy beliefs. Since my research design does not allow for separate evaluation of through- and output of a political process, I will work with the term **through- and output** to describe aspects of the process inducing legitimacy beliefs via the process-throughput.

I consider the **outcome dimension** as the most influential aspect to stabilize attitudes towards democracy. The outcome dimension is very different from the previously described aspects of input and input induced legitimacy beliefs. Is also differs from throughput induced legitimacy beliefs. While both aspects were framed as procedural increases in legitimacy beliefs, the effect of the outcome lies neither in the inclusiveness nor in the process but in **the substantive fit** of the outcome with one's own interests. This effect is usually strong but may not be long-lasting, since the likelihood of

decisions in other area negatively impacting legitimacy beliefs can be considered high. The outcome dimension once again refers to the participatory policy making process as pictured in Figure 1. I shortly described that the participation process produces an output that is not in all points translated into an outcome. This is due to the non-direct form of democracy, that allows local municipalities to incorporate ideas from the participation, but does not force them to do so.

The theoretical model by Scharpf (1999) and Schmidt (2013; Schmidt) describes these **substantive** legitimacy beliefs increasing effects as *output induced legitimacy* or *output legitimacy*. It becomes clear that Scharpf (1999) focusses an ordinary (not a participatory) political process. The theory is helpful when trying to understand how legitimacy beliefs are produced during political processes and how effects of decision-making processes can be derived from both process and the decision itself. In the previously introduced participatory process model the decision that can influence legitimacy beliefs is subsumed under the term outcome to clarify that it does not necessarily resemble the output of the participatory process. When referring to the effects the outcome has on legitimacy beliefs by e.g. altering living conditions of an individual, or: substantive changes, Scharpf (1999) and his idea of output induced legitimacy will play a huge role. Effects of a political decision (or: output) on legitimacy beliefs reflect on the perceptions of the decisions present in the outcome of a participatory process in the public. These are **substantive aspects** that induce legitimacy beliefs. Legitimacy is assumed to in- or decrease with the substance of the outcome, because the outcome can either improve or worsen individuals living conditions and will thus, play a role for changes in their everyday life. This will be discussed more in detail in Chapter 3. This is particularly important in the context of the idea of political equality.

I consider all paths described in this chapter to influence legitimacy beliefs concerning the political regime measured in a dyadic measurement using expectations and evaluations. Since loads of mechanisms on the different levels can be assumed to have an influential impact I chose to work with my main focus on social and political equality and will thus take a closer look at representation dynamics on the three potentially influential levels of the production of legitimacy beliefs, that are **input induced, throughput induced** (incorporating through- and output) and **output induced** (incorporating the outcome after a participatory process). I consider this especially important since conflict in the urban space is likely to arise between different socio-economic

groups. Normatively it can be considered important to include different perspectives on urban infrastructure into a political process, discussion and outcome. At the same time it is plausible that disadvantaged groups are currently systematically misrepresented in all three aspects (Beaumont, 2011; Christensen et al., 2023; Dalton, 2017; Kern & Hooghe, 2018), which is likely to effect legitimacy beliefs especially when prominent conceptions of democracy incorporate ideas of equality as is the case in most Western democracies.

This link between legitimacy beliefs and representation is only shortly introduced here and will especially be elaborated in Chapter 3. Before approaching this topic, a discussion of models on participatory politics is useful. The next chapter will introduce thoughts on participatory policy-making and critically reflect on them. They are all seen as having the potential to frame the potentially positive effects of participation on legitimacy beliefs. However, they have slightly different approaches to how participation can do this and which aspects of the political process are best moderated by participation.

2.4. Participatory Policy Making and its Advantage for Democracy

Chapter 2.1. introduced the concept of **legitimacy beliefs** and their relevance for democracies, while Chapter 2.2. describes the reason to research **participation as consultation in Germany**. Chapter 2.3. introduced the **participatory policy-making process**, assessed how it differs from ordinary (parliamentary) policy-making processes and which pathways (**procedural vs. substantive**) are relevant for increasing **legitimacy beliefs** through consultation. Obviously, this is worth researching, as political practitioners tend to expect an increase in legitimacy beliefs, or at least: the acceptance of a public decision, from participatory policy-making. At the same time, it is not yet clear whether participation can increase legitimacy beliefs and what conditions are necessary to achieve this desirable effect. This will be discussed in reference to different theories on participatory democracy in this chapter.

According to Kubicek et al. (2011) local authorities expect advantages from using participation on a local level. Arguments for more consultative participatory procedures are usually based on three aspects. They will expect (1) to generate better understanding of the policy making process by inviting citizens. They expect citizens to learn about policy making processes in general and to gain a better understanding of these policy-

making processes (Kubicek et al., 2011). This does not only help citizens, but also legitimacy beliefs in a long term since it strengthens understanding of decision-making processes and may thus improve democratic support (Bogumil & Holtkamp, 2013). Integrating participation in politics does also help to (2) generate good decisions. Making decisions that are feasible for many groups becomes more likely through a process where different ideas are discussed. This may help people in different living conditions in their everyday life and strengthen equality in political outcomes. Another aspect is that (3) identifying and carrying out conflicts is generally a useful process in a democracy. This is due to discussions general potential for making problems of individuals in society visible and can also be a basis for redistribution of resources in an unequal society. Conflicts may not always be solved but may become visible and help identifying were basic needs are unfulfilled which can be relevant for equal opportunities. I will approach the role of participation sticking to the three key claims by Kubicek et al. (2011) that frame the role of consultative participation for democracy (see Figure 2). To work on these key advantages, I will use a variety of aspects from democratic theory and weight them against each other.

Figure 2 Advantages of Citizen Participation (Kubicek et al 2011)

Most discussed normative democratic principles do not incorporate elements of direct democracy, but still incorporate an understanding of democracy that is relevant to define the basic conditions of a model of democracy. Liberal democratic theory does not specifically focus on political equality or participation beyond voting. Still, these theories usually start with a translation of the term “democracy” that means that the power should be in the hands of the people. While this resembles an earlier understanding of democracy and todays democracies are a lot more about organization of large groups of people, the principle of equal electoral rights still accounts for individual possibilities of participation (Beetham, 2009). But even in regimes that can be considered authoritarian, leaders usually talk about their actions as the “will of the people”. It is necessary to work with a broader conception of the idea of liberal democracy. This is especially necessary to distinguish democracies from non-democracies. Political scientists all over the world have spent quite a long time defining key aspects (Thurich, 2006).

To approach these normative aspects, it can be useful to look at common measurements and classifications of the democratic constitution of a state. Müller and Pickel (2007) see a useful start for elaboration in the Freedom House Index (FHI), a measurement that was mentioned and elaborated on in Chapter 2.2. They consider the FHI representing a universal normative depiction of expectations towards democracy that is highly applicable in a scientific explanation and also communicated to society. It measures political rights like elections and pluralism in elections but also considers possible political participation beyond this key participatory element in most democracies. It accesses how well governments fulfil general principles of democracy and whether citizens’ personal freedoms are secured within a regime. Key aspects beyond this are individual autonomy and social rights. A functioning rule of law and levels of freedom of speech, assembly and organization. It is possible to identify universal principles agreed on by democratic societies using these measurements.

These democratic key principles are usually used for international comparison. Do they say something about local level policy making? Measurement units from the FHI as well as theories on liberal democracy usually offer a strong focus on single moments of authorization (e.g. elections) in democratic states (Barber, 2004; Dahl, 2000; Müller & Pickel, 2007). Elections are important. They constitute the key participatory character of a democracy. They authorize officials to represent individual people in the political process (Budde & Buchanan, 2002; Schwindt-Bayer & Mishler, 2005). Furthermore,

they can be considered useful in international comparison. And they do matter on a local policy making level as well. Still, we should not consider it the only important element of democracy on a local level. Because what makes local level democracy and participation worth researching is that within a smaller area of policy making and less inhabitants than on a national level more diverse forms of participation become possible. While elections are certainly relevant, **new participatory elements** trying to capture the everyday life of citizens and change environments according to their needs are interesting especially when it comes to topics of societal redistribution (e.g. of space in mobility planning).

Participatory elements present opportunities to enhance acceptance. Most cities do not yet use these opportunities to their full potential, but integrate some elements (Mark et al., 2024). We can distinguish between different intensities of local (topic related) policy making being: (1) information, (2) consultation and (3) direct democracy[5]. All of these forms to integrate a local community into the policy making process can potentially be stabilising for political systems thus making them more sustainable (Barber, 2004). However, they nearly play no role in democratic theories focusing on liberal democracy in national political systems. With participatory democratic theories there is a range of frameworks that can help describing the potential of these cases (e.g. Barber, 2004; Pateman, 1970). Especially **participatory democracy frameworks** (Barber, 2004; Pateman, 1970) offer a range of theoretical thoughts on how participation can result in higher accountability **and higher legitimacy beliefs** – potentially building a long-term sustainable democracy. In the following, I will reference three theoretical frameworks discussing their potential, when researching legitimacy beliefs and consultative participation.

To describe the mechanisms behind consultative participation processes, three types of democratic theory that go beyond common democracy frames will be used. First, **participatory democratic theory** will offer insights into questions of increasing acceptance and strengthening democracy by inclusion of citizens into policy making processes (Barber, 2004; Pateman, 1970). **Deliberative democratic theory** will be used to examine the improvement of decisions through citizen inclusion in a democratic process (Habermas, 2019; Young, 1997, 2010, 2011) and additionally, to make an

[5] In Germany, this tool is only available for local level politics (Schiller, 2011).

argument for consultation over direct democracy, **radical democratic theory** will be used to contrast perceptions of representation and legitimacy beliefs and introduce new perspectives on conflict in a democratic society (Demirović, 2020; Laclau & Mouffe, 2020). However, I do not try to integrate these perspectives but rather depict them as different approaches to the same questions: **What is an inclusive democracy and in which way can participation help to increase legitimacy beliefs among citizens?**

For a conception of political participation most of the theoretical frames proposed refer to Hannah Arendt (2011, 2020)[6]. She conceptualizes political participation as an active and necessary political practice of individuals. The political area is thus composed mostly of the political participation of individuals. This construction of the political space is referenced by both participatory democratic theories but also within the more radical democratic approaches (Meyer, 2020). No democracy exists without individual political participation, society is composed of individual actions. The political is additionally described as conflictual. This will play a crucial role especially when looking at redistributive questions. In our example cases it is likely that most of these conflictual situations are linked to situations referencing a redistribution of urban space. Conflict or dissatisfaction can be seen as key to most political participation and are therefore one key element of participation in politics. Possible dissent and pluralism are key aspects of most democratic states. The democratic state is constituted in a fragile manner. Laws of a democratic state e.g. can only persist when they are supported by the citizens of a nation state. **Participation** of citizens then again shapes the constitution of the democratic state (for a short introduction see Meyer, 2020, 99f). Participation is thus the constituting factor in the heart of democracy and can stabilize a democratic order. However, it is also capable of the opposite: demolishing the democratic state (Arendt, 2011, 2020; Meyer, 2020)[7].

While Arendt's evaluations remain rather theoretical current nation states deal with a variety of possibilities to participate in politics. These variants come with differing potential of increasing legitimacy beliefs among citizens. They cannot be seen as

[6] Especially when looking at participatory and radical democratic theories (e.g. Meyer, 2019).

[7] Arendt's (2011) ideas did not pertain to the democratic systems that are currently in place. They more specifically tried to elaborate on the organization of council democracies.

“alternative to political representation or expertise” (Fung, 2006, 66f). Fung (2006) develops a model to understand **citizen participation**. He describes participation along three dimensions starting with the question who participates. “Some participatory processes are open to all who wish to engage, whereas others invite only elite stakeholders […].” (p. 66). The second dimension described in his work focusses on the possibility of citizens to engage in discussion. While some participatory processes are rather considered informative to citizens, other offer them the possibility to deliberate on topics as well as sharing their experiences on topics with others. Inclusive potential is only given on this deliberative part of the ladder of citizen participation. This is because citizens can exert some influence when governments collect their perspectives (Arnstein, 1969). Consultative citizen participation is worth researching in mobility planning, since it currently is often applied (Mark et al., 2024) with the aim to make mobility transitions easier and stronger linked to the needs of individuals. And **consultation** can help collecting new perspectives. But while often used under this promise by local municipalities, it is still rather unclear whether consultation can indeed lead to higher legitimacy beliefs among participants.

To elaborate on this, I chose three theoretical frames that capture single important elements of participation and offer sometimes contradictory perspectives on aspects practitioners consider relevant when planning participatory procedures. The first frame (**participatory democratic theory**) will help to understand how acceptance (or: legitimacy beliefs) can be increased through citizens involvement in the procedure (Barber, 2004; Pateman, 1970). The second frame (**deliberative democratic theory**) offers perspectives on finding the best solution for a problem through discourse and integration of differing perspectives. Additionally, deliberative democratic theory will offer strong arguments for consultative inclusion of citizens into the political process (Young, 1997). The third frame (**radical democratic theory**) is used rather supplementary, since it describes aspects of conflict (antagonism) prevalent in democratic systems (Laclau & Mouffe, 2020). Additionally, it offers perspectives on the interrelation of the economic system reducing the potential for political inclusion (Demirović, 2020). It is still rather complicated to integrate especially radical democratic theory with deliberative democratic theory. But still radical democratic theory can give us some ideas about the organization of states and should not be left out of the discussion.

Participation is assumed to help (1) better understanding and more support for democratic procedures as a relevant outcome (legitimacy beliefs), (2) generation of consensus over political decisions (deliberation) and (3) visibility of conflict (antagonism) (see Figure 2). Obviously, it is not helpful trying to combine strictly theoretical approaches. It is, however, still possible to link thoughts and participation and argue, why more participatory elements in a democratic system might be useful. This is why I do not try to combine or contrast theories, but to introduce ideas and arguments of how participation can help a vital democracy.

I will start this by referring to the approach of **participatory democracy** by starting with very early elaborations on participation as an element of democracy (Lefebvre, 2016; Marx & Engels, 1999; Rousseau, 2012) that are seldom used due to their focus on city states such as the Paris commune. However, they seem interesting and applicable when researching local policy making. Also, the theory of Benjamin Barber (2004) that worked on questions of democracies being “strong”, will be introduced. He elaborates on a participatory model of democracy**,** which can merely be considered an ideal-typical theoretical case and does not necessarily need to apply to existing democracies. Identifying key aspects of participatory democracy can be helpful to gain understanding over the mechanisms, participation can account for. The author divides democratic systems into strong and weak democracies – the strong ones being driven by high degrees of participation (Barber, 2004). The idea behind this is that democracy including stronger participatory elements can make different claims of individuals visible for a more informed decision among political actors (Mansbridge, 1999; Young, 1997).

Democracy is expected to live and thrive through participation. This is also true for some of the general democratic theories referring to political systems, where governments are determined in a participatory way by elections. But democracies differ in the amount of participation they implement from elections only over consultative procedures to direct democratic elements. When approaching participatory democratic theory Rousseau (2012) and his theory of the *contrat social* are often used as a starting point. Even though Rousseau (2012) obviously has not thought about modern democratic models in large states, his ideas help framing nowadays organization of participation. First, he already implements the thought that political decisions gain efficiency and recognition by being generated in participatory ways and thus argues for a

participatory organization of a democratic society in city states[8]. This can also be found in other early elaborations on participatory elements beyond elections. E.g. in observations of la commune de Paris, the revolutionary established city council during the time of the French-German War (Lefebvre, 2016; Marx & Engels, 1999). While through their focus on local organizational units these evaluations are usually seen as not applicable to nowadays complex and large political systems, they help to get an idea of historical evaluations of participation and its advantages. This study focusses reorganization of urban space, which is a topic of national relevance that is usually implemented in smaller organizational units. Competences for changes in the built environment usually lie partly with local policy makers. This is what makes these approaches especially interesting in the context of this study.

Rousseau (2012, p. 28) refers to humans as being able to organize and direct powers in political contexts. What is key to his thoughts is the question of how society can be organized without the loss of individual freedoms. For him this demand is the key element of a just societal order and a key demand of political organization. Individual freedoms should be reached and obtained in a participatory way and society must be organized by individual participation. Here, Rousseau (2012) already refers to problems of social inequality that potentially threaten equal participation. He claims that participatory organization of society and the postulated effects of participation on social cohesion can only take place in societies where people are equal and their living conditions do not differ too much. Within this he already grasps that local political units are probably the ones that can easier organize political participation.

Later theorists on participatory politics and advocates of participatory democracy strongly refer to Rousseau (2012) and his theory of the *contrat social*, when establishing their own theories on how successful and stable democracies can be organized. Focussing on larger political units is common among this theoretical branch. **Strong democracy** is a concept used by Barber (2004) and mentioned in Pateman's (1970, pp. 22–45) theoretical reflections on participatory democracy. Barber (2004) differentiates between what he calls 'thin' and 'strong' democracies. He assumes a greater sustainability - in terms of long-time stability - among the 'strong' democracies. A

[8] His notion of the *volonté general* is comparably radical in terms of the demands for a participatory organization of every aspect of society.

participatory organization, Barber (2004) argues will benefit citizens acceptance of decisions but also of the regime. He associates the current democracies with a strong tendency towards anarchism in values, realism in means and minimalism in their political temper to especially weaken individual rights, individual trust, social cohesion and solidarity, which are relevant for the persistence of democracy (Barber, 2004, pp. 93–98).

> „The perfect liberty of theory may spell anomie in practice; perfect independence may mean defencelessness against actual bondage; perfect individuality may produce actual deracination; perfect privacy may breed an incapacity for fellowship; perfect representation may induce a paralysis of activity and a torpor of the political will." (Barber, 2004, p. 98)

The focus here is particularly on the role of minimalism in state policy, which cannot enable positive political action. Positive political action is seen by Barber (2004) as relevant to build what he calls a ‚strong' and sustainable democracy. 'Strong' democracies rely on a high level of political participation. However, a high degree of political participation does not mean that direct democratic elements are implemented in a democratic system. According to Barber (2004) societies are far too complex for too many direct democratic elements. Participation is seen as a fundamental advantage for democracies. It is assumed to generate common interests and to hold potential for joint action. Both aspects tend to stabilise social relations and generate solidarity.

According to Barber (2004), most Western democracies are thin democracies. Introducing more participatory elements can be a useful tool to increase legitimacy beliefs among citizens. Early theoretical works such as Pateman's (1970) book on 'Participation and democratic theory' also refer to the aspect of strengthening democracy through participatory elements. Pateman (1970) sees aspects of citizen participation as useful tools in consulting governmental actors. With a consultative position, citizen gain an understanding of democracy. The more citizens are involved in the process, the less they differ in their understandings of democracy. Pateman (1970, pp. 85-103) goes even further than Barber (2004) by pointing out that participation in the workplace can also be helpful.

The means of achieving the ideal of a strong democracy is widely discussed in theoretical frameworks. For Barber (2004) and Pateman (1970), complex political contexts do not allow easily for direct democratic principles, but would benefit from citizen

consultation. Representative democracy retains its relevance to the decision-making process, even when structures are opened up to citizens who feel unseen by governments. These theoretical evaluations show, that citizens understanding of democracy and legitimacy beliefs can theoretically be increased. The increase takes place either by involving citizens into the political process (procedural path) or by responding to their needs (substantive path). Legitimacy beliefs could be induced by the previously mentioned input of a participatory policy-making process, through- and output of a participatory policy-making process out outcome of a participatory policy-making process (see Chapter 2.3).

In addition to the notion that the current political system's organisation may reduce legitimacy beliefs by not allowing citizens to participate in the political process, it is important to ask: how can participation possibly help to strengthen the political outcomes? And, which element of participation is relevant for potential increases in legitimacy beliefs? Discourse is a key element of democracy. Political decisions are generated in discursive processes. Society itself evolves through discourse. The role of discourse in political decision-making is often used in evaluations of legitimacy beliefs. Additionally, thoughts on discourse can be applied to consultative participation. Discursive evaluation of topics with citizens can help identify problems that have not been articulated before. This is especially true when people involved in discursive evaluations of topic differ among certain (socio-demographic) characteristics (Mansbridge, 1999). Gaining knowledge of different perspectives is often cited as possible advantage of consultative participation. Local municipalities often establish participatory mechanisms to collect different perspectives. This knowledge of diverging perspectives is useful in general and can help achieve a representation of these perspectives and ideas in decisions. It is likely to increase inclusiveness in terms of substantive representation and increase legitimacy beliefs[9] (Young, 1997).

Theorists in the field of **deliberative democratic theories** aspire to use non-coercive discourse as a strategy. This involves expressing one idea at a time in short, straightforward sentences and using active voice. The goal is to reach the best possible decisions and increase both normative and empirical legitimacy beliefs (Habermas, 2019;

[9] Hannah Fenichel Pitkin (1972) defines substantive representation as a concept that focuses on whom the decisions are made for, rather than who is involved in the policy-making process. This study will further explore this concept in Chapter 3.

Mansbridge, 1999, 2015). Deliberative models differ from participatory models in some aspects. Participatory theories focus on participation, while deliberative theories concentrate on the features of process of inclusion in the policy-making process. The notion is to hear all positions of all parties involved and establish tools to reach fair decisions. Young (1997) argues against direct democracy and for consultative inclusion. She rejects the idea of a 'mirror' representation in direct democracy. Instead, she refers to the importance of effective substantive representation by collecting perspectives that are often linked to the social position and living circumstances of the individual (Mansbridge, 1999; Young, 1997). Professional political actors are still considered necessary for effective problem-solving. They filter various positions, especially since political participation is biased. Professional political actors make decisions based on knowing who is missing from the procedure (Young, 1997). Finding effective solutions for social problems increases legitimacy beliefs in this understanding of democracy.

To increase legitimacy beliefs, it is important to maintain understanding of representative democracy and avoid essentializing social differences as identity differences (Mansbridge, 1999, 637ff; Young, 1997, p. 359)[10]. Since substantive representation as 'acting for' (Pitkin, 1972) can be achieved by actors in policy making only, consultative participation can only be a tool to help getting an idea about perspectives and living conditions. I argue, that conflict cannot be solved by majority decisions in direct democracy but rather by political actors being capable of bringing together citizens needs and effectively translating them into an inclusive political decision. Consultative citizen participation is then rather a method to increase the **quality of decisions** and finally, to contribute to the normative legitimacy of a politics as well as to increase empirical legitimacy beliefs.

Radical democratic theory positions itself against deliberative ideas of participation, while demanding a democratization of all areas of social and political life. The focus here is on agonism and social struggles for hegemony. The goal appears emancipatory at first. What distinguishes radical democratic areas from more deliberative theorists is that direct democracy is a necessary tool for achieving social and democratic goals. Their idea of conflict is that it cannot be resolved by discourse but is fundamentally caused by social injustices that can only be discussed but not resolved by participation

[10] Both authors would, however, still argue in favour of specific representation.

(Laclau & Mouffe, 2020). Still, more democratisation of current states is the designated political goal of these theoretical frameworks. Radically democratized democracy is considered to hold the potential to be a prerequisite for higher equality in society. They can be distinguished from the participatory concepts of Barber (2004) and Pateman (1970) because they focus on the democratisation of everything, rather than making participation an additional aspect capable of improving the strength and longevity of democracy. They also consider direct democracy (not consultation) the relevant formats. Participatory theories do not go so far. Some of the more deliberative authors even consider direct democracy dangerous. Young (1997) for example, makes an argument for the responsibility of the authorities to deal with the potentially biased participation results (Young, 1997).

In contrast, **radical democratic theory** refers to the conception of societal struggle for hegemony discussed (Laclau & Mouffe, 2020). Authors like Laclau and Mouffe (2020) define agonism (or: the open conflict between different political actors) as key principle of democracy. Conflict is generally framed positively. Participation is thus not presented as consensus-oriented as in other theories discussed (especially the more deliberative theories such as Young, 1997), but is usually presented as making conflict visible. Ways towards more democratization are strived for within these concepts since further democratization is a defined precondition for establishing an emancipated society[11].

In terms of researching legitimacy beliefs the radical democratic concept of 'post politics' is relevant. 'Post politics' are areas of social life where agonism, or: conflict is absent through force. These areas are assumed to destabilize democracy. There can also be areas of post-politics where conflict is missing through other mechanisms (Žižek, 2010). In an ideal-typical radical democracy, all conflicts are visible even though they are not resolved. Since most conflicts result from socio-economic inequalities, in this picture of society all social groups shall participate in decision making. Otherwise, conflict might stay hidden. This utopia of a strongly democratized society is disputed, especially by deliberative political theorists. Young (1997, p. 362) describes the

[11] Authors focus on discourse and discoursive hegemony with reference to the work of Antonio Gramsci as one way of creating the emancipatory society they are striving for (see e.g. Laclau and Mouffe, 2020). However, the hegemony concept does not play a role for participation and its interrelation with legitimacy beliefs and will therefore not be part of the considerations even though it plays a role for radical democratic theory itself.

potential of a representative system within the “inevitable different and separation between the representative and constituents”. While representation in modern politics may be useful, demands for direct democracy seem to forget the fact that in a society based on inequalities, biases in participation can hardly be undermined. With the destabilising effects of a possible non-response of a political system to minorities needs, this can even proof dangerous.

I thus argue, that even though radical democratic theory can give us a sense of the problems of participatory politics in an unequal society, it is not an applicable theory for the current German context. Still the theoretical frames hold potential to explain positions on social historical conditions that oppose political equality even in democratic systems (Demirović, 1997; Sack, 2020). Sack (2020) can, for example, show that activism is closely linked to socio-economic differences. Higher degrees of decommodification[12] in a society can, for example, significantly lower the ‘activism gap’ between men and women. Changes in the economic conditions will, thus, as well lead to more voluntary involvement of the lower classes in politics. To be aware of these phenomena is generally helpful when approaching participation, but while the discussed theories see conflict as the viable solution they do not offer a framework sufficiently explaining inclusive solutions (that would be achieved after open conflict) and potential increases in legitimacy beliefs.

This chapter tried to frame what legitimacy beliefs are and how they can be influenced by participation. It gave an overview over theories on political support trying to place legitimacy beliefs within this framework (Easton, 1957). While political authorities and communities undoubtedly are important in political attitudes, it is nevertheless probable that the investigation of attitudes towards a political regime will prove instrumental in the identification of the most efficacious factors conducive to political longevity and sustainability (see Chapter 2.1). Therefore, the research focus of this study is the German context that is currently incorporating consultation in mobility planning. While this does not seem to be a radical procedural choice as would direct democracy, it is still quite useful because it has the potential to react to biases in political participation.

[12] Meaning the decoupling of means of the welfare state (e.g. unemployment support, etc.) from the labour market, thus paying higher amounts of money to those never employed.

Germany was also seen as important case because it is currently facing problems with empirical legitimacy beliefs (see Chapter 2.2).

The participatory policy making was then introduced to make clear that input, through- and output and outcome can play a role for increasing the beliefs in the rightfulness of a political system (see Figure 1). Therefore, theories on input-induced, throughput-induced and output-induced legitimacy beliefs were discussed and applied to the participatory policy making model. The input is assumed to induce higher legitimacy beliefs when a process is opened up. The throughput is induced to strengthen legitimacy beliefs through improving the policy making process. Here, participatory policy making processes differ from usual policy making processes in terms of the role of the output of the consultative participation. While the theoretical frame would talk of output induced legitimacy beliefs when a certain political action is taken the output of the participatory policy making process should not be mixed up with political action. Political action is only taken in the outcome of the process (Scharpf, 1999; Schmidt, 2013). Supposed effects were described as either procedural (input and throughput induced legitimacy beliefs) or substantive (output induced legitimacy beliefs) (see Chapter 2.3).

This chapter tried to explain more in detail whether legitimacy beliefs can indeed be assumed to be increased by an altering of the (currently not participatory) democratic process. This theoretical overview offered ideas of the mechanisms behind participation increasing legitimacy beliefs (Barber, 2004; Mansbridge, 1999; Pateman, 1970; Young, 1997). It arrived at a comprehensive description of the democracy strengthening effect participatory policy-making is supposed to have in more deliberative, radical and participatory democratic theories. They would suggest that participation can indeed increase **legitimacy beliefs** via the **procedural path** – learning about policy-making processes – and a **substantive part** – adjusting results to the individuals' needs. The next chapter will elaborate on the requirements in terms of descriptive and substantive representation that may make these effects more likely.

3. Representation

The participatory democracy models presented in Chapter 2.4 are referring to a principle of citizen involvement in the political process, with an emphasis on social inequalities. This notion is central to participatory, deliberative (and also radical) democratic theories. The reality of current participatory processes differs from the utopia of the authors. Systematic bias among participants is often the reality in real-life participatory procedures (Dalton, 2017; Marien et al., 2010; Schlozman et al., 2010; Verba et al., 2003; Verba et al., 1995). The importance of the supposed equal inclusion in participatory political processes is opposed to the unequal reality of such inclusion. If we ask about the conditions under which it seems plausible that participation will increase legitimacy beliefs it is easy to arrive at thoughts about **representation**.

It is currently likely that political inequality in participation leads to democratic problems after participation processes. This chapter will elaborate on the question how **representation** can be relevant for **legitimacy beliefs**. After using theories by Mansbridge (1999), Pitkin (1972) and Young (1997) I will suggest that better representation is possible on different levels of the participatory policy-making process (see Figure 1). This representation has a variety of appearances. But, even with the diversity of types of representation it can be suggested that a better fulfilment of the promise of political equality across all three levels of the participatory policy-making process (**in-, through-, and output and outcome levels**) may increase **legitimacy beliefs**. I argue, that political equality can be better achieved by representing individuals at all three levels of the participatory policy-making process, each following different mechanisms.

As mentioned, a key problem of consultative participatory policy making is that it usually fails in including all groups equally. While aiming for political equality through offering consultation, local procedures almost always fail to represent all societal groups[13]. Middle-aged men with high socio-economic status are overrepresented in decision-making procedures, other groups usually do not enter the political space at all (Verba, 2003; Verba, Schlozman, & Brady, 1995). I suggest that this is a problem for participatory processes, as they communicate to aim at (non-exclusive) involvement of citizens in the process. They run the risk of losing marginalised voices in

[13] This is true for political participation in general and not a result limited to the area of sustainable mobility planning (Verba et al., 1995).

particular when this dynamic is translated into a process outcome, which in turn leads to socially unequal policy outcomes. Especially, when it comes to planning procedures concerning the organization of mobility in cities the importance of the diversity of experiences and needs should be emphasized. Currently, social inequality is a conflictual aspect in urban environments. General marginalisation significantly interacts with travel restrictions, further limiting opportunities for those who are already disadvantaged in other areas of life (Creutzig et al., 2020; Greed, 1994, 2011). Consultation processes that only partially include the population would thus not reach their promised goal of higher political equality (Dahl, 2000, pp. 62–68) and responsiveness of the political system to disperse needs.

So, who and whose needs can be included into democratic processes and how do these aspects interact? And who or what should be represented in a consultation to increase legitimacy beliefs in a political system? To address these questions, I first utilise theories (Mansbridge, 1999; Pitkin, 1972) that frame **representation in politics**. In a subsequent step, I will connect these ideas to the participatory policy-making process model that was previously described. Linking these concepts to the previously presented notions of **input-induced, throughput-induced, output-induced,** and **outcome-induced legitimacy beliefs** will aid in framing the mechanisms that underlie the increase in legitimacy beliefs through greater equality. My theoretical approach focuses on aspects of equality and may exclude other relevant factors for the production of legitimacy beliefs. However, I argue that the promise of greater political equality makes this one of the most significant and relevant issues when researching the production of legitimacy beliefs.

A definitory frame to research **representation** was established by Pitkin (1972). This framework is a good introduction to representation. Additionally, it can help identifying shortcomings and problems of previous research. Finally, it can be used to develop a measurement strategy for approaching inequalities in political participation on the three levels input, through- and output and outcome. I argue that aspects of **descriptive representation** can be relevant for **legitimacy beliefs** on the **input level** of the process, whereas aspects of **substantive representation** are relevant on the **through- and output** and **outcome level**. While measurement of substantive representation might be considered complicated in these cases, I use a very straightforward strategy of working with **needs** and **need fulfilment** to measure **substantive representation**

(see Chapter 4.2). This strategy draws on a theory of social practices that identifies ways of using transport in terms of a person's material, knowledge and routines (see Chapter 4.1).

3.1. Descriptive Input Representation, Substantive Through- and Output Representation and Substantive Outcome Representation

The starting point of my theory will be the theoretical concept of **descriptive representation** which has been extensively researched (Arnesen & Peters, 2018; Dovi, 2002; Gay, 2002; Hahn, 2022; Hayes & Hibbing, 2017; Montoya et al., 2021; Phillips, 2020; Pow et al., 2020). To provide an overview of the definition of descriptive representation as a *standing-for perspective*, I adopt Pitkins (1972) approach. Later, I will discuss how descriptive representation can benefit consultative participation procedures and political participation in general. Therefore, this study will mainly focus on the argumentation of Mansbridge (1999, 2015) and Pateman (1970, 1971). However, it will also consider the dangers of solely researching descriptive representation (Clayton et al., 2019) and argue for prioritizing substantive representation in future research, even though it may be harder to measure.

The approach offered by Pitkin (1972) starts with a description of a *descriptively representative body*. This body is defined by the author as being "distinguished by an accurate correspondence or resemblance to what it represents, by reflecting without distortion." (Pitkin, 1972, p. 60). She sees this view on representation reflected in the work of many authors. Specifically, she refers to John Adams who in the American Revolutionary period argued that representative legislature should be composed as a miniature of the population (Pitkin, 1972, p. 60). The author distinguishes between descriptive representation and formalistic authorization and accountability. Formalistic authorization and accountability refer to features of a *representative democracy* – like the moment of voting in elections - while descriptive representation pertains to the composition of for example, a representative body[14]. But what does descriptive representation mean?

[14] In my case studies this representative body will be replaced by the participants of a consultation.

> “For those writers, representing is not acting with authority, or acting before being held to account, or any kind of acting at all. Rather, it depends on the representative's characteristics, on what he is or is like, on being something rather than doing something.” (Pitkin, 1972, p. 61)

Pitkin (1972, p. 62) defines descriptive representation as a political body (like e.g. a parliament) resembling the composition of society. Pitkin (1972, p. 63) criticizes approaches that refer to descriptive representation in political participation as the sole element of equality or justice. Approaches that aim for accurate proportionality in this composition are often referred to as proportionalist. These approaches are divided in two ideal-typical groups that represent different poles of a spectrum. First, there are approaches that emphasize, that every groups opinion should be at least present in the discourse. The second group comprises approaches that emphasise the size of groups and the importance of approaching similarity to the general society in political assemblies (Pitkin, 1972, p. 63). While the aspect emphasizing at least the participation of one person from a certain group to have their interests represented is relevant for this study, theoretical (Mansbridge, 1999, 2015) and empirical approaches often refer more specifically to proportions and sizes of groups within a sample (of for example, participants). This can be seen in later parts of the study that focus that current state of research (Dovi, 2002; Gay, 2002; Hayes & Hibbing, 2017; Montoya et al., 2021; Pow et al., 2020; Schwindt-Bayer & Mishler, 2005; Verba et al., 1995).

Descriptive representation is a characteristic that reflects a “larger class of persons whom” individuals in the political process “represent” (Mansbridge, 1999, p. 629). This concept has been largely discussed for example by deliberative theorist Mansbridge (1999, 2015) as a condition under which:

> “Black legislators represent Black constituents, women legislators represent women constituents, and so on.” (Mansbridge, 1999, p. 629)

Mansbridge (1999) and Pitkin (1972) have aligning but somewhat different views on descriptive representation. While Pitkin (1972) talks about both presence of people by statistical categories and ideas, Mansbridge (1999) mainly refers to the people by statistical categories or group affiliation. This difference is important to note since the representation of ideas is usually subsumed under the term “substantive” as there is substance in ideas (Mansbridge, 1999). Pitkin (1972) is pretty strict and refers to substantive representation only when an idea is acted upon. From an actor-theoretical

perspective this makes sense. My approach to descriptive representation will follow Mansbridge (1999) definition, which refers to thoughts by Pitkin (1972). For research purposes this approach offers a much clearer distinction between the socio-economic categories and substance for example in terms of ideas but also actions. The practicability of this approach makes it more comparable to previous research on representation (Pow et al., 2020) .

From a general perspective, socio-demographic categories are mainly used to identify who is descriptively represented in a political procedure (Mansbridge, 1999), or in the context of this study: a consultative political procedure. Additionally, descriptive representation is supposed to lead to a ‘speaking for’ others from the own group by mentioning their ideas during the consultative participation process (Mansbridge, 1999). Questions of descriptive representation in the beginning of a participatory process can be described as relevant to qualify the decision-making process. The question “Who is part of the procedure?” had previously been asked in reference to Scharpf (1999), that describes the path to legitimacy beliefs yielding from the input of a political process. In my study, I focus on how legitimacy beliefs can be enhanced with altering the input level of the policy-making process using consultation (involving individuals into the input of a political process). To clarify the importance of this aspect at the input level and arrive at a measurable concept that can explain increases in legitimacy beliefs induced by the input, I chose to frame descriptive representation on the input level of the policy-making process as **descriptive input representation**. I assume that descriptive input representation is highly relevant when aiming to increase legitimacy beliefs procedurally.

I argue that analyses of representation should not stop at researching descriptive (non-)representation in political participation. Instead, perspectives on the effects of descriptive representation on the variety of life realities and needs represented in the process and outcome should be integrated. The representation of ideas during the process and in the outcome of the process is reflected upon in the next chapter. They are included in the concept of **substantive representation**, as they generally represent the essence of a political decision. While at the input and output levels this involves advocating for one's own interests, at the outcome level it is related to the question of whose interests are being integrated into **political action**, or: planning decisions. Measuring interests can be quite challenging. I use Mansbridge (1999) and Bourdieu (2018) to

establish a framework, where socio-demographic characteristics can be linked to everyday life experiences with mobility. Although I believe that descriptive representation is an important factor for substantive representation at both through- and output and outcome level, I disagree with the notion that it is a universal solution for addressing social inequalities in societies. Local municipalities are important in balancing interests between included and non-included groups as mentioned in Chapter 2.2 (Young, 1997).

This chapter tries to link **descriptive input representation** to **substantive through- and output representation**, reflecting possible representation at the throughput stage of the participatory policy making process (see Figure 3). Substantive outcome representation – meaning representation in the measures – will be discussed during the next chapter (3.2). I argue there, that substantive outcome representation can be relevant for legitimacy beliefs. This interdependency is discussed in Chapter 3.3. I consider substantive representation especially important at short term. However, I argue, descriptive input representation can become important when examining the effects of the process alone and strengthening democracy without altering policy outcomes. The clearness of this definition is not yet given in current theory so that the basics for understanding **substantive representation** will be laid now and reused with reference to the outcome in Chapter 3.2.

To link both types of representation in a theoretical framework it is useful to define substantive representation. While descriptive representation was considered the "standing for" a certain group and linked to the composition of assemblies (Pitkin, 1972, pp. 60–91), substantive representation describes an "acting for" a certain group (Pitkin, 1972, pp. 112–143). Representation is framed in an actor theoretical perspective. This is useful, when trying to figure out, how well representative political systems represent their citizens. Representation is no longer seen as being present as member of a certain group, but rather considered an activity that benefits the groups' needs (Pitkin, 1972, p. 112). In this framework, political action is considered substantively representing. In terms of the participatory policy making process I added an in-between level, where individuals indeed share a preferred political action. I consider these participants trying to substantively represent themselves (and: others with the same problems). Since they have no decision-making power, representation on the through- and output level this can only be considered a 'speaking for' someone, which is more than the

descriptive ‘standing for’ a group but less than the ‘acting for’ that can be related more clearly to a process’s outcome.

Substantive representation in a participatory process is a very important part of representation. For example, it is plausible that higher substantive representation of people with lower socio-economic status could effectively reduce inequality. This makes it important when researching travelling and the urban space, where mobility poverty is a widely discussed topic (Bocarejo S. & Oviedo H., 2012; Borgato et al., 2021a; Kuttler & Moraglio, 2021a, 2021b, 2021c; Reis & Freitas, 2021a; van Egmond et al., 2021). I argued, that substantive representation can be expected to induce legitimacy beliefs. If living environments are altered positively, people may be more content with local democracy, or: local democracy may be more positively evaluated[15]. Research on participation often stops at focusing the descriptive representation, that is interpreted as important way to reach substantive representation (Mansbridge, 1999, 2015). This can induce fallacies e.g. that the groups presence is sufficient for the substantive representation of the group’s interests. In my approach I focus on the inclusiveness of the process and the inclusiveness of the results/political actions taken.

Pitkins (1972, pp. 113–114) describes **substantive representation as an act**. This is interesting since ‘acting’ is usually not always a part of approaches to representation. While descriptive input representation described rather an aspect of being present within a process, substantively representing someone is closely linked to ideas of political change. This political change will either benefit the interests of a person or not. These actions take place in parliamentary policy making and do not yet involve consultative participation. In a parliamentary context there are representatives. Their role is “to speak for, act for, look after the interests of their respective groups” (Pitkin, 1972, p. 116). It has already been discussed that this approach focusses on substantively representing someone as “activity”. This is called an ‘actor-centred’ approach to representation (Pitkin, 1972, p. 116). Whether the actor is the elected representative the citizen wanted does not matter. It is considered relevant whether the representative acts “to further the objectives of those they represent” (Pitkin, 1972, p. 116).

[15] Although the concept may appear straightforward, the process of measurement is more complex. This study aims to illustrate this phenomenon, but it is limited to examining self-perceived changes in the living environment, rather than employing an objective measure of change.

This approach is indeed useful in distinguishing between voting and actually acting for someone. It can be applied to my participatory policy making process introduced through Figure 1. This participatory policy making process involves two levels (the input and the outcome) that can be integrated into Pitkin's (1972) theoretical framework of representation. This helps to understand the effects that greater equality of opportunity in the input of the participatory processes can have on legitimacy beliefs. Effects expected are an input induced increase in legitimacy beliefs by an increase in equality in the respective input, or: the opportunity to be part of the input. This opportunity to be part of the input was previously framed as descriptive input representation. Substantive representation was described as tied more to the outcome of a policy-making process, since only the outcome – from a strictly actor-theoretical approach – can be considered as acting for a person or group of people. This means that only the government – in a local political unit: the local municipalities – is able to represent substantively. **Substantive outcome representation** can only be achieved if the local municipality incorporates citizens' ideas into policy decisions. But, the consultative participatory policy-making process adds further levels where substantive representation (not as an 'acting for' but as a 'speaking for') has additional potential, that may not be captured within my theoretical framework so far.

The **through- and output level** of the participatory policy-making process resembles the part of the process, in which citizens are involved **substantively**. In the throughput of the process, they introduce their ideas on a political issue and engage in discussions with other citizens. They (dis)agree in arguments, they will find the substance of their interests more or less represented during the discussion. The results from the participatory process (the output) is produced within this process. This output does not directly translate to a political decision (outcome) but influences the political process. As the participants in the consultation are discussing substantive issues relevant to decision-making, and as this discussion may be vulnerable to the dynamics of social exclusion, representation at this level needs to be evaluated. I do not consider this part of the participatory policy-making process to be characterised by presence alone. This suggests that the term descriptive may not be helpful when talking specifically about the substance represented in a participatory process. I decided that representation in the through- and output can be framed as speaking for different needs throughout the process. The aspect of throughput-induced increases in legitimacy beliefs that is worth exploring is: **substantive through and output representation** (STOR). The framing

as **substantive representation** is chosen because citizens are in consultative participation assigned the role of representatives. They speak for certain interests and ideas to change cities. Research on social inequality suggests that that everyday experiences are structured by social inequalities. Socio-economic status influences livings as well as working conditions and social and cultural events individuals attend. These can be considered substance, even if they are not introduced in the final decision.

I already argued that **descriptive representation** can be assumed to influence **substantive representation**. Authors suggest that the concepts cannot easily be separated, since it can be assumed that in "horizontal communication" (such as between citizens in a participation process) the "voice carrying the authority of experience" (Mansbridge, 1999, p. 644) plays a major role. Experience can then bring concrete ideas for changes, for example in the urban built environment of the people. However, assuming that substantive representation can be achieved simply by increasing descriptive representation without clearer understanding of the process of demands and expectations may exacerbate problems rather than solve them (Mansbridge, 1999, p. 640). It may lead to an overemphasis on the composition of decision-makers. This has been investigated by Clayton et al. (2019, p. 113). In a study in the US American contexts authors find that the descriptive representation of women increases legitimacy beliefs. However, when looking more closely at the decisions, they find that the presence of women in these decision-making processes particularly legitimizes decisions that go against women's rights. This effect seems to be strong among men with rather undecided views on women's rights. (Clayton et al., 2019, p. 119). While this is certainly not a normatively desirable aspect, it is an indication that representation can indeed have procedural effects on legitimacy beliefs. It also induces that these effects are weaker when substantive interests can be clearly identified by citizens. The next chapter takes a closer look at the dynamics between **descriptive input representation (DIR), substantive through- and output representation (STOR)** and **substantive outcome representation** (SOR).

3.2. Translating Participation into Policy Outcomes

I want to explore, how **descriptive input representation** benefits **substantive through- and output representation** and how **substantive through- and output representation** translates into beneficial policy outcomes, or: **substantive outcome representation**. This refers back to the participatory policy making model (see Figure

1 and Figure 3), where the input precedes the through- and output and the through- and output precede the outcome. It can also be explained theoretically. Since substantive through and output representation is supposed to be shaped solely by the ideas of citizens in the participatory process, it is clear that it can only be shaped by those who participate in the first place, i.e. those who are descriptively represented in the input of the procedure. At the same time, it is relevant to note, that it is likely that local municipalities offer a consultation procedure to alter the outcome so that it is representative of the needs in the (participating) population. While it is likely that local municipalities will incorporate what citizens 'spoke for' during a procedure into the policy outcome, this point is specifically important to research. Offering participation to the general public without the idea to incorporate their ideas into the results would pose a democratic problem. This chapter will elaborate on the mechanisms behind representation on the different levels increasing each other. I will take a closer look at how **descriptive input representation** (DIR) influences **substantive through- and output representation** (STOR) and **then substantive outcome representation** (SOR).

Starting with the definitory framework in which types of representation can be assigned to their relevant process stages I have identified relevant process stages in a participation procedure as input, throughput, output and finally, the outcome. The input level is rather relevant in top-down organized procedures. These are usually open to everyone but there is a huge self-selection bias in those participating (Kubicek et al., 2011; Marien et al., 2010; Michels, 2012). This bias is induced by pronounced differences in the engagement in local politics between social groups even when it comes to manifest changes of their living environments (Hanslmaier et al., 2022). Interest in local politics and participation in local consultations is strongly linked to resources such as social status and local social capital, but also other demographic variables marking marginalisation in society such as gender, age and nationality (Hanslmaier et al., 2022). Not only perspectives on political equality (Dahl, 2000) would suggest that this is problematic but also perspectives on results from policy making. In the context of unequal participation, it becomes likely that results tend to advantage already high resource groups. Evaluating the links between DIR, STOR and SOR should therefore be useful in answering the question of whether social inequalities can indeed be tackled by offering consultative participation. Opening up the political process alone is unlikely to do the job if there are no links between DIR, STOR and SOR.

Political scientists suggest that all mentioned policy levels are indeed intertwined. DIR is assumed to influence whose ideas can possibly be heard during a procedure (STOR). In a consultative participation procedure, the needed changes in living environment can be communicated during the participatory procedure – the part of the policy making that produces STOR. This type of procedure is a “mode”, in which “officials preserve their authority and power but commit themselves to receiving input from participants” (Fung, 2006, p. 69). In citizen participation, participants are often asked to share their own experiences. It seldomly appears that citizens act for somebody else. They are expected appear as experts of their own everyday life speaking for themselves under current conditions e.g. a current built environment that should be altered (Schmiz & Caminero, 2022, p. 82). Their experience with the built environment is important to discuss the issues often asked in consultation procedures. People differing in their socio-structural variables often also differ in the ideas or needs to the urban space, they describe. I suggest that their descriptive representation in the input will increase their substantive representation in the through- and output because different people bring different topic and ideas to the table (Mansbridge, 1999).

The outcome of a participatory policy making process is produced irrespective of the input, throughput or output of that process. Substantive outcome representation is produced by local municipalities, that are the only institutions that have legal rights to act for a person or group of people. The results from the participatory process that are incorporated are produced by the local municipalities. Local municipalities are in this case allowed to make decisions without the participating public. While STOR rather meant making topics and issues with the infrastructure visible, the SOR dimension will relate to the altering of the living environment as an ‘acting for’ (Pitkin, 1972). While in consultation the through- and output of the citizen participation are usually not binding for local municipalities to incorporate into the policy decision, there are nevertheless reasons for these actors to incorporate citizens ideas.

The idea of ‘invited spaces’ like top-down consultation procedures are ‘created by governments to take on initiatives to create public value’ (Visser et al., 2021, p. 870). Rules to the game are usually set by the government, but the interaction even though hierarchical is usually taken serious by governments. Even with being non-binding invited spaces would not be established if the government did not already wish to change the status quo (Visser et al., 2021). This also means, that it is quite likely that some of the

citizens ideas will be incorporated into the result. The likelihood for an incorporation of citizens ideas into the results increases with a more representative citizen sample participating in procedures (Migchelbrink & van de Walle, 2019). Political actors usually use participation as a resource for identifying problems and altering built environments. With this they impact the everyday life of citizens. If the decision did not refer back to the participation this would pose a democratic problem. Participation without integration of citizens ideas can be framed as "pseudo participation" (Pateman, 1970), that is only offered to increase legitimacy of decisions among the general public. Local municipalities should not operate like this for normative reasons. Through this normative path, I suggest that **substantive through- and output representation** in consultation **increases substantive outcome representation**.

3.3. Legitimizing Policy Decisions through Public Participation

Legitimizing decisions, as framed previously for the context of "pseudo participation" is not a bad thing in general – especially, when decisions were established through a real democratic process. In Chapter 2, Chapters 2.1 and 2.2 already gave us an insight on how high legitimacy beliefs among the general public can benefit a democratic system and potentially increase its longevity (using, for example, the theory by Barber, 2004; Easton, 1957, 1975, 1976). I argued that this form of stabilisation is important for democratic systems today, because democratic systems can suffer from destabilisation attempts by anti-democratic voices (Kneip et al., 2020; Lehmann & Zehnter, 2022). I argue, that a decrease in democratic rights would mean a loss of personal freedoms and a decreasing security of minority rights. To describe whether consultation can help with increasing legitimacy beliefs I chose to work on representation in participation. More specifically descriptive input representation, substantive through- and output representation and substantive outcome representation. I ask whether **descriptive input representation, substantive through- and output representation and substantive outcome representation** all influence **legitimacy beliefs**?

Scharpf's (1999) framework is useful in addressing these questions. It offers ideas about how legitimacy beliefs are produced through different parts of the process. Scharpf (1999) refers to two aspects of the policy-making process in which legitimacy can be produced. These are (1) the input level and (2) the output level. The input level is in his framework described as "shaped by the ideals of participatory democracy in the Greek *polis* and of the French Revolution, the starting point is the Rousseauian

equation of the common good with the “general will” of the people” (Scharpf, 2006, p. 4). He focusses on questions of who has access to the process that may as well shape legitimacy beliefs. In consultative participation the usual principles of a representative democracy are altered and individuals can represent themselves. The definition, who should be represented, is slightly altered and citizens are included as experts (Schmiz & Caminero, 2022). This may be more approachable for citizens. Obviously, it is dependent on the attitudes of the citizens whether this direct form of inclusion is desired. Independent of this it is likely that an increase of ‘like me’ perceptions for people in the participatory procedure will induce high legitimacy beliefs among individuals, as they perceive their role within the discourse and being asked rather than ignored (Pow et al., 2020).

While DIR can be expected to increase legitimacy by ‘like me’ perceptions that induce the feeling of being represented throughout the process, STOR can help increase legitimacy beliefs by having one’s ideas mentioned in a discussion. While this is not featured in Scharpf's (2006) framework, it was introduced by Schmidt (2013), who refers to the throughput as relevant factor shaping legitimacy belief. Individuals are interested not only in (1) who is part of the process and (2) what the outcome of the process is, but also in the organisation of the process and whether they perceive the process to be fair and democratic. In consultation citizens are invited to discuss topics and get a feeling of how others react to the ideas they introduce and what counterarguments there are. They learn to do democracy (Bogumil & Holtkamp, 2013). The more groups from the general population represented in the consultation process the better? There is indeed evidence that the diversity of groups shapes the issues discussed in policy contexts. Descriptive input representation of marginalised groups such as people of colour (Broockman, 2013; Dovi, 2002; Mansbridge, 1999), LGBTIQ* (Lesbian/Gay/Bi/Trans/Inter/Queer*) people (Bönisch, 2021; Reynolds, 2013) and women (Schwindt-Bayer & Mishler, 2005) tends to be beneficial for their perception of the throughput. Generally, I assume that **STOR** will increase **legitimacy beliefs** by increasing feelings of being heard in the policy making process and teaching citizens how to negotiate them in a policy making procedure (Bogumil & Holtkamp, 2013).

The paths mentioned for DIR to legitimacy beliefs and STOR to legitimacy beliefs are linked to a better understanding or, finally, evaluation of the procedure. Being in the process for example is considered to be descriptively represented in the input. While

DIR may or may not increase representation in the outcome, it may be given intrinsic value because it is procedurally desirable. Participation in a process not only helps to achieve certain personal substantive goals, it also legitimises decisions by opening up the process and allowing the perception that 'people like me' (Pow et al., 2020) have participated - a step towards a 'demos kratos' in the original sense. The argument for the increase in legitimacy beliefs is a strictly procedural argument that refers to normative questions on who should be part of the process. STOR can increase legitimacy beliefs by offering ideas of how policy making discussions are usually organized and the possibility to states one's opinion that is heard and discussed at the same time as other opinions. Schwindt-Bayer and Mishler (2005, p. 407) describe this as "feelings of being fairly and effectively represented". This means that the STOR pathway of increasing legitimacy beliefs will also relate only to **procedural arguments**, although there is a substantive level involved in the expression of opinions. As these opinions are only considered and not yet implemented the effect of being involved and the expression of opinions during a process can only be procedural.

Procedural aspects are relevant, but research seldomly focusses them. More attention is usually payed to **substantive aspects** increasing legitimacy beliefs. Scharpf (2006) calls this output legitimacy. This means that the increase in legitimacy beliefs is caused by the output of a political process, meaning: the outcome of the participatory policy making process. Since the output in the participatory policy making model is not the political decision but the output from the participation we will focus on the outcome as a substantive aspect increasing legitimacy beliefs. It would be plausible to include the impact as another source of legitimacy beliefs. The time horizon of the CIMT project did not allow for this. The outcome of the process is Pitkins (1972) „acting for" individuals or groups in society by the local municipalities. When looking at potential sources of legitimacy beliefs in the area of representation **substantive outcome representation** (SOR) may be the most influential variable. This is due to the interests of the people either being or not being directly reflected in the policy decision and thus, planned political action. **Being advantaged by a policy outcome is likely to increase legitimacy beliefs.**

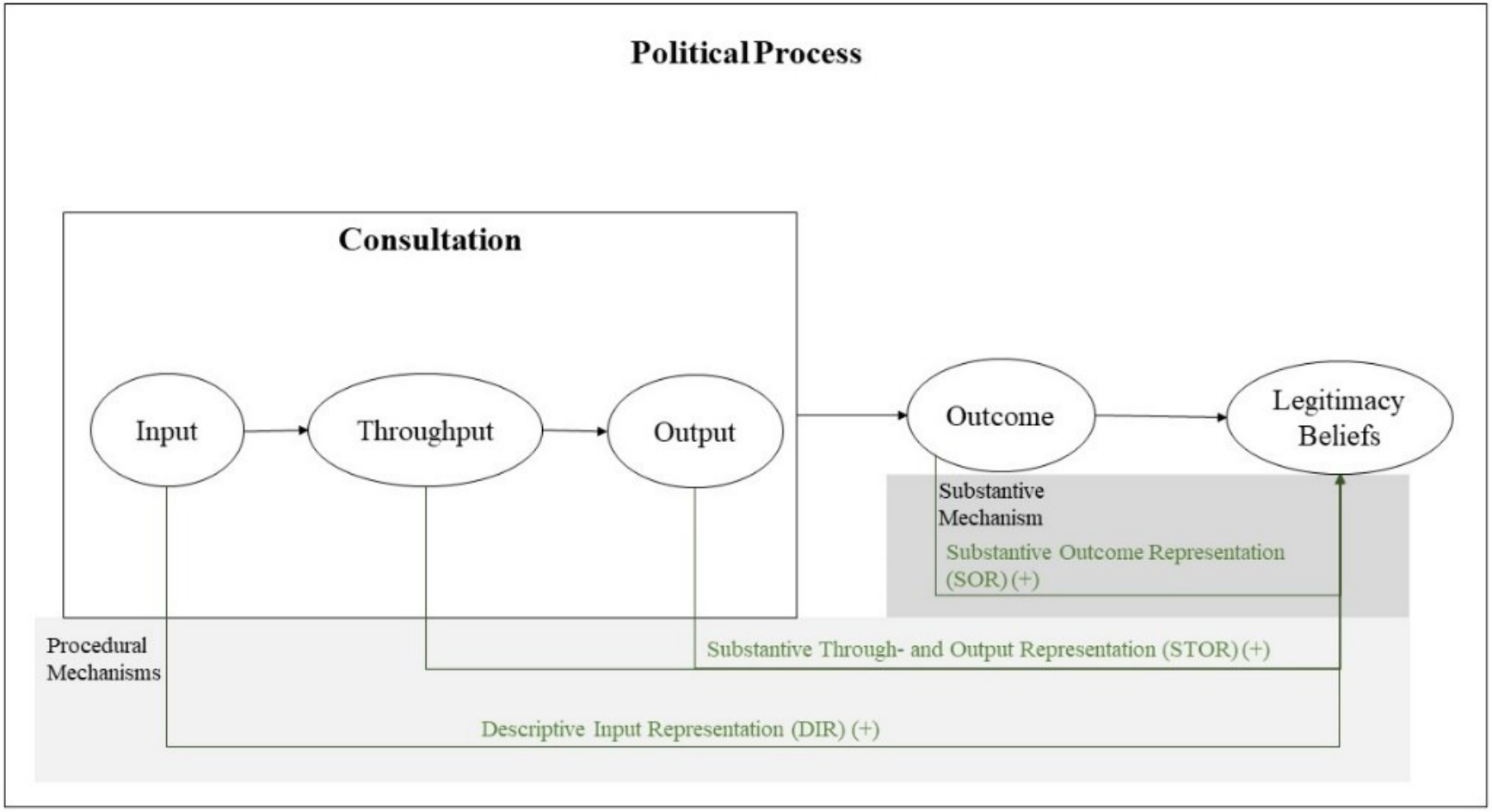

Figure 3 Representation and its hypothesized effects

It is generally helpful to think about the interrelationships between in-, through and output and outcome of a participatory policy making process. This is particularly the case given that it is normatively desirable for these levels to be inter-connected. If the outcome is decided without an input or throughput, this may be seen to contradict the idea of a democratic political process. An individual's descriptive input representation would be useless without discussing their interest in the through- and output. Figure 3 starts with the participatory policy making model from chapter 2 and adds **legitimacy beliefs** as a key dependent variable. Here, the pathways identify procedural mechanisms and substantive mechanisms that increase legitimacy beliefs. While **procedural mechanisms** tend to refer to **descriptive input representation** and **substantive through and output representation**, as they frame the way in which policy decisions are supported by the public's ideas, **substantive mechanisms** refer more clearly to **substantive outcome representation**. Substantive mechanisms frame whether or not an outcome is beneficial to a person, i.e. whether they are more effectively represented by the policy decision.

This chapter briefly introduced the concepts of **descriptive and substantive representation** (see Chapter 3.1). It also links these types of representation to the different **stages of the participatory policy-making process** defined in Chapter 2.2.. To do so, it was necessary to assign either descriptive or substantive characteristics to each stage of the policy-making process. By applying the theories of Pitkin (1972) and Mansbridge (2015) to mechanisms in local consultations, and distinguishing between mere presence in a procedure and the actual discussion or implementation of citizens' ideas, the participatory process could be structured. This allowed for the identification of the representation types most beneficial at different stages of the participatory policy-making process. This is illustrated in Figure 3. The representation types potentially beneficial to democracy **are descriptive input representation (DIR), substantive through- and output representation (STOR), and substantive outcome representation (SOR).**

Although this is a useful model for explaining legitimacy beliefs among the general population, it is complicated to put into practice in general. While it is fairly clear how to measure descriptive input representations, since they relate solely to a person's presence in a participatory process, this remains unclear, especially for outcome representation, which tends to relate to a policy decision made after the participatory part

of the process. At this point, it makes sense not only to refer to a general framework, but also to add information on the actual topic of a political process to the research framework. In the case of the CIMT project that forms the basis of this study, this topic is: **Sustainable Urban Mobility**.

4. Mobility

Sustainable Urban Mobility is a topic widely explored through different areas of research. The decarbonization is necessary to reach climate goals as part of the Sustainable Development Goals defined by the United Nations. Germany currently is a large CO2 emitter especially in the transport sector (Sajid et al., 2019, 24ff). At the same time transport is considered one of the more complicated sectors to decarbonize due to “strong lock-in determinants and path-dependent processes” (Georgatzi et al., 2020, p. 12). Emissions from the transport sector are at the same time linked to the built environment – meaning if using environmental friendly options is more convenient, individuals tend to use them (Georgatzi et al., 2020, p. 13). This makes approaching urban mobility from the citizen centred approach of consultative participation a useful strategy, since citizens can voice their interests and opinions for local municipalities to establish in the urban space (Ewing & Cervero, 2010; Schmiz & Caminero, 2022). Additionally, it is an approach often used to shape urban environments in Germany (Mark et al., 2024). I previously discussed why descriptive input representation of different people may play a role for political legitimacy beliefs. This chapter deals with the importance of diversity in the input for equality in the outcome when it comes to sustainable urban mobility. Currently, social exclusion can be linked to potentials of being mobile. Often this is observed in studies using approaches to lifestyles of individual people (Hesse & Scheiner, 2010, p. 94). Unrealized mobility needs are usually linked to socio-demographic characteristics (Kuttler & Moraglio, 2021a, p. 23). When Pitkin (1972, p. 113) references substantive representation she talks about representatives showing “attention to” the “wishes and needs of the represented”. This idea will serve as an approach to measuring **mobility needs** when trying to measure **substantive outcome representation**. Whose needs are represented in the outcome? Whose are not represented?

4.1. Social Inequalities in Urban Mobility

Researching inequalities in substantive representation in consultations that deal with urban mobility sets the frame for the research focus of this study. Mobility is a field, where social inequality plays a major role. It is determined by many factors and effectively in- and decreases potential for participation in social and cultural life and the work force (Hesse & Scheiner, 2010). A definition of **mobility** refers to the term from a perspective of social practices. It does not only mean the movement of a person from one place to another, but is considered a guiding principle of everyday movements in differing fields of practice. Mobility as describing all potential movements of a person is different from **transport** that rather focusses the actual movements (Adey, 2009; Wilde, 2014b). The think-tank Agora Verkehrswende defines it as follows: While **mobility** can be considered a key need of the individual in our society, **transport** rather describes the means by which a certain destination can be reached (Agora Verkehrswende, 2017). The key aim of citizen consultation in the field of mobility often is to enable more sustainable mobility in cities[16]. This can, if the citizen consultation is well organized and socially inclusive contribute to a built environment that is more inclusive and offers better mobility options for different social groups.

A key problem that makes decarbonizing Germany's transport sector difficult is the way German cities have been built. German city planning according to principles of the car-friendly city ("autogerechte Stadt") let most cities grow according to the needs of car drivers. Cars were framed the most important mode of transport (Bernhardt, 2017). While this is already problematic concerning the CO2 emissions caused by cars, it becomes more complicated when comparing the mobility of car owners to the mobility of those who do not own or cannot afford a car. Non-car owners can be prone to exclusionary mechanisms introduced by this built environment (Ewing & Cervero, 2010). The previously fostered separation of function in urban areas furthermore induced a higher dependence on cars in general (Bläser & Schmidt, 2012). Social equality and

[16] It is important to consider rural areas as well. However, this study does not address them, as the CIMT project did not include observations of rural regions. Additionally, the dynamics in rural areas differ significantly from those in urban environments, making direct comparisons difficult (Küpper, 2011).

sustainability in the field of mobility are interconnected. Equality in space allocation is an important topic[17] (Creutzig et al., 2020).

Urban planning is usually confronted with lots of problems to solve and lots of diverging interests among citizens. Local municipalities consider consultation an eligible tool for co-creating possible solutions and gaining acceptance (Kubicek et al., 2011). They organized participation procedures that are open to everyone and thus expected be socially inclusive. However, the reality often differs from the ideas of the municipalities (Marien et al., 2010; Verba et al., 1995). Participation usually suffers from a lack of representation of very young and very old participants, female participants and participants with lower education (Marien et al., 2010; Migchelbrink & van de Walle, 2019; Verba et al., 1995). This homogeneity among political participants can be criticized from a normative point of view. If socio-economic groups that are already marginalised (e.g. more exposed to emissions, less able to be mobile) do not participate in procedures, the outcomes will usually not be beneficial for them and thus: no advantage for overall social equality[18].

This connection between descriptive and substantive representation have been researched when it comes to topics such as black rights, LGBTQ* rights and women's rights in the US-American context on a politically representative level (Mansbridge, 1999, 2015; Schwindt-Bayer & Mishler, 2005) and effects of representation and acceptance of decisions for legitimacy beliefs (Arnesen, 2017; Arnesen & Peters, 2018). Nevertheless, the applicability to citizens inclusion through participation is unclear. While it seems relatively easy to frame substantive representation in the context of women's rights or queer rights, for example, this is not the case for most other issues where mechanisms of social inequality operate in the background and are not as clearly identified. For the topic of urban sustainable mobility, interactions between

[17] There is an additional impact on social inequalities in health when it comes to mobility issues. The segregation of German cities, which are usually divided into richer and poorer neighbourhoods, becomes a problem in terms of health inequalities. Different socio-economic groups rarely live in the same neighbourhoods or on the same streets (Friedrichs and Triemer, 2009). The poor are often exposed to the highest levels of urban emissions, while the wealthier produce the highest levels of (air and noise) emissions, highlighting social and health inequalities (Mielck et al., 2009).

[18] A biased sample also increases the chance of differences between societal groups in their sense of internal political efficacy. Participation procedures on the local level as schools of democracy (Bogumil and Holtkamp, 2013) might increase internal political efficacy only for specific societal groups which will be problematic because it increases chances of systematically differing legitimacy beliefs.

socio-economic variables as a **descriptive element** and **mobility needs** as potential element of **substantive representation** still need to be described. These chapters will clarify the link between the socio-economic position in society and mobility behaviour. It will add a perspective of mobility needs working on potential patterns induced by socio-economic status but also focusing in the importance of representing mobility needs so cities can change and enable more individuals to be mobile.

Cities are currently highly segregated in their organization (Bertelsmann Stiftung, 2010; Friedrichs & Triemer, 2009). Those producing most emissions are not living near the most polluted streets (Mielck et al., 2009). The access to different modes of transport differs between socio-economic groups. Also, researchers often observe patterns in the use of modes of transport (Busch-Geertsema, 2018; Dangschat & Segert, 2011; Götz, 2007). These differences in patterns of everyday life yield differences in needs linked to mobility. For example, some research identifies differences in the needs of women and men (Greed, 1994, 2019; Manderscheid, 2019). Differences in patterns of use are assessed. They hint at differences in everyday life and tasks that are fundamentally linked to the possibilities of being mobile. For example, women were more likely to be responsible for taking children to school, even if they were working. They have been shown to use their cars to carry out tasks that would take too long using public transport (Greed, 1994, 2011, 2019; Hunecke & Preissner, 2001). Also, old people have been focused by research since they differ in their needs and are more challenging to integrate into mobility infrastructures. (Artho et al., 2018; Wilde, 2014a, 2014b). There is some research about the mobility needs of other socially deprived groups (Huber, 2016), but results are generally not exhaustive. Also, the cities context is a decisive variable when researching mobility needs and has to be kept in mind when focusing on individuals demands.

This study chooses a social focus on the problem of an unequal distribution of space in urban mobilities. It does not address the problem of environmental sustainability. I consider ecological sustainability to be a goal that is set in advance for local communities and is necessary to achieve. Consultation is usually introduced to reach two goals when discussing decisions necessary for the mobility transition: an improvement in the decision through the **inclusion of individual mobility needs that can be represented in the process** and a **legitimisation of the decision**. If changes necessary for the reduction of CO2 emissions are discussed by the public it is more likely that

outcomes become as socially acceptable as possible. How **substantive outcome representation** would look for different groups in society will be the topic of this chapter. By focusing on needs, I will elaborate possible patterns of mobility behaviour and the structural mechanisms that create these patterns, mobility needs that could be addressed by local municipalities, and a structuring of these mobility needs in a theoretical model. To identify and elaborate these needs, I will use a social practice approach that is helpful in making social inequalities visible (Bourdieu, 2018; Manderscheid, 2019; Wilde, 2014b). To approach differences in theoretical approaches I will nevertheless first of all refer to a rational choice approach to mobility behaviour, since it is often discussed and used. As the practice theoretical approach constitutes an integral part of the operationalisation of mobility needs, it is beneficial to distinguish this approach from the more prevalent methodologies employed when attempting to elucidate mobility behaviour, which is Rational Choice Theory.

Rational Choice Theory offers insights into mobility behaviour by stating clear postulates concerning the importance of preferences and restrictions. Preferences can be defined as determinants of actions. They are instrumentally used to satisfy an individual's demands. Restrictions on the other hand are aspects reducing or enhancing the abilities of an individual to go after their preferences and satisfy their demands instrumentally (Bamberg et al., 2008, p. 143). Preferences and restrictions are helpful in identifying a utility maximum and lead to a choice of e.g. a certain mode of transport (Bamberg et al., 2008). However, when looking especially at the choice of the mode of transport, there is a strong habitualisation of actions observed (Davidov, 2007). This habitualisation seems to contradict the postulate of utility maximization, but with looking closer into the theoretical frame RC Theory offers a useful description in terms of the concept of rational habit formation. Since the choice of a mode of transport is often linked to a search for information individuals tend to get back to the mode of transport that is the one most used in their daily live to reduce the time-consuming factor of collecting useful information for all modes of transport (Davidov, 2007). In comparison to the theories of social practices the rational choice approach assumes that actions are used to maximise benefits by individuals, which is often not given in reality. The theory of social practices helps to more clearly identify the coupling mechanisms at play (Manderscheid, 2019) that reinforce certain behaviour in specific daily routines.

Theories of social practices are more helpful when identifying structural differences in mobility patterns. They may be a good starting point for a theoretical analysis of socio-structurally differing *habitus* in the choices of modes of transport and mobility patterns. “La Distinction” by Pierre Bourdieu (2018) approaches the key principles of the habitus that induces patterns in human behaviour by social class during primary socialisation. Often, lifestyle phenomena have been approached using this concept (Hartmann, 1999). Also, mobility has been approached with the concept within the research of mobility styles/types (Götz, 2007) or when it came to the connections of certain mobility behaviours to specific daily routines (Manderscheid, 2019).

The Bordieuan concept of habitus as a structuring principle of society can be seen as helpful in identifying mobility behaviour and, in particular, individual preferences, e.g. for the choice of transport mode or the prevalence of a particular mobility need. For describing the habitus of an individual Bourdieu (2018) refers to an individual’s socio-structural position in society. This position is then assumed to be related to the individuals dispositions thus e.g. ways of speaking, ways of moving, etc. The habitus, as the incorporated form of the cultural capital in the theoretical frame is built in early childhood and socialization (Bourdieu, 1983) and shows in the social practice of a person. Mobility can be framed as habitus. Manderscheid (2019, pp. 174–175) proposes to take a closer look at mobility – and especially social inequality in mobility – by approaching it from a practice theoretical view and taking a closer look at the daily practices that are linked to certain types of mobility behaviour. She identifies how everyday actions of individuals are usually linked to certain modes of transport, for example, the car is often linked to accompanying children on their way to schools (Manderscheid, 2019).

This framework differs from the rational choice perspective since it does not focus on rational decision making of individuals, but rather on established behavioural patterns that may or may not be prone to irrationalities[19]. It focusses on incorporated knowledge, routines and patterns of orientation that are socio-structurally differentiated

19 At this point it would be interesting going more into detail about the concept of the Doxa that can be found in some praxeological work (Bourdieu, 2018). Doxa, in Bourdieu's theory, refers to the set of beliefs, values, and perceptions that are taken for granted within a society and are seen as self-evident truths. It represents what is unquestioned and accepted as normal or natural, without being critically examined. This may be relevant especially concerning perceptions of the meaning of the car for societies. This study cannot adequately address this topic, as the quantitative data mainly rely on the perceptions of individuals.

between groups that differ in capital. In theories on mobility and capital authors usually do not only refer to social, cultural and economic capital (the Bordieuan forms of capital) but also consider geographical capital as e.g. the access to a certain mode of transport (Manderscheid, 2019; Wilde, 2014b). Especially, the last aspect will be very context related. Modes of transport and mobility in cities are shown to differ by social groups (Manderscheid, 2019; Wilde, 2014b). Habitualised choices of modes of transport could be assumed to tremendously differ and be prestructured by the habitus, as well as the ways destinations are reached. Wilde (2014b) uses the theory of social practices to explain patterns in mobility behaviour. Referring to Reckwitz (2003, 2020), Bourdieu (1983, 2017a, 2017b; 2013) and mainly the theory by Shove et al. (2012)[20] he conceptualizes mobility as social practice depending on three aspects (1) material (Materialität), (2) knowledge and (3) routines (Cass & Faulconbridge, 2016; Shove et al., 2012). All of these aspects are expected to structure mobility behaviour between groups from different backgrounds/with different habitus. There are two aspects of material that are relevant for mobility behaviour. The first aspect is the tools used for being mobile. In their texture they tend to structure ways of moving and in this very specific context mobility behaviour as such. Here, we are basically talking about either (a) the way modes of transport are built, (b) the way streets and infrastructure are built and (c) the way the body incorporated moving as a social practice. To understand this incorporation of mobility it is useful to refer back to Bourdieu (1983, 2018) and his way of describing the *habitus* in his theory of practices. The *habitus* is formed when incorporating **cultural capital** and yields e.g. different forms of moving that are mostly performed subconsciously and incorporated through primary socialization[21] (Bourdieu, 1983, pp. 187–189). This early incorporation of cultural capital conditions a behaviour structured by socio-economic class that can lead to distinctive behaviour in moving and using certain modes of transport (and many more things…).

The second aspect is **knowledge** as an important factor supposedly driving mobility behaviour. Knowledge is conceptualized along three dimensions: (1) motivational emotional knowledge, (2) interpretative understanding and (3) methodological knowledge. The motivational emotional knowledge refers to motives as the main driver of mobility

[20] None of the mentioned authors specifically refers to “mobility” or “transport” when specifying their theory.

[21] Incorporated cultural capital is only one mentioned expression of cultural capital. The others are materialized (e.g. books owned) and institutionalized (educational) capital.

practice in everyday life. He defines two types of motives, first the motives of reaching a certain place (“Motive des Ankommens”) as well as the motives of being on the way (“Motive des Unterwegsseins”) (Wilde, 2014b, pp. 165–166). While motives of reaching a certain place rather refer to mobility as an instrument to get from A to B, motives of being on the way refer to an emotional aspect of mobility like for example the pleasure of walking or the aggression and stress while driving a car during Rush Hour (Wilde, 2014b, pp. 165–167). This theoretical differentiation is close to more practical conceptualizations of mobility needs, that will later help me operationalize aspects to be represented in the outcome of a consultative participation procedure (Bartz; Dangschat und Segert 2011).

The aspect of interpretative understanding in the knowledge dimension refers to a differing type of knowledge relevant in mobility behaviour meaning a symbolic differentiation between places and forms of movement. Modes of transport are ascribed to have strong effects on the forms of movement of a person in a certain environment. Methodological knowledge, as the last aspect of the knowledge dimension, describes the knowledge about the use of modes of transport that are relevant in the decision for or against this form of movement (Wilde, 2014b, pp. 165–167). The last dimension of the model was the importance of routines for mobility behaviour. Obviously, routines play a very important role the mobility of the people. They are relatively stable on a long term and hard to change. This becomes clear especially when looking at the choice of certain modes of transport (Davidov, 2007). Routines are linked to the previous dimensions of material and knowledge but formed within the motivation to reach places. They are linked to the events people attend in their everyday life. The more often an event takes place, the stronger the routine. Routines in the use of modes of transport when reaching the work place, may thus be more stable than established routines in the choice of modes of transport when trying to reach a holiday destination (Wilde, 2014b, pp. 167–168). Relevant for the mobility behaviour are the actor, the social event and the place to reach. The actor with their knowledge and motives will have an established mobility practice that is contingent on the place where he lives but also places where social events happen.

This approach allows us to differentiate mobility behaviour by socio-economic groups. This is possible, since people of different socio-economic groups live in different parts (places) of cities (Friedrichs & Triemer, 2009), have different habitus and thus take

part in differing social events (Bourdieu, 2018), have work places that differ in the geographical location (social events) and have differing incorporated knowledge on possible forms of movement and differing preferences (Götz, 2007; Jensen, 1999)[22]. Furthermore, it helped to unveil patterns in living (or: lifestyles) differing tremendously between social groups and is now an important element of the sociology of lifestyles (Hartmann, 1999). Nowadays, it is a concept applied and used in the research of urban mobility (Manderscheid, 2019). This variance in fields of application proves useful, when trying to establish more general ideas for measuring substantive representation in outcomes of consultative participation. For a discussion of what can and should be represented in consultative participation on sustainable urban mobility, it is helpful to take a look at the socio-structural influences on mobility behaviour and differing mobility needs.

Socio-structural differences in mobility behaviour between socio-economic groups have been empirically tested throughout research without (Bartz, 2015; Götz, 2007; Hunecke & Preissner, 2001; Jensen, 1999) and with approaches from the theory of social practices (Manderscheid, 2019; Wilde, 2014b). What all studies have in common is that they can empirically observe manifested differences in the mobility behaviour of individuals from different socio-economic strata and their needs. Observations often approach mobility behaviour (and needs) by looking at manifest reasons to use certain modes of transport and emotive reasons to use certain modes of transport[23]. A very early approach to types of transport users was offered by Jensen (1999). The study starts with using a qualitative approach to then define ideal types for mobility behaviour in a Weberian sense[24]. The author extracts most different groups from her qualitative interviews to describe mobility behaviour. Her types are thereby quite closely linked to

[22] The theoretical framework of differing practices is used not only by mobility researchers but also in market research. Bourdieu's framework has been applied in many fields of sociological research and is particularly useful for analyzing taste and lifestyles, such as in the perception of music and art (Otte, 2007). It has also been instrumental in identifying the persistent failures of social policies in addressing inequality in the fields of school and university education (Ecarius & Wahl, 2009)

[23] Sometimes ideas of attitudes are added to the models, since they can be possible influences to action.

[24] Within Weber's broad works ideal types have a special role. He uses them e.g. for his famous descriptions of motives for social action as well as his well-known evaluation of legitimacy of regimes. It is usually stated that they can help ordering a reality as such but usually mostly mixed types are found in real life (Weber, 1922).

the modes of transports people use but also to the needs they fulfil by using a certain mode of transport.

For example, people tend to engage in recreational cycling in their leisure time or use the bike as main mode of transport because they have strong attitudes towards environmentally friendly living. She uses a quantitative survey to identify how mobility types are related to socio-demographic characteristics of individuals in the Danish society and finds differences especially when concerning the dimensions of gender, income and age. For example, women more often use their bicycle and/or public transport in their daily life. However, especially when taking care of children is necessary in their time schedule they more heavily rely on the car and the car becomes very important . Other studies e.g. in the British context find similar patterns for the car use of women (Greed, 1994, 2011)[25].

Income is another relevant factor while talking about modes of transport and mobility. Income influences the modes of transport a person can afford (Borgato et al., 2021b)[26]. Cars are the most expensive mode of transport researched. Not everyone can afford to rely on a car for their everyday mobility. Jensen (1999) finds the lowest income group mostly among “cyclists/public transport users of necessity” and the “cyclists/public transport users of conveniences”. When looking at current data low income seems to be mostly connected with the use of public transport. Generally, lower income individuals travel less kilometres per day (Borgato et al., 2021b; Rozynek, 2024). Younger age groups in comparison to older age groups are more often cyclists (all three types) (Jensen, 1999). This may be attributed to the fact that older people are more often physically impaired and the bicycle does not resemble their mobility needs. Jensen (1999) does not find clear results on education. There are hints that those still in education tend to less often be among the group of the car drivers and overrepresented

[25] She refers to this way of using a car (or more precisely this group) as leisure time car drivers. I personally find that this is a terminology that should not be used in discussions on women’s mobility. Caring for children cannot be considered “leisure time”, but will more likely be subsumed under the terminology of family work. Family work is still unequally distributed and shapes the everyday life of women (Hochschild, 2012).

[26] Mostly at risk of low income are unemployed people and single parents, which are again mostly women (Borgato et al., 2021b).

among the cyclists/public transport users (Jensen, 1999). Later studies find a preference for cycling among high educated people in Germany (Hudde, 2022)[27].

The study by Jensen (1999) is helpful to get a first overview and an idea of ideal types imaginable in a transport system. However, it solely has an introductory character and specifically observes the Danish context that will differ from the German context. In Germany there is a strong focus on the car as a mode of transport. At the same time the car industry is much more important compared to Denmark. There have been studies focusing differences in mobility practices in the German population, that are more useful when it comes to identifying context dependent differences in patterns. For example, Götz (2007) defined mobility types in the context of a study clustering different milieus and their mobility practice. Milieu studies usually differentiate between groups of people inhabiting a distinct practice. Götz (2007) differentiates between (1) the traditional domestic milieu, (2) the risk-averse car fans, (3) status oriented car drivers, (4) traditionally nature oriented and the (5) ecologically determined. These groups differ in their preferences for a certain mode of transport (oriented towards car, environmentally friendly methods of moving etc.) but also in their choice of certain modes of transport by needs they can(not) fulfil with them. The traditional nature-oriented group is for example shown to not use the tram at night due to security issues. Gender is a relevant factor identified by the author, but age is also an important influence. Disadvantaged groups are generally shown to be less mobile, which hints at societal exclusion problems caused by mobility (Kreyenfeld & Konietzka, 2017).

These studies suggest a strong relationship between socio-economic group affiliation and mobility behaviour. Additionally, they suggest that there may be differing mobility needs based on the behavioral patterns and resources available to an individual. They are a good starting point for answering the question: **What are local municipalities political actors able to represent in the outcome** (see Figure 3)**?** Particularly for a consultation process in urban sustainable mobility, descriptive input representation was supposed to have a positive impact on substantive (through- and output/outcome) representation. There is potential for decreasing social exclusion mechanisms.

[27] This clearly does not align with Bourdieu's concept of habitus, as it focuses solely on individual education as an explanatory variable, without connecting it to the social background and patterns formed in early socialization. However, it is included here as it suggests potential differences between educational and economic capital in relation to transport choices.

Substantive (through- and output/outcome) representation has been previously defined as speaking for/acting on behalf of the interests of a specific group. Acting on behalf of the interests of someone means being responsive to their "wishes and needs" (Pitkin, 1972, p. 113). While in the field of mobility behaviour differs by socio-demographic categories, it seems likely that mobility need fulfilment will also differ by socio-demographic categories. This is due to socio-demographic categories generally structuring everyday life. They change perceptions of the importance of issues in mobility. Gender, income, education, age and disability are relevant in this context (Artho et al., 2018; Bartz, 2015; Greed, 1994, 2011; Huber, 2016; Hunecke & Preissner, 2001). The next chapter lays a theoretical ground to capture mobility needs and identify their relevance for different societal groups.

4.2. Mobility Needs and their Satisfaction

Enabling a perspective of mobility needs differing between groups of people, can be considered useful for an inclusive planning of urban sustainable mobility. The perspective is also useful when addressing current failures of the mobility infrastructure that are disabling certain groups to be mobile. To start with, a systematic definition of what I mean by **mobility needs** and how they can be linked to mobility behaviour as a practice is necessary. The term of **mobility needs** does not refer to primary basic human needs that secure the survival of every person (Amitai Etzioni, 1968). Mobility needs can rather be described as underlying need structures that can be expected to differ by socio-economic variables. This can be explained by the differently structured everyday life activities of individuals that also differ by socio-economic variables. Differing mobility needs are expected to induce differing demands for change when it comes to reorganising urban mobility with consultation. I define **mobility need fulfilment** (in general) as substantive representation in the urban space. People who can fulfil their mobility needs better, are currently better represented, which refers back to Pitkin (1972) and her definition of substantive representation as acting on behalf of the wishes and needs of a person or group of people.

Mobility can conceptually be two things (1) an end in itself or (2) a mediator for an external need (Bartz, 2015). The focus of this study will not be on mobility as a means of reaching specific destinations (Bartz, 2015, p. 32). Instead, mobility will be understood as a tool to fulfill other needs. The focus will be on the preferences and desires related to how individuals wish to navigate and use mobility. I refer to these as 'mobility

needs'. Mobility needs being more or less fulfilled will enable/disable people from moving in a certain way through the urban space to reach certain goals. For rational choice theory concepts of needs/requirements, opportunities and abilities (NOA/ROA) have been established when explaining mobility behaviour. These models focus on Needs, Opportunities and Abilities as drivers for individual mobility behaviour that may differ between individuals. Needs, Opportunities and Abilities are expected to be interrelated (Vlek, 2000, p. 160). While needs and opportunities are assumed to drive the motivation to perform, a second aspect of behavioural control is expected to be driven by both opportunities and abilities (Vlek, 2000, pp. 160–161). In practice, these models can help identifying restrictions in the built environment and offer solutions to reduce them. Still, it can be considered a rather reduced theoretical model that lacks the ability to differentiate socio-economic groups and their mobility needs and tends to overemphasize rational decision making when it comes pro-environmental action.

In previous chapters, I referred to the usefulness of the theory of social practices for describing mobility behaviour in different socio-economic groups especially when it comes to researching social practices. To explain differences in mobility needs and their potential fulfilment I will use aspects of this theory to enable clearer understanding of possible differences. Aspects of (1) material, (2) knowledge and (3) routines are assumed to be relevant for these differences (Wilde, 2014b). Differences lie in aspects of socialization of an individual as well as social norms and structures. Also, material differences play a role, this means e.g. differences in the living environment and economic resources. Mobility needs can be understood as closely connected to other aspects of practices and everyday life such as tasks individuals (have to) fulfil or events they attend in their leisure time. The evaluation of needs fulfilment is quite likely linked to mobility behaviour. The reason for this lies in the (current) organization of cities. Some mobility behaviour that is linked to certain habitualised choices – like, for example, the mono-journeys of men to their workplace (Greed, 2019) – of modes of transport is systematically better represented in cities built environments than others. This was described as often linked to less marginalised societal positions. Needs of marginalised groups are less often fulfilled when it comes to mobility (Borgato et al., 2021b; Greed, 2019; Reis & Freitas, 2021b; Wilde, 2014b).

Obviously, the term need does not describe the need to be mobile, but rather refers to an external need as mobility need for the individual person. Research identifies

aspects people consider relevant for their movement from one place to another. To differentiate different types of needs I first identify how previous research clustered needs (Bartz, 2015; Busch-Geertsema, 2018; Dangschat & Segert, 2011). The most relevant needs that ought to be fulfilled in mobility are subsumed under the term basic needs. Basic needs fulfilment first of all resembles for example a built environment that will enable different groups in society to be mobile. I consider them basic needs since without them autonomous movement through cities is extremely difficult. It is (nearly) necessary that they are fulfilled for a person to be mobile. Basic needs fulfilment will be composed of several aspect. First of all, it will be necessary that the built environment enables people to move through it. People are disabled from being mobile for example because their physical needs are not met by their current mobility options. I call this needs for barrier free assessment. Whether these needs are fulfilled depends on how pronounced they are for a person. For example, in a built environment without a ramp a parent with a baby carriage using public transport is less likely to be able to fulfil their needs for barrier free assessment than a student with no special needs cycling to university (Greed, 1994, 2011, 2019; Reis & Freitas, 2021b).

Further aspects adding to the physical and psychological barriers or enablers of being mobile, are security and safety. Both aspects are linked to the bodily integrity of people and of pronounced relevance for the mobility of vulnerable groups. While the term safety means “the prevention of non-intentional accidents” – e.g. accidents in urban transport, security refers to “the prevention of intentional unpleasant activities by people” such as crimes (Candia et al., 2018, p. 191). While for some individuals the perception of these risks might be relatively low, we can assume that for vulnerable groups they are relatively high. Children or less experienced cyclists, for example, may perceive safety lower. For women it is likely that they will be more afraid of crime in public places, since they more often become victims (Vera-Gray & Kelly, 2020; Yates & Ceccato, 2020). These aspects of unfulfilled security and safety needs can be considered relevant enough to prevent individuals from travelling. A last aspect of needs that I consider as basis for being mobile in cities is the affordability of mobility. Individuals whose affordability needs are not met by their options have a high likelihood of not being mobile. Social exclusion can arise from a mobility system not meeting the affordability needs of an individual (Dangschat und Segert 2011, S. 57–58). Data hints at affordability being a key aspect when it comes to social exclusion in mobility. For

example, it is widely recognized that groups with lower socio-economic status travel less all together (e.g. Borgato et al., 2021b).

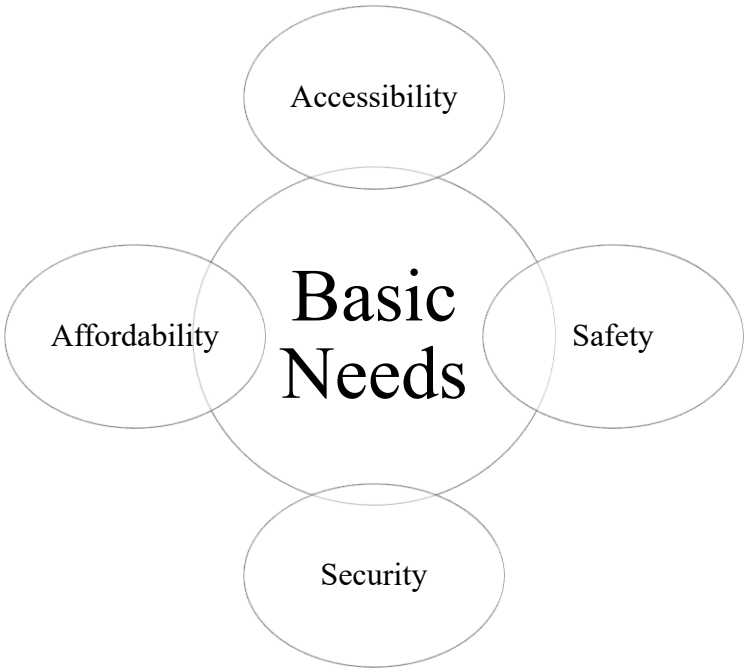

Figure 4 Basic Needs in Mobility Options

Basic needs fulfilment (as depicted in Figure 4) is the main factor preventing and enabling moving through a city. But for the choice of modes of transport, more factors play a role. These can be seen as moderators of behaviour while not being as essential for the possibility of moving through a city as the dimension of basic needs was. The second need group I will elaborate on is the group of **time-efficiency needs** (see Figure 5). Arriving on time is a relatively strong societal norm. Individuals' time restrictions differ depending on their daily activities. These differences are mainly induced by differences in the everyday life of people. While being time-efficient might be less relevant for unemployed individuals, it becomes more important when a person has many daily obligations. Also, caretaker obligations can play a large role when it comes to time-efficiency needs (Greed, 1994, 2011, 2019; Jensen, 1999; Manderscheid, 2019). Women are usually more often assigned duties that include both working in the labour market and being the main care taker of children (Hochschild, 2012; West & Zimmerman, 1987). Not fulfilling time-efficiency needs can lead to strong discontent among users, but also to a change of decision on the mode of transport. While reorganising cities, it should be kept in mind that individuals are still able to fulfil their time efficacy needs especially when they are linked to working and care taking. A slower, less

flexible and less punctual mobility infrastructure can especially harm non-male individuals – if they cannot afford certain modes of transports - by reducing their possibilities to fulfil the many demands to them. Fastness, flexibility and punctuality are the key elements when it comes to measuring time-efficiency needs. While individuals in the work force will rely on choosing the fastest way to get to work mainly, depending on the importance of their appointments, punctuality will play a large role, too. Flexibility is especially relevant with different demands and should interact with the other two aspects.

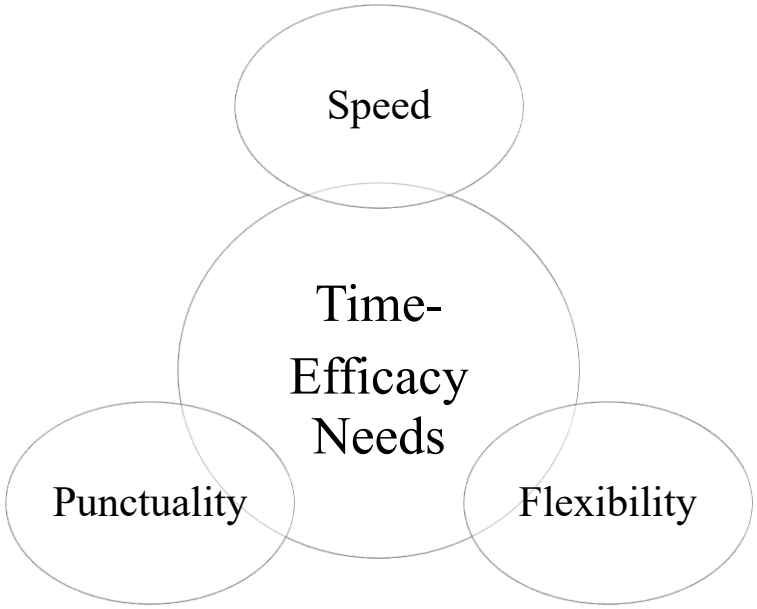

Figure 5 Time-efficiency Needs in Mobility Options

A last cluster can be subsumed under the term of **individualist needs** (see Figure 6). Besides fulfilling key needs to (1) be enabled to use transport (basic needs fulfilment, Figure 4) or to (2) be enabled to organizing demands of everyday life (time efficacy needs, Figure 5), there are aspects to mobility that influence the choice of modes of transport that refer to aspects of enjoyment or comfort. These needs are rather related to the positive feelings and experiences one gets while moving through a city. This need cluster is considered to consist of (1) enjoyment, (2) comfort and (3) relaxation. Even though individualist need fulfilment may seem less relevant than basic need fulfilment and the fulfilment of time-efficiency needs, it can still be important for the choice of a certain mode of transport if all other needs are at least met (for an overview over

a similar grouping, see Dangschat & Segert, 2011). Why else would someone chose to go somewhere by car if cycling is equally easy and time-efficient?[28]

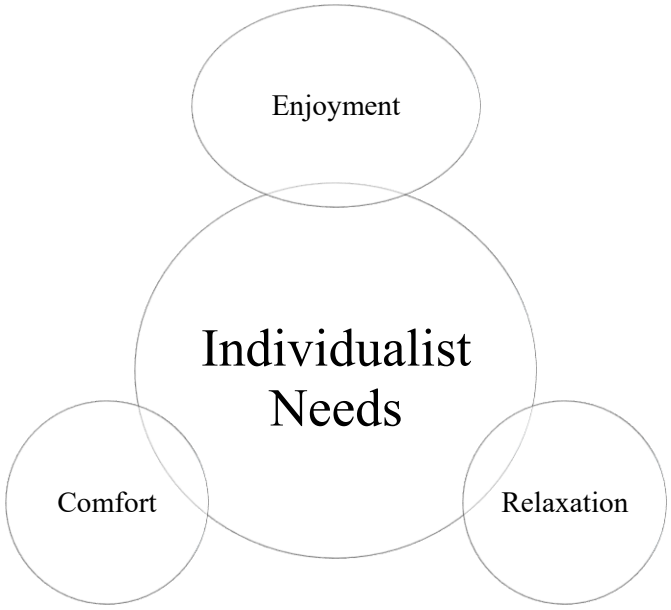

Figure 6 Individualist Needs in Mobility Options

This argumentation already hints at a hierarchical organization of needs. A hierarchical organization of needs was most famously established by Maslow (1943) and is often depictured in the form of a pyramid. The author starts by talking about 'physiological' and 'safety' needs that he subsumes under the category of basic needs (Maslow, 1943, p. 373). He established the idea that physiological needs need to be gratified so safety needs can emerge. Besides not being able to move through a built environment that is not barrier free for oneself physiological needs are not linked to mobility behaviour and cannot be researched. Mobility needs differ from generalized needs in this aspect which is clear due to their organization as secondary needs within the need of being mobile. Still the organization of these needs within a basic need cluster including safety and security needs has been relatively helpful. Time-efficiency needs can be differentiated from the basic needs established by Maslow (1943) by not being generally given but introduced by a societal context and individuals routines and obligations within. They are more likely to differ by groups and be more present among the population in the workforce and less pronounced among pensioners, for example (Greed, 1994;

[28] Of course, we can still assign some irrationality to the decision for a certain mode of transport. This is because, habitualized decisions do not always follow rational principles (see Chapter 4.1).

Jensen, 1999; Wilde, 2014a, 2014b). Still, they are highly relevant since being in the work force is in current societies the foundation to being more mobile or able to afford basic need fulfilment (for hierarchical order see Figure 7).

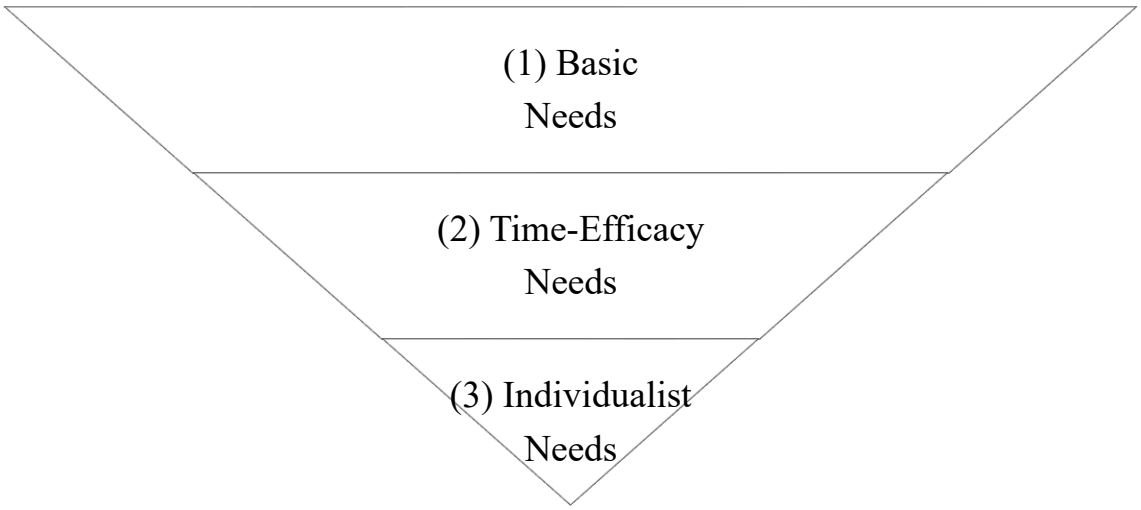

Figure 7 Hierarchical Order of Need Structure

I previously described that I suppose that needs will be satisfied to different degrees in different socio-economic groups, since some need more than others and groups generally need different things. This is, as mentioned in Chapter 4.1, because needs are structured by events of daily life and linked to specific practices in daily life (Manderscheid, 2019). To start, I define a group of socio-economic variables that is likely to be important to explain the fulfilment of mobility needs. These variables are **gender, education, income, age** and **disability** (Borgato et al., 2021b; Greed, 2019; Jensen, 1999; Musselwhite & Scott, 2019; Reis & Freitas, 2021a, 2021b). I divide gender into the two categories male and non-male. I do this because I assume that the male population is generally less confronted with societal marginalisation than women and other genders. This accounts for care-taking (Greed, 2019; Hochschild, 2012; Manderscheid, 2019) but also for higher risks of being violently attacked (Kretschmer et al., 2024; Schlack et al., 2013). This also means that there is especially two mobility needs that non-male people cannot fulfil as easily as men: basic needs and time-efficiency needs.

Education is a relevant factor since it is usually linked to positions in the workplace that affect mobility routines (Hudde, 2022). Income is obviously relevant for need fulfilment since most mobility needs can be bought with money (Borgato et al., 2021b; Rozynek, 2024). Education and (higher) income can as a proxy for employment easily be related

to a harder fulfilment of time-efficiency needs. Low income groups are at the same time expected to less easily fulfil their basic needs. Age is considered relevant for two reasons. First, it is usually linked to certain kinds of mobility impairments that can reduce the possibility that mobility options fulfil their mobility needs adequately. Additionally, we can assume that older people have different routines with mobility than younger people, which can once again be assumed to impact how well current transport system fulfil mobility needs but also which needs predominantly develop (Wilde, 2014a, 2014b). The variable disability includes those individuals that describe an impairment linked to mobility (Reis & Freitas, 2021a). Being impaired can obviously reduce the possibilities of fulfilling one's mobility needs. Age and disability will both be relevant for basic need fulfilment. While older people should pronounce the relevance of time-efficiency needs less often, they might still be relevant (and unfulfilled) for disabled people. Individualist needs seem to be more an add on and are supposedly more often pronounced, when basic needs and time efficacy needs are already met. Table 1 shows all supposed interrelationships between socio-demographics and the under fulfilment of mobility needs. The key dependent variable substantive outcome representation will incorporate the idea of need fulfilment. A person is substantively represented in the outcome when they feel their needs represented in the built environment.

Table 1 Socio-Demographic Factors and Potential underfulfilment of Mobility Needs

Socio-Demographics	**Under fulfilled Mobility Needs**
Gender	Basic Needs
	Time Efficacy Needs
Education	Time Efficacy Needs
Income	Basic Needs
	Time Efficacy Needs
Age	Basic Needs
Disability	Basic Needs

All in all, in Chapters 4.1 and 4.2 I aimed to explore how different socio-economic groups may differ in their mobility behaviors. Specifically, I sought to operationalize measurable aspects of mobility by examining STOR and SOR (see Figure 3). The core idea, I argue, lies in the distinct ways in which mobility is experienced by **different**

socio-economic groups. The question of how **mobility needs** are either met or unmet provides a useful operationalization for understanding who is represented in urban space, as framed by Pitkin's (1972) theoretical framework discussed in Chapters 3.1 and 3.2. I proposed that these mobility needs can be clustered into three categories: **basic needs** (see Figure 4), **time-efficacy needs** (see Figure 5) and **individualist needs** (see Figure 6). Among certain groups, unmet needs are more pronounced. Additionally, I suggested that these needs can be hierarchically ordered, starting with the basic requirements for accessing mobility options and progressing to needs that are considered "add-ons" for those whose basic needs are already fulfilled.

5. Process versus Outcome: Interdependencies and Effects for Legitimacy

This theoretical framework leads to a variety of ideas of how and through which mechanisms participation can shape legitimacy beliefs. The focus was previously set by describing the possible importance of descriptive and substantive representation in a democratic understanding. This will further be developed. Aspects of *being in the procedure (DIR)* and *being able to voice an opinion during the procedure (STOR)* will be subsumed under the idea of the **procedural aspects** of participation. I assume that procedural aspects of participation can increase legitimacy beliefs. The *substantive representation in an outcome (SOR)* (or: built environment) through a better need fulfilment will be framed **as substantive effect of participation** (see Chapter 2.3). I consider both aspects influential for **legitimacy beliefs**. The hypotheses are contextualized by introducing results from previous research.

5.1. Does Participation Translate into Beneficial Policy Outcomes?

H1.1: Being in a consultative participation process (DIR) leads to being heard by the local municipality (STOR).

The first hypothesis, which is based on a fundamental democratic problem, remains relevant. Consultation is often introduced with the aim of integrating citizens' opinions. Citizens are usually promised the opportunity to express their opinions, so it seems quite relevant that these processes live up to their potential and local authorities listen to citizens' voices (see Chapters 2.2. and 2.4). In technical terms, this means that higher descriptive input representation (DIR) should induce higher substantive

through-/output representation (STOR) (see Chapters 3.1 and 3.2). This has advantages for decision-making. When more people with different demographic backgrounds are included in a consultation it becomes more likely that diverse mobility needs are mentioned throughout the process (see Chapter 3.2). Possible relationships between socio-demographic group affiliation and mobility behaviour were discussed in Chapter 4 and are summarized in Table 1. Socio-demographic conditions are likely to shape possibilities for using the mobility infrastructure according to differing material, knowledge and routines. The organization of the urban space is considered to be shaped along general dynamics of social inequality (e.g. segregation and living conditions, socialization into care taker roles, etc.). While e.g. for a person living in a gentrified district paths could be short and well established for riding a bike this might differ for a person living in a poor district close to roads only available for cars (see Chapter 4.1). This means that the integration of different groups into the process will shape the opinions present. It is thus desirable that **people being present in the consultation (DIR)** are more likely **to be heard by local municipalities (STOR)** (see Figure 3)**.** With municipalities generally offering consultation procedures to incorporate citizens thoughts into planning it becomes more likely that they first listen to citizens opinions on a certain topic. While certainly the main aim of participants may be to increase the likelihood that they are presented in a certain outcome – since SOR benefits them the most – listening to their opinions can play a crucial role for citizens perception of the political process.

H1.2. Being in a consultative participation process (DIR) effects the fulfilment of mobility needs in the built environment positively (SOR).

When socio-demographic variables can be linked to need fulfilment through the built environment it becomes likely that citizens presence and active participation in a consultation increases their substantive representation in the built environment (or: SOR). Local municipalities should plan to integrate citizens' opinions and decisions and not have clear ideas of the reorganization before the process. It is likely that this effect is indirect. Citizens participate in the consultation and through this participation their opinions can be heard. Opinions that are heard are then more likely to be incorporated into the political decisions made after the process. Which unfulfilled needs certain group affiliations can be related to was discussed during Chapter 4.2. These variables can indeed be expected to be rather context dependent, which is why I will test the current

condition for the samples I work with. Statistical models will incorporate both, relevant socio-demographics for need fulfilment as well as direct and indirect paths from descriptive input and substantive through- and output representation.

The assumed effect describes how the participation of individuals is translated into political decisions through a participatory policy-making process. This translation is usually not binding and must be incorporated as decision of local political actors in consultation. Hence, political actors and/or decision-making in institutions is/are relevant for political decisions established. Consultation usually aims to collect citizens perceptions and ideas. If the decision making does not aim at including these perspectives, the consultation would not fulfil these aims (see Chapter 2.2). Hence, the presence of differing perspectives in the process should increase the likelihood that things improve for a variety of groups – representation should increase on a substantive level if it increases on a descriptive level (also see Chapters 2.4, 3.1 and 3.2). Also, it should be clear that presence of different groups in the process is no necessary condition for their substantive representation. Political actors filter decisions after the consultation. It is on the one hand possible that they incorporate ideas of citizens into decision-making. On the other hand, local authorities may have an overview over the groups missing from procedure. They are able to act as their representants in decision-making and incorporate their daily life experiences as well (see Chapter 2.2).

Much attention has already been payed to the general inequalities in representation in e.g. parliaments but also political participation as such (Reynolds, 2013; Schwindt-Bayer & Mishler, 2005). These inequalities can be found along the general lines of social exclusion and represent general patterns of social inequality such as class (in terms of own and parental education), gender (in terms of the marginalisation and the distribution of care work), disability (in terms of accessibility) and race (in terms of marginalisation and racism but mainly within the intersections with socio -economic status) clarified in their mechanisms by a lot of sociological theorists describing social structure (Blau, 1977; Boudon, 1974; Bourdieu, 2017a, 2018; Crenshaw, 1997). That these mechanisms of exclusion persist is true for political participation on- and offline (Oser et al., 2013; Rottinghaus & Escher, 2020; Schlozman et al., 2010; Schöttle, 2019). Some authors postulate that these mechanisms to some extent are linked to the welfare system and their degree of decommodification. With less inequality in terms of income political participation becomes more equal between societal groups (Sack,

2020). Rottinghaus and Escher (2020) find that small adjustments in participation processes—such as personalized invitations—can help diversify participant representation.

While with unequal participation patterns problems may arise with unequal understandings and acceptance of democracies as well as with normative claims of political equality as posed by e.g. Dahl (2000), it is important to ask what the impact of equal representation in processes can and should be. Here, most authors refer to the potential substantive representation following descriptive representation (Mansbridge, 1999; Young, 2010), since marginalised groups are considered to be "likely to share certain common experience, and thus are likely to share a certain view on social reality" (Brown, 2006, p. 219). By higher descriptive representation this path is commonly expected to lead to a richer degree of interests represented in the decision-making process (Brown, 2006). For consultative participation higher acceptance of citizens ideas was found among public officials when citizens included into the process were more diverse (Migchelbrink & van de Walle, 2019). I see this as a further argument to elaborate more on the dynamics of who participates and who is represented. Additionally, participation as "yet another opportunity for the participatory elite" (Migchelbrink & van de Walle, 2019, p. 1) is often criticized by both research and the public. This is especially relevant in transportation planning where it is usually necessary but challenging to include different societal groups equally (Boisjoly & Yengoh, 2017; Elvy, 2014)[29]

Whether descriptive representation does indeed increase substantive representation is well researched when taking a closer look at parliaments and marginalised groups dealing with a violation of their fundamental rights of self-determination and autonomy. There are many studies e.g. focusing on the role of female legislators for women's rights (Schwindt-Bayer & Mishler, 2005). Focusing on parliaments makes sense in the context of an actor-theoretical perspective on substantive representation as the one offered by Pitkin (1972, pp. 113–115) where substantive representation is framed as an 'acting for'. These theoretical paths frame changing something by 'acting' as a key to representing someone. Authorized political actors (e.g. legislators) have the powers for political decisions and can engage in an 'acting for' a certain part of the population.

[29] This research deals with case studies of local transportation plans. Additionally, it partly assesses strategies like the targeting of specific groups to include them more effectively (e.g. Elvy, 2014).

Women in parliament for example were found to increase policy responsiveness concerning women's rights (Schwindt-Bayer & Mishler, 2005, p. 424). Same questions have been applied to the presence of LGBT[30] legislators in parliament whose presence in parliaments has also been found to be relevant for their substantive representation (Reynolds, 2013). But Reynolds (2013, pp. 271–272) is additionally raising questions on whether cross-sectional data is sufficient for answering these questions, since societal progress in general could yield both consequences: (1) more rights for LGBT and (2) greater presence of LGBT in parliaments. Bönisch (2021) looks in detail at the Irish parliament that has a low share of LGB legislators and the UK parliament that has a high share of LGB legislators. She finds stronger effects for the party position than of the share of LGB legislators on resulting laws (Bönisch, 2021, p. 862). Still the presence of LGB members of parliament might influence positions of other members of parliament and thus substantively contribute to policy results.

Some studies have found effects of the presence of people of colour in parliament on the substantive representation of their interests e.g. through higher intrinsically motivation of people of colour to represent these interests (Broockman, 2013). Even stronger effects are assumed when looking at the effects of descriptive representation of People of Colour (PoC) on democratic legitimacy (Dovi, 2002) even when presence does not affect the political outcome, but this will be evaluated with the second research question. In contrast to all the positive results concerning the mechanisms between descriptive and substantive representation a study by Clayton et al. (2019) could show that there might be a danger to the perception that descriptive furthers substantive representation. They find that when women are included in decision making even anti-feminist decisions are accepted more often.

All of these studies are located in the parliamentary area of policy making. Nearly no studies can be found when referring to unconventional forms of political participation like consultation. For political and sociological research of participation this is a problem, since consultation is a form of participation usually used to include everyday experience of citizens (Kubicek et al., 2011), but still strongly biased towards male, middle aged well educated participants (Migchelbrink & van de Walle, 2019). Since it is a

[30] Even though constantly referring to the term of LGBT rights in their paper, their operationalization does rather address rights for same-sex couples and does not refer much to rights for trans people.

tool considered useful by participation theorists (Arnstein, 1969; Barber, 2004; Pateman, 1970) and usually especially addressing improvements in peoples living conditions. Links between descriptive and substantive representation should be clarified, even when citizens do not make the final decisions, especially to find out whether some ideas are incorporated more often than others even if the respective socio-economic groups are descriptively represented in an input. If local municipalities want to learn from citizens experience and improve their living environment we first need to address the links between citizens social position and their realities in everyday life.

I argued previously that this can be best done with using an approach from the theory of social practice. The ideas were originally designed by Bourdieu (2018) but are currently incorporated into research of mobility habits and can be used to identify patterns in everyday life and differentiate them by e.g. socio-economic status or gender by using a model incorporating peoples (1) material, (2) competences and (3) meanings (Cass & Faulconbridge, 2016; Manderscheid, 2019; Nettleton & Green, 2014; Savan et al., 2017; Shove et al., 2012; Spotswood et al., 2015; Urry, 2013; Wilde, 2014b). They partly contradict usual socio-psychological approaches and open up a discussion sensitive to social inequalities in society (Savan et al., 2017, p. 246). I consider these approaches useful for measuring substantive representation as a precedent of descriptive one in consultative participation for two reasons (1) since consultative participation explicitly tries to collect citizens everyday experiences that are contingent on social class and (2) since measurement of mobility behaviour and needs is useful for answering my hypotheses. However, even though socio-demographic question have previously been linked to mobility behaviour and needs and distinct types were identified for many context including the German context (Bocarejo S. & Oviedo H., 2012; Dangschat & Segert, 2011; Greed, 1994, 2011; Hudde, 2022; Hunecke & Preissner, 2001; Jensen, 1999). This approach has not yet been applied to questions of substantive representation in a consultative participation procedure, which becomes more relevant since nowadays consultative participation is a standard procedure used in city planning (Mark et al., 2024).

5.2. Does Representation affect Local Legitimacy Beliefs on a Procedural or a Substantive Level?

H2.1: Becoming part of the procedure (DIR) increases local legitimacy beliefs.

H2.2: Being heard in the procedure (STOR) increases local legitimacy beliefs.

H2.1 refers to the mechanisms induced by descriptive input representation for local legitimacy beliefs of the population and participants. I suggest that participation in the process increases local legitimacy beliefs by increasing the inclusiveness of an otherwise elite-only decision-making process. The input level of the process is usually connected to normative perceptions concerning the way the procedure ought to be (for theoretical explanation see mainly Chapter 2.4 and Chapter 2.3). This means that direct effects from the input on local legitimacy beliefs are induced through a perceived improvement of the procedure by introducing consultative elements (input-induced legitimacy beliefs, see Chapter 2.3). The same accounts for H2.2. that considers who is heard through the procedure and more closely linked to perception of the design of a procedure that should be fair and inclusive (throughput-induced legitimacy beliefs, see Chapter 2.3). A direct effect of being heard in a procedure on higher local legitimacy beliefs is plausible. It is also possible that there might be an indirect effect from being in the process through being heard in the process on local legitimacy beliefs. Since being heard in the process still refers to the way in which the procedure was organized, this effect would still be of a procedural nature (see Chapter 2.3).

H2.3: Beneficial changes of the living environment (SOR) increase local legitimacy beliefs.

The second effect refers to the possibility that it is not (only) the procedure strengthening local legitimacy beliefs but the procedures outcome. Consultations in the field of urban sustainable mobility aim at changing the built environment to be more suitable to sustainable transport options. This political goal can obviously interfere with the private preference or routine of driving a car. There is at the same time the possibility that the consultation improves the built environment for a participant e.g. by implementing their ideas into the political decision. It seems plausible that those advantaged by the political decision will be more positive regarding their perception of the local political system. As in any resource conflict, it is plausible that a negative change in the built environment may induce lower levels of local legitimacy beliefs. Both effects refer to

the substance of the decision and whether it benefits/disadvantages the own need fulfilment (output-induced legitimacy beliefs, see Chapter 2.3).

The state of research does not fully resemble the hypotheses. This has to do with the measurement strategies for legitimacy beliefs[31] that are often using concepts of trust or satisfaction. When including these measurements, there is already a lot of research focusing on legitimacy beliefs and their relation to the stability of political systems both theoretically and empirically (Andeweg & Aarts, 2017; Arnesen & Peters, 2018; Buchanan, 2002; Haldenwang, 2016; Hough et al., 2013; Kriesi, 2013; Lindgren & Persson, 2010; Lipset, 1959; Schmidt & Wood, 2019; Schmitt & Thomassen, 1999, Reprinted 2007; Stillman, 1974; Strebel et al., 2019; Weatherford, 2017). Measurement strategies, however, usually differ ranging from a dyadic measurement of what I call legitimacy beliefs (evaluation vs. expectations to democracy, this was already discussed during Chapter 2 and will be operationalized in Chapter 7) to less abstract levels of support such as trust with institutions (van Deth & Tausendpfund, 2013) or satisfaction with authorities or even the acceptance of decisions (Arnesen & Peters, 2018). Trust and satisfaction are relevant for legitimacy beliefs but as a source rather than a measurement strategy (Andeweg & Aarts, 2017, p. 195). They are distinct concepts. Even though legitimacy was a normative construct at first (Easton, 1957; Kneip & Merkel; Lipset, 1959) it is important to take into account the empirical dimension of it measurable by using citizens' norms and at the same time their evaluation of the current political system. This operationalization of legitimacy beliefs has so far only been researched on a national or supranational policy making level (Kriesi, 2013), but will be the focus of this study. For a summary of previous findings on legitimacy I will, however, give an overview over research generally subsumed under the term legitimacy.

All together a lot of research has been done on legitimacy of supranational or international actors such as the UN or European Union since these are usually confronted with legitimacy problems due to their distance to citizens as well as the complexity of their policy making process (Binder & Heupel, 2015; Dellmuth & Schlipphak, 2020; Fuchs & Escher, 2015; Grosfeld et al., 2022; Karlsson et al., 2012; Longo & Murray, 2011; Meunier, 2003). Even though they are not undemocratic as such citizens perceptions often refer to questions of whether they are established through democratic

[31] They talk about "legitimacy" more often than really using the term "legitimacy beliefs".

processes. It is obviously very relevant researching legitimacy beliefs on inter- and supranational policy makings, but it is not applicable to (1) questions of political participation exceeding voting (e.g. consultation) or (2) questions of changes in everyday life through city planning. Both aspects happen rather close to the individual citizen on the local level, so in addition to the important research on the international levels it might be relevant to focus on the local level as well.

Increasing legitimacy can be considered a key to a broader acceptance of international and supranational organizations (Binder & Heupel, 2015; Dellmuth & Schlipphak, 2020; Fuchs & Escher, 2015; Harland, 2004; Longo & Murray, 2011; Loveless & Rohrschneider, 2011; Sabrow, 2017; Schmidt, 2015). It can also be considered as difficult task. Research on the paradox of distance (Frederickson & Frederickson, 1995, p. 167) explains this partly. The further away public officials are from citizens the more critical are citizens concerning their evaluation. Supra- and international actors are in current political practice furthest away from the citizens. This is considered a paradox since especially in local political contexts, there is less public communication so the field might be more prone to actual democratic problems (Vetter, 2002a, p. 183). The local field thus remains highly relevant while researching legitimacy beliefs even though it is not focused by a lot of researchers. However, it recently gains importance in the context of the research of legitimacy beliefs, since local politics are assumed to influence peoples living environments more directly.

Even though legitimacy research sometimes focusses on supra- or international actors, the national policy making level is of biggest importance when researching legitimacy beliefs. With established measurement in the European Social Survey some research has been focusing on how citizens evaluate democracy and how important factors of these evaluations differ between countries (Ferrín & Kriesi, 2016; Norris, 2011). Operationalisations are here usually close to the theory by Easton (1957, 1975, 1976) linked to objects like the institutions or the authorities but also the expectations towards and evaluation of democracy that was most prominently measured in the European Social Survey. The measurement for legitimacy beliefs on a national level consists of the measurement of both IS and OUGHT evaluation of democracy. Ferrín and Kriesi (2016) describe this as a possibility to find out about both the evaluation and the expectation of democracy. Such a dyadic understanding can be helpful for understanding legitimacy and its difference to other dimensions of trust. For the European Social

Survey the authors define different aspects of legitimacy beliefs that can be relevant in citizens expectations and find counterparts in existing democracies for evaluation (European Social Survey ERIC, 2013; Ferrín & Kriesi, 2016). This has not yet been applied to the local context.

So far a lot of research has been focusing on this level for a measurement of legitimacy (e.g. Norris, 2011; Weßels, 2016b). Rarely local level legitimacy plays a role for research (e.g. Esaiasson et al., 2012; Vetter, 2002a) no matter the relevance for the national context. Local level analysis for legitimacy can be considered highly context dependent (Vetter, 2002a, p. 196) and must thus carefully take this sensitivity into account. Also there are no currently existing measurement for a dyadic approach on the local level where expectations of citizens might be clearer directed towards information and personal influence into the political process, since local policy usually deals with topics quite close to everyday life of the citizens and might induce pro-democratic effects (Vetter, 2002a, 2002b)

With urban mobility being a topic of local municipalities and local municipalities often including citizens into these processes one aim of this study is researching local level legitimacy and whether it interacts with citizen inclusion into the process. The local level is sometimes evaluated better than the national level (Frederickson & Frederickson, 1995) even though it is prone to problems of social inequality directly. Relevance arises from this area of local policymaking, which is prone to social inequalities that deeply impact the lives of citizens in their respective cities. Local governments are usually more responsive to citizens and effective in introducing changes that affect citizens' daily life (Vetter, 2002a, p. 192) than national policy making units. First, the local level is usually considered a school of democracy (Bogumil & Holtkamp, 2013) where citizens learn to deal with democratic processes as such and second because local level policy evaluation is usually linked to national level policy evaluation (Vetter, 2002a, p. 183) and thus can strengthen democracy in general.

For local level democracy and democratic acceptance, research identified several micro level effects for individuals. These are shown to be more satisfied with democracy when they have a high sense of political efficacy (Gabriel & Kersting, 2014, p. 137). Income could be shown to negatively influence local trust (not local legitimacy beliefs as a dyadic construct) (and for the UK context Bolet, 2021, p. 1654; van Deth &

Tausendpfund, 2013, p. 301), individual social capital/inclusion into the local context were highly influential on trust in local institutions (Bolet, 2021, p. 1657; van Deth & Tausendpfund, 2013, p. 311) and satisfaction with authorities (Andeweg & Aarts, 2017, p. 200). Macro factors that were found to be influential were the task range of local municipalities (Vetter, 2002a, p. 188), the measures introduced by local municipalities and how these measures were perceived by citizens (Vetter, 2002a, p. 190), the responsivity of local municipalities (Vetter, 2002a, p. 192) and the inclusion of citizens into the political process (Vetter, 2002a, 190ff.).

Most studies on the local level are researching trust and satisfaction (Andeweg & Aarts, 2017), that can be assumed to strongly increase legitimacy beliefs, which makes these relevant nonetheless. Especially the inclusion of citizen into decision-making (Vetter, 2002a) will play a role for my research when referring to the relevance of descriptive representation on the input of the process for local legitimacy beliefs. Even though previous studies link socio-economic status to trust and satisfaction they do not offer insights into the aspects of descriptive input representation in consultative participation on legitimacy beliefs.

Research on legitimacy also does to some extent focus on the effects of (usually descriptive) representation in participation or questions of the outcome orientation of the citizens on an increase of legitimacy beliefs (Arnesen & Peters, 2018; Esaiasson, 2010; Esaiasson et al., 2012, 2017; Escher & Rottinghaus, 2024; Pow et al., 2020). This can be considered useful especially when referring to a society where participation and legitimacy are unequally distributed (Kneip et al., 2020; Rottinghaus & Escher, 2020; Verba et al., 2003). While the presence of a group is often argued to be an important element of representation, it is in fact of procedural relevance for legitimacy belies (Arnesen & Peters, 2018; Clayton et al., 2019). It can increase legitimacy beliefs by increasing perceived fairness in the decision-making process and thus may be able to legitimate decisions even against the interest of certain groups (Clayton et al., 2019). It is, however, also argued to increase substantive representation by including more interests (Mansbridge, 1999, 2015).

There is some literature on legitimacy increasing effects of descriptive representation that is usually linked to the general evaluation of citizens inclusion into political processes (e.g. by Arnesen & Peters, 2018; Pow et al., 2020) and additional research

focusing the theoretical mechanisms with which descriptive representation in parliaments increases legitimacy beliefs (Mansbridge, 1999; Reynolds, 2013; Schwindt-Bayer & Mishler, 2005). Descriptive representation within all these frameworks is expected to increase legitimacy beliefs by accounting for fairer processes and clinging to an ideal of political equality that was already proclaimed by Dahl (2000). Research by Escher and Rottinghaus (2024) confronts these ideas by finding that intense participation can have the opposite effects and decrease satisfaction with local authorities. Measurement differences in some of these studies do not enable clear comparability to my research aim.

While Pow et al. (2020) test the effect of like me perceptions for legitimacy beliefs, they specifically take a look at mini publics not consultative participation as one distinct participatory element. Reasons, why especially consultative participation might be relevant are described in previous chapters (see e.g. Chapters 2.2, 2.3, 2.4 and 3.3) and should be kept in mind. They find that 'like me' perceptions indeed increase legitimacy but operationalize legitimacy as outcome- perceptions (Pow et al., 2020, p. 50). Even though this result is interesting especially when looking at the preference of distinct social groups for representatives in the process that are 'like them' (Pow et al., 2020, p. 50) it remains unclear whether the effects of legitimacy also refer to a more abstract dyadic measurement of legitimacy beliefs that is used in my research. They control substantive representation by measuring ideology which is not directly linked to experiences in everyday life (Pow et al., 2020, p. 50) but may still be an applicable measurement for their case study since they do not look at topic-specific consultative participation.

Arnesen and Peters (2018) conduct a survey experiment to measure the effects of descriptive representation on legitimacy (of a participation process) and find that descriptive representation is especially relevant for marginalised groups. They seem to put higher emphasis on the importance of shared background characteristics (Arnesen & Peters, 2018, p. 884). This was true for nearly all marginalised groups except low education groups. People with lower education did not have a specific interest in decision-makers sharing this characteristic since decision-making was usually clearly linked to knowledge which they assumed they did not have (Arnesen & Peters, 2018, p. 887). This may be true for their specifically designed case referring to actual decision-making power. Here again, a consultative participation procedure case study may

differ since the actual decision-making power lies with the local municipalities and citizens are asked to give their experience. Legitimacy is measured as “willingness to accept public decisions” (Arnesen & Peters, 2018, p. 892) and thus also differs from a measurement using expectations and evaluations of a local democratic system and might overestimate the effects descriptive representation might have for legitimacy beliefs. Gay (2002, p. 730) finds that especially the representation of PoC legislators in parliament will increase the acceptance of public officials and thus their legitimacy.

For the German context, there are less studies specifically focusing on the effects of descriptive representation on legitimacy beliefs. There are some studies framing local participation and legitimation of decisions on topics of environmental sustainability like the “Energiewende” (Best, 2018). Here, after an in-depth analysis of a participation process the author identifies that participation is not necessary for a redesign of society but helps with legitimizing some of the processes and also explaining sustainable action (Best, 2018, p. 339). Most studies agree that it is not only the process that counts. The outcome still plays a huge role in affecting citizens’ attitudes towards a decision (Arnesen & Peters, 2018; Marien & Kern, 2017). Here, authors usually measure outcome favourability and perceptions of the process (e.g. Esaiasson, 2010; Esaiasson et al., 2012). My focus on the outcome in the context of substantive representation will differ from their measurements just as my measurement of legitimacy beliefs did, but may still be beneficial research on legitimacy beliefs.

Most previously cited studies on descriptive representation include ‘substantive representation’ in forms of either outcome favourability or the ideology of the people in the process (Arnesen & Peters, 2018; Esaiasson, 2010; Esaiasson et al., 2012; Pow et al., 2020). For outcome favourability theoretical as well as empirical paths are clearly defined – if individuals like the outcome the acceptance of the decision-making process will increase. If they do not like the outcome it will decrease. While it is still argued that the fairness of the process matters (Esaiasson, 2010, p. 368), outcome favourability is seen as a very important factor for the increase of the willingness to accept decisions (Arnesen, 2017) and ideology is still a driving factor for the acceptance of representatives in participatory procedures such as mini-publics (Pow et al., 2020). When referring to the representation of PoC Gay (2002, p. 730) finds that PoC respondents were still more motivated to accept public officials if they shared their political views and that acceptance was not so much about ‘like me’ perceptions. Clayton et al. (2019) find the

opposite. In their experiment decisions that were against women's rights were accepted more often if part of the decision committee was female. Here descriptive representation was the more influential factor.

Even though directed towards the same question these studies only give a hint on how substantive representation and legitimacy beliefs might be related, they do not clearly conceptualize both aspects for the research of consultative participation. Consultative participation differs from the described procedures in context to the real-life decision-making power people in the process have. In consultative participation this decision-making power is usually restricted to bringing topics up (speaking) while the actual acting for remains in the hands of the local municipality. Within the context of mobility, it also remains hard identifying what the respective interests of socio-economic groups are (This problem was discussed in Chapter 4, as an operationalization strategy I chose to work with mobility needs.).

So, building on this research I use a measurement approach that accounts for two levels of substantive representation and its potential influence on legitimacy beliefs. While keeping the 'speaking for' level in mind where substantive throughput representation may play a role for broader acceptance of local political structure I refer mainly to thoughts on fairness in the process that were shown to actually increase acceptance for decisions among citizens (Esaiasson, 2010), while focusing rather on the research related to outcome favourability (Arnesen, 2017; Arnesen & Peters, 2018) when referring to the 'acting for' level of substantive outcome representation. Instead of the national level and parliaments (Reynolds, 2013; Schwindt-Bayer & Mishler, 2005), I refer to the local policy making level. Instead of the rather direct aspects of satisfaction with authorities or trust in institutions (van Deth & Tausendpfund, 2013; Vetter, 2002a, 2002b) on this level, I refer to a rather general dyadic measurement of legitimacy beliefs built on the expectations towards and evaluation of a current local democratic regime (Ferrín & Kriesi, 2016; Kriesi, 2013; Schoon, 2022). To conceptualize what substantive representation of interests in the context of mobility planning can be I use thoughts from approaches from the theory of practice in urban mobility research as in Chapter 4 (Artho et al., 2018; Bartz, 2015; Cass & Faulconbridge, 2016; Dangschat & Segert, 2011; Greed, 1994, 2011; Hunecke & Preissner, 2001; Sheller, 2018; Urry, 2013; Wilde, 2014b).

This section explores the relationship between local legitimacy beliefs and various factors in local policymaking, particularly in the context of urban mobility planning. It suggests that participation in decision-making processes increases local legitimacy beliefs by making the process more inclusive and consultative, as seen in hypotheses H2.1 and H2.2. H2.1 proposes that participation boosts legitimacy by improving the inclusiveness of typically elite-dominated processes. H2.2 argues that being heard in the process enhances perceptions of fairness, contributing to higher legitimacy beliefs. H2.3 shifts focus to the outcomes of these procedures, suggesting that beneficial changes to the living environment, such as improvements in urban mobility, can also increase local legitimacy beliefs. On the other hand, negative outcomes may lower legitimacy beliefs, depending on how they align with citizens' needs and preferences.

The section also highlights that legitimacy research often focuses on national or supranational levels, but local policymaking is increasingly seen as a crucial area for understanding legitimacy. The inclusion of citizens in local decision-making processes, such as consultations on urban mobility, has been found to positively affect legitimacy beliefs. However, previous studies on legitimacy often use trust or satisfaction as proxies, and this research seeks to measure legitimacy beliefs directly at the local level, considering both the procedural fairness of participation and the substantive outcomes.

6. Measuring Local Legitimacy Beliefs and Representation in Five City Contexts

To answer the questions posed by the previous chapter, it is necessary to take a closer look at the case studies observed during the project “Citizen Involvement in Mobility Transitions” (CIMT). This chapter will give an overview over the different case studies and explain how they were chosen. This is helpful when describing the landscape of consultative participation in Germany and how the data resembles this landscape. Later, in this chapter, I will give information on the process of collecting survey data and discuss the specifics of the different samples. I will also shortly discuss the problem with interpreting p-values in inferential statistics within this chapter. In the end, I will describe which parts of the questionnaire resembles the concepts that are processed in Chapters 2, 3 and 4 – offering an operationalization for each relevant aspect. The operationalization will always be made for two different types of models. A general model that tries to measure unspecific participation not linked to the consultation

process observed and a specific model measuring relevant effects once again but in one specific case. While the general models will estimate effects in a Dummy regression for all cities, the specific model will use panel data on the changes in legitimacy beliefs in one specific case study. Additionally, I will shortly describe how cognitive interviews have helped understanding peoples' reactions and understanding of the questionnaire.

6.1. The Case Studies in the Context of Consultation in German Local Politics

To approach our case studies, in the project CIMT, we systematically reviewed consultative participatory procedures. We arrived at two observational categories to bring the consultations we found in an initial order. These categories influence the dynamic of a participatory procedure. The first observational category is the level of **concreteness** which we dichotomized along the categories **operational** (very specific) or **conceptual** (unspecific but usually more open). The second category was the **scale of reorganization**, which was either established (1) on the **city level** (large scale) and (2) on a **district/street level** (small scale). Focusing on these aspects of procedures we arrive at four types possible researching. Two of them are the most frequent: **Type I** which describes a conceptual procedure aiming to restructure a whole city (Marburg, Offenburg) and **Type IV** describing a more operational restructuring of a district/street of the city (Hamburg Ottensen, Hamburg Altona and Wuppertal Heckinghausen) (see Table 2). We decided to collect data in these two cases since the high frequencies in our collected database suggested that these types describes large parts of the participatory landscape and can therefore be used as a good starting point for an empirical evaluation of the implications consultation has for local legitimacy beliefs (for a short description of the database, see Mark et al., 2024). All procedures observed in this study are consultations with a focus on all modes of transport and the distribution of urban space between them. I chose to research these because I argue that they have the most potential to address social inequalities given in current urban environments.

Table 2 Overview over Types of Consultative Participation

Concreteness	Level	
	City level	**District/Street level**
conceptual	type I e.g. mobility concepts (Marburg, Offenburg)	type II
operational	type III	type IV e.g. redesign of a place/ street/ district (Wuppertal, Hamburg-Ottensen, Hamburg-Elbchaussee)

All observed consultations were organized by local municipalities – so they were top-down consultations rather than bottom up initiatives. The top-down organization has several advantages. First, municipalities organize consultations on sustainable mobility because they already have plans to change urban environments, which makes them more open to incorporate citizens opinions on how this change should look. This may be a motivational factor for citizens since they can indeed benefit from participation. Secondly, all citizens are theoretically invited to participate. For bottom up participation citizens usually need knowledge and resources that groups with lower socio-economic status may not have. While top-down organized consultation still mostly attracts people with high socio-economic status, it is in general open to everyone and individuals have to share nothing but their experiences in everyday life and ideas for mobility. Municipalities generally were able to develop an idea of who is missing from the consultations and try to incorporate their ideas into the results at least (see Chapters 2.2 and 2.4). Generally, top-down procedures were expected to have more inclusive potential even though it is usually not fully utilized.

For the five contexts Masterplan Verkehr 2035 Offenburg, MoVe35 Marburg, Elbchaussee Dialog Hamburg-Altona, Verkehrsuntersuchung Wuppertal Heckinghausen and freiRaum Hamburg-Ottensen we drew random samples from the cities/district population. Sample sizes were adjusted to the population of the respective area of observation. This is why we drew larger samples in the cities of Marburg, Offenburg and Hamburg Altona in comparison to Hamburg-Ottensen and Wuppertal Heckinghausen. The conceptual procedures MoVe35 (Marburg) and Masterplan Verkehr OG 2035 (Offenburg) were both aiming at a strategy to reform the local mobility system until 2035. They focused on long-term strategies. Both tried to include the public in a relatively early stage of the reorganization.

Marburg started to elaborate its strategy with MoVe35 in 2020. This time point can potentially cause problems with the data. This is because it was set at the start of the

COVID pandemic that adds challenges problematic to deal with. Restrictions made offline meetings impossible. All these challenges were overcome by Marburg and the participation could take place. There were different phases in which citizens were invited to participate in the process. First, the local municipality was interest in gaining insights into the problems of citizens in their mobility behaviour. The second phase of the participatory process was rather directed at formulating concrete goals and guidelines for further participation. The last aspect aimed at by the local municipality was the aspect of a co-generation of concrete measures for adjusting the urban space, still on a rather conceptual level though. They aimed at including the people by offering an online survey and citizen workshops. Additionally, a project-accompanying MoVe working group with stakeholders was involved. Stakeholders as well as randomly chosen citizens and local councillors were not part of the participants sampling. Instead, we decided to survey the participants in the kick-off event of the participation to become part of our questionnaire. We added additional questions to the questionnaire, addressing their evaluation of the process. The additional sampling is still suspected to increase the number of consultation participants in the sample.

The procedure Masterplan Verkehr OG 2035 was similar to the procedure in Marburg in terms of the idea of generating a city-wide concept to shape mobility politics until 2035. The project started later during the pandemic which means that the local authorities had a chance to adjust to the new conditions. Participation was – same as in MoVe35 – considered necessary when establishing goals and guidelines. Participation was also used to identify problems and to rate measures for possible changes in mobility politics. In comparison with Marburg there were more steps of participation. This means that the CIMT project was able to observe more consultation formats and more participants in the surveys. Offenburg offered their citizens an online participation and face-to-face participation. Also, local forums were added. Additionally, the local authorities of the city of Offenburg used pop-up measures for citizens. Citizens were asked to evaluate these measures. Furthermore, a forum was established that tried to include teenagers and children in Offenburg[32]. It is interesting to take a closer look at these cases since conceptual procedures do indeed differ from the operative ones in terms

[32] Children and teenagers could not be surveyed due to data privacy issues.

of openness. At this stage of the process citizens can still influence the outcome. Still, the aspect influenced will rather be a general goal than an operative measure.

Operational, district level consultation procedures seem to be likely in later phases of the process, when the generally desirable outcome is clear. And they seem to be more likely in larger cities. This will be described through framing the processes in Wuppertal Heckinghausen, Hamburg Altona and Hamburg Ottensen. District level consultative procedures approach problems on a smaller level. While the whole city would a huge area to redesign, the district level will play a bigger role in these cases. These procedures are used often when political measures are close to being implemented. There is usually already a direction given by the local municipality. Details are evaluated with citizens. One of these procedures was observed in Wuppertal-Heckinghausen. It was an urban traffic study that started during the pandemic. Just as in Marburg the local municipality had to adapt to a new societal situation fast. The area where the concrete re-organization should take place was the Heckinghauser Straße. Individuals living near to the Heckinghauser Straße were specifically invited to join the process. The authorities mentioned that they tried to integrate people with migration backgrounds and from low socio-economic status into the process. The participation started with a kick-off event, then used street-mix tools and an online tool and offered citizen office hours for citizens. It was only possible to recruit participants during the kick-off event of the procedure, which leads to only a low number of participants captured by the survey. Data on the district is, however, still usable and helps to increase the overall size of people with lower socio-economic status in my analyses. It was only used for the estimations in the general models.

For the Elbchaussee Dialogue, several districts close to the Elbchaussee were observed. We can thus see the procedure as a consultation with the aim to re-organize one road in Hamburg Altona with city wide importance. The participation was called “Elbchaussee Dialog” and started in 2018 working mainly with an online platform and some stakeholder participation. The main differences to the other procedures were, that we started investigating after the consultation was finalized. In the data collection process, we distributed questionnaires in several districts of Hamburg Altona close to the respective street. These were Othmarschen, Nienstedten, Groß Flottbeck, Ottensen and Altona-Altstadt. The participatory procedure was organized as an online procedure. Participants were anonymous during the procedure. This made their

recruitment for the survey complicated. It was hard recruiting participants after the process to take part in our study. The decision e.g. on more sustainable mobility was already made, citizens were asked to discuss measures for reaching this goal during the consultation.

The consultation in the procedure “freiRaum Ottensen” aimed at the redesign of Hamburg-Ottensen as a low-car district. Again, the general direction of the outcome was clear when the process started. Citizens were invited to help with the details of the operative implementation. To solve ongoing conflicts in this process tradespeople and disabled people have been included into the processes through committees and focus groups. The district worked with mainly online events including a kick-off event, an online dialogue and different online workshops. A focus group dealing with disability was added to the repertoire of used methods. Additionally, they worked with an advisory board[33]. The project started 2021 and ended in 2022. Recruitment of participants of the process for our evaluation was done during the kick-off event, the online dialogue, the focus group for disabled and two workshops. The recruitment process for evaluating participants’ evaluation of the process was the most successful in Hamburg Ottensen. A large sample of participants in the consultation process is part of the survey. This, and the fact that we managed to evaluate participants’ and citizens’ attitudes before and after the participatory procedure made the Ottensen sample useful in terms of analysing the impact on the changes in local legitimacy beliefs. In Chapter 7 of this study, regression models are estimated that use this longitudinal sample to contrast the results of the general model to be able to address questions on changes in local legitimacy beliefs after a consultation. The selected case studies were considered appropriate for representing positive examples in the West German context and for generating initial exploratory insights into the effects of participation on political attitudes in the case of mobility planning.

To collect data, a random survey of the general population was conducted. In addition, a full census of participants from a specific participation process was carried out to ensure sufficient representation in the sample, as it was assumed that this group would be underrepresented in the random sample. To collect data for the case studies a standardized questionnaire was distributed among a general random sample from the

[33] We did not invite the participants in the advisory board to answer our questionnaires.

population of the respective city (district(s) of the city), or: area focused by the consultation process. This proves useful since it enables us to not focus on participants only, but to get an idea of the perspectives in the general population, also: among those who (systematically) do not participate in consultations. Surveying a random sample of the general population is helpful, since it enables inferring a population from a sample. Established processes in survey research can at the same time offer many tools to tackle biases, even though they may not fully combat them. But, random sampling may also be problematic when it comes to including enough participants from the consultation into the survey. To increase the number of participants we decided to separately ask for their participation in our questionnaire. Usually, we added a part on the consultation itself. While this increases the number of participants in our data set, it should be kept in mind especially when interpreting p-values. Since a random sample is not given, interpreting p-values as likelihood for the persistence of an effect in the basic population may not be possible. This is due to the sample composition including the participants as a self-selected sample. Nevertheless, I decide to interpret p-values as usual. I argue that this can be done because large parts of the used sample are composed of a random sampling of the general population and participants only make up a small amount of the whole sample. Still, I argue that one should be careful while interpreting the results and keep the respective problems in mind.

Hamburg-Ottensen is special in terms of composition of the sample not only because a large number of participants agreed to take part in our survey. In Ottensen we were able to observe a whole process from its beginning at T1 until the implementation of measures at T2. It enables us to work with individual data over two time points and observe changes in local legitimacy beliefs. Even though it is only one case study and cannot be considered representative for the German participatory landscape, it is still very useful to investigate influences participation can have on local legitimacy beliefs. With being one of the most elaborate consultation procedure we investigated it can serve as a ‘most-likely case’ (Koivu & Hinze, 2017) example. If effects on local legitimacy beliefs are a realistic outcome it is most likely to be shown in Hamburg-Ottensen.

Sample sizes where chosen in reference to the population size. Wuppertal Heckinghausen with 13,130 inhabitants (Stadt Wuppertal, 2021) and Hamburg Ottensen with 34,904 inhabitants (Statistisches Amt für Hamburg und Schleswig Holstein, 2021, p. 39) offered participation procedures directed towards smaller areas of the cities.

We thus decided to survey a random sample consisting of 500 inhabitants. Hamburg Altona with 101,157 inhabitants (Statistisches Amt für Hamburg und Schleswig Holstein, 2021, p. 39) is significantly larger. We decided to draw a sample of 1,258 inhabitants to include the relevant districts according to their sample size. These districts were Nienstedten (7,081 inhabitants), Blankenese (13,656 inhabitants), Othmarschen (16,365 inhabitants), Ottensen (34,904 inhabitants) and Altona-Altstadt (29,151 inhabitants) (Statistisches Amt für Hamburg und Schleswig Holstein, 2021, pp. 33–59). For Marburg and Offenburg, we did not restrict sampling to respective areas of residence but chose to drew samples from the whole towns' population. Marburg has 77,845 inhabitants (Landkreis Marburg-Biedenkopf, 2022), which is somewhat smaller than the districts of Altona we researched altogether. Offenburg with 62,815 inhabitants was even smaller (Stadt Offenburg, 2022). Questionnaires were for both cases sent to 1,250 individuals (see Table 3). All postal surveys included an additional link and a personalized code to enable online participation instead of postal participation in the questionnaire.

Table 3 Sample Sizes and Response Rates by City

	Inhabitants	Sample Size	Response Rate (W1)
Wuppertal Heckinghausen	13,130	500	29.2%
Hamburg Ottensen	34,904	500	39.6%
Hamburg Altona	101,157	1,258	33.8%
Marburg	77,845	1,250	34.7%
Offenburg	62,815	1,250	26.2%

Response rates differed by context, measures to increase response rates were similarly applied. Being directly affected by a topic which was in our cases the reorganization of a certain area of town was expected to incentivize participation and thus increase response rates (Reuband, 2015, p. 224). Time as costs for survey participants was an issue. With 12 pages the questionnaire was relatively long. This could have reduced the response rates (Reuband, 2015, pp. 223–224). A further strategy we used to increase response rates were reminders that were sent after the first invitation two times (Reuband, 2015, p. 211). We also used return envelopes as a strategy to increase response rates and personalization of cover letters, which are suggested to motivate participation in mail surveys (Dillman, 1991, p. 230). Wuppertal-Heckinghausen and Offenburg show the lowest response rates. At the same time, these cities were those inhabited by the most people from low education and income backgrounds. This may hint at a problem that survey research has in general and that relates to a high non-response among economically and educationally derived groups that would be

more critical of political systems. Participation in the questionnaire with 39.6% in Ottensen and 33.8% in Altona was high among citizens from Hamburg. In both cases citizens have been largely involved in the participatory processes. While Marburg (34.7%) also had relatively high response rates, they were lowest in Offenburg (26.2%) shortly followed by Wuppertal-Heckinghausen (29.2%) (see Table 3).

Regarding generalizability it is not the lower response rates in some contexts that generate the problem. Every citizen living in the respective cities had the same chance of becoming part of the sample and we neither suffer from a noncoverage error, nor a sampling error (Dillman, 1991, p. 227), but there is a problem with systematic nonresponse. Especially people with lower social status responded to the questionnaire less often. This can be assumed a *non-response error* as described by Dillman (1991, p. 228). *Measurement errors* on the variables used for testing these studies hypotheses will be discussed in later parts of the paper. To reduce the *measurement error* from the beginning of the survey we tested most of the relevant instruments using cognitive interviews. We used ‘think aloud’ and ‘paraphrasing’ techniques to identify problems with wordings in our questionnaire (Porst, 2014, pp. 194–197) and interviewed 12 people from different socio-economic backgrounds (grouped by gender, education, age). We chose to test the questions introduced and formulated by the research group CIMT and not (yet) established in bigger surveys like the ALLBUS (GESIS - Leibniz-Institut für Sozialwissenschaften, 2019) or GLES study (GLES, 2019).

The strategy for generating a participants’ sample was focused on increasing their likelihood to answer the questionnaire by offering them incentives. The questionnaire was not distributed in a print version, but sent to the participants as an online questionnaire shortly after the respective participatory element they participated in. Previous registration was necessary due to privacy issues but produced a barrier for participation. Respondents mail-addresses had to be collected after the process to assure the possibility to survey them in a second wave and generate panel data. We tried to reduce the barrier by offering monetary incentives of 10 Euro per participation in the questionnaire, a method recommended by researchers to increase response rates (Reuband, 2015, p. 220). While aiming for a full sample of participants, we have to assume that there are systematic differences between those participating in the processes and those self-selectedly participating in our evaluation. Also, by design of the questionnaire as an online questionnaire, not everyone was equally able to participate and

register e.g. people with limited digital skills. This can be considered a noncoverage error (Dillman, 1991) but was inevitable. For registered individuals' response rates are usually very high (> 90%). Also, further participants can be found in the general citizen samples to reach a number usable for statistical analyses.

Data on participants is only truly usable for some contexts, since it usually represents a very small group of the sample. While field access was quite easy in some of the case studies it especially turned out to be hard for others, like Wuppertal-Heckinghausen. Being part of a social city program a reorganization of the main road in Heckinghausen would have been a useful case study for researching social inequalities in political participation and the urban space. Observed participation was restricted to one event during the pandemic that was held online and dominated by local authorities and the planning institution followed by a very short discussion. The only possibility to increase the sample size of participants was to approach them after this event. Only five people registered for the survey and even though 100% of the registered individuals answered the questionnaire, there is a lack of statistical usability of the data because of the small amount of people participating. The same was true for Marburg with only 18 participants in MoVe35 that answered the questionnaire.

All other cases consultations produced solid numbers of participants to be part of the questionnaire. This was due to the fact that they (1) offered more consultation events during the process that we were able to observe and (2) had the possibility to contact the participants via mail after the consultation. The contact via mail was only possible because the local authorities collected some of the people's e-mail addresses. The possibility of just clicking on a link/scanning a QR code to get to the website for registration was a low barrier way for participants to engage with the questionnaire. The only case study for which working with panel data was possible is Hamburg Ottensen. There we had the advantage to see measures being introduced quite early. This is why we engaged in a second sample including citizens' as well as participants answering questions on local legitimacy beliefs and the introduced measures affecting their everyday mobility.

6.2. Legitimacy Beliefs and Representation in the Questionnaire

The questionnaire integrated a variety of modules on mobility politics, political attitudes (like legitimacy beliefs), political behaviour, mobility behaviour and needs and socio-

demography (for an overview over the modules see Table 4). Questions were categorized along the three groups. First, questions on political behaviour and attitudes, mobility behaviour and needs and socio-demography were asked in a **general** sense with no relation to the consultation that was taking place at the same time. These questions were easy to answer even for those that did not participate. Often, a separate part of the questionnaire asked for these aspects more **specifically** in relation to the consultation[34]. In context of the case studies (consultative participation in the respective cities), we included questions on the changes of need fulfilment through the procedure and changes in local (and national) legitimacy beliefs through the participation procedure. Also, we asked respondent about the own participation in the consultation and the evaluation of the procedure and motivations that were special pull and push-factors for (non-)participation linked to the respective consultation.

Table 4 Overview over Modules and Waves of the Questionnaire

	Questionnaire Modules		
	General	**Pandemic**	**Process Specific[35]**
Sociodemographics	T0/T1, T2		
Mobility	T0/T1, T2	T0/T1, T2	
Mobility Needs	T0/T1, T2		T2
Mobility Politics	T0/T1, T2		
Legitimacy Beliefs	T0/T1, T2	T0/T1, T2	T1, T2
Politics and Participation	T0/T1, T2		T1, T2

This chapter will introduce the operationalisations for the key concepts of my research focus, which are: local legitimacy beliefs, descriptive input representation, substantive through- and output representation and substantive outcome representation. Within the definition and explanation of these concepts in the chapters 2, 3 and 4 I already discussed the advantages of e.g. a dyadic operationalization of local legitimacy beliefs (see Chapter 2.3) or conceptualizing substantive representation as a representation of need fulfilment through political action taken by public authorities (see Chapters 3.1 and 3.2). These ideas will play a major role for operationalisation.

To approach the research questions, I chose to work with two analytical approaches bringing together the different strengths of the cross-sectional and the longitudinal data. Cross-sectional models are established to integrate all five contexts into the

[34] The questionnaire included questions on the changes in political attitudes and mobility behavior during the pandemic. These do not play a role in this study.

[35] This means that there are questions relating to the respective case study (or: process) like, for example, “freiRaum Ottensen”.

analyses. They operate with larger sample sizes and can include large parts of the sample from the general population. The second aspect is due to the choice of questions, which are often asked as general questions concerning political behaviour, mobility behaviour and local legitimacy beliefs – as later parts of this chapter show. The second group of models are referring to changes in local legitimacy beliefs and work with a reduced sample that relates to the specific participatory context of the case study in Hamburg Ottesen. This is due to the longitudinal construction of the dependent variable change in local legitimacy beliefs and the necessity that people must have at least heard of the participatory procedure to evaluate questions of e.g. the throughput or how the measures benefit their everyday mobility and is explained in more detail later. The benefit of working with this second sample lies in the specific answers enabling better understanding of real-life consultation procedures. Also, being able to measure change via a longitudinal design is useful when it comes to evaluating whether consultation indeed changes attitudes towards a political system. These advantages can only be reached with a very reduced sample size.

All theoretical paths are modelled in different regression analyses. This means that I start with elaborating on the dynamics of descriptive input representation (in terms of general participation in top-down organized consultation procedures) on substantive through- and output representation. Later, I will work on the influences of descriptive input representation and substantive through- and output representation on substantive outcome representation (in terms of satisfaction of needs in the urban space). In a last step, I will try to measure the influences of the three concepts separately in their effects on local legitimacy beliefs. Through every step of the process, socio-economic variable conceptualizing marginalisation in politics and the urban space are incorporated into the models. Additionally, mobility behaviour is an important confounding variable in all cases.

The first important aspect of measurement is the variable of **local legitimacy beliefs**. Many researchers have dealt with legitimacy as a concept for describing contexts in which asserted power is accepted by individuals at its mercy. But it can be complicated working with the concept of legitimacy beliefs in research and differentiating between the different conceptions used and measurements established. This is especially the case in a federal policy making context that is not centralized. Even a closer look at research on acceptance and political support does not help because definitions of

legitimacy beliefs largely vary across the studies. While some researchers refer to aspects of satisfaction and trust, others measure the acceptance of policy making results. In this study, I differentiate between the concepts of satisfaction, trust and legitimacy beliefs. While I consider trust and satisfaction important aspects for the analysis of political attitudes, I chose not to research them. Legitimacy beliefs I argue are in their level of abstraction most important for the longevity of democracies and should thus gain attention in research even if they seem harder to measure.

The literature referring to measurements of national level legitimacy beliefs within the European Social Survey, by e.g. Weßels (2016a, pp. 239–241) uses legitimacy beliefs as concept distinct from satisfaction or trust. Markowski (2016, 266ff.) names trust as an influential factor for legitimacy beliefs, but beliefs that trust and legitimacy beliefs are distinguishable since trust is rather an independent variable that is important for legitimacy beliefs. Authors like Weßels (2016b) argue that measurement should include both aspects: (1) an evaluation of political principles important for decision-making process and (2) an evaluation of current decision making processes. These kinds of legitimacy belief assessments have been included into the European Social Survey (European Social Survey ERIC, 2013) and compared between countries. Possibilities of use and different approaches are offered by a book edited by Ferrín and Kriesi (2016). With the ESS measurement Markowski (2016) was able to identify context specific differences in the expectation of the citizens. This is important to note since it shows that expectations of citizens can be a very helpful aspect of measurement. While it certainly plays a role how people evaluate political systems, it is helpful to take a closer look at differences in expectations in addition to that.

These results are not local level results but can be a hint at measuring legitimacy beliefs carefully when it comes to local level politics, since results may be very context sensitive. I consider this worse for local level politics since there is hardly any identifiable broad societal discussion on the way local politics should be organized. Without a broad consensus on that, expectations among individual will tremendously differ. While for some citizens information might be relevant in local level politics, opinions on e.g. consultation or opinions on who should be included into the decision making might vary between the individuals living in a democracy. On a national level such discussions are more common and it is easier to identify key principles of democracy such as e.g. freedom of speech or the right to vote. If strategic stabilization of a system is

one key challenge of democracies (Haldenwang, 2016, pp. 2–4), it is very useful to consider legitimacy beliefs as a dependent variable.

Concerning effects of representation on legitimacy beliefs I consider it likely to see them on the local level first. This is because local policy making decisions usually affect the life of the individuals more directly. Effects can be traced back to policy makers more easily. Local politics is usually closer to the individual person (Frederickson & Frederickson, 1995). Consultation as a local policy making tool is especially suitable for sharpening the link between local politics and decisions that affect everyday life. Especially in mobility politics it is easier to identify and thus clearer linked to political action by citizens than e.g. a nation state especially when it comes to mobility politics (Agger & Löfgren, 2010, p. 23). By researching the local context, I thus increase the likelihood to find effects by the design of my study. The focus on aspects of the political regime was chosen because if a regime with its rules is accepted, citizens tend to accept the authorities and institutions even if they do not like them or are from another political background.

My main dependent variable is: **local legitimacy beliefs** measured as **beliefs in the legitimacy of a local regime**. I chose a dyadic approach incorporating two aspects: (1) the expectations of a local democratic system and the (2) the evaluation of the current local democratic system. For this measurement the project identified three aspects relevant in a participatory understanding of local democracy which are (a) information, (b) consultation and (c) direct democracy (see Table 5). Not all these elements are equally relevant for citizens. This accounts for the aspects that are less common in policy making processes such as direct democracy. While consultation is quite common direct democracy is not a common procedure and thus usually not expected by citizens. Similar questions were used in previous studies e.g. a study on a procedure described as the Cycling Dialogue, a study on local level participation concerning cycling infrastructure in Cologne, Bonn and Moers. I chose to test the original Cycling Dialogue questions through cognitive interviews using both a ‘think aloud’ method and a ‘paraphrasing’ method. As a result, the third aspect (direct democracy) was reformulated for better understanding. The questions used are shown by Table 5.

Table 5 Measurement of Local Legitimacy Beliefs (general regression, specific regression)

	(1) Evaluation	(2) Expectation
	Thinking now about the current situation in your city, how much do you think the following statements are true? *1 – do not agree* *5 – agree very much*	In your city, how important is it ... *1 – not important at all* *5 – very important*
Information	Local politics in [city] explains its decisions to citizens.	...that local politics explains its decisions to the citizens?
Consultation	When it comes to important decisions, local politics in [city] gives citizens the opportunity to contribute their attitudes and knowledge to the decision-making process.	...that local politics gives citizens the opportunity to contribute their attitudes and knowledge to the decision-making process when important decisions are made?
Direct Democracy[36]	In [city], citizens have the final say on important local political issues through direct voting.	...that citizens have the final say on the most important local political issues through direct votes?

This is close to the method used in the European Social Survey evaluated e.g. by Weßels (2016b). With reference to these thoughts on legitimacy beliefs, I decide to work with a value estimated as difference between expectations (2) and evaluations (1). All variables are measured on 5-point Likert scales. This yields a possible range from -4 for the lowest possible legitimacy beliefs and +4 for very high legitimacy beliefs. A value of -4 is for example possible if a person has high expectations concerning local democracy e.g. if they consider it very important that local politics explains its decisions to citizens (value 5) and at the same time does not agree to the statement “Local politics in [city] explains its decisions to citizens.” (value 1). The singular differentials were combined into a mean index. If the expectations exceed the evaluation of local politics, there is low local legitimacy beliefs.

$$Legitimacy\ Beliefs_{Local} = Eval_{Local} - Exp_{Local}$$

$$Legitimacy\ Beliefs_{Local} = 1 - 5 = -4$$

While the meaning of the middle value 0 indicates that expectations and evaluations match, it might be useful to discuss the meaning of positive estimates in this context. These indicate an over fulfilment of expectations, which will be considered high legitimacy beliefs in this study. I argue that the over-fulfilment of democratic needs is a possible way to strengthen stability of a democratic society by establishing methods that exceed citizens’ expectation and are at the same time democratic practices needed for a strong democracy (Barber, 2004; Pateman, 1970). Another argument is, that the function of participatory political practice as a ‘school of democracy’ (Bogumil

[36] This aspect was not used for analysis since it only showed low correlations with the other two aspects.

& Holtkamp, 2013) will establish stronger democratic patterns even if citizens do not really expect participation in local politics. Another advantage of this practice is that working with indices will contribute to the quasimetric character of 5-point scales. This will lead to higher validity and reliability in the OLS regression. While this method is useful for the first group of models that generally focus on local legitimacy beliefs as a dependent variable, the second model will – as mentioned before – work on the aspect of changes in legitimacy beliefs. In the specific model (Hamburg Ottensen) the delta $\Delta_{local\ legitimacy\ beliefs}$ will be estimated as difference between the factor score for local legitimacy beliefs during T1 and T2.

$$\Delta_{local\ legitimacy\ beliefs} = Legitimacy\ Beliefs_{local\ T1} - Legitimacy\ Beliefs_{local\ T2}.$$

The panel structure of the data that is only given in the case study of Hamburg Ottensen. It enables to link thoughts on the effects of representation in a specific process on the development of local legitimacy beliefs, which is a possible way to see whether participants were already more critical at the start of the consultation or developed more critical attitudes over time. Hamburg Ottensen is the only case with the applicable data structure, since it offers data on non-participants and participants before and after the consultation process. I face restrictions in the generalizability of the results, since Ottensen was not a 'typical' participation process but exceptional in the effort the local municipality made to integrate citizens into the process (see Chapter 6.1). At the same time, the focus on changes in local legitimacy beliefs adds a longitudinal perspective that is helpful for interpreting the cross-sectional data more carefully.

A first independent variable from the theoretical framework to be operationalized is descriptive input representation. DIR refers to a way in which citizens can be represented in a political process which is reduced to a very pragmatic understanding of representation – the 'being there' included in the input of the process (Pitkin, 1972). Representation in the input can first of all yield a variety of results. It can for example lead to an individual voicing his opinion in the throughput of the process (STOR). This can once again be necessary to account for the interest of the individual being part of the planning decision (SOR). But what are the effects for local legitimacy beliefs? I previously described that descriptive input representation may have a positive influence on legitimacy beliefs. The mechanism behind this was described as a procedural

mechanism. An individual is happy to be included into the process and is more accepting towards a political regime because they had the possibility to participate in it.

With an approach focusing on different (more general vs. more specific models) I will establish two strategies. DIR will be measured as participation, since I can consider that those participating are (at least) descriptively represented in the input of the process by being a part of the process. This straightforward approach enables to identify whether individuals are represented in political processes and how this effects their legitimacy beliefs without already focusing on the results of the process. The questionnaire incorporates questions on general political participation to help with this process. These questions are taken from the General Longitudinal Election Study (GLES) (Roßteutscher et al., 2019) on- and offline participation module.

We asked for several forms of political participation during the project. This study is very much focused on the effects of top-down organised consultative participation and the descriptive representation in the input of consultative procedures. Therefore, I chose to work with the two variables closest to the participation procedures we observed for the case studies first to gain higher comparability and second, to be clear that the level of involvement is the same in the general and the specific models. Another advantage besides better comparability of the models and effects is that this measurement is less sensitive to the effects of the pandemic, that was a major issue during the time of our surveys. Variables asking for participation in protest e.g. would have been biased, whereas with consultation platforms or events the city itself framed the subject of the participation. Respondents that did not answer the question were assigned the value 0 for 'non-participation' whereas those who indicated that they participated in this type of procedures were assigned the value 1 for participation (see Table 6 for wording of the questions).

Table 6 Measurement of Descriptive Input Representation (general regression)

Online Participation	Offline Participation
And now for the topic of political participation on the Internet. Here are some ways to be politically active online. For each option, please indicate whether you have used it in the last twelve months. Have you...?	And now to the topic of political participation outside the Internet. Thinking back over the last twelve months, have you done any of the following things to make a political impact and make your point? Have you...?
...used a participation platform of the city (yes/no)	...participated in an event organized by the city (yes/no)

The variable for descriptive input representation in the specific model (Model 3) for Hamburg Ottensen is also quite straightforward since it deals with participation in the process to capture the 'being there' as descriptive input representation. To identify whether a person participated or not, I used their value on participation in the procedure at timepoint T2. To measure descriptive input representation in Model 3, I use the question of whether the respondent participated in one or more consultative activities during the procedure "freiRaum Ottensen". This measurement is rather specifically linked to a consultation procedure organised in Hamburg Ottensen that aims at a re-design of the city. In the questionnaire for the random sample we added a distinction between active and passive participation, which is recoded to a Dummy variable where participation (composed of both active and passive participation) was coded 1 and non-participation was coded 0. Participation was automatically coded 1, for individuals that where part of the participants sample.

The participants sample does not consist of participants of one event only, since the district of Altona tried to include relevant people into the planning procedure to collect information about their interests. The sample contains participants of several procedures: (1) an online kick-off event, (2) an online participation platform, (3) a focus group on barrier free mobility, and (4/5) two workshops for collecting further interests of individuals. While we stuck to a general scheme of surveying participants, this has to be kept in mind. Some people participated in surveys on more than one participatory procedure. For these people, I used the data from their first survey ignoring their later answers to make sure my data are statistically independent.

Thoughts on descriptive input representation usually aim to increase substantive through- and output representation. Through- and output are located within a participatory process that is part of a planning process (see Figure 1). The result of the planning process is the political decision meaning the outcome, while the output refers to the result of the participatory process that is not (yet) the political decision. This structure resembles the general idea of consultative participation that places the power for decision-making in the hands of the local municipality while collecting the ideas and experience of citizens. This describes a 'speaking for' level rather than an 'acting for' level. Higher legitimacy beliefs are assumed to be induced by a more positive perception of representation in the through- and output of the consultation. The mechanism

is still procedural even though linked to substantive issue mentioned during the process.

How can we measure substantive through- and output representation (STOR) in a consultation process? The elements of the terminology suggest that we need to capture whether people experience their substantive interests to be represented in the result. Good substantive through- and output representation must be reflected in a measurement of the perceived quality of the through- and output of a participation process, or the perception that one's substantive needs have been heard during the process. Some participatory procedures fail because of the through- and output of the process (Goldschmidt, 2014, p. 25), which will make worth researching if a through- and output is perceived positively by citizens (see Chapter 2.3). I use two measurements to measure the perception of the through- and output. Once again, there is the necessity to work with two measurements because the general models are in comparison to the specific models differently structured. I work with a general perception of how well citizens feel integrated into processes by local municipalities. The specific model then asks how well this has happened during the procedure "freiRaum Ottensen".

The measurement is complex for the general model. While the questionnaire integrates a question of how well people feel included by the local political system this is also used for the measurement of legitimacy beliefs, which shows that the concepts are quite close. Hence, the general models are not statistically able to incorporate all types of representation and estimate their effects for local legitimacy beliefs. While this effect cannot be estimated in the general model, effects of substantive through- and output representation on the delta in legitimacy beliefs in the case of "freiRaum Ottensen" can be measured. The advantage of the specific measurement is that the question does not have to be part of the general core questionnaire but is part of the questionnaire on a real-life consultation process. Substantive through- and output representation can be estimated using various distinct through- and output evaluations of the consultation in "freiRaum Ottensen" even with using the data from the respondents that did not participate but heard of the process.

While the chosen questions do not clearly reference who voiced their opinion during the process, they still manage to assemble parts of the throughput and procedure

evaluation mainly linked to a conception of fairness with incorporating (1) understandability of the process and its role for the decision, (2) accessibility of information, (3) perception of local municipality incorporating ideas that were new to them. This can be seen as a proxy for the perception of STOR during the process. Questions used to measure STOR can be found in Table 7. The measurements for the specific model were chosen because they contained information for those that heard of the process and did not participate and those who did participate, which marks a relevant distinction in my analyses. The questions for the specific model were combined into a mean index for the analyses.

Table 7 Measurement of Substantive Through- and Output Representation (general regression, specific regression)

Measurement of perception of substantive through- and output representation	
General Model	**Specific Model**
When it comes to important decisions, local politics in [city] gives citizens the opportunity to contribute their attitudes and knowledge to the decision-making process.	In the course of the process, I have come to understand better how the decisions come about. I felt well informed at all times about the planning and felt well informed about current developments. How the results of participation were incorporated into political decisions was comprehensible for me. Through the project "freiRaum Ottensen" new insights (e.g. new ideas) were gained.

The ‘acting for’ dimension of representation is the last aspect necessary to measure. Descriptive input representation and substantive through- and output representation were described as rather procedural aspects influencing legitimacy beliefs (see Chapter 2.3). DIR is displayed either (1. general) as participation in a consultation organized by a city or (2. specific) as participation in “freiRaum Ottensen”. STOR is displayed as (1. general) evaluation of how well the city includes citizens into political decision-making and (2. specific) how well citizens felt included by the procedure “freiRaum Ottensen” in terms of aspects of understandability of the process, incorporation of citizens ideas into decision making and working with new ideas from the citizen consultation.

For substantive outcome representation, I decide to stick close to the definition by Pitkin (1972) describing an ‘acting for’ representation as the fulfilment of needs by the actions of a local government after a consultative procedure (see Chapter 3.1 and Chapter 3.2). This path of inducing legitimacy beliefs is distinct from the previously described paths that would influence legitimacy beliefs by citizens being more accepting of the procedure in which decisions are induced. Substantive outcome representation (SOR) is very much focused on results only and can thereby be given, even when

there is a decision made without a consultation procedure. This incorporates questions on the effects the political decisions may have on the daily life of citizens. The general models measure it exactly this way for the complex of mobility behaviour and mobility needs. Substantive outcome representation in the context of a consultation of a mobility planning process will mean measuring how well a person is represented in the urban space with their individual mobility needs (see Chapter 4). For the general model, I argue that needs articulated towards the urban space previously (e.g. through earlier participation) could be better fulfilled by now if a person has been politically active. I consider local democratic systems to be responsive to the consultations they offer. For this, I chose to work with an item battery, originally containing fourteen different needs to the urban space that can be clustered along theoretical dimensions. Only 10 are used in my models.

For (1) basic needs, I work with items on barrier free accessibility, costs, safety and security, which I consider key needs to be fulfilled to be able to be mobile on a very basic level. I work with aspects of (2) time-efficiency on a second need dimension. Time-efficiency is considered to be important for the working part of the population. On this aspect, I work with questions on speed and punctuality[37]. The third cluster is the cluster of the more (3) individualist need spectrum, where transport needs to be comfortable, fun and relaxing. When looking at these groups of needs they seem to be hierarchically ordered (see Chapter 4.2). While it is simply not possible to be mobile if the individual cannot afford or use a mode of transport (basic needs), it is plausible that individuals would use a certain mode of transport even if they assign high importance to the comfort and consider the respective mode uncomfortable.

To estimate the need fulfilment and thus the substantive representation in the outcomes of urban planning, I chose to work with an IS/OUGHT evaluation very similar to the one chosen for measuring legitimacy beliefs. The questionnaire incorporates 14 questions on the importance of certain needs for the respondent – all measured on a five-point Likert scale. Additionally, respondents were asked to assess the current conditions (IS evaluation) while (1) cycling, (2) using public transport and (3) driving by car. To estimate need fulfilment, I will use the same strategy that was already

[37] Flexibility was omitted from this analysis after realizing it did not correlate good enough with the other variables to account for acceptable model fit indices in the confirmatory factor analysis.

established for legitimacy beliefs. The OUGHT dimension for mobility needs is described by the importance of different aspects for an individual person. E.g. while the working mother might find speed very important, a disabled person with higher age may find barrier free accessibility more important than time efficacy. This was partly confirmed by the cognitive interviews on the questions. The difference between the IS and OUGHT dimension shows how good the current mobility system can fulfil the needs of individuals. The respective questions can be found in Table 8.

I will be focusing on the OUGHT as the importance of features of an urban mobility system vs. the IS as an evaluation of the features of the current mobility system when using habitualised mode of transport (modes used at least monthly). Therefore, we measured the importance of needs on the individual level on a five-point Likert scale for the OUGHT-dimension (see Table 8). The OUGHT dimension is measured to account for the fact that individuals place different importance on different features of the mobility system (or: needs linked to mobility). While e.g. a disabled person will consider barrier free accessibility more important than an able-bodied person, a poor person might consider low costs more important than a rich person. According to this, a bad IS condition in terms of basic need fulfilment can be more harmful to a disabled and/or poor person than to an able-bodied, rich person meaning that the disabled, poor person is less substantively represented in the urban space.

Table 8 Measurement of Substantive Outcome Representation (general regression)

	Substantive Outcome Representation (general)	
	$\boldsymbol{OUGHT - Dimension_{Need}}$	$\boldsymbol{IS - Dimension_{Need}}$
	Please think now about the daily journeys you make. How important are the following criteria for you personally? It is important to me personally that... [measured on a 5-point Likert scale]	Suppose you were to make your daily journeys by car/public transport/bike. When I drive... (distinct variables per mode of transport) [measured on a 5-point Likert scale]
	Basic Needs	
Safety	... I am safe in traffic.	...I feel safe in traffic.
Security	... I am protected from crime.	...I feel protected from crime.
Low Costs	… costs are low.	...I travel at a low price.
Barrier free Accessibility	… I travel barrier free.	...I travel barrier-free.
	Time Efficacy Needs	
Speed	... I am fast.	...I am fast.
Punctuality	... I am punctual.	...I am punctual.
	Individualist Needs	
Relaxation	... I travel relaxed.	...I travel relaxed.
Comfortability	… I travel comfortably.	...I travel comfortably.
Fun	… I have fun.	...I have fun.

$$Need\ Fulfilment = IS_{Need\ (all\ modes)} - OUGHT_{Need}$$

It is useful to clarify the estimation procedure behind the IS condition in this model. It is rather unlikely that I can take the evaluation of the IS condition from one evaluation variable per need, since the evaluation variables were divided among modes of transport. Individuals give their evaluation on each mode of transport relevant in the urban space and whether it satisfies one specific need. For example, the same individual might cycle to work, they may use a car for grocery shopping and go to the bar/club by public transport. They are thus asked whether e.g. they are fast while cycling, fast while driving a car, fast while walking. These 'habitualised modes' are all included when the estimation of IS_{Need} takes place. Individuals are classified as users of every mode of transport they use at least monthly. This leaves us with 7 user groups for every combination of the three modes of transport.

(1) Car Drivers
(2) Cyclists
(3) Public Transport Users
(4) Car Drivers/Cyclists
(5) Car Drivers/Public Transport Users
(6) Cyclists/Public Transport Users
(7) Car Drivers/Cyclist/Public Transport Users

For these questions the fulfilment of the needs: barrier free accessibility, low costs, safety, security, speed, punctuality, comfort, fun and relaxation are measured. These needs are all linked to a desired mobility in the urban space. To get a useful approximation of a users' evaluation of the transport system, I chose to work with an average on every need, because I assume that individuals deliberately switch between all their habitualised modes of transport. For the value on the variable $Evaluation_{Need\ (all\ modes)}$ an individual that only travels by car will get the value of their evaluation of the respective need while travelling by car. A person that frequently travels by bike or public transport will get an average evaluation of the respective need for their habitualised modes (cycling, public transport). For example, when asking whether travelling through the city is cheap (need for low costs), the person might answer with the value 5 (full agreement) while answering with the value 3 (neither agreement nor disagreement) when evaluating the public transport. Their evaluation of a need for their habitualised modes is then the average meaning the sum of need evaluation across the modes divided by the number of modes frequently used.

$$IS_{\,Need\,(all\ modes)} = \frac{\left(\sum_n IS_{Need\,(one\ mode)}\right)}{\sum n}$$

$$IS_{\,Need\,(all\ modes)} = \frac{5\,(cycling) + 3\,(public\ transport)}{2\,(number\ of\ modes)}$$

For the general models this measurement of substantive outcome representation refers to the built environment and offers insights on how well individuals are mobile in the cities they live in. This approach considers (1) different emphasis on needs by different individuals and (2) different modes of transport used recently. For the specific models a more specific measurement is used considering the changes in need fulfilment induced by the participatory procedure "freiRaum Ottensen". While the dyadic approach will be able to measure a substantive representation in the outcome as an outcome from earlier planning decisions, the more specific approach will try to measure perceived changes of the need fulfilment through a specific participation process. Differences in need fulfilment before the participatory process of "freiRaum Ottensen" will not be included into the model, since I consider differences before the process irrelevant when trying to measure substantive effects of the process on legitimacy beliefs. If a person is very well represented beforehand and perceived no change through the planning decision, they are not represented in the planning decision. This is neither normatively considered good, nor bad. It is seen as a given condition of the process. A person that has a very positive evaluation of a certain need in the dyadic measurement and perceives the planning decision to still improve this condition is substantively represented in the outcome. The need groups are similar to those used for the needs measured in the dyadic measurement. However, due to multicollinearity issues caused by the small n and low values on perceived change among the respondents, three models had to be estimated to differentiate between the need groups (see Table 28 in appendix). Additionally, an extra model was estimated for "freiRaum Ottensen" where all needs are treated as one variable (substantive outcome representation)[38]. The original variables were chosen in a combination of theoretical evaluations (e.g. by Dangschat & Segert, 2011), existing measurements from previous studies (e.g. by Engel & Pötschke, 2013) and empirical considerations (e.g. the correlations between the

[38] This was done because of high multicollinearity that appeared when working with "changes in need fulfilment through the process" rather then "need fulfilment".

separate measurements). To get an overview over the wording of the questions see Table 9.

Table 9 Measurement of Substantive Outcome Representation (specific regression)

Substantive Outcome Representation (specific)	
(5-point scale "much less than before" = 1, "somewhat less than before" = 2, "will not change" = 3, "somewhat more than before" = 4, "much more than before" = 5)	[Introduction describing the measures after the consultation in Ottensen] Do you anticipate changes in your daily mobility?
Basic Needs	
Safety	...I will feel safe in traffic.
Security	...I will feel protected from crime.
Low Costs	...I will be able to travel at a low price.
Barrier free Accessibility	
Time Efficacy Needs	
Speed	...I will be fast.
Punctuality	…I will be punctual.
Individualist Needs	
Relaxation	...I will be relaxed.
Comfortability	...I will be comfortable.
Fun	...I will have fun.

7. Representation and Legitimacy Beliefs: Results from 5 German Case Studies

This chapter tries to answer the question: **Do levels of representation interact in consultative policy making.** Thereby it takes a closer look at the mechanisms between DIR and STOR and later DIR, STOR and SOR. **So, does descriptive input representation (DIR) increase substantive through- and output representation (STOR)?** And, **does substantive through- and output representation (STOR) increase substantive outcome representation (SOR)?** While theoretically this seems straightforward it has not yet been clarified that participation translates into feeling heard and later, policy results (see Chapter 7.3). Furthermore, I try to answer the question: How does representation through consultation shape local legitimacy beliefs? I differentiate between two potential effects. An effect of the procedure by asking: **Does descriptive input representation (DIR) increase local legitimacy beliefs? (Procedure) And, does substantive through- and output representation (STOR) increase local legitimacy beliefs? (Procedure)** And the outcome by addressing the question: **Does substantive outcome representation (SOR) increase local legitimacy beliefs? (Outcome)** (see Chapter 7.4).

In the previous chapter I referred to the measurements of my concepts of legitimacy beliefs, descriptive input representation, substantive through- and output representation and substantive outcome representation (see Chapter 6.2). Most of the theoretical

concepts cannot be measured by using one manifest variable. For legitimacy beliefs, substantive through- and output representation as well as substantive outcome representation, I will use indices. This has many advantages. First of all, it enables me to integrate more aspects of a theoretical constructs, for example to capture different aspects of basic needs (barrier free accessibility, safety, ...) when working with the overall term “basic mobility needs”[39].

I used confirmatory factor analysis (CFA) and extract factor scores for the variables to use for measurement of the theoretical constructs. In most cases, I will use simultaneous confirmatory factor analysis (SCFA) while estimating several theoretical constructs e.g. for the need groups. Here, it is important to find out whether the theoretically suggested variables indeed measure the suggested latent constructs (e.g. basic needs, time-efficiency needs, individualist needs) and whether these latent constructs are distinct. I consider all variables to be *effect indicators* (not cause indicators). This means that I assume that the latent variables (distinct needs) cause the observed variable. Effect indicators are more often used in the social sciences (Bollen, 1989, p. 65). I started with the idea that different groups of people have different realities that emphasize different needs. For example, I assume that some individuals due to their work situation, will emphasize time-efficiency needs. In this theoretical conception the needs are key to peoples’ societal condition. A high need for time-efficiency will induce a need for punctuality and flexibility in the mobility context.

Some material conditions (like e.g. a disabled body or poverty) will lead to emphasizing a need for basic accessibility of conditions. Basic accessibility needs are then considered to induce higher needs for barrier freedom, low costs and bodily integrity (see Chapter 4.2. A first step of my analysis will be the assurance that these need groups can be subsumed under one category by using confirmatory factor analysis (see short description of the derived factor scores in Chapter 7.1 and results of the analyses in Table 25 and Table 26 in the appendix). The data used can be considered nested as I work with several city contexts, meaning that the individuals sampled (Level 1 units)

[39] A combination of the variables is here considered a more valid measurement than one of the manifest variables could offer (Latcheva and Davidov, 2019, p. 896). Using indices is considered a practical way to reduce the social desirability bias and reduce measurement errors. Measurement errors are less severe when researchers work with more than one variable. Since measurement errors are expected to be random errors they are considered to cancel each other out the more variables are added for the measurement of a construct (Latcheva and Davidov, 2019, p. 897).

are from different municipalities (Level 2 units). To make sure latent factor means are comparable it is suggested to test invariance between different contexts – at least when following suggestions aiming at cross-national comparison (Davidov et al., 2018, p. 631). I argue that due to the different mobility cultures in our observed case studies, unequal understanding and answering of the questions might be likely. I thus choose to test configural, metric and scalar invariance models against each other by assigning the contexts to groups before looking at mean values of factor scores. This procedure is called multi-group comparison (MGC). This is applied before engaging in descriptive analysis, since it is one part of my operationalization strategy (see Chapter 7.1 and Table 25 and Table 26).

Obviously, analysing paths between my key concepts would be possible within a structural equation model. However, I chose to work with Dummy and Ordinary Least Squares (OLS) regression. I consider this a useful procedure, since it is straightforward to interpret and at the same time produces robust results. It also enables a step-by-step inclusion of the independent variables of interests with focus on the changing effects through confounding variables. OLS Regression will thus enable flexible changes and a comparative dimension along the models that is useful for answering my research questions in more detail. In ordinary least squares regression it is possible to test how a dependent variable y varies with changes in several independent variables x (Wooldridge, 2014, p. 18) (see Chapters 7.3 and 7.4). All assumptions for linear regression will be tested in Chapter 7.2.

The previously mentioned nested data structure will pose a problem to a normal ordinary least squares regression. Still, I choose to not estimate multilevel models. First of all, the number of Level 2 units (cities) is with an n of four still quite low which will reduce the expressiveness of such models. Additionally, there are no specific context effects I am interested in. I argue that I can solve the most relevant problems of context differences within a Dummy Regression (Wooldridge, 2014, pp. 391–392). This means that I include dummy variables for the different cities to get a city de-meaned model (as in e.g. deHaan, 2020). Another example of this procedure is often used for panel data, since this procedure produces exactly the same results as using time-de-meaned data. Obviously, this is usually only applicable with a lower amount of researched time points. Coefficients, standard errors and other major statistics estimated are usually equal to the de-meaned models such as fixed effects regression for panel data and

can be interpreted accordingly. Usual assumptions of OLS regression still hold (Wooldridge, 2014, p. 392). The procedure reduces omitted variable bias by controlling all city specific constants (deHaan, 2020, pp. 8–10), which usually leads to larger R^2 statistic (Wooldridge, 2014, pp. 391–392). The results of these Dummy regressions for representation and legitimacy will be shown in the general models in Chapters 7.3 and 7.4.

In the **general models**, I use **local legitimacy beliefs as a dependent variable** derived as a factor score from the multigroup approach simultaneous confirmatory factor analysis. Derived from 5-point agreement scales and transformed to a weighted index this variable can be considered to be metric and meet the assumption of ordinary least squares regression, for which a metric dependent variable is needed. The same argument holds for the **dependent variables of the three groups of need fulfilment measuring substantive outcome representation**. My measurement of the **dependent variable substantive through- and output representation** contains only one variable measured on a five-point Likert scales. Usually these variables are rather considered to be ordinal but often also used as metric scales. To keep the model structure constant, I decide to not change my method of analysis here and still work with a Dummy regression. I argue that five point Likert scales are considered to produce robust results when using ordinary least squares estimators (as I do with Dummy regression) (Norman, 2010). Additionally, they are commonly used in parametric procedures in the social sciences (Wu & Leung, 2017). For the **specific models** especially referring to the **change (Delta) in legitimacy beliefs as a dependent variable**, I chose to work with a regular Ordinary Least Squares Regression. Furthermore, I use **changes in need fulfilment after the consultation as a dependent variable to measure substantive outcome representation** and **evaluation of the procedure "freiRaum Ottensen" as a dependent variable for substantive through- and output representation** (see Chapter 6.2). I previously described that I only use the case of Hamburg-Ottensen in the specific estimations, because (1) there is panel data available and (2) the presence of Ottensen as a best-case example yields advantages when it comes to searching for specific effects participation can have if well organized. It is neither possible nor necessary to include city dummies in this context. Sample sizes are rather small within the specific models since the probability of fulfilling the requirements of being part of the sample are high. I was only able to observe individuals that heard of the procedure and participated in the questionnaire at two timepoints.

During the first part of Chapter 7.1 I will start with presenting and interpreting the results from the simultaneous confirmatory factor analyses, since the factor scores estimated will capture the most relevant theoretical concepts in the regression analyses: **local legitimacy beliefs, substantive through- and output representation** and **substantive outcome representation** (in terms of needs linked to possibilities of being mobile in cities). I will work with the full samples from all cities including both (1) the random sample from the district's population and (2) the participant sample. Individuals that participated more than once will be captured by using their first answer only. Their participation in T2 will be excluded to account for statistical independence in the data.

For the regression analyses different sets of variables were included into the statistical analysis. City dummies were included first for **all general models**. This was done to observe the changes in the adjusted R^2 for these variables separately since they are considered to fix effects and thus to control all unobserved variables constant in the respective city. This means that they usually account for large changes in R^2 (Wooldridge, 2014). I separate them to get a better idea of the changes in the adjusted R^2 through the other (theoretically driven) variables. In a second step I included socio-demographic variables **in all general models**. In most of the **general models** an inclusion of the frequencies of the use of different modes of transport was useful. All socio-demographic variables were included as k-1 Dummy variables. A lot of them were dichotomized so they were able to account for the necessary group size[40]. The 'no response' categories for income and age were included since a large part of individuals (10% to 20%) did not answer the respective questions in the questionnaire. For age, this was only the case for the **general sample** (see Table 12).

Nevertheless, there was no theoretical background to include these variables into the **general model explaining STOR**, which is why they were left out in this context[41]. The **general models** explaining substantive through- and output representation and

[40] This is especially true for education, where low and medium education need to be assigned to one group. Other variables included in this block are gender (non-male/Reference: male), education (low and medium/Reference: high), equivalence income (Below median equivalence income/no response/Reference: Above equivalence income), disability (disability/Reference: no disability), age (under 35 years old/Reference: 35 – 65 years old/over 65 years old/no response).

[41] The frequency of the use of modes of transport was measured on a five-point Likert scale and I deliberately decided to not include pedestrians, since it was the category with the lowest variance.

local legitimacy beliefs were assumed to be prone to political involvement (internal political efficacy, external political efficacy and local political interest), which is why I introduced them as further control variables. They were not included into the **general model explaining SOR**, as there was no reason to believe these variables would in- or decrease need fulfilment in the urban space. The dynamics of representation are captured with including basically DIR since the theoretical model specifies a path from representation in the input to representation in the throughput and output whereas substantive outcome representation should follow from representation in the input and through- and output (see Figure 3 for the path model for representation dynamics and Table 10 for an overview of the in-/excluded variables in the general models estimated). After omitting missing values on all variables necessary to explain the phenomena of interest I work with a constant analytical sample of 978 respondents for the analyses of the general models (see Table 12). This is useful since Chapter 7.1 can clarify the exact composition of the sample used for all analyses.

Table 10 Variable Blocks (general regression)

		Dependent Variables		
		SOR	**STOR**	**Legitimacy Beliefs**
City Dummies		Yes	Yes	Yes
Demography		Yes	Yes	Yes
Modes of Transport		Yes	No	No
Political Involvement		No	Yes	Yes
Representation	**DIR**	Yes	Yes	Yes
	STOR	Yes	No	No
	SOR	No	No	Yes

For the **specific models** that deal with the case of “freiRaum Ottensen”, I specified the used measurements accordingly. The city dummies are dropped, since there is only one remaining case. **Specific models explaining SOR** include predictor variables for demography, modes of transport used and representation (DIR and STOR). **Specific models explaining STOR** include demography, political involvement and representation (DIR). Also, they include modes of transport. This was done in reference to the structure of the processes that referred to urban mobility. Thus, it was more plausible that modes of transport used may influence the political evaluations. A car driver for example might not feel heard in a participatory procedure that already decided for an almost car free neighbourhood. At the same time, modes of transport were also included into the **specific models explaining the change in local legitimacy beliefs**. The same is true for the model estimating the changes in legitimacy beliefs. While

"freiRaum Ottensen" may have the potential to increase cyclist's legitimacy beliefs, it might not hold that potential for car drivers. Another difference is that the measurement of STOR as evaluation of the throughput of a real-life procedure enabled us to include all three aspects of representation (DIR, STOR and SOR) into the regression analysis and thus take a closer look at the differences between them. With estimating a delta for legitimacy beliefs only panel participants could be included into the analytical sample. It was also necessary that respondents had at least heard of the procedure "freiRaum Ottensen". After omitting missing values, this leaves me with a rather small sample of 150 respondents (see Table 14). At the same time the panel models add useful information and the possibilities to look more specifically at the effects of participation in consultations (for an overview of the in-/excluded variables in the specific models see Table 11).

Table 11 Variable Blocks (specific regression)

		Dependent Variables		
		SOR	**STOR**	**Legitimacy Beliefs**
City Dummies		No	Yes	Yes
Demography		Yes	Yes	Yes
Modes of Transport		Yes	No	Yes
Political Involvement		No	Yes	Yes
Representation	***DIR***	Yes	Yes	Yes
	STOR	Yes	No	Yes
	SOR	No	No	Yes

7.1. Estimation of Factor Scores from Confirmatory Factor Analysis and Descriptive Insights into the Larger General Sample and Smaller Longitudinal Sample

After an introduction to the variables relevant to my analysis, a descriptive analysis of the variables is relevant. This helps to identify possible problems for the analysis. It also helps to get an idea of the general distributions, means, outliers and variances of the relevant variables. I will do this by first examining the blocks of variables in the order in which they are added to the (dummy) OLS regression models. For measurements of the theoretical concepts I cannot only use manifest variables, which is why I chose to generate factor scores from a multigroup comparison approach in confirmatory factor analysis. Before going into detail on the sample composition, I will shortly clarify the composition of these factor scores to assure that the meaning of the values can be understood. This is the case for the three variables measuring substantive outcome representation (**basic needs satisfaction, time-efficacy needs satisfaction**

and individualist needs satisfaction). I will not lay a focus on this analysis, since it is only used as a tool to generate the respective variables for regression analysis.

So, to determine whether individuals are represented in their local mobility politics, I use a measurement of mobility needs that were theoretically framed in Chapter 4. I first theoretically grouped them and then explained why they have different importance for being mobile. These three needs – **basic needs, time efficacy needs and individualist needs** – will be incorporated into the model. Whether the data structure fits this theory was tested using a multigroup comparison simultaneous confirmatory factor analysis approach. The groups for the multigroup comparison tests were the different city contexts, since they were assumed to be influential to people's answers to the questions of their preferred movement (importance of needs) through a city. Assuming an equal composition of the factors for the different groups led to an estimated comparative fit index (CFI) of 0.89. The CFI is generally somewhat below the suggested threshold of 0.90 for accepting a model, which means that we have to be at least careful when interpreting the factor. However, 0.89 is still quite close to this threshold, which is why I argue that for pragmatic reasons I am going to use the estimated factor scores for analysis. I also consider the scientific theory relatively strong and assume that the CFI would be higher if I was able to measure single factors (like time efficacy needs and individualist needs) using more variables than I am currently able to use. I thus decide to accept the respective factor structure.

When assuming equal loadings (metric invariance), the CFI decreases to 0.88 (ca 0.01). Even though the Chi² test would be the test of choice when comparing models and looking for a significantly worse fit through new restrictions (like equal loadings) it is not usable in this case since it easily becomes significant for samples larger than 300. Chen (2007) suggests to interpret changes in CFI larger than 0.01 as significant changes seriously decreasing the goodness of fit of the model. This does apply when assuming equal loadings (metric invariance). However, the critical aspect when comparing between the context is, as in many studies, scalar invariance (equal intercepts) which will assume equal intercepts for the different contexts (Davidov et al., 2018). Here, the CFI decreases with 0.02, so that we can only assume partial scalar invariance since intercepts are not equal (see Table 26). This is a limitation to the study that cannot assure comparability between the measurements for SOR between the respective cities, which should be kept in mind. I argue, that through the choice of Dummy

regression I am still able to control these small uncertainties, especially since the mathematic difference between 0.02 and 0.01 is not large. Still, I chose to work with the factor scores estimated. Estimates for the weighted factor scores can be observed in Table 26.

The differences between the cities will be examined first since they seem to be highly relevant for mobility related questions. I will focus on the **city dummies** for controlling for context-specific differences such as topography, cycling infrastructure, participation culture, etc. These contextual factors mark differences induced by the context. They are used because the number of cities surveyed is nowhere near a useful number of cities for multilevel analysis, but still needs to be controlled for. These effects cannot and will not be interpreted in the regression analysis because they control for many factors at once (namely all those that are stable for the urban context) and it is very unclear which aspect is causing the effect. Altona was chosen as the reference category because the largest proportion of the analytical sample (26.54%) came from Hamburg Altona. Marburg with 24.49% and Hamburg Ottensen with 22.13% of the sample are almost as large as the Altona sample[42].

For the **demographic variables** it is important to note that the groups 'low' and 'medium' education had to be merged into one group and not treated as separate groups, as is usually the case in the ISCED classification. This is due to a desire for greater statistical power and is particularly relevant as we have not been able to reach these socio-demographic groups well and only a small number of people with a low or medium level of education have responded to our surveys. While this is typical for postal questionnaires, it still poses problems to a research that is especially focused on the representation of marginalised groups. Partly the problem with the low sample sizes among these groups may be induced by the chosen areas researched. Marburg is a student's city. The parts of Altona researched and Ottensen are rather the opposite of deprived neighbourhoods. With 186 people (19.57%) of the total sample, the low/medium educated group is still large enough to have some statistical power.

[42] A small problem is that I will use Hamburg-Ottensen and Hamburg-Altona as differentiated samples, because Hamburg-Ottensen is a district in the district of Altona. However, both samples were drawn in combination with different participation procedures and are therefore treated as different contexts.

While the educational status of groups was one variable of interest I also chose to research how income influences the respective dependent variables. For income the equivalence income was estimated by using the class middles of the originally ordinal variable, as well as the household size and number of kids of different age classes living in a household. Before the exclusion of the people I estimated a median equivalence income to split respondents in two groups. This median equivalence income was at 2.333 € monthly, which is much higher than an at-risk-of-poverty income of 1.251 € (Statistisches Bundesamt, 2021). This shows once again that the sample is rather special and partly not able to study marginalised groups, which should be considered. After excluding all individuals in the sample who did not answer all questions relevant for the Dummy regression, 33.50% of individuals below the estimated Median equivalence income remain in our dataset, suggesting systematic non-response of this group to several items. However, the group size is still large enough for meaningful estimations.

Income is always a variable people do not like to answer. For the 11.58% missing values I chose to add a non-response category as a dummy to the regression analysis. This was considered important to see whether the group systematically differed from those who responded to the question. Non-male people are underrepresented in the sample, which is typical for surveys. The sample consists only 46% of non-male people as compared to 54% male respondents. This has no dramatic effect on the analyses since the group is still relatively large. Due to the mobility and basic needs theory presented in Chapter 4 it was important to include people that have mobility restrictions, for example, a visual impairment or walking disabilities, into the sample. I will call them disabled people, since I consider them disabled by infrastructural features of urban contexts. They make up 9.94% of the sample. Although these types of disability account for many of the mobility problems and needs of older people, age is still included in the analysis as it is likely to have a specific impact on policy attitudes.

The age variable was a problem in the questionnaire as 23.05% of respondents did not answer the question. This seems to be caused by the use of an open question asking for year of birth rather than a classification of age, as shown by the specific sample where we used a classification and had almost no missing values. I decided to add the category 'no response' for age to at least control for age dynamics and to check for specific effects of those who did not fill in the age question Age is divided into three categories, one of which can be described as the stage before and at the very

beginning of a career (younger than 35 years). This category is rather large as it was difficult to obtain a relatively large number of respondents. 18.24% of respondents fall into that category. The second category - and the reference category in the analysis - is also quite broad, ranging from 35 to 65 years of age, which basically describes the period during which a person is an active part of the labour market. With 44.26% of respondents, this is the largest category, making it a useful reference category for the OLS regression. In addition, it is theoretically the most plausible reference category, since I assign to this category certain time efficiency needs that are considered different from those of the younger and older groups and that are mostly induced by labour market integration. The over-65 group, which is assumed to be made up of pensioners, represents 14.47% of the respondents (see Table 12).

Table 12 Descriptive Results for General Regressions

Sample 1: General Regression					
	Mean	**Median**	**Stddev**	**Variance**	**Range**
Cities	*0 for not part of the group and 1 for part of the group*				
Altona	26.54%				0-1
Marburg	24.49%				0-1
Offenburg	19.26%				0-1
Ottensen	22.13%				0-1
Wuppertal	7.58%				0-1
Demography	*0 for not part of the group and 1 for part of the group*				
Low/Medium Education	19.57%				0-1
Income					
Below Median Equivalence Income	33.50%				0-1
Above Median Equivalence Income *(Reference Category)*	54.91%				0-1
No Response	11.58%				0-1
Not Male	46.00%				0-1
Disability	9.94%				0-1
Age					
Younger than 35 years	18.24%				0-1
35 to 65 years old *(Reference Category)*	44.26%				0-1
Over 65 years old	14.47%				0-1
No Response	23.05%				0-1
Modes of Transport	*1 never to 5 almost always*				
Bike	3.32	4.00	1.54	2.36	1-5
Car	3.66	4.00	1.35	1.83	1-5
Public Transport	2.67	3.00	1.23	1.52	1-5
Political Involvement	*1 low involvement to 5 high involvement*				
Internal Political Efficacy	3.86	4.00	0.84	0.70	1-5
External Political Efficacy	2.40	2.50	0.72	0.53	1-5
Local Political Interest	3.43	3.00	0.94	0.89	1-5
Representation					
	0 no participation 1 participation				
Descriptive Input Representation	43.55%				0-1
	1 low STOR 5 high STOR				
Substantive Through- and Outcome Representation	2.85	3.00	0.90	0.81	1-5
Substantive Outcome Representation	*-4 low SOR 4 high SOR*				
Basic Needs Representation	1.26	1.23	0.76	0.58	-1.9 - 4.0
Time Efficacy Needs Representation	1.83	1.95	0.76	0.57	-1.4 - 4.0
Individualist Needs Representation	1.04	1.07	0.76	0.57	-2.4 - 4.0
Legitimacy Beliefs					
Legitimacy Beliefs	-1.48	-1.50	1.02	1.05	-4 - 1.5
n	978				

Note: The mean of a 0 / 1 coded variable corresponds with the share of people belonging to a certain group.

The modes of transport used in the regression models are cycling, car and public transport. A first overview of the means and medians of these variables shows that the individuals in my analysis sample seem to slightly prefer private transport (such as cycling or car) to public transport. While cycling with a mean of 3.32 was slightly above the middle category 'one to three times a month', the median of 4 is even higher and shows that more than 50% of the sample cycle at least 'one to three days a week'. The same is true for car use with an even slightly higher mean of 3.66. Public transport has a mean of 2.67, meaning that on average respondents use public transport slightly less often than 'one to three times a month', with a median of 3 meaning that 50% of respondents use public transport at least 'one to three times a month'. A brief overview of the point-biserial correlations between the city dummies and the modes of transport shows that the medium-sized cities are associated with lower rates of public transport use and higher rates of car use, while the population of the two areas in Hamburg seems to use public transport more often. Respondents in Ottensen were less likely to use a car and more likely to cycle than respondents in the other areas. This is also true for respondents from Altona and makes sense as Hamburg is a relatively flat city with good cycling infrastructure. The topography also seems to reduce people's willingness to cycle, as can be seen from the negative point-biserial correlation of the respective city dummies of Marburg and Wuppertal (see Table 13).

Looking at respondents' political engagement, my analytical sample tends to be confident about their own ability to participate meaningfully in politics, but also critical about the political responsiveness of the political system. The mean score for internal political efficacy is well above the medium category with a score of 3.86 and a median of 4. The sample scores low on external policy efficacy, which is an assessment of the responsiveness of the system. The mean is 2.4 and the median 2.5. A brief overview of the differences between the cities (again using point-biserial correlations) shows almost no significant differences between the cities, except that Offenburg is negatively correlated (-0.09***) with external political efficacy. Local political interest is also slightly higher than the middle category of respondents, with a mean of 3.43 and a median of 3 (see Table 12 and Table 13).

For the general measures of representation, I start with reflecting on **descriptive input representation** measuring whether a person was involved in local consultation procedures in the past 12 months. 43.55% of the respondents have been involved into local

consultation procedures. For **substantive through- and output representation** or the feeling to be included into policy making processes we find values that lie below the middle category with a mean value of 2.85. The measures for substantive outcome representation can range from -4 to 4 with the medium category zero. In the sample used for regression analysis this scale only reaches values from -1.9 to 4.0 for **basic needs**. This means that no one's basic needs are completely unfilled and usually people should find ways to be mobile with a mode of transport of their choice. A mean value of 1.26 shows that there is usually at least some over fulfilment of basic needs in the urban space. The representation of **time-efficiency needs** e.g. scores somewhat higher with a mean value of 1.83 and median of 1.95. The representation of **individualist needs** scores slightly lower with a mean value of 1.04 but is still on the positive side of the scale. The point-biserial correlations with the city dummies show that there is significantly lower basic needs representation in Offenburg (-0.06**) and significantly higher basic needs representation in Marburg (0.11***). There are no differences in the representation of time-efficiency needs between the cities and a significantly higher representation of individualist needs is shown for Wuppertal (0.07*) (see Table 12 and Table 13).

Local legitimacy beliefs[43] can range from -4 to 4 - the empirically observed range is -4 to 1.5. The empirically given numbers occupy the opposite site of the scale and show that the people in the sample are rather discontent. On average there is an under fulfilment of democratic expectations with a mean value of -1.48. Local legitimacy beliefs are negatively correlated to the Ottensen (-0.10**) sample and positively associated with the Marburg sample (0.07*). There is a marginally significant positive association to younger age and negatively associated with disability (-0.10*). Disabled people are usually politically involved and at the same time not represented in the urban space. Their lower legitimacy beliefs may be explained by that, but the survey cannot fully clarify this. An overview over the correlations also shows that legitimacy beliefs are strongly associated with external political efficacy (0.34***). Other factors of political involvement, such as internal political efficacy and local political interest are negatively associated with legitimacy beliefs. This could be expected, since external political

[43] Here, I decided to drop the question on direct democracy that was part of the questionnaire because it only showed low correlations with the other two aspects (information, consultation). The index represented consists of these two variables. This poses limitations to the study.

efficacy measures perceived responsiveness of a political system – an aspect highly relevant for legitimacy beliefs (see Table 24 in the appendix for an overview). Concerning the levels of representation measured in the questionnaire descriptive input representation – in terms of general participation – is shown to be negatively associated with legitimacy beliefs. Higher need fulfilment (SOR) is at least for basic needs representation in the urban space and individualist need representation in the urban space positively associated with legitimacy beliefs.

Looking at the table of the point-biserial and Phi correlations for association with the city dummies (see Table 13) gives further ideas of the demographic sample differences. For example, the Hamburg district samples are (compared to the other cities) relatively rich. They show positive Phi associations with the category “income above the Median equivalence income”, while the Marburg sample seems to consists of a lot of people below the Median equivalence income (Correlation = 0.11***). Since the city dummy of Marburg is also positively associated with younger age, but not associated with lower education, I consider this an effect of Marburg being a city mainly consisting of students. The Hamburg cases are more strongly associated with the medium age group (35 to 65 years old). General political participation is positively associated with living in Ottensen (0.10***) and Offenburg (0.10***), while it is negatively associated with living in Altona (-0.11***) and Wuppertal (-0.08**) (see Table 13).

Table 13 Point-biserial and Phi Correlations between City Dummys and Variables in the OLS Regression (general model)

	Altona	Offenburg	Ottensen	Marburg	Wuppertal
Lower Income	-0.10**	0.02	-0.06+	0.11***	0.06+
Higher Income	0.11***	-0.04	0.09**	-0.14***	-0.05
No Response (Income)	-0.04	0.04	-0.05+	0.06+	0.01
Low/Medium Education	-0.10**	0.17***	-0.14***	-0.00	0.13***
Not Male	-0.03	0.17***	0.02	0.01	-0.03
Younger Age	-0.10**	-0.09**	0.03	0.13***	0.03
Medium Age	0.08**	-0.08*	0.08**	-0.07*	-0.03
Older Age	0.03	0.02	-0.03	-0.04	0.03
No Response (Age)	-0.04	0.15***	-0.10***	0.00	0.03
Disability	-0.01	0.04	0.01	0.04	0.02
Bike	0.07*	0.08*	0.19***	-0.21***	-0.21***
Car	-0.11***	0.16***	-0.24***	0.13***	0.11***
Public Transport	0.15***	-0.16***	0.09*	-0.07*	-0.03
Internal Political Efficacy	0.11***	-0.03	0.08*	-0.07*	-0.15***
External Political Efficacy	0.07*	-0.09**	0.01	0.02	-0.04
Local Political Interest	0.08*	-0.08*	-0.05+	-0.11**	-0.04
DIR	-0.11***	0.10***	0.10***	-0.02	-0.08**
STOR	0.02	0.08*	-0.02	0.01	-0.07*
Basic Needs (SOR)	0.02	-0.06*	-0.04	0.11***	0.02
Time-efficiency Needs (SOR)	-0.05	-0.00	0.04	-0.00	0.02
Individualist Needs (SOR)	-0.08*	-0.01	-0.02	0.07*	0.07*
Legitimacy Beliefs	0.02	0.04	-0.10**	0.07*	-0.04
n	978				

Notes: Point-biserial Correlations depicted for dichotomous-metric correlations, Phi coefficient shown for dichotomous-dichotomous correlations.
*p < 0.001 ***, p < 0.01 **, p < 0.05 *, p < 0.1 +*

For the other associations between the variables in the regression model, I can observe that low income and low/medium education correlate positive, while low/medium education is negatively associated with high income. These are neither a new, nor a surprising effect, but should be kept in mind, when observing multicollinearity between variables. With 0.15*** and -0.19*** the effects are rather small. Also, having a low/medium education is associated with not answering the question on income (0.06*). Disability shows a strong association with age. Being younger (under 35 years old) is also shown to be associated with higher education, while being older (over 65 years old) is associated with lower education. The highest correlation within our matrix is between local political interest and internal political efficacy. It is positive with a value of 0.45***, which could lead to problems when estimating a regression model. It is thus important to pay attention to multicollinearity and the variance inflation factor (for all correlations see Table 13 and Table 23).The sample for the more specific regressions dealing with

the procedure “freiRaum Ottensen” only differs from the sample used for the general regression in a few aspects. An overview over the city differences by examining the Phi coefficients with the demographic dummies already hints at some of the differences more visible within the specific sample. First, it is important to refer to the sample being relatively small compared to the general sample with only 150 cases induced by the choice of a delta of legitimacy beliefs as a dependent variable. This excludes everyone who was not a Panel participant and/or did not answer one of the questions involved in the operationalisation. Additionally, the sample was reduced by the intention to measure the effects of substantive through- and output representation on legitimacy beliefs, which excludes those questionnaire participants who have never heard of the procedure. Both these problems are at the same time advantages that will help me get an idea of some of the questions the general regression models are not able to answer. Working with panel data, for example, enables me to observe changes in legitimacy beliefs and to find effects besides: more critical people are participating more often. Also, the inclusion of only those who heard of the procedure induces the possibility to differentiate between those who decided to participate and those who did not decide to participate in terms of an evaluation of the procedures through- and output.

With these restrictions I obviously did not arrive at the perfect sample. The first aspect striking is that there are less people with low/medium education in this specific sample, which may first of all be induced by specifically choosing the case of Hamburg Ottensen. The correlation table could show that the amount of people with lower or medium education was with 9.33% especially low in Hamburg Ottensen. The second factor adding up to this is that item non-response is higher among lower/medium education groups. This aspect unfortunately makes it less likely to find effects induced by lower and medium education of the respondents and increases the likelihood of underestimating existing effects through reduced statistical power. Working with the same median income from the whole sample for at least some comparability, it is observable that the income groups do not differ much from the other sample. 30.67% have an income that is lower than the median equivalence income, 44.0% have an income higher than the median equivalence income. 25.33% did not respond to the income question in the questionnaire. This amount is much higher than in the general sample. It is relatively unclear who these people are. By observing the point-biserial correlations between the no response group on income and the relevant dependent variables I cannot identify any significant correlations. However, they seem to be more critical

when it comes to evaluating external political efficacy (-0.23*) and can thus be considered sceptical when it comes to elaborating on the responsiveness of political systems, which makes it very important to not exclude these cases from analysis. Generally, there is a problem with assessing these groups' political attitudes especially since they tend to refuse to take part in surveys. Here, they tend to answer when it comes to their attitudes but are a bit more sceptical when it comes to answering questions about their income. Also, these people less often travel by bike (-0.20*) but are not more frequently using a car or a bus. There are no Phi correlations with the age groups. Since there was only one missing value on age, this time there is no need for an inclusion of an age group that has not responded to the question. Still the association with the oldest age group is relatively high with a Phi coefficient of 0.16 and nearly marginally significant with a p value of 0.101. Since significance is also partly induced by sample size this association has to be kept in mind even though the p-value slightly exceeds the threshold. No associations can be found between the non-response on the income variable and disability, education or being non-male (see Table 24).

When referring to interesting differences between on the one hand the general sample for dummy regression and the specific sample for OLS regression on the change in legitimacy beliefs it is striking that there is a higher percentage of disabled people in the specific regression sample. Disabled people make up ca. 3 percentage points more of the specific regression sample (see Table 12 and Table 14). This might be a result of the procedure "freiRaum Ottensen" itself aiming at increasing the number of disabled people in the participation by offering specific focus groups for them to discuss potential developments in Ottensen. There is 6.91 percentage points less people in the sample for the specific regression that are under 35 years old compared to the general regression and also 3.14 percentage points less people that are older than 65 years. This means that it is especially people from the age group 35 to 65 years that are overrepresented in the district (see Table 14 and Table 12). This generally met the expectations from the correlation table from the general regressions (see Table 13).

Table 14 Descriptive Results for Specific Regressions

Sample 2: Specific Regressions					
	Mean	Median	Stddev	Variance	Range
Demography		*0 for not part of the group and 1 for part of the group*			
Low/Medium Education	9.33%				0 / 1
Income					
Below Median Equivalence Income	30.67%				0 / 1
Above Median Equivalence Income	44.00%				0 / 1
No Response	25.33%				0 / 1
Not Male	43.33%				0 / 1
Disability	12.90%				0 / 1
Age					
Under 35 Years Old	11.33%				0 / 1
35 - 65 Years Old	69.33%				0 / 1
Over 65 Years	11.33%				0 / 1
Modes of Transport		*1 never to 5 almost always*			
Bike	4.02	5	1.29	1.67	1-5
Car	2.72	3	1.35	1.81	1-5
Public Transport	3.25	3	1.12	1.25	1-5
Political Involvement		*1 low involvement to 5 high involvement*			
Internal Political Efficacy	4.04	4	0.76	0.58	1.5-5
External Political Efficacy	2.45	2.5	0.70	0.50	1-4
Local Political Interest	3.83	4	0.86	0.74	1-5
Representation					
		0 no participation 1 participation in "freiRaum Ottensen"			
Descriptive Input Representation	74%				0 / 1
		1 low STOR to 5 high STOR			
Substantive Through- and Outcome Representation	2.74	2.75	0.84	0.70	1-5
Substantive Outcome Representation		*1 low SOR to 5 high SOR*			
Basic Needs Representation	3.13	3	0.57	0.32	1-5
Time Efficacy Needs Representation	3.06	3	0.79	0.63	1-5
Individualist Needs Representation	3.30	3	0.93	0.87	1-5
Legitimacy Beliefs		*-4 negative changes to 4 positive changes in legitimacy beliefs*			
Delta Legitimacy Beliefs	0.22	0	1.03	1.06	-2.5 – 4.0
n	150				

Note: The mean of a 0 / 1 coded variable corresponds with the share of people belonging to a certain group.

When observing the use of modes of transport, we see that the people from the specific sample score higher on cycling and the use of public transport but lower on car use (compare means in Table 12 and Table 14). It is not necessarily the procedure that was part of the survey inducing this pattern but rather the specifics of living in a metropolis with a good cycling infrastructure and public transport system. Also, less parking infrastructure will usually make car use less likely especially in bigger cities. It is still possible that the topic of our study was somewhat more interesting for cyclists than for car users and that there is higher non-response among those more frequently going by car. The individuals in the specific regression sample score very high on internal political efficacy (mean value of 4.04, see Table 14). This means that they agree to the fact that they are able to participate in politics more often, which may also be an effect of having less low/medium educated people in this specific sample. There is a negative point-biserial correlation between these variables (-0.18+) that is marginally significant (see Table 24 in the appendix). It may also be induced by the sample excluding those who have never heard of "freiRaum Ottensen" and overrepresenting participants (74% of the sample participated in the procedure). Here, a look at the point-biserial correlation between internal political efficacy and DIR shows a highly significant positive association (0.35***). External political efficacy is the same value as in the general regressions sample and local political interest is probably due to the high share of participants in a relevant local procedure. The point-biserial correlation between participation in "freiRaum Ottensen" and local political interest shows that (0.26***). The association for education is not prevalent in the case of local political interest (see Table 24).

Since measurements for representation differ from the general sample measurements it is not really possible to compare them, except for descriptive input representation as participation in "freiRaum Ottensen" which has already been part of the discussion. Measurements for Substantive Through- and Output Representation rather refer to the perception of "freiRaum Ottensen" as an inclusive and fair procedure[44]. While this measurement can range from 1 to 5 the middle value of the distribution would be 3. Respondents scored somewhat lower on that measurement (2.74), which shows that in general they are not fully content with the procedure's throughput. Substantive

[44] Four variables mentioned in Table 7 were used. I estimated Cronbach's Alpha to make sure they can be summarized as one index. Alpha was 0.76 which exceeds the necessary threshold.

outcome representation concerning the three needs groups operates with a perceived change through the participation procedure. Here, it is first observable that the respondents do not usually perceive changes for themselves. Mean values are close the the middle category 3 with relatively low variances. Nevertheless, values range from 1 to 5 for all variables and the mean value for individualist need representation is somewhat higher with 3.30 (see Table 14).

7.2. Testing the Assumptions for Linear Regression

To make sure the regression models are valid it is useful to test assumptions for linear regressions. This is done to make sure that the standard errors are calculated correctly and OLS is the best linear unbiased estimator (BLUE). Relevant parameters for this are (1) the distribution of the dependent variable that should at least be close to a normal distribution to reduce (a) chances of heteroscedastic error terms and therefore wrong standard errors and (b) increase the chance for a normal distribution of the residuals. All three aspects will be checked for the ten regression models used to identify the effects between the different levels of representation and effects of representation on legitimacy beliefs. This is important because especially the specific sample has a relatively low sample size, which makes the OLS estimation less robust and susceptible to errors. Additionally, using a generalized variance inflation factor for the full models (not the steps of the models) will be used to be able to identify multicollinearity within the models.

The **normality assumption** is checked by using (1) an optical overview over the distribution of the y-variables from the different models and (2) the Kolmogorov Smirnoff Test (KS Test), a relatively strict numeric test to estimate whether a distribution is significantly different from normal distribution. For the general regression models, I refer to Figure 8 to Figure 12 (Appendix) to observe the normality assumption optically first. While most dependent variables for the general regressions indeed look normally distributed, there seems to be a problem with the model estimating effects on the substantive outcome representation in terms of time efficacy needs, which is not symmetric but left skewed (see Figure 10). While the variable measuring legitimacy beliefs for the general model has slight similarities with a normal distribution, problems might arise with the middle category not being the best occupied category (see Figure 12). Looking at the results from the KS test (mostly verified using a Shapiro Wilk test additionally) we find that the normality assumption is not violated in most models. We find p-values

higher than 0.10 for all general Dummy regression models including the model using legitimacy beliefs as a dependent variable. However, there is a problem with the SOR model using the time-efficiency variable. While the KS Test is insignificant (with a still comparably low p-value close to a marginal significance) the Shapiro Wilk test shows that the distribution significantly differs from a normal distribution (see Table 15).

Table 15 Linear Regression Assumptions Test General Sample

	STOR Model	SOR Basic Needs Model	SOR Time Efficacy Needs Model	SOR Individualist Needs Model	Legitimacy Beliefs Model
Kolmogorov Smirnoff Test	p = 0.37	p = 0.33	p = 0.12	p = 0.24	p = 0.94
Breusch-Pagan-Test	Chi² = 1.23 p = 0.26	Chi² = 0.03 p = 0.85	Chi² = 16.88 p = 0.000	Chi² = 6.3 p = 0.23	Chi² = 6.9 p = 0.01

While we detect nearly no problems with normality in the general (and larger) sample, most of the measurements from the specific (and much smaller) sample also look quite good in terms of the normality of the dependent variables (see Figure 13 to Figure 17 and Table 16). The only variable that significantly differs from a normal distribution is the delta of the legitimacy beliefs of the individual, which looks like a normal distribution but is missing some values on the right side of the histogram (see Figure 17). Here, we must pay special attention to the tests on heteroscedasticity that could in the worst case influence the standard error.

Table 16 Linear Regression Assumptions Test Specific Sample

	STOR Model	SOR Basic Needs Model	SOR Time Efficacy Needs Model	SOR Individualist Needs Model	Delta Legitimacy Beliefs Model
Kolmogorov Smirnoff Test	p = 0.99	p = 0.69	p = 0.91	p = 0.25	p = 0.98
Breusch-Pagan-Test	Chi² = 0.77 p = 0.38	Chi² = 0.86 p = 0.35	Chi² = 0.07 p = 0.79	Chi² = 0.23 p = 0.63	Chi² = 0.73 p = 0.39

To test for **heteroscedasticity** of the residuals, I chose to use the Breusch-Pagan-Test that is based on a Chi² statistics. As previously described heteroscedasticity can influence the standard errors in an OLS regression and is thus influential for the p-values and the R^2. Heteroscedasticity can reduce the efficiency of a model, which can also be a problem for estimation. The null hypothesis of the Breusch-Pagan-Test describes homoscedasticity, thus p-values above 0.05 are needed to be sure of the plausibility of using OLS regression as the best linear unbiased estimate. Otherwise, it will probably be helpful estimating the models once again using robust standard errors,

that will solve the problems with heteroskedasticity. The Breusch-Pagan Test is sensitive to a non-normal distribution of residuals, which is why all models' residual distributions were checked beforehand. All residual distributions are normally distributed.

The table for the overview over the Breusch-Pagan (Table 15 and Table 16) tests show that for most models, problems with heteroskedasticity are not given. For two cases of the general sample, we should indeed be careful, since the Breusch-Pagan test shows that in these models, homoscedasticity is not given. The first problematic model is the model estimating effects on the substantive outcome representation of time efficacy needs – the model that was already problematic in terms of normality, which is not surprising since a normally distributed dependent variable reduces chances of heteroskedasticity. To be able to interpret my models alike, I decided to not use a different analytical approach but to check the robustness of the model by estimating the same model once again using robust standard errors (see Table 27). Since heteroskedasticity influences mainly the standard errors of a model mainly this should give an idea of whether OLS estimation gives us wrong results. Same is true for the general model for the effects of legitimacy beliefs. Here, the same strategy is chosen. This is not the case for the delta of legitimacy beliefs, where non-normality of the dependent variable was the problem. Since non-normality itself does not influence estimates or standard errors no further adjustments must be made in these cases.

Multicollinearity effects both standard errors and estimates and is the most severe of all problems when trying to reach unbiased estimates in OLS regression. The correlation tables already hinted at possible problems especially in the specific regression sample, when looking at the measurements for substantive outcome representation for the three need types. Here, all three measurements correlated very significantly with correlation coefficients above 0.8 (see Table 24). This was not the case for the general regression, where it was possible to show via a confirmatory factor analysis, that the three need groups are indeed different groups and can be treated differently (see Table 25 and Table 26). What changes for the need groups in the specific sample is that I no longer use the measurements of importance of the different aspects but focus on the expected change through the participatory procedure with most people not expecting any changes in their daily mobility. Since it is the specific measurement causing the strong correlation of the variables (and maybe also the low sample size) not the non-existence of the three need categories as shown by the confirmatory factor analysis, I

decide to add up the three concepts. I also chose to estimate their effects in differing models to be able to interpret the singular need types additionally (see Table 28). I do this to still be able to differentiate between the importance of the three need groups that should be hierarchically ordered through theory, meaning the most important (basic needs representation) should have the most relevant effect for legitimacy beliefs. After this procedure all GVIF (generalized variance inflation factors) for the full models are below 2, which should indicate that there is no multicollinearity given and the OLS estimation works just fine.

7.3. The Relationship between Descriptive and Substantive Representation

To examine the interrelations between **Descriptive Input, Substantive Through- and Output and Substantive Outcome Representation**, all theoretical concepts have been modelled for the general sample with the larger sample size and more individuals from marginalised groups such as low education or low income groups and the specific regression model low in sample size but offering a measurement of DIR, STOR and SOR linked to a real life process and changes in citizens' everyday life through that process. Both approaches hold information that the respective other sample cannot offer and will be interpreted accordingly.

The participatory democratic approach links being (at least) descriptively represented in the policy-making process through participation (DIR) to the idea of a better understanding and/or higher support for democracy (Local Legitimacy Beliefs). While this is certainly a relevant question that will be answered in the next chapter, I will first take a closer look at the types of representation I identified as relevant for legitimacy beliefs in a broader frame. Here, I argued that not only the participation in itself or the being present in the process is relevant but that there is a specific relevance to an individual being able to talk about their position towards a topic/changes in the urban space. I call this aspect substantive through- and output representation (STOR) since it incorporates the feeling of an own opinion being seen and heard by decision makers. This can be considered rather distinct from the aspect of substantive outcome representation (SOR) which is linked to the outcome of the process satisfying the individuals' needs. The outcome level is the respective level where the 'acting for' takes place, while the other level rather feed procedurally into an understanding of the political system. To get an idea of how descriptive representation in the political process can shape both the substantive representation in the throughput and output of the participation

process as well as the substantive outcome from the political decision-making process or the political decisions it is useful to look at the results from regression analyses explaining STOR and SOR first. To do this, I chose to look at the general models and specific models explaining these aspects.

Both regressions are estimated in a step-wise procedure including first the demographic variable block, second the political involvement variable block and last descriptive input representation to observe not only the effects of the singular variables but the changes in effects and the adjusted R^2. The block with the variables measuring specifically the use of the modes of transport is left out, since it offers no clear explanation for perceptions of STOR. For the specific STOR model, modes of transport were also not included. This was necessary due to the low n and to not reduce statistical power any further with control variables that are not key to explaining a phenomenon. All models shown are significant with a 5% error probability. Effects are interpreted as marginally significant with $p < 0.10$[45].

The **general regression model** for the effects of democracy on STOR, which means feeling included into the local policy making process in general, has an adjusted R^2 of only 0.014. Only 1.4% of the variance of the dependent variable STOR can be explained by the city dummies and demography alone (see Table 17). Nevertheless, some effects can be observed. While the city effects show that individuals that live in Offenburg feel better included into local policy making context than people living in Altona, this effect will not be interpreted any further since context reasons usually remain unclear due to the variety of differences between the local contexts. More interesting are the socio-demographic variables in Model 1.1.a. At first sight, people with a low/medium level of education tend to feel less involved in the local political context (-0.13+). The effect is only marginally significant with a p-value below 0.10 and vanishes with the introduction of the political involvement variables. It is also important to note that being disabled decreases the assessment on the STOR scale by 0.26 scale points. This effect is significant with an error probability of 1% and remains stable even when including variables that are stronger predictors for feeling included. This is interesting, since historically and institutionally disabled people are politically organized and

[45] This is not only done because of the low sample size for the specific regressions but also because most hypothesizes are directed hypotheses and estimators can be considered too strict.

associations of disabled people usually play a role in local participatory procedures. This may already be a hint to the phenomenon that well-organized groups that are not well represented in outcomes (e.g. the urban space) are somewhat disillusioned with their representation in through- and output of political processes.

Not surprising is the effect of external political efficacy that is the strongest effect in Model 1.2.a (beta = 0.43**) and Model 1.3.a (beta = 0.43**). With the introduction of this variable the negative effect from low education disappears. The effect of education is explained by introducing the variable of external political efficacy. While STOR is about the feeling of being included into local policy making process, external political efficacy still measures something different: the expected responsiveness of a political system. Theoretically, this strong effect makes perfect sense. Individuals that perceive a political system to be more responsive have higher values on the perceived substantive representation in the through- and output. When an individual's value on the external political efficacy scale increases by one point, the perception of substantive through- and output representation increases by 0.43 scale points. It must be noted that this is possibly a feedback effect that is induced by a strong effect of external political efficacy on the perception of substantive through- and output representation. The effect direction is not entirely clear and both theoretical frames would be plausible. Including the block of variables on political involvement increases the adjusted R^2 to0.124. The city dummies, demographic variables and political involvement variable explain 12.4% of the variance of STOR among the respondents from the general sample.

For the block on representation both the general and specific model for STOR will include only descriptive input representation as a potentially influential variable. This is due to the theoretical model relying on a timed structure. Only DIR can be a possible influence for STOR within this process model. In the full general regression model for the influences on STOR (1.3.a) I find that descriptive input representation influences the perception of substantive representation in the through- and output positively with a b coefficient of 0.12* that is significant on a 5% significance level. With a beta of 0.07 this effect is much smaller than the effect of the perception of external political efficacy but nevertheless very present. If a person participated in local consultation procedures during the past twelve months, their perception of their substantive through- and output representation in the local political regime will increase by 0.12 scale points. This is an

interesting result that will play a role in later chapters of the study since it suggests a link between the level of descriptive input representation and local legitimacy beliefs.

Table 17 General Regression on Substantive Through- and Output Representation

	Substantive Through- and Output Representation						
	Model 1.1.a		**Model 1.2.a**		**Model 1.3.a**		
	b	beta	b	beta	b	beta	GVIF
Intercept	2.84***	-0.04	1.93**	-0.10	1.98***	-0.09	
	(0.07)	(0.07)	(0.20)	(0.07)	(0.28)	(0.07)	
City Dummies (Reference: Altona)							
Marburg	0.05	0.05	0.04	0.05	0.03	0.03	
	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)	
Offenburg	0.19*	0.21	0.25**	0.28	0.21*	0.24	
	(0.09)	(0.10)	(0.08)	(0.09)	(0.08)	(0.09)	1.28
Ottensen	-0.02	-0.03	0.01	0.01	-0.01	-0.02	
	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)	
Wuppertal	-0.16	-0.18	-0.13	-0.15	-0.14	-0.16	
	(0.12)	(0.13)	(0.11)	(0.13)	(0.11)	(0.13)	
Demography							
Income (Reference: Above the median equivalence income)							
No Response (Income)	-0.12	-0.13	-0.04	-0.04	-0.05	-0.05	
	(0.09)	(0.10)	(0.09)	(0.10)	(0.09)	(0.10)	1.14
Income below Median Equivalence Income	0.02	0.02	0.06	0.07	0.07	0.07	
	(0.07)	(0.07)	(0.06)	(0.07)	(0.06)	(0.07)	
Age (Reference: 35 - 65 years old)							
Over 65 Years Old	0.08	0.09	0.08	0.09	0.09	0.10	
	(0.09)	(0.10)	(0.09)	(0.10)	(0.09)	(0.10)	
Under 35 Years Old	0.10	0.11	0.10	0.11	0.10	0.11	1.36
	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)	
No Response (Age)	0.04	0.05	0.02	0.03	0.04	0.04	
	(0.08)	(0.08)	(0.07)	(0.08)	(0.07)	(0.08)	
Medium/Low Education	-0.13+	-0.15	-0.05	-0.05	-0.04	-0.05	1.28
	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)	
Not Male	0.01	0.01	-0.01	-0.01	-0.01	-0.01	1.11
	(0.06)	(0.03)	(0.06)	(0.06)	(0.06)	(0.03)	
Disabled	-0.26**	-0.09	-0.23*	-0.08	-0.22*	-0.07	1.12
	(0.10)	(0.03)	(0.10)	(0.03)	(0.09)	(0.03)	
Political Involvement							
Internal Political Efficacy			-0.04	-0.04	-0.05	-0.05	1.55
			(0.04)	(0.04)	(0.04)	(0.04)	
External Political Efficacy			0.43***	0.34	0.43***	0.35	1.06
			(0.04)	(0.03)	(0.02)	(0.03)	
Political Interest (local)			-0.01	-0.01	-0.03	-0.03	1.52
			(0.03)	(0.04)	(0.04)	(0.04)	
Representation							
DIR					0.12*	0.07	1.25
					(0.06)	(0.03)	
Observations	978						
R^2 / R^2 adjusted	0.026 / 0.014		0.137 / 0.124		0.141 / 0.127		

*p < 0.001 ***, p < 0.01 **, p < 0.05 *, p < 0.1 +*

The **specific regression analysis** (see Table 18) does not refer to a general perception of STOR in the respective city but generally tries to capture perceived STOR of the consultative procedure “freiRaum Ottensen”, a procedure trying to establish a (nearly) car-free area in the district Ottensen in Hamburg. The results for the perceived STOR in “freiRaum Ottensen” show effects that are surprisingly close to those found in the general regression model that included rather general measurements but different city contexts. For example, the specific regression model shows significantly worse evaluation of the through- and output by disabled people with a b coefficient of -0,53** significant on a 1% level. This is interesting since I already argued that there is a higher possibility of well-included political and societal groups that are not rewarded with the necessary outcomes to remain dissatisfied after a process. The analysis of “freiRaum Ottensen” suggests that this is likely. Political authorities used an oversampling of disabled citizens in the procedure. Still, disabled people perceive the representation in through- and outcome of the consultation process worse. Nevertheless, it is certainly rather a consequential hypothesis which is not yet researched to its full extent within the models. This effect remains stable for all three models (1.1b, 1.2b and 1.3b).

People who have an income below the median equivalence income evaluate their STOR worse. Compared to those with an above median equivalence income they will evaluate their STOR with 0.32 scale points worse. The beta coefficient indicates that the effect (-0.38 in the last model 1.3b) is stronger than the effect of disability (beta of -0.17). It is significant with a p-value below 0.01. Within the demographic variable set these are the main effects identified. The last model indicates that non-male respondents tend to evaluate STOR worse, too (b = -0.15+). However, this is only true within the full model and cannot be seen in previous models 1.1b and 1.2b. The adjusted R^2 indicates that the demographic variables alone explain only 2.2% of the variance of the dependent variable STOR. Stronger explanatory potential once again lies in the variables measuring political involvement especially once again in the variable of external political efficacy. A strong effect of external political efficacy on STOR has already been found for the general model and plays a strong role in the specific model once again. Also, when looking at specific procedures like “freiRaum Ottensen” we can say that the perception of a stronger responsiveness of a political system influences the perception of being substantively represented in the through- and outputs (0.37***/0.43***). The full model suggests that an increase of the x variable external political efficacy of 1 will induce an increase of the perceived STOR by 0.43. The beta of 0.36 suggests that this

effect is stronger than the effects of disability and being non-male, but still somewhat smaller than the effect of a lower than Median equivalence income (see Table 18).

For the more specific model an effect of internal political efficacy – so, the self-assessment of political abilities – effects the perception of STOR negatively. Who thinks they are very qualified to participate in politics usually rates STOR more poorly (-0.17*). It seems that specifically in the case of Hamburg Ottensen citizens that assumed they are really well equipped for the political process (see Chapter 7.1), are usually more critical about its organization as well as their substantive representation in through- and output. This effect is somewhat smaller than the effect of external political efficacy (beta = 0.15) but still rather strong. Local political interest cannot be shown to have any effect on STOR. All in all, the political involvement variables increase the adjusted R^2 from 2.2% in the demographic model to 11.4%.

Table 18 Specific Regression on Substantive Through- and Output Representation

	Substantive Through- and Output Representation						
	Model 1.1.b		**Model 1.2.b**		**Model 1.3.b**		
	b	*beta*	*b*	*beta*	*b*	*beta*	*GVIF*
Intercept	2.93***	0.10	1.97***	0.15	1.95***	-0.28	
	(0.17)	(0.18)	(0.54)	(0.17)	(0.53)	(0.23)	
			Demography				
Low/Medium Education	-0.12	-0.14	0.00	0.01	0.08	0.10	1.15
	(0.24)	(0.28)	(0.24)	(0.28)	(0.23)	(0.28)	
Income (Reference: Above the median equivalence income)							
Below Median Equivalence Income	-0.27	-0.33	-0.35*	-0.41	-0.32*	-0.38	1.19
	(0.18)	(0.22)	(0.18)	(0.22)	(0.18)	(0.21)	
Non-Response (Income)	0.01	0.01	-0.10	-0.12	-0.06	-0.07	
	(0.17)	(0.21)	(0.17)	(0.20)	(0.17)	(0.20)	
Not Male	-0.10	-0.06	-0.08	-0.05	-0.15+	-0.09	1.39
	(0.14)	(0.09)	(0.15)	(0.09)	(0.15)	(0.09)	
Disability	-0.53**	-0.21	-0.46**	-0.18	-0.45**	-0.17	1.10
	(0.21)	(0.08)	(0.21)	(0.08)	(0.20)	(0.08)	
Age (Reference: 35 - 65 years old)							
Under 35 Years Old	-0.12	-0.14	-0.07	-0.08	-0.07	-0.09	1.30
	(0.22)	(0.26)	(0.22)	(0.26)	(0.22)	(0.26)	
Over 65 Years	0.12	0.14	0.17	0.20	0.17	0.20	
	(0.18)	(0.22)	(0.18)	(0.21)	(0.17)	(0.20)	
			Political Involvement				
Internal Political Efficacy			-0.12+	-0.11	-0.17*	-0.15	1.61
			(0.11)	(0.10)	(0.10)	(0.10)	
External Political Efficacy			0.37***	0.31	0.43***	0.36	1.27
			(0.10)	(0.09)	(0.10)	(0.08)	
Local Political Interest			0.14	0.15	0.08	0.08	1.48
			(0.09)	(0.09)	(0.09)	(0.09)	
			Representation				
Descriptive Input Representation					0.44***	0.53	1.22
					(0.16)	(0.19)	
Observations	150						
R^2 / R^2 adjusted	0.068 / 0.022		0.174 / 0.114		0.218 / 0.156		

*Note: + p < 0.10 * p<0.05 ** p<0.01 *** p<0.001*

For the general regression model, the step-wise construction was used to add the most interesting variables in the context of my theory (representation variables block: here only descriptive input representation because of the time-ordered logic of the theoretical paths) in a last step to the full model to identify its effect in the context of the whole model but also identify how it changes the adjusted R^2 in the context of the whole model. The adjusted R^2 changes by 4.2 percentage points when descriptive input representation is added to the model. Together demographic, political involvement and representation variables explain 15.6% of the variance of the perceived STOR. With a beta of 0.53 we can say that descriptive input representation strongly influences substantive through- and output representation. In the final model 1.3b this is the strongest effect that can be identified. It is significant with a p-value below 0.01. Being a participant of the procedure “freiRaum Ottensen” increases STOR 0.44 scale points (see Table 18).

Both results, the one from the general regression as well as the specific regression result for “freiRaum Ottensen” hint to links between the different aspects of the procedural decision-making level and a potential effect of consultative participation. Looking at the results from both regressions, we can observe that **those who are descriptively represented in local consultation procedures, will also feel more substantively represented in the through- and output of this procedure**. Not yet linked to the outcome, this can give a first idea of the effects of participation in local consultation and a feeling of being included into the decision-making process not only as a person but with their interests and needs. This is a highly relevant result since it helps to see the relevant influences of participation for the strengthening of a democratic process which could lie in the relevant element of feeling more included and seen. But not only the aspect of individuals feeling more included and seen is relevant when it comes to consultative participation. Cities that offer participatory procedures to their citizens, will usually claim to do so in order to ensure that citizen are in the outcome by sharing their ideas. The next part of this chapter will focus these thoughts and try to explain what influences **Substantive Outcome Representation**.

After a classification of the need dimension that can be distinctively measured (**Substantive Outcome Representation of Basic Needs, Time Efficacy Needs and Individualist Needs**) by using confirmatory factor analysis (see Chapter 7.1) I modelled the dependency of this substantive outcome level from the other levels of

representation (DIR and STOR). The previous group of regression models (DV: STOR) was able to identify DIR contributes to STOR. The procedural paths of the theoretical model were shown to be closely intertwined. DIR was shown to influence peoples feeling seen as STOR both in the general and specific models. Now, DIR as well as STOR can indeed be supposed to influence an individual's representation in a planning result such as mobility in the urban space. To determine whether individuals are represented in their local mobility politics, I use a measurement of mobility needs for which the dyadic of the importance of a need versus the actual fulfilment by usable modes of transport is used (as described in Chapter 6.2). For these models, political involvement variables are not hypothesized to have an effect and are thus excluded from the models whereas modes of transport that are used, that can be hypothesized to strongly effect the substantive outcome representation in the urban space, since the current organization of cities is assumed to not equally include all modes of transport (for an overview go back to Table 10 and Table 11).

Table 19 General Regression on Substantive Outcome Representation

	Basic Needs Representation Model 2.1. a		Time Efficacy Needs Representation Model 2.2. a		Individualist Needs Representation Model 2.3. a		
	b	beta	b	beta	b	beta	GVIF
Intercept	1.47***	0.08	2.58**	-0.07	1.18***	-0.15	
	(0.17)	(0.07)	(0.16)	(0.07)	(0.18)	(0.07)	
City Dummies (Reference: Altona)							
Marburg	0.15*	0.19	0.02	0.03	0.17*	0.22	
	(0.07)	(0.09)	(0.07)	(0.09)	(0.07)	(0.10)	
Offenburg	-0.04	-0.05	-0.10	-0.13	0.03	0.03	
	(0.08)	(0.10)	(0.07)	(0.09)	(0.08)	(0.10)	1.55
Ottensen	-0.00	-0.00	0.04	0.06	0.04	0.06	
	(0.07)	(0.09)	(0.06)	(0.08)	(0.07)	(0.09)	
Wuppertal	0.09	0.11	0.13	0.17	0.30**	0.39	
	(0.10)	(0.13)	(0.09)	(0.12)	(0.10)	(0.14)	
Demography							
Income (Reference: Above the median equivalence income)							
No Response (Income)	0.03	0.04	0.01	0.01	0.01	0.02	
	(0.08)	(0.10)	(0.07)	(0.10)	(0.08)	(0.10)	
Income below Median	-0.05	-0,06	0.05	0.07	0.06	0.08	1.15
Equivalence Income	(0.05)	(0.07)	(0.05)	(0.07)	(0.06)	(0.07)	
Age (Reference: 35 - 65 years old)							
Over 65 Years Old	-0.09	-0.12	0.14+	0.18	0.03	0.04	
	(0.07)	(0.10)	(0.07)	(0.09)	(0.08)	(0.10)	
Under 35 Years Old	0.01	0.01	0.01	0.02	-0.01	-0.01	1.35
	(0.07)	(0.09)	(0.06)	(0.09)	(0.07)	(0.09)	
No Response (Age)	-0.05	-0.07	0.06	0.08	0.07	0.09	
	(0.06)	(0.08)	(0.06)	(0.08)	(0.06)	(0.08)	
Medium/Low Education	-0.30***	-0.40	-0.02	-0.03	-0.04	-0.05	1.23
	(0.07)	(0.09)	(0.07)	(0.08)	(0.07)	(0.09)	
Not Male	-0.22***	-0.15	-0.06	-0.04	-0.09	-0.06	1.05
	(0.05)	(0.03)	(0.06)	(0.03)	(0.05)	(0.03)	
Disabled	-0.22**	-0.09	-0.11	-0.04	-0.18*	-0.07	1.15
	(0.08)	(0.03)	(0.08)	(0.03)	(0.09)	(0.03)	
Modes of Transport							
Bike	-0.03	-0.06	0.05**	0.11	0.00	0.01	1.40
	(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	
Car	-0.04	0.07	-0.09***	-0.17	-0.09***	-0.08	1.28
	(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.04)	
Public Transport	-0.04*	-0.07	-0.27***	-0.43	-0.05*	-0.14	1.39
	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.04)	
Representation							
STOR	0.03	0.03	0.04	0.04	0.06*	0.07	1.12
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	
DIR	-0.06	-0.04	0.01	0.01	0.05	0.04	1.04
	(0.05)	(0.03)	(0.05)	(0.03)	(0.05)	(0.03)	
Observations	978						
R^2 / R^2 adjusted	0.091 / 0.074		0.199 / 0.185		0.050 / 0.033		

*Notes: + p<0.10 * p<0.05 ** p<0.01 *** p<0.001*

Chapter 7.2 showed that there are some problems with the general regression model for the second need group (time efficacy needs) that I consider an important measurement for substantive outcome representation. For this model, we found a significant Breusch-Pagan Test and thus, heteroskedasticity, which can influence the p-values of the model. To not operate on totally different models in the overall interpretation, I still use the OLS model especially since normality of the dependent variable was given. Additionally, I chose to estimate the same model once again with robust standard errors (see Table 27) to make sure the results (especially p-values) are not wrong. Generally, the model with using robust standard errors arrives at the same conclusions as

the ordinary least square regression. However, the extra model shows an additional effect of gender, that is not significant in the OLS model (see Table 27).

Generally, it seems that the substantive representation in the urban space is partly dependent on **demographic aspects**. Especially, for the ability to fulfil one's basic needs low education, not being male and being disabled seem to be relevant which supports the idea that marginalised groups cannot fulfil their needs when moving through a city as established groups can. We find these effects especially when looking at the variables explaining the substantive representation of basic needs. They are especially visible for lower educational groups, non-male people and disabled people. All effects identified are negative, meaning that the affiliation to one of these groups is associated with a lower substantive representation in the urban space by a reduced possibility to fulfil one's basic needs when traveling. Belonging to a low/medium education group compared to a high education group will reduce the substantive representation of basic needs by -0.30***. With a beta of -0.40 this is the strongest effect we identify – low/medium education groups felt the least represented in terms of basic needs representation. When compared to male respondents, non-male respondents have -0.22*** scale points less substantive outcome representation, the same is true for disabled people.

Effects of the demographic affiliation of a person are mostly relevant when it comes to the representation of basic needs and do not play a huge role when trying to explain time efficacy needs representation or individualist needs representation (besides disability, that has an effect of -0.18*). For the explanation of time efficacy needs representation, we find only one effect of demography, namely a positive effect of being aged over 65 compared to the reference group of 35 to 65-year-old respondents. With 0.14+ the effect is marginally significant with a p-value below 0.10. It is also easily explainable, since the routines of over 65-year-olds strongly differs from the daily routine of 35 to 65-year-old individuals (see Table 20). Their time efficacy needs can thus be seen easier fulfilled by a mobility system than the time efficacy needs of individuals in the work force. This effect remains positive and marginally significant even when estimating the model using robust standard errors. Additionally, in Model 2.2.a (robust SE) there is a significant effect for gender that was not estimated in the OLS model. This effect is negative, which strengthens the theoretical frame that women's time efficacy needs are harder to fulfil since they more often manage both care work and jobs (see Table 27).

All in all, while basic needs representation seems mainly unequally distributed by demography, this is different for the other aspects of substantive outcome representation. Here, usually demographics do not play a huge role in explaining who is better or less represented. **Modes of transport**, however, may be the more relevant factors when looking at the fulfilment of needs. This makes sense since there are usually resource conflicts in cities and space is distributed unequally. Certain modes of transport can be considered favoured by the current transport system while others must be considered disadvantaged especially in infrastructural terms. While we usually observe rather car-focused infrastructure in German cities this does not always mean that the car fulfils all needs best. Looking at the general regression model, it becomes clear that especially for time-efficiency needs the car is usually not the best option. Using a car more often according to Model 2.2.a reduces the fulfilment of time efficacy needs. An increase with one scale-point on the frequency of car use scale decreases the fulfilment of time efficacy needs by -0.09*** scale points. This effect is significant but rather small. Stronger decrease of the fulfilment of time efficacy needs can be observed when individuals more frequently use public transport. With -0.27*** this decrease is rather strong. Cycling is reported to positively (0.05**) affect the fulfilment of time-efficiency needs (for all effects see Table 20), which makes sense, since especially in bigger cities cycling to places is easier due to flexibility and also organizational aspects such as parking.

Interestingly for basic need fulfilment in the urban space, the model depicts a very small but significantly negative effect for the use of public transport (-0.04*). This gives us a hint that basic needs are less easily fulfilled the more a person has to use or rely on public transport. For individualist needs representation we can identify an effect of going by car and by public transport more often that will significantly reduce individualist needs fulfilment in the urban space. When looking at the variables of interest from the theoretical framework it becomes clear that it is hard to identify any effect on substantive representation in the outcome, which is in our case the urban space. While effects remain close to zero and are non-significant, it is important to note that this might be induced by the rather unspecific measurement of this model. All models suffer from low adjusted R^2 values, which means that there are certainly variables missing from the model that would have more explanatory power (see Table 19).

I started by indicating that better representation in the urban space (SOR) may be induced by being integrated in procedures that shape this urban space (DIR and

STOR) either through a simple ‘being there’ and participating in a local consultation (DIR) or by voicing an opinion during a participatory procedure (STOR). Measurements slightly differ for all concepts (DIR, STOR and SOR) between the general and specific models estimating the effects. For the general model DIR is given if a person participated in a consultative procedure by the city during the last twelve months, for the specific model this question specifically addresses the own involvement in the procedure “freiRaum Ottensen”. Even more unspecific STOR addresses the feeling of being able to voice one’s opinion before political decision making. In the specific model, STOR will measure the possibility to voice an own opinion through “freiRaum Ottensen”. While rather unspecific the results from the general model will still be of crucial relevance. Here, citizens are not asked to relate their SOR to a specific procedure but to rate their general SOR. I still assume that a participation in a previously organized consultation by the city (which are often about reorganizations of urban space) may have already increased SOR. The same is true for the STOR of a person.

Results show that nearly no such effects can be identified at least for the general models. The representation by basic needs in the urban space does not depend on descriptive input representation or substantive through- and output representation meaning that the goodness of fulfilment of basic needs is not higher for those actively participating in the policy-making process. This may be due to the unspecific measurements. If it was true that there was no relationship between representation in the input and higher basic need fulfilment this would pose a democratic problem, because participatory procedures usually promise an integration of citizens ideas into the decision making. If citizens needs are not better fulfilled after a procedure than there should at least be a discussion about why this is the case and whether consultative participation really does what it is supposed to do. The theory suggests that participation should help local administration to specifically collect citizens demands to the space to accommodate these in decision making thus the outcome. The same accounts for people that feel like they have been heard by the city (STOR). The only effect that can be identified can be seen for a higher individualist needs representation for people that have felt more heard by the local municipalities. This effect is with 0.06* comparably small but significant on a 5% level (see Table 20). It is possible that feeling more heard will only influence a better fulfilment of basic needs. This will indicate that participation usually does not change the basics to mobility infrastructure that would be important

for a basic need fulfilment or time-efficiency but changes specifics that will make commuting e.g. a little more comfortable.

The paths modelled in the specific model are closer to the theoretical model since they manage to display a real-life participation procedure. The general model is in comparison relatively unspecific. Estimation was still useful since the general regression sample can incorporate a much larger randomly drawn sample, while the specific sample is very closely directed at Hamburg-Ottensen and can only observe those that heard of the procedure - making the sample even more specific. Some questions can be incorporated better into the specific model because questionnaire measurements differed when two time points with a political decision in-between were observed.

When asking for changes in need fulfilment after the procedure “freiRaum Ottensen” some of the demographic effects are not visible anymore. This is due to the aspect that the specific regression model indeed measures something different, namely: how the fulfilment of needs should change after the planning decisions made as a result of the consultation are induced. Low/Medium educated people assume that their basic needs representation will decrease through the consultation procedure (-0.32**). Individuals that have an income below the median equivalence income assume that their individualist need representation will increase (0.37**). Also, the modes of transport have a lot of explanatory power when it comes to perception of the change in need fulfilment. While cyclists generally evaluate their need representation better (on all three categories), car users tend to evaluate their need representation worse (on all three categories) (see Table 20).

Table 20 Specific Regression on Substantive Outcome Representation

	Substantive Outcome Representation						
	Basic Needs Representation Model 2.1.b		Time Efficacy Needs Representation Model 2.2.b		Individualist Needs Representation Model 2.3.a		
	b	*beta*	*b*	*beta*	*b*	*beta*	*GVIF*
Intercept	2.93***	0.03	1.90***	0.03	2.15***	0.05	
	(0.31)	(0.17)	(0.43)	(0.17)	(0.50)	(0.17)	
Demography							
Low/Medium Education	-0.32**	-0.55	-0.27	-0.34	-0.39	-0.41	1.08
	(0.15)	(0.26)	(0.20)	(0.26)	(0.24)	(0.26)	
Income (Reference: Above the median equivalence income)							
Below Median Equivalence Income	0.10	0.17	0.13	0.17	0.37**	0.39	1.22
	(0.10)	(0.18)	(0.14)	(0.18)	(0.17)	(0.18)	
No Response	-0.02	-0.04	-0.00	-0.00	0.00	0.00	
	(0.11)	(0.19)	(0.15)	(0.19)	(0.17)	(0.19)	
Not Male	-0.11	-0.10	-0.11	-0.07	-0.12	-0.06	1.17
	(0.09)	(0.08)	(0.12)	(0.08)	(0.15)	(0.08)	
Disability	-0.17	-0.10	-0.23	-0.09	-0.18	-0.06	1.13
	(0.13)	(0.08)	(0.19)	(0.08)	(0.22)	(0.08)	
Age (Reference: 35 - 65 years old)							
Under 35 Years Old	-0.08	-0.14	0.02	0.03	-0.17	-0.18	1.18
	(0.13)	(0.23)	(0.19)	(0.23)	(0.22)	(0.24)	
Over 65 Years	0.06	0.10	0.15	0.19	0.15	0.16	
	(0.11)	(0.19)	(0.15)	(0.19)	(0.18)	(0.20)	
Modes of Transport							
Bike	0.08**	0.19	0.17***	0.28	0.20***	0.27	1.32
	(0.04)	(0.08)	(0.05)	(0.08)	(0.06)	(0.08)	
Car	-0.11***	-0.27	-0.09*	-0.16	-0.10*	-0.14	1.30
	(0.03)	(0.08)	(0.05)	(0.08)	(0.06)	(0.08)	
Public Transport	-0.07*	-0.14	0.03	0.04	-0.02	-0.02	1.11
	(0.04)	(0.08)	(0.05)	(0.08)	(0.06)	(0.08)	
Representation							
DIR	-0.02	-0.03	-0.09	-0.12	-0.18	-0.19	1.12
	(0.10)	(0.17)	(0.14)	(0.17)	(0.16)	(0.17)	
STOR	0.18***	0.26	0.27***	0.28	0.29***	0.26	1.16
	(0.05)	(0.08)	(0.07)	(0.08)	(0.09)	(0.08)	
Observations	150						
R^2 / R^2 adjusted	0.295 / 0.233		0.297 / 0.235		0.290 / 0.228		

*Notes: + p<0.10 * p<0.05 ** p<0.01 *** p<0.001*

For the levels of representation, the model shows that DIR does not have a separate effect on SOR. This would not have been plausible considering Figure 3 and the theoretical framework established in Chapter 3. What is striking is that there are clear effects of STOR on SOR. That is true for the estimation in all need groups. Respondents, who evaluate the **throughput** better (thus, have higher STOR) evaluate their **fulfilment of basic needs** after the process better with 0.18 scale points (***). They evaluate their fulfilment of **time-efficacy needs** better fulfilled with 0.27 scale points (***) and they evaluate their **individualist needs** better fulfilled with 0.29 scale points (***). Together with the very clear effect of DIR on STOR in both models (see Table 17 and Table 18) this suggests that participation most likely has an indirect effect on substantive outcome representation when inducing higher substantive through- and output

representation. High explanatory power of these models is with an adjusted $R^2 > 20\%$ given in every case. While this may be due to the small sample size it may also be a result of the specific measurements used. Measurements all referred to “freiRaum Ottensen” as the object of evaluation.

This chapter attempted to answer the research questions about how the levels of representation influence each other. I assumed that **DIR increases STOR** and **STOR increases SOR**. Both models could show that **DIR increases STOR** among citizens. Being in the process seems to increase the feeling of being heard by public officials. While the general models did not show clear effects, especially for the path between STOR and SOR, the **specific models could clearly show that those who felt well involved in the process perceived better need fulfilment after the process**. Shortcomings of the general models could be explained by the non-specific measures used.

7.4. The Role of Representation in Shaping Local Legitimacy Beliefs

The theoretical framework suggests not only that there may be an influence of the different representational aspects on each other that could be identified in the analysis in Chapter7.3, but also that **the different representational aspects (DIR, STOR and SOR) are relevant for local legitimacy beliefs**. This Chapter tries to answer the question: **How does representation through consultation shape local legitimacy beliefs?** It therefore reflects on the three subdimensions of representation extracted from theory in Chapter 3 and tries to identify their effects on local legitimacy beliefs. Underlying questions are**: Does descriptive input representation (DIR) increase local legitimacy beliefs? (Procedure) Does substantive through- and output representation (STOR) increase local legitimacy beliefs? (Procedure) And, does substantive outcome representation (SOR) increase local legitimacy beliefs? (Outcome)**

Again, I have chosen a stepwise procedure to separately identify the effects and the share of explanatory power of the different variable blocks. First, I include the block of variables on demography in the model, as I expect it to have distinct effects on local legitimacy beliefs that are not seen in the last model because they are controlled away by other variables. A second model includes variables on political involvement. These should be the most influential variables when it comes to explaining local legitimacy beliefs. It is also plausible to include them, since the own political involvement can be

assumed to have strong effects on local legitimacy beliefs. In a third step, the aspects of representation are added to the model (see Table 10 and Table 11).

As mentioned above, STOR could not be added to the general model because the perception of being involved in political decision-making at the local level is part of the evaluation measurement of legitimacy. This is due to the fact that especially on the IS (evaluation) side of the dyadic measurement it played a big role how people perceive their own role in the local policy making context (see Chapter 6.2.). If STOR is to be measured on a general level, it must be part of an IS assessment of current local democracy. Nevertheless, it can be hypothesised that the effects of both general participation (DIR) and general satisfaction of needs in the urban space (SOR) could be influential on local legitimacy beliefs (see Table 10 and Table 11).

A model overview shows that the **political involvement** variables are indeed most influential when it comes to explaining **legitimacy beliefs**. Model 3.2.a adds the most explained variance to the model. While the demographic aspects were able to explain only1.4% of the variance in the dependent variable local legitimacy beliefs which is induced by nearly no significant effects from the demographic variables. Local legitimacy beliefs do not seem to be shaped by **demographic factors** or the choice of a **mode of transport**. Modes of transport are assumed to be related to substantive outcome representation and thus included into the model especially since they are assumed to be highly relevant in the specific model for “freiRaum Ottensen” and to keep models constant concerning their explanatory variables. A lot more explanatory power can be assigned to the political involvement variables in the model meaning: internal and external political efficacy and local political interest. Adding political involvement variables increases the adjusted R^2 from 1.4% to 18%. Adding the representation variables (DIR and SOR) from the theoretical framework increases the explained variance by only 0.7 percentage points to an adjusted R^2 of 18.7% (see Table 21).

Effects of **demographic variables** are interesting to observe. For example, we find lower local legitimacy beliefs for disabled people. Relating back to ideas of being involved and being actually heard/represented in the outcome this is interesting. Disabled people are usually politically organized but remain marginalised in situations where urban space should necessary be adjusted. This might induce to lower legitimacy beliefs among them since democracy usually suggests that political organization

will eventually lead to being seen or heard[46]. Interestingly, this effect remains consistent over all models even when political involvement variables and representation variables are added (0.22*). The influence is much smaller than the influence of the political involvement variables but with a beta of -0.06 off the same size as the representation variables effects (Table 21).

In Model 3.1.a, there is no further significant effects. When adding the political involvement variable, a rather interesting change is happening within the demographic effects – the variable non-male suddenly becomes significant. This seems at first confusing, but can be explained by referring back to the correlations between some of the political involvement variables with gender. Internal political efficacy (-0.27***) and local political interest (-0.18***) show a highly significant negative correlation with gender. The gender effect in Model 3.1.a is probably undermined by the significant difference between non-male and male groups in terms of internal political efficacy and local political interest. If these two variables are held constant, being non-male effects local legitimacy beliefs negatively meaning that if non-male and male people have the same internal political efficacy and local political interest non-male people will evaluate local democracies worse (see Table 21).

[46] With this model, however, this theory remains plausible but unanswered, since we cannot directly capture why disabled people have lower legitimacy beliefs but their misrepresentation in many daily life situations and at the same time intent to be politically involved may be interesting to look at. A different sample will be needed for this though, since there is usually a smaller number of disabled people participating in surveys with randomly drawn samples. Here, an oversampling of disabled people might help when looking for their reasons to have lower local legitimacy beliefs.

Table 21 General Regression on Local Legitimacy Beliefs

	Local Legitimacy Beliefs						
	Model 3.1a		**Model 3.2a**		**Model 3.3a**		
	b	beta	b	beta	b	beta	GVIF
Intercept	-1.26***	0.01	-1.20***	0.00	-1.42***	-0.00	
	(0.22)	(0.07)	(0.28)	(0.07)	(0.30)	(0.07)	
City Dummies (Reference: Altona)							
Marburg	0.07	0.07	0.04	0.04	0.04	0.04	
	(0.10)	(0.10)	(0.09)	(0.09)	(0.09)	(0.09)	
Offenburg	0.07	0.07	0.10	0.10	0.13	0.13	
	(0.10)	(0.10)	(0.09)	(0.09)	(0.10)	(0.09)	1.64
Ottensen	-0.21*	-0.21	-0.15	-0.15	-0.13	-0.13	
	(0.09)	(0.09)	(0.09)	(0.08)	(0.09)	(0.08)	
Wuppertal	-0.21	-0.21	-0.23	-0.22	-0.24	-0.24	
	(0.14)	(0.14)	(0.13)	(0.13)	(0.13)	(0.13)	
Demography							
Income (Reference: Above the median equivalence income)							
No Response (Income)	-0.14	-0.13	-0.10	-0.10	-0.10	-0.09	
	(0.11)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	
Income below Median Equivalence Income	0.00	0.00	0.00	0.00	0.00	0.00	1.19
	(0.08)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	
Age (Reference: 35 - 65 years old)							
Over 65 Years Old	0.04	0.04	0.14	0.14	0.14	0.14	
	(0.10)	(0.10)	(0.10)	(0.09)	(0.10)	(0.09)	
Under 35 Years Old	0.13	0.13	-0.01	-0.01	-0.01	-0.01	1.50
	(0.10)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	
No Response (Age)	0.07	0.07	0.07	0.07	0.06	0.06	
	(0.09)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	
Medium/Low Education	-0.07	-0.07	-0.04	-0.04	-0.02	-0.02	1.36
	(0.09)	(0.09)	(0.09)	(0.08)	(0.09)	(0.08)	
Not Male	-0.04	-0.02	-0.18**	-0.09	-0.15*	-0.07	1.14
	(0.07)	(0.03)	(0.06)	(0.03)	(0.06)	(0.03)	
Disabled	-0.30**	-0.09	-0.24*	-0.07	-0.22*	-0.06	1.15
	(0.12)	(0.03)	(0.11)	(0.03)	(0.11)	(0.03)	
Modes of Transport							
Frequency: Bike Use	-0.04	-0.06	-0.03	-0.04	-0.02	-0.03	1.44
	(0.02)	(0.04)	(0.02)	(0.03)	(0.02)	(0.03)	
Frequency: Car Use	-0.01	-0.01	-0.02	-0.02	-0.02	-0.03	1.45
	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)	
Frequency: Public Transport Use	0.00	0.00	0.01	0.01	0.01	0.01	1.54
	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)	(0.04)	
Political Involvement							
Internal Political Efficacy			-0.17***	-0.14	-0.16***	-0.13	1.55
			(0.04)	(0.04)	(0.04)	(0.04)	
External Political Efficacy			0.52***	0.37	0.51***	0.36	1.08
			(0.04)	(0.03)	(0.04)	(0.03)	
Political Interest (local)			-0.19***	-0.17	-0.16***	-0.14	1.56
			(0.04)	(0.03)	(0.04)	(0.04)	
Representation							
DIR					-0.12+	-0.06	1.29
					(0.07)	(0.03)	
Substantive Outcome Representation							
Basic Needs					0.07	0.05	1.51
					(0.05)	(0.04)	
Time Efficacy Needs					-0.04	-0.03	1.54
					(0.05)	(0.04)	
Individualist Needs					0.09+	0.07	1.54
					(0.05)	(0.04)	
Observations	978						
R^2 / R^2 adjusted	0.029 / 0.014		0.195 / 0.180		0.206 / 0.187		

*Notes: p < 0.001 ***, p < 0.01 **, p < 0.05 *, p < 0.1 +*

The **political involvement** variables themselves have the highest significant effects in the model. Higher internal political efficacy can be shown to decrease local legitimacy beliefs by 0.16*** scale points (-0.17** in Model 3.2a). That means that if a person thinks that they have high political ability, they will have lower legitimacy beliefs. This can mean that they either have higher expectations or evaluate the political system more critically – or a mixture of both. This is plausible, because higher ability will mean that the current political system will be criticized more often. It does not matter whether this higher ability is imagined among individuals or a real feature. This effect remains stable with a relatively high beta coefficient of -0.13 in the full model. The opposite applies to the effect of external political efficacy. With 0.52*** this effect is highly positive. Each increase of external political efficacy by 1 increases local legitimacy beliefs by 0.52. This is also quite plausible since external political efficacy measures the responsiveness of a political system. The perceived responsiveness of a political system is closely linked to the local legitimacy beliefs of a person. If a person perceives the political system to be more responsive to their citizens they will have higher local legitimacy beliefs. A strong association was already identified during Chapter 7.3 when observing the correlation (see Table 23). In terms of democratic theory, a responsivity of politics suggests a fulfilment of democratic key aspects and thus should increase legitimacy beliefs. Local political interest is the last variable of interest within this block of variables. It is shown to negatively influence local legitimacy beliefs with a b coefficient of -0.16***. The more interested a person is in local politics the lower their local legitimacy beliefs are.

In the last model, the variables of interest for the theoretical framework were introduced trying to answer the question whether **representation** influences local legitimacy beliefs. The variables introduced in the general model were descriptive input representation and substantive outcome representation. Substantive Through- and Output Representation could not be measured because in a general measurement frame it is part of a measurement of local legitimacy beliefs since local legitimacy beliefs include an evaluation of the status quo and thus should capture whether people feel included into the process (see Chapter 6.2). These problems are not given when the measurement reflects a real-life participation like the model for “freiRaum Ottensen” that allows to measure how well people felt substantially represented in the through- and output of a certain procedure. The general model shows that with **descriptive input representation** (as participation) there are lower local legitimacy beliefs. This effect is marginally

significant. While this result is mostly true for cross-sectional models it is no hint at a general decrease of legitimacy beliefs through participation but rather describes that those who participate are indeed more critical at the start. Further analysis explicitly focusing changes in legitimacy beliefs through the procedure may help us identifying more clearly the effect of participating in a procedure. With a decrease of 0.12+ on local legitimacy beliefs for those who have participated in the procedure that effect is visible. It must be noted that it is small when comparing beta coefficients still rather small (-0.06). This may be hint at an effect of participation that was not previously hypothesized. Further research could clarify which mechanisms cause this effect. It seems quite straightforward to assume that a certain threshold of dissatisfaction has to be reached for citizens to decide to participate in procedures.

The effects of **substantive outcome representation** (SOR) seem to oppose the effects of DIR. While descriptive input representation was shown to influence local legitimacy beliefs significantly negative, I can find positive effects for substantive representation in the outcome on the dimension of individualist needs representation. Better **individualist need representation** increases local legitimacy beliefs by 0.09 scale-points. This effect is also marginally significant. I find no significant effect for the other needs represented in the urban space. This cannot easily be attributed to the difference between the needs, since worse basic needs representation indeed prevents people from moving in the urban space, which can be highly problematic for inclusion and should thus have an influence on local legitimacy beliefs. However, the measurements of need representation in the urban space were unspecific. It may be the case that differences in need fulfilment are not attributed to local policy making by citizens. The more specific model will hold further information on changes in need representation through a process and thus will be helpful in clarifying questions the general model can hardly answer. This model shows that moving through a city easier and more comfortable increases local legitimacy beliefs – even when controlling for the very influential political involvement variables. While the substantive effect of representation on local legitimacy beliefs is visible, the procedural effect goes into the opposite direction. **Local democracy profits from better living conditions among individuals. It does not seem to profit from including individuals into processes.**

The **specific model** goes into detail when asking how legitimacy beliefs relate to participation in consultations. Measurement strategies were refined by referring to the

change in local legitimacy beliefs as a dependent variable (see Chapter 6.2 and Table 11). While **descriptive input representation** will still be measuring participation but now more specifically relate to participation in the consultation to “freiRaum Ottensen”, the measurement remains close to the general model. The measurement of STOR changes because it resembles the evaluation of the process “freiRaum Ottensen”. SOR is measured using the perceived change in **basic need fulfilment, time efficacy needs fulfilment and individualist need fulfilment**. Results discussed in the text will mostly reflect on a combined measurement of the three need groups, that was used due to issues with multicollinearity (see Table 22). The model was estimated for the need groups separately to be able to observe differences between them (see Table 28)

Looking at models estimating what influences changes in legitimacy beliefs, there are once again **demographic influences** to observe. One of the most interesting effects that resembles the results from the general regression even is that disability has a negative effect on the change in legitimacy beliefs that remains relevant and significant in all three models even when including previously relevant aspects such as political involvement or aspects of representation. With a b coefficient of -0.47* and a beta of -0.15 disability is shown to be a relatively strong influence.

This effect is robust even when estimating the model for the different need groups (see Table 28). Previously, I formulated the idea that individuals who are politically organized but still remain unseen in political decisions – or: their needs remain unmet - are more critical towards the political system. The results from Ottensen partly suggest that the consultation did not manage to include enough ideas and suggestions of disabled people into the decisions made after the process even though they tried to offer special focus groups for these individuals.

A further interesting aspect is that there seems to be rather high decrease in legitimacy beliefs among individuals that are younger than 35 years in comparison to those between 35 and 65 years. Being younger than 35 years in comparison to being 35 to 65-year-old leads to a decrease in legitimacy beliefs (-0.58** scale points, see Table 22). Effects remain stable even in the models differentiating between the need groups (see Table 28). This cannot easily by explained by theory or data. While the “freiRaum Ottensen” process also suffered from a representation bias in terms of age, it may be

plausible the negative changes in local legitimacy beliefs could have been induced by the lack of being involved. Because the measurement of change in legitimacy beliefs is unspecific and not related to the procedure, it remains plausible that other aspects could have caused this effect. With the current data it is not possible to distinguish possible explanations well enough, as both questions do not include a procedural framing.

The block of the **political involvement** variables is interesting to observe. It was previously shown that this variable block (composed of internal political efficacy, external political efficacy and local political interest) has tremendous influence on local legitimacy beliefs especially external political efficacy that is indeed conceptually close to the concept of legitimacy beliefs. Interestingly, while there is a strong effect on general local legitimacy beliefs, the change/delta in local legitimacy beliefs does not seem to be influenced by any political involvement variable. This is also plausible, since there is not really a theoretical framework that could easily describe why the effect of political involvement should be given when observing changes over time for one individual. All variables, generally inducing higher or lower legitimacy beliefs when it comes to testing on the between variance of the cases, do not yield an effect when looking at their effects for a change in local legitimacy beliefs over time (see Table 28).

In the last model, I introduce the variables on **representation** to answer my research questions. I examine the effects of descriptive representation on the input level (DIR) as well as substantive representation in the through- and output (STOR) as well as substantive outcome representation (SOR). The variables differ from those used for the general model and address the circumstance of a real-life participation procedure with “freiRaum Ottensen” more directly (see Chapter 6.2). It was hypothesized that on the **descriptive level representation** in the consultation would more often induce a positive change of local legitimacy beliefs. Unfortunately for the municipalities, this cannot be seen in the data. This means even when looking at changes in local legitimacy beliefs before and after the procedure we cannot observe that participants’ local legitimacy beliefs change more positively than those of non-participants – at least in the case of “freiRaum Ottensen” (see Table 22 and Table 28).

This means that an impact of DIR on local legitimacy beliefs cannot be measured. However, the specific model and the idea of measuring changes in local legitimacy are

helpful because we can also not observe a significantly negative effect – as was the case in the general model. While DIR may not increase local legitimacy beliefs over time, it does not seem to have negative effects either. I can therefore argue that participation can still be a helpful tool. In Chapter 7.3 I observed positive effects on STOR and positive effects of (possibly increased) STOR on SOR. While a negative effect of DIR would have suggested that it is probably even dangerous for democracy to organise consultation, the insignificant effect suggests that participation may still be helpful: just not for increasing local legitimacy beliefs. At the same time, it does not seem to put them at risk.

STOR does not significantly affect the changes in local legitimacy beliefs in the full model (see Table 22 and 28)[47]. This makes it likely that STOR indirectly influences changes in local legitimacy beliefs by increasing the likelihood for being substantively represented in the outcome especially since the effect becomes insignificant when introducing **substantive outcome representation** as an independentvariable. For substantive outcome representation I chose to use an index, since variables correlated with each other highly when dividing them into the categories' **basic needs, time-efficiency needs and individualist needs** (a short discussion in Chapter 7.1). This is only the case when examining the changes in needs fulfilment and was not the case for the general regression model variables (see Table 23). I observed effects between DIR, STOR and SOR (see Chapter 7.3). These effects suggested that STOR was able to increase SOR, which is already helpful in consultative participation. Nevertheless, at this point I have to recognize that no direct procedural effects on local legitimacy beliefs can be found with the study. Their key function in consultation may not be to increase local legitimacy beliefs but to shape the outcome, so that it is linked to their ideas of a positive change of living environment.

[47] A step-wise inclusion of the representation variables, that is not depicted in the tables, showed that STOR influenced changes in local legitimacy beliefs before the inclusion of SOR into the models.

Table 22 Specific Regression on (Delta) Local Legitimacy Beliefs

	Delta Legitimacy Beliefs						
	b	*beta*	*b*	*beta*	*b*	*beta*	*GVIF*
Intercept	0.38**	0.11	0.54	0.11	-0.28	0.16	
	(0.15)	(0.13)	(0.67)	(0.14)	(0.75)	(0.20)	
Demography							
Low/Medium Education	-0.46	-0.44	-0.45	-0.43	-0.38	-0.37	1.17
	(0.29)	(0.28)	(0.30)	(0.30)	(0.31)	(0.30)	
Income (Reference: Above median equivalence income)							
Below Median Equivalence Income	0.01	0.01	0.01	0.01	-0.03	-0.03	1.28
	(0.20)	(0.19)	(0.20)	(0.19)	(0.20)	(0.20)	
No Response	0.01	0.01	0.02	0.02	0.00	0.00	
	(0.21)	(0.21)	(0.22)	(0.21)	(0.22)	(0.21)	
Not Male	0.07	0.03	0.05	0.03	0.09	0.04	1.40
	(0.18)	(0.08)	(0.20)	(0.09)	(0.20)	(0.10)	
Disability	-0.59**	-0.19	-0.59**	-0.19	-0.47*	-0.15	1.15
	(0.26)	(0.08)	(0.27)	(0.08)	(0.27)	(0.09)	
Age (Reference: 35 - 65 years old)							
Under 35 Years Old	-0.56**	-0.55	-0.60**	-0.58	-0.58**	-0.56	1.32
	(0.27)	(0.26)	(0.29)	(0.28)	(0.28)	(0.27)	
Over 65 Years	-0.06	-0.06	-0.04	-0.04	-0.09	-0.09	
	(0.22)	(0.21)	(0.23)	(0.22)	(0.23)	(0.22)	
Political Involvement							
Internal Political Efficacy			0.02	0.02	0.05	0.04	1.64
			(0.14)	(0.10)	(0.14)	(0.10)	
External Political Efficacy			0.01	0.00	-0.09	-0.06	1.45
			(0.13)	(0.09)	(0.14)	(0.10)	
Local Political Interest			-0.07	-0.06	-0.08	-0.07	1.49
			(0.11)	(0.10)	(0.12)	(0.10)	
Representation							
DIR					-0.05	-0.05	1.30
					(0.21)	(0.21)	
STOR					0.09	0.08	1.39
					(0.12)	(0.09)	
SOR					0.25*[48]	0.17	1.26
					(0.13)	(0.09)	
Observations	150						
R^2 / R^2 adjusted	0.083 / 0.038		0.086 / 0.020		0.122 / 0.038		

*Notes: p < 0.001 ***, p < 0.01 **, p < 0.05 *, p < 0.1 +*

This positive change in living environment was until this point called substantive outcome representation. It is also the only significant influence by the representation

[48] In the model that contains robust standard errors substantive outcome representation was still significant but only on a 10% level. The effects of disability and being under 35 years old also remained significant (see Table 29 in Appendix).

variables that can be identified throughout the last model. With an b of 0.25* it has a positive influence on the changes in local legitimacy beliefs which once again strengthens the perspective on the importance of the participations' outcome for individuals changes in legitimacy beliefs (see Table 22). Individuals that experience more positive outcomes from the process for themselves – meaning who are substantively represented in the outcomes – reported stronger positive changes in local legitimacy beliefs. This effect could be identified for the index from all need groups and their substantive outcome representation (see Table 22). It remains robust for all three need groups when estimating separate models. Local legitimacy beliefs are strengthened when there is better basic needs fulfilment through a consultation (0.35**). They are also strengthened, when there is better time efficacy needs fulfilment (0.23*) and even when there is better individualist need fulfilment (0.13+)49. This even confirms the idea that basic needs fulfilment is the most important aspect to individuals when it comes to the fulfilment of their local legitimacy beliefs. This is because 0.35 is the strongest b estimate found.

All in all, these results suggest that **not every consultation is able to increase local legitimacy beliefs**. It points to the importance of the process of inviting people to participate, allowing them to express their opinions during the participation, and incorporating some of their ideas into the relevant planning decisions. The study was able to show that an increase in local legitimacy cannot be achieved by a consultation process alone. The effects of participation and evaluation of the process remain insignificant when the evaluation of the outcome is also considered in the statistical models. At the same time, the study suggests that the process can be influential in shaping this outcome. Participation influences the perception of being heard, or: a positive evaluation of the throughput. A positive evaluation of the throughput also has a positive effect on the evaluation of the representation of one's own needs in the output. This suggests that consultation can indeed play a role in increasing legitimacy beliefs at the local level. This role is to produce an outcome that is inclusive of different needs. This outcome is relevant for increasing local legitimacy beliefs.

[49] Comparison between these aspects is allowed, since they come from regressions that have equal samples and work with equal scales on both dependent and independent variables.

8. Discussion

In researching consultation in participatory policy-making on sustainable urban mobility, I have tried to answer following research questions**:**

(1) Do levels of representation interact in consultative policy making processes?
   a. Does descriptive input representation (DIR) increase substantive through- and output representation (STOR)?
   b. Does substantive through- and output representation (STOR) increase substantive outcome representation (SOR)?

(2) How does representation through consultation shape local legitimacy beliefs?
   a. Does descriptive input representation (DIR) increase local legitimacy beliefs? (Procedure)
   b. Does substantive through- and output representation (STOR) increase local legitimacy beliefs? (Procedure)
   c. Does substantive outcome representation (SOR) increase local legitimacy beliefs? (Outcome)

This means that I examined the effect of descriptive input representation on substantive through and output representation. In addition, I asked whether being involved in the policy-making process (and being able to express an opinion) leads to changes in the personal living environment through the planning outcome (SOR) or not: How well is someone substantively represented in the policy outcome if they are descriptively represented in the input and substantively represented in the through and output?

The theoretical framework from Chapters 2 to 4 suggests that descriptive input representation can induce higher substantive representation at the through- and output level. Only those who are descriptively represented in the input can express their opinions. If a consultation process goes as planned, the opinions expressed will influence the decision-making process. **Thus, the presence of a person in the participatory policy making process (DIR) and the expression of needs during the participatory policy making process (STOR) will probably lead to a change in the living environment after the participatory policy making process (SOR)** (see Chapters 3.13.2 and 2.3 and Figure 3). This can be seen as the potential of using consultation in policy making. As local authorities have chosen to invite citizens to share their

experiences when organising a consultation, they are likely to process these experiences when developing a planning decision. Citizens are likely to be seen as experts of their everyday lives (Schmiz und Caminero 2022). The mechanism behind the potential in consultation can be found in socio-demographic characteristics as explanatory variables for shared experiences in mobility behaviour and a high likelihood of shared needs (Huber, 2016; Hunecke & Preissner, 2001; Mansbridge, 1999; Wilde, 2014b).

8.1. Inclusive Representation yields Inclusive Results.

Previous research has attempted to capture this dynamic between descriptive representation and substantive representation for marginalised groups gaining access to parliaments or other political institutions (e.g. Schwindt-Bayer & Mishler, 2005). At the same time, the participation of citizens in local consultations is nearly never studied. This means that previous findings can be applied to a slightly altered model of policy-making and only be interpreted in comparison to that. This also suggests that the results generated in the CIMT project captured an important aspect of consultative participation, namely: **that participation indeed influences the results**. This aspect is often assumed, but not yet confirmed when it comes to substantive outcome representation as changing living environments for individuals. Research on parliamentary inclusion can show that there is a connection between the presence of marginalised groups (or: descriptive input representation) and their substantive representation.

Acting on behalf of particular groups is more likely when a group is represented descriptively in policy-making. For example, when women were represented in policy-making, their needs were more likely to be substantively represented in policy decisions (Schwindt-Bayer und Mishler 2005). But research also suggests that results could be rather specific for women, since they constitute a large group in society that has long been marginalised. The impact of being a representative of a smaller minority group has been less clear. For people of colour in representative positions, research showed that they were more intrinsically motivated to support the interests of other people of colour in comparison to white representatives (Broockman, 2013). Here, it remains unclear whether higher intrinsic motivation is sufficient for the substantive representation of marginalised groups (such as PoC or LGBTQ*). With a shrinking size of the respective group gaining majorities in parliaments and acting on behalf of a groups' interest may only be possible to a limited extent. This was shown to be a problem in

the case of rights for LGBTIQ*, especially when majority party positions tend to be conservative (Bönisch, 2021; Dovi, 2002). The characteristics of a representative political system and the controversies and competition between parties shape this dynamic. They are more relevant for the results than the participating individuals, if these are from a rather small group. This gains complexity, when looking at the representation of people from lower socio-economic status groups (Mansbridge, 2015).

For the relationship between descriptive input representation and substantive through and output representation in a participatory policy-making process, I find clearer positive relationships. The general regression model with STOR as the dependent variable shows a positive effect of the explanatory variable DIR**. Participation in political process in general increases the perception of being able to express one's own opinion in policy-making in comparison to non-participation.** This very clear effect is explained by the character of consultation. Professionalized policy-making contexts differ in two aspects. The first aspect is the aspects of group dynamics. Group dynamics generally present in parliaments through, for example, party affiliation or factionalism should be less relevant in participatory policy making that is framed citizen consultation. The second aspect is the aspect of political powers. While a parliament has several political powers and competencies to act on behalf of the interests of citizens, this does not account for the consultative assembly. Both dynamics make it more likely that individuals are encouraged to express their opinion and articulate their interests. They are not in a professional context in which it could be important for their own interests to align with a party's position. Also, it is clear that their articulated interest may be incorporated but is not responsible for the result. It can be an excerpt from their reality and only that. Most likely this does account for the feeling of being more heard after being included into the policy making process. Looking more closely at the more specific regression model for "freiRaum Ottensen", **it becomes clear that after a process, individuals evaluate the through- and output better if they were part of it.** Linking the questions on DIR and STOR to a specific consultation procedure effects the regression results insofar as it suggests an even stronger effect of DIR on STOR. The specific regression model estimates high standardized beta coefficients for the effect of participation in "freiRaum Ottensen" on the evaluation of the substantive through- and output representation in "freiRaum Ottensen".

Obviously, these results only hint at the real effects of descriptive input representation on substantive throughput and output representation. First, they clearly measure individual effects rather than a societal phenomenon. This is already helpful, since it is relevant whether individuals participating in local consultation perceive that their expressed opinion was heard. It would be more problematic if participants felt they were heard less often than non-participants, since this would suggest a serious democratic problem with consultation. It is, however, far from being the answer to the general question whether descriptive input representation in consultation yields substantive representation of this group.

Perceptions can differ between socio-economic groups and especially marginalised groups may feel less heard even if they participate in the process. Results show that this is the case. Most undebated may be the result on disability and STOR. **Disabled people feel less often heard even when participation is controlled for throughout the models.** In the specific regression model this is also true for low(er) income individuals. This gives us a hint that while local municipalities seem to generally be successful in communicating that they are listening to particular groups, this becomes more complicated in these two cases of disability and low income. It may be useful to specifically focus these dynamics when further elaborating on the data. It would also be helpful to leave this individual level and look more specifically on representation to get an idea, of what induces these dynamics. Are disabled people participating in processes but, due to a small group size unable to change certain aspects of their built environment? Are low(er) income people generally prone to feeling less heard or do local municipalities less often encourage them to express their interests within consultative contexts? This must be a topic for future research because it cannot be answered with this study.

But STOR is generally neither the goal of the citizens participating in the consultation, nor the goal of the municipalities offering it. Also, the state of research related more directly to questions framing a **substantive outcome representation**, where local municipalities act on behalf of the interests of a certain group. Substantive outcome representation was defined as only being able to be reached when someone is represented in an urban outcome. Being represented was defined as being able to fulfil secondary mobility needs on the dimensions: basic needs, time efficacy needs and individualist needs. While the models suggest that previous participation in local

consultations does not advantage individuals in terms of their SOR, it becomes visible that people especially differ in their basic needs' representation. The effects might indeed resemble general patterns of marginalisation in society. Especially, disabled people state systematically lower fulfilment of basic needs while travelling in the general model including all observed contexts. The effect is similarly negative for non-males compared to males and for people with lower/medium education compared to those with higher education. Along with disabled people, these misrepresented groups in the outcome are usually the ones missing from consultation processes as well. What is interesting is that basic needs fulfilment seems to be less dependent on the choice of a mode of transport in comparison to time-efficiency need fulfilment and individualist need fulfilment. Using public transport allows for basic need fulfilment a little less, but with a comparably small effect (see Table 19).

Feeling heard during the process positively influenced perceived individualist need fulfilment, but was not relevant for the other dimension. This suggests either that there is no effect through feeling heard in a procedure or the measurement in the general model is flawed (see Chapter 7.3). There are certainly limitations to the general model. The general model is a cross-sectional model and measures need fulfilment at the same time point as feeling heard by local politics. The measurement of the variables is not related to a consultation procedure neither is the organization of the city to enable better need fulfilment related to a participation procedure. With a lot of variables generally able to explain need fulfilment on all three levels, it might be harder to identify an effect of STOR. In the general model estimating the effects on SOR, the influence factor of DIR does not account for whether the consultation in question was actually related to mobility planning and may measure something different. I chose to make this assumption out of methodological pragmatism. This likely contributes to the weak effect observed. This limitation applies primarily to the model focusing on SOR and less so to the other general models. However, the low specificity of the measurements overall makes it more difficult to identify meaningful patterns or mechanisms.

This is different in the more specific models dealing with change in Hamburg Ottensen. **Here, changes in need fulfilment through the participatory process can be identified in relation to the feeling of being heard during the process. All models show strong significant effects of STOR on SOR.** I assume that the weakness of the measures in the first models was the reason for the lack of effect. I also assume

that people who feel that they are heard in a participatory process will perceive that the built environment is changing in their favour. This must be focussed by further research, because my results only show these effects for a participation procedure that was organized by local authorities with many resources. Another limitation of the more specific models is their low explanatory power (adjusted R^2), which indicates that many relevant variables are not captured in my models. Future research could address this not only by increasing the number of cases, but also by developing ideas about additional influencing factors that, with a larger sample size, could be tested more effectively.

The validity of the results is somewhat limited to operational procedures at the district level (Type IV, see Table 2) with well-organised consultation, as the general model was not able to show any results. These limitations not only affect the type of consultation to which the results can be applied, but may also be related to the choice of sample and sample size. Only 150 people could be interviewed, which is obviously a rather small sample, but it was necessary due to the specific conditions under which the third important dependent variable (change in local legitimacy beliefs) was measured, and the necessity that respondents had heard of the "freiRaum Ottensen" process. At the same time, the sample is not only small, but also quite specific. Many participants in the process were not recruited through random sampling, but were interviewed by contacting a full sample of participants. This leads to possible problems in estimating and interpreting p-values. At the same time, the panel structure provides better measures of the theoretical problems, so I decided to accept these aspects. Future research could focus on a similar structure, but with an emphasis on measurement strategies that are not susceptible to these problems, and expand the sample to include more case studies in different cities (of different sizes).

Even though with limited validity, these findings can be interpreted in line with the theoretical (and empirical) literature on the effects between descriptive and substantive representation. The empirical model is refined by adding the through- and output levels of a consultative participation process (see Figure 1 and Figure 3), which makes it applicable to researching consultation. **Descriptive representation was shown to affect substantive through- and output representation and substantive through- and output representation was shown to affect substantive outcome representation** (see Chapter 7). This means that the effect of being part of the process in the

sense of participation is usually the feeling of being heard with one's ideas, or: the opportunity to mention ideas in the process. Mentioning ideas in a participatory process then leads to these ideas being taken up by public authorities, i.e. substantive representation of results. This supports the key idea of Mansbridge (1999), who sees the potential of descriptive representation in achieving fairer substantive solutions that are inclusive of the descriptively represented groups. However, it is important to note that this effect can only be seen if a group or group member takes the opportunity to express an opinion during the process.

8.2. Results of Procedures are relevant for Local Legitimacy Beliefs, Procedures maintain relevant for Results

Legitimacy beliefs, not necessarily about local politics, have been the subject of political research for some time. Obviously, this is due to their relevance for the stability of political systems. Local legitimacy beliefs are a highly relevant concept for local politicians, who tend to use participation to justify decisions that are unpopular with some sections of the population. Does this idea work? Does the (participatory) process have the power to increase legitimacy beliefs at the local level by strengthening the understanding for a certain decision? What differentiates this study from most previous studies on the influences of a participatory procedure on democratic support is the measurement of local legitimacy beliefs and the reference to local level rather than national level politics. Most previous studies focused on satisfaction and trust as measurements for legitimacy beliefs and on national level policy making. Since a dyadic measurement of legitimacy beliefs is used in the European Social Survey for national level politics (European Social Survey ERIC, 2013) I chose to adapt this approach to the local policy making level especially since I suspect the local policy making level to be better measurable with a dyadic approach. Legitimacy beliefs at the local level are seen as susceptible to contextual differences that give rise to different expectations (Vetter, 2002a). The absence of normative frameworks for local politics leaves even more room for what people might expect from local politics.

Previous studies find that a participatory process can indeed legitimize decisions through (merely descriptive) representation. People are more likely to accept decisions if a more socio-economically diverse group was involved in the decision-making process. This even accounts for decisions that discriminate against specific groups

(Clayton et al., 2019). Results also indicate that descriptive representation (or: like-me perceptions when seeing decision makers) is a relevant factor to influence legitimacy beliefs. This factor is especially relevant for marginalised groups (Gay, 2002). While these studies indicate positive effects from descriptive representation on legitimacy beliefs, the five observed case studies for the general regression model show opposite effects (see Chapter 5.1). Descriptive representation in the procedure (reached by participation) is negatively related to local legitimacy beliefs. This can be explained quite easily by taking a closer look at the specific character of descriptive representation in consultation. Here, individuals are descriptively represented if they themselves participate in the procedure. For the cases, that found positive effects of descriptive representation on legitimacy beliefs this was almost never the case. Other studies worked with the idea of representatives, where it may be more likely that like-me perceptions introduce positive feelings towards an outcome. The barriers for participating in a local consultation should not be very high, still participants must invest their time and energy to be part of the procedure. I argue that the reason for the negative impact of participation on local legitimacy beliefs is that discontent motivates people to participate. While this is certainly caused by the design of these procedures, another reason for the negative effect can be found in the cross-sectional design of the data set when looking at the five case studies. This means that we can only measure local legitimacy beliefs at one time point and estimate effects using the variance between individuals (in this case participants and non-participants). The specific model for Hamburg-Ottensen could give a hint at possible effects on the change in local legitimacy beliefs but can only estimate an insignificant effect that is close to 0 (see Chapter 7.3.). *In conclusion, this means that we cannot confirm a positive effect of the procedural path from descriptive input representation.*

Being present during a participatory process is not the only way in which procedural aspects can be relevant for local legitimacy beliefs. Indeed, from a theoretical point of view, it seems likely that perceptions of the process, e.g. whether one's interests were more likely to be heard during the process, will have a stronger influence on the dependent variable of local legitimacy beliefs. Previous research has tended to focus on the input and outcome levels of processes, and the throughput level has been theoretically assessed but rather ignored as a specific side effect. This study has tried to measure it in both models, the general model and the specific model, but the measurements are very different. The measurement in the general models is specifically

interesting since it happens to be part of the measurement of local legitimacy beliefs. This is both a methodological problem and an indication of how closely the concepts of substantive representation in a process (being heard by local politics) and local legitimacy beliefs are related. This general model also indicates that there is a positive influence of being in the process (or: participation) on feeling heard by a local municipality. This result is good news for local municipalities. We have seen that more critical people tend to participate in local consultations. This accounts mainly for the negative effect of descriptive input participation on local legitimacy beliefs. But, even these more critical citizens feel heard through the consultation procedure which is a good reason for local municipalities to integrate participatory elements in planning. No other effects could be identified for being heard in a procedure. Also, for Hamburg Ottensen feeling heard during a procedure does not explain changes in local legitimacy beliefs. This also means that I must reject all hypotheses expecting procedural aspects to influence local legitimacy beliefs alone. However, the procedural levels seem to affect the feeling of being heard as mentioned in Chapter 8.1, which means that their role just might differ. While they increase perceived SOR, they might still have an effect for local legitimacy. This effect just does not show through DIR and STOR that does not lead to SOR.

So, is SOR more relevant for local legitimacy beliefs than DIR and STOR? Research has already examined the relevance of the outcome of a procedure for the acceptance of a decision (e.g. Arnesen & Peters, 2018). I propose that it is not only the acceptance of decisions that is influenced by the favourability of the outcome. Most of the changes introduced by participatory decision-making in planning - especially in the field of sustainable urban mobility - tend to be permanent, as they lead to a long-term reorganisation of cities towards more convenient modes of sustainable transport. While they are unlikely to improve mobility options for every member of society, it seems plausible that some will benefit from the changed built environment. This change is likely to be permanent and mobility can be considered a basic right and an important part of everyday life. Permanent improvement in a very important area of everyday life can generally increase satisfaction and the feeling that political actors are responsive to one's needs. I therefore expected that improving mobility needs will increase legitimacy beliefs (see Chapter 5.2). The general model starts with an approach modelling the need fulfilment in mobility as independent variables. While I consider this generally a good approach it lacks clear relation to a planning decision and change related to politics.

Supposedly, this is why general models do not clearly measure the expected effects. Nevertheless, one marginally significant effect of better individualist need fulfilment on higher local legitimacy beliefs can be identified. While not being clear enough this already hints at the importance of the outcome for local legitimacy beliefs with suggesting that those with a higher likelihood to fulfil their needs on their everyday journeys are more likely to be positively effect in their local legitimacy beliefs through the process. An expected effect is, by definition, less clearly identifiable in the general models. In a second approach I use the changes in supposed need fulfilment (that are related to the real-life participation procedure) after the city's redesign as an independent variable. The model shows first that the change in mobility need fulfilment has a strong positive effect on the changes in local legitimacy beliefs. Improvement of the living conditions when it comes to mobility will yield higher legitimacy beliefs (see Chapter 7.4 and Table 22).

The results suggest that **procedural aspects do not play the desired role in influencing local legitimacy**. While municipalities may hope that they can legitimize unpopular decisions through a participatory process alone, this does not seem very likely. Rather, the results imply that the outcome of a participatory process plays a major role for local legitimacy beliefs. This indicates that these outcomes cannot be too different from citizens' expectations. What is unclear and a further limitation of the study is the question of whether the measurement is very accurate. The interpretation that a positive change in living conditions has strong effects on local legitimacy beliefs relates to the idea that citizens can assess how their own living conditions will change as a result of a particular measure (see Table 9). It is at least questionable whether this is the case. Their assessment could also relate to their own political opinion, choice of transport mode or other aspects that are not accessible in a survey questionnaire. Future research may be better able to access the impact of policies on people's lives after they have been involved, which is not yet the case in our study. **Nevertheless, this study suggests that positive evaluations of one's ability to move around a city change local legitimacy beliefs for the better.**

That only the outcome is influential for local legitimacy beliefs does not make a participation process obsolete, but rather shifts the focus to other aspects that citizen participation can fulfil, such as refining the results of a planning process to make them more responsive to citizens' needs and ideas. In the best cases, participation is a tool for

local municipalities to improve decisions so that they cater for citizens' needs. Who is there should influence who speaks and feels heard during a process. This is suggested by normative conceptions of democracy, as well as by the results of the models measuring the influences of being present in a process on the feeling of being heard by local authorities. Looking more closely at the specific results, this also seems to be a useful way to increase local legitimacy beliefs from the perspective of local authorities - although this effect could not be verified through my regression analyses. The reason for this is that the definition of the concept of being represented in the through- and output of a process is quite close to a normative understanding of local democracy and can therefore be part of citizens evaluation of democracy in a dyadic measurement approach. While citizens expectations of how much local authorities should hear them may still exceed this evaluation, participation was shown to indeed be helpful in enhancing a positive evaluation of these aspects. This should be kept in mind. This suggests a certain complexity of effects and some positive outcomes from the procedural levels of participation at least when it comes to evaluating whether local authorities are interested to hear individuals' opinions and incorporate them into the decision making.

Missing effects of participation on local legitimacy beliefs may also be assigned partly to the measurement of expectations of citizens when it comes to their local authorities. A further limitation of the study is that the measurement catalogue for the measurement of local legitimacy beliefs is not very broad. It is possible that some mechanisms may have remained hidden because of the measurement of local legitimacy beliefs. This is still rather basic in incorporating only thoughts on different intensities of local participation. It may be useful to take a few steps back in future research. First, intense theoretical work on local democracy and second, a more qualitative approach may be useful in identifying possible expectations to local democracy that can be incorporated into a new – more detailed – item battery approaching local legitimacy beliefs. A more detailed catalogue of demands for what can be expected and evaluated in local democracy would have been very useful in this research. Still, the presented measurements can be considered useful when evaluating local participation but they lack some depth when it comes to further aspects that are part of citizens evaluations of local authorities. A broader catalogue may also help to establish an understanding of local differences in the expectations of the citizens and their role in shaping local legitimacy beliefs. Current results hint at better evaluation of local politics through local political participation. Still, effects on local legitimacy beliefs are either negative or non-significant, which

suggests that differences in expectations should play a role for local legitimacy beliefs. And not only research would benefit from evaluating possible expectations by citizens. This knowledge may also help local authorities to react to demands of the public and can thus be profitably used to build stable local communities.

The idea that there may be more aspects to local legitimacy beliefs than participation also suggests that I overestimate the effects of participation on local legitimacy beliefs to some extent. Real values might not be as negative as those estimated in the general regression models. The change in local legitimacy beliefs may nevertheless be the more useful variable when estimating effects of participation in a specific procedure. Here, low sample sizes seem to be a big challenge. This is due to panel issues such as a needed before- and after-evaluation but also induced by working with a smaller, district specific sample. Further research could easily increase sample sizes here, by collecting panel data in more contexts. Nevertheless, some mechanisms behind representation and its effects on local legitimacy beliefs could be identified in the models. Especially, substantive representation in the outcome of a participatory process can be considered relevant for local legitimacy beliefs. **If there is an improvement in mobility for citizens, they will have higher local legitimacy beliefs after the consultation.** This means that it is first of all helpful for local authorities to improve the situation for citizens. They can use participation to achieve an identification of current problems. **When trying to improve local legitimacy beliefs, participation may be a good solution to help incorporating citizens ideas into the results.**

9. Conclusion

In this chapter I will summarise the main findings of this study. While they address social inequalities in civic participation on a small scale, they provide important insights to assessing and protecting democracies on a larger scale. The study makes it clear that tackling climate change is one of the most important goals in contemporary politics. Although it is unclear how to achieve a reduction in CO2 emissions, many (democratic) politicians define it as a key objective. It is part of the Sustainable Development Goals defined by the United Nations. The mobility transition is crucial to this, since the transport sector is one of the largest emitters of CO2. Often, these decisions are shown to be not only controversial but prove major challenges in terms of acceptance. Citizens demand more say in the decision-making process. Especially those that do not

directly benefit from the decisions because they travel by car often usually present high levels of discontent, to the point that this might affect their long-term acceptance of a political system. Local authorities need to ask themselves how to strengthen acceptance among these groups. It is unclear whether the consultations they currently offer are working in their favour. **Understanding the mechanism behind increasing legitimacy beliefs through consultation is key to strengthening democracy at the local level - and ultimately to gaining social acceptance for measures to tackle one of the biggest problems facing modern society.**

This study aims to uncover some of the mechanisms that explain how local legitimacy beliefs might increase through consultative participation. The focus was on these consultative participation processes. This participatory approach seemed straightforward, especially since citizens usually complain when they are not consulted about decisions. This is also because conflict over urban space is generally a conflict over resources, and dissatisfaction usually arises from the loss of resources. Indeed, the theoretical framework suggests that, from a normative point of view, citizens may complain if they are not involved in policy-making processes, since their understanding of how local democracy should work usually includes (at least indirect) involvement of the public in policy-making processes.

The theoretical part of the study shows that citizens **can be represented at different levels of the policy-making process**. Representation in the input can be reached by participating in a process, **representation in the through- and output by voicing one's opinion during a process**. Representation in the result, or: outcome, is less easily achieved without the help of local authorities because these usually have the competences to act. Citizens are asked for their opinion on issues, but the consultation is usually not binding on the decision. Citizens may be excluded from the outcome of the consultation process, even if they were present during the process. While there is some evidence that representation in the outcome increases legitimacy beliefs, it would be extremely useful to know whether the more procedural aspects such as representation in the input and through and output have the same potential. This would imply that local communities could involve people in order to get them to accept decisions from which they will not benefit.

Although the decision-making process is structured in such a way that citizens can be excluded from the outcome of the process, the study shows that this is not often the case. In fact, the data suggests the opposite**. Citizens who become part of the process are more likely to perceive their ideas and interests as being represented in a process through- or output.** T**he study can also show that those who perceive that their interests are represented in the through- and output of a process are more likely to perceive that the built environment is changing to their benefit.** This can indeed shed light on the importance of inclusiveness of citizen participation in urban planning. The results suggest that when people are more represented in the process, they are more satisfied with the results because they see themselves represented in the results. This means that at least the groups currently represented in the processes tend to find themselves in the outcomes of the processes. Although this is a good answer to the question of whether citizen participation is conducive to inclusive decision-making, it is possible that the outcomes are different for different social groups and that these mechanisms mainly serve the groups currently represented in the processes. Further research should look more closely at whether the chances of having one's needs met through a process differ for marginalised and non-marginalised groups, and whether the manifest spatial conflicts that arise when more groups are involved in discussions change the overall picture. Here, limitations of my study lie in the small group size of marginalized groups especially in the panel model. Specific oversampling may help to reduce this problem. Qualitative approaches may additionally be able to reflect in more detail on need differences in different groups.

The cases examined for this study do not confirm the idea that participation increases legitimacy beliefs. The data can show that dissatisfaction is generally higher among those who participate in procedures. However, it is not possible to conclude that this dissatisfaction can be resolved through participation. Individuals are likely to perceive public consultation as a space where they can express their dissatisfaction. This may ultimately lead to the negative relationship between participation and local legitimacy beliefs: **A higher level of dissatisfaction to start with potentially increases the motivation to participate in consultation. Political involvement can have the potential to make local authorities aware of the dissatisfaction among citizens.** There is potential for further research here. An interesting finding is that there is no effect of participation on legitimacy beliefs when looking at the longitudinal aspect of changes of legitimacy beliefs rather than drawing a cross-sectional picture. While this

is important to contrast with the findings of a negative effect of participation on legitimacy beliefs in the cross-sectional model, it could still be that Hamburg Ottensen - the only case where it was possible to estimate change in legitimacy beliefs as a dependent variable - is an exception to the rule in terms of participation influencing legitimacy beliefs. Only a larger study, including more consultation processes of different quality, can give an indication of the real impact of consultation on legitimacy beliefs. This limitation was discussed in the previous chapter.

When trying to find out under what conditions participation in consultation processes can increase local legitimacy beliefs, this 'real impact' may not be the most relevant feature. Here it would be useful to find out how the process and the outcome of consultation affect legitimacy beliefs. This study has selected **representation** as a potentially relevant feature of the through- and output of a participatory process that may affect legitimacy beliefs as a process factor, but cannot confirm an effect induced by perceptions of representation in the through- and output of the process on legitimacy beliefs. The only meaningful effect can be found on the **perceived representation in the outcome** of the process – or: the **change of living conditions**. If people believe that their living environment will change in their favour, they will have higher legitimacy beliefs. **A living environment designed for them can potentially increase their support for democracy.**

However, issues of measurement and research design highlight a particular nature of the idea of substantive through- and output representation. Here, I think it is important that further research takes a step back and attempts to develop a theoretical model of local legitimacy beliefs that can identify in particular the expectations placed on local authorities. This has already been discussed in Chapter 8. For the study of political attitudes, it is relevant to discuss whether the feeling of being heard - which is essentially described by the notion of substantive through and output representation - in a citizens' consultation can be distinguished from local legitimacy beliefs, or whether it can be seen as part of it. This theoretical discussion should mainly develop around the question of whether representation in a policy-making process, for example through consultation, should be a general part of an understanding and definition of local democracy. Although defining STOR as essential part of local democracy perception would disable us from testing possible effects of STOR on legitimacy beliefs, it would

be valuable in terms of strengthening the role of consultative participation in a general discussion that can be beneficial for democratic inclusion of citizens.

Understanding STOR as general part of expectations citizens have to local democracy and at the same time not consulting them can open up a wider gap between the population and politics and consultation could rather be considered a minimum standard for fulfilling democratic tasks. This study was able to show that evaluation of democratic inclusion through local politics does indeed increase with the possibility of participation. It is rather the expectations dimension that lowers the overall values for legitimacy beliefs which would indeed mean that local authorities do not yet fulfil minimum standards citizen have to them. Also, participation can increase STOR and STOR increases the important perception of a good output. Further research on expectations to local politics could increase the understanding of unfulfilled expectations among citizens and help identify vulnerabilities in local policy making. It may also be useful in adjusting policy making to explain unliked decisions to citizens in a more plausible way that meets their expectations. **Because if citizens see substantive representation in a process's through- and output as essential part of democracy, it becomes more important to really include them effectively into decision-making processes.**

While the procedural aspects - descriptive input representation and substantive through-and output representation - leave room for interpretation and further discussion of the results, substantive outcome representation is where the proposed effects are clearest. An improvement in a person's living conditions leads to higher local legitimacy beliefs. This is clearly in line with the results of previous research, which finds effects of outcome favourability on satisfaction with authorities and almost no effects of the decision-making process. It also would suggest a relatively straightforward approach in policy making: **Make sure that citizens' interests are represented in the outcome and they will be more accepting of local democracy.** While this may be a good strategy when it comes to questions of being liked by the public it is questionable whether this is realizable. If more people participate more spatial conflicts will emerge in the consultation. **These conflicts will not always be solvable since urban space are a limited resource. But they can be addressed by participation.** The question of whether local legitimacy beliefs can be strengthened with consultation must be a clear yes. Even though it seems to depend on the process and how citizens ideas are incorporated into policy outcomes, the potential of consultation to increase local

legitimacy beliefs is given through the outcome. **More inclusivity of the outcome in terms of needs representation is always better for local legitimacy beliefs.**

This may not be easy to deal with in these types of conflicts that ultimately concern the reduction of CO2 and thus, space for cars. There is the necessity that certain groups lose the space they currently get assigned. The study suggests that the improvement of living conditions after a consultation ultimately increases local legitimacy beliefs. To reach the goal of reducing CO2 it is relatively clear that not everyone's living conditions can improve. Some people fulfil their mobility needs best by using a car and for most consultation procedures one goal is to reduce car traffic. It is obvious that with moving in the direction of a mobility transition -which is the initial aim of these procedures – not every car user will be content with the decisions made after a consultation. While this is relatively easy to explain, it would also mean that the consultation process does not necessarily help in resolving conflicts it just makes them more obvious.

But even within this study, this is only half the story. There is potential in the process itself and in the general understanding that meeting mobility needs is relevant to citizens' legitimacy beliefs. **Local authorities have the opportunity to put a strong focus on these mobility needs – instead of the modes of transport.** This offers the potential for an approach to mobility transitions that is sensitive to socio-economic differences and seeks to provide equal opportunities for different social groups to move around a city. A specific focus on organising to better meet needs can be a helpful tool for local authorities. Even if it is still necessary to take space away from certain users, it may be less harmful to these users if their needs are met by other modes of transport. A focus on meeting needs when organising cycling infrastructure or public transport can help motivate different groups to use these modes of transport. If, in a given context, we find that car users do not use public transport because their time-efficiency needs are not met, it is at least conceivable that more punctual public transport or a better timetable will lead to better need satisfaction, even if they are forced to use it. However, this realisation may not come immediately after a measure has been adopted. But if an improvement in living conditions generally has the potential to improve legitimacy beliefs (as this study shows), the long-term effects can be imagined as strengthening democracy. **In the long term, mobility needs rather than a respective mode of transport may be the necessary focus to achieve the transition to**

more sustainable mobility with the least damage to democratic attitudes among citizens.

All in all, it must be concluded that the case is more complicated than the usual notions of designing citizen consultations to increase acceptance of policies. While the idea that a process alone can increase legitimacy beliefs may be plausible, it does not often seem to work in reality, especially when spatial conflicts are the status quo. While achieving a sustainable mobility transition is a necessary political goal, spatial conflicts cause (also political) dissatisfaction, and this dissatisfaction cannot be addressed by worsening the living environment that people can and must use. Consultative participation in the transition to sustainable mobility needs to be used wisely, focusing on needs rather than modes when considering what should be represented in a process. Keeping living environments comfortably usable for citizens and at the same time changing the status quo in terms of CO2 emissions can be a way to influences local legitimacy beliefs and support for the political system. **Creating inclusive, usable living environments based on more sustainable modes of transport is key to a mobility transition that does not undermine political support.** Banning cars from cities without improving aspects of other modes of transport that are important to car owners will help the transition to sustainable mobility, but at the cost of individuals' legitimacy beliefs and thus support for the political system. This decrease is not necessarily dangerous and could be accepted in terms of preventing climate change but it may not meet local communities' expectations of consultative participation. While high inclusiveness may at first seem like posing a threat for ecological sustainability, it is central for social sustainability and should thus be tried. Especially, since it can be important for securing long-term political sustainability.

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Appendix

Table 23 Correlations between all variables for OLS Regression in the General Sample

	Lower Income	Higher Income	Nonresponse (Income)	Lower Education	Not Male	Younger Age	Medium Age	Older Age	NR (Age)	Disability	Bike	Car	Public Transport	Internal PE	External PE	Local Political Interest	DIR	STOR	Basic Needs	Time-efficiency Needs	Individualist Needs
Lower Education	0.15***	-0.19***	0.06*	1																	
Not Male	0.08**	-0.06*	-0.01	0.01	1																
Younger Age	0.13***	-0.10**	-0.05	-0.15***	0.03	1															
Medium Age	-0.05+	-0.05*	-0.03	0.05	-0.06+		1														
Older Age	0.02	-0.02	-0.00	0.16***	-0.08*			1													
No Response (Age)	-0.07*	0.02	0.08**	0.06+	0.11**				1												
Disability	0.05	0.09**	0.06+	0.21***	0.04	-0.10*	-0.12**	0.24***	0.03	1											
Bike	-0.05	-0.08**	0.04	-0.24***	-0.06+	-0.06*	0.17***	-0.16***	0.01	-0.20***	1										
Car	-0.13***	0.10**	0.03	0.11***	-0.07*	-0.17***	0.05	0.04	0.06+	-0.02	-0.19***	1									
Public Transport	0.02	-0.03	0.03	-0.05+	-0.01	0.15***	-0.08*	-0.02	-0.02	0.03	-0.12***	-0.36***	1								
Internal PE	-0.19***	0.22***	-0.05+	-0.27***	-0.27***	-0.17***	0.08**	0.08*	-0.01	-0.04	0.15***	-0.05	0.06+	1							
External PE	-0.8**	0.13***	-0.08*	-0.17***	-0.00	0.01	-0.03	-0.03	0.01	-0.06+	0.06+	-0.01	0.05+	0.15***	1						
Local Political Interest	-0.10**	0.12***	-0.05	-0.02	-0.18***	-0.26***	0.04	0.18***	0.04	0.06+	0.14***	-0.02	0.08**	0.45***	0.09**	1					
DIR	-0.07*	0.06+	0.02	-0.8**	-0.11***	-0.09**	0.09**	0.03	-0.04	-0.04	0.22***	-0.05	0.03	0.29***	-0.00	-0.05+	1				
STOR	0.02	0.02	-0.05	-0.07*	0.01	0.05	0.03	-0.01	0.01	-0.10**	0.07*	-0.05+	0.05	0.02	0.33**	-0.03	0.05+	1			
Basic Needs	-0.06+	0.05+	0.01	-0.16***	-0.15***	0.04	0.04	-0.06+	-0.04	-0.13***	0.11***	-0.02	-0.08**	0.06+	0.03	0.02	-0.03	0.03	1		
Time-efficiency Needs	0.04	-0.01	-0.03	-0.03	-0.03	-0.04	0.01	0.03	0.00	-0.07*	0.18***	0.04	-0.37***	0.01	0.05	0.04	0.02	0.04	0.32***	1	
Individualist Needs	0.04	-0.03	-0.01	-0.02	-0.05	0.01	-0.01	-0.01	0.02	-0.08*	0.03	-0.02	-0.12***	-0.02	0.08*	-0.14***	0.04	0.08*	0.49***	0.42***	1
Legitimacy Beliefs	0.02	0.01	-0.04	-0.03	-0.02	0.06+	-0.05	-0.02	-0.04	-0.08**	-0.04	0.01	0.01	-0.12***	0.34***	-0.19***	-0.14***		0.10***	0.03	0.13***
n																					978

Notes: Point-biserial Correlations displayed for dichotomous-metric correlations, Phi coefficient shown for dichotomous-dichotomous correlations and Pearson's correlation coefficient displayed for metric variables.
*p < 0.001 ***, p < 0.01 **, p < 0.05 *, p < 0.1 +*

Table 24 Correlations between all variables for OLS Regression in the Specific Sample

	Lower Income	Higher Income	NR (Income)	Lower Education	Not Male	Younger Age	Medium Age	Older Age	Disability	Bike	Car	Public Transport	Internal PE	External PE	Local Political Interest	DIR	STOR	Basic Needs	Time-efficiency Needs	Individualist Needs
Lower Education	0.04	-0.07	0.04	1																
Not Male	0.06	-0.19+	0.15	0.06	1															
Younger Age	-0.12	0.06	0.02	0.10	-0.13	1														
Medium Age	0.01	0.06	-0.08	-0,17+	0.25*		1													
Older Age	-0.6	-0.08	0.16	0.12	-0.19+			1												
Disability	-0.13	0.00	0.15	0.06	-0.06	-0.12	-0.11	0.22+	1											
Bike	0.24*	-0.05	-0.20*	-0.15	0.02	-0.07	0.15	-0.12	-0.11	1										
Car	-0.02	-0.01	0.03	0	-0.15	-0.02	0.14	-0.14	0.04	-0,26**	1									
Public Transport	-0.13	0.09	0.03	0.11	-0,17+	0.05	-0.19*	0,18+	-0.11	-0,2*	-0.06	1								
Internal PE	-0,19+	0.07	0.13	-0.18+	-0.29**	-0.27**	0.10	0.08	-0.01	-0.02	0.14	-0.15	1							
External PE	-0.04	0.24+	0,23*	-0,18+	-0.08	-0.07	0,2*	-0.17+	-0.12	0.14	-0.02	0.11	0.16	1						
Local Political Interest	-0.07	-0.02	0.1	0.00	-0,26**	-0.27**	-0.08	0.29**	0.09	0.00	-0.04	0.29**	0.43***	0.09	1					
DIR	-0.09	0.01	0.1	-0.16	0.05	-0,19+	0.08	0.04	0.09	0.00	0.03	-0.04	0.35***	-0.1	0.26**	1				
STOR	-0,21*	0.15	0.05	0.00	-0.15	-0.04	-0.02	0.05	-0.21*	0.1	-0.09	0,19+	0.03	0.3**	0.16	0.19+	1			
Basic Needs	0.08	0.01	-0.1	-0.25*	0	0.02	0.02	-0.03	-0.20*	0.34***	-0.38***	-0.13	0.03	0.25*	-0.07	0.02	0.22*	1		
Time-efficiency Needs	0.11	-0.06	-0.05	-0.14	-0.05	0.06	-0.04	0.00	-0.23*	0.34***	-0.33***	0.10	0.01	0.28**	0.1	0.00	0.3**	0.81***	1	
Individualist Needs	0,17+	-0.04	-0.15	-0.20*	-0.04	-0.02	-0.03	0.05	-0.21*	0.39***	-0.32**	-0.04	0.00	0.25**	0.04	-0.02	0.22*	0.85***	0.8***	1
Delta Legitimacy Beliefs	0.02	-0.01	-0.01	-0.16+	0.07	-0.15+	0.14+	-0.05	-0.18**	0.16*	-0.08	-0.02	0.07	0.05	-0.01	0.02	0.13	0.24**	0.21**	0.17*
n	150																			

Notes: Point-biserial Correlations displayed for dichotomous-metric correlations, Phi coefficient shown for dichotomous-dichotomous correlations and Pearson's correlation coefficient displayed for metric variables.
*p < 0.001 ***, p < 0.01 **, p < 0.05 *, p < 0.1 +*

Table 25 Estimates from the Scalar Invariance Model from Confirmatory Factor Analysis

	Basic Needs	
	Estimates (unstandardized)	**Estimates (standardized)**
Costs	1	0.50
Safety	1.12	0.64
Security	1.89	0.72
Barrier Free Accessibility	1.44	0.52
	Time Efficacy Needs	
Punctuality	1	0.69
Speed	0.69	0.47
	Individualist Needs	
Fun	1	0.52
Comfort	0.96	0.49
Relaxation	1.03	0.53

Table 26 Model Fit Indices from Confirmatory Factor Analysis

	Basic Needs		
	CFI	**RMSEA**	**Delta CFI**
Configural Invariance Model	0.89	0.07	
Metric Invariance Model	0.88	0.08	-0.01
Scalar Invariance Model	0.86	0.08	-0.02

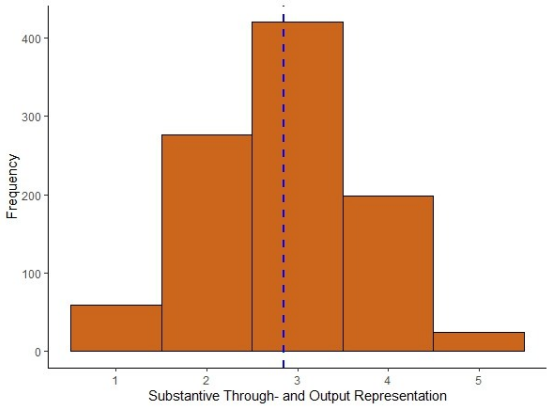

Figure 8 Distribution of Substantive Through- and Output Representation (general regression)

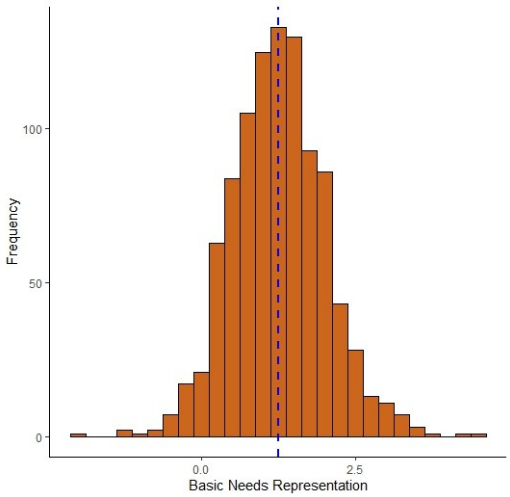

Figure 9 Distribution of Basic Needs Representation (general regression)

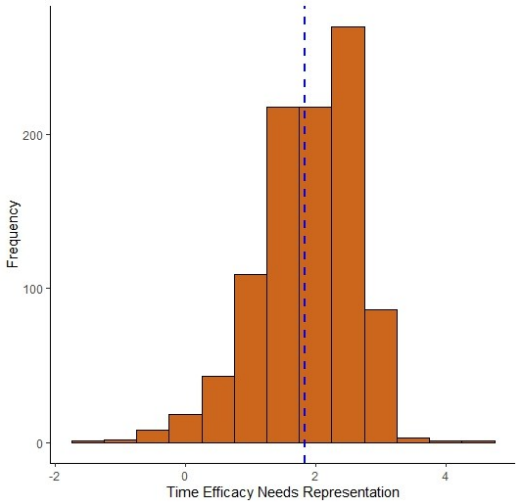

Figure 10 Distribution of Time Efficacy Needs Representation (general regression)

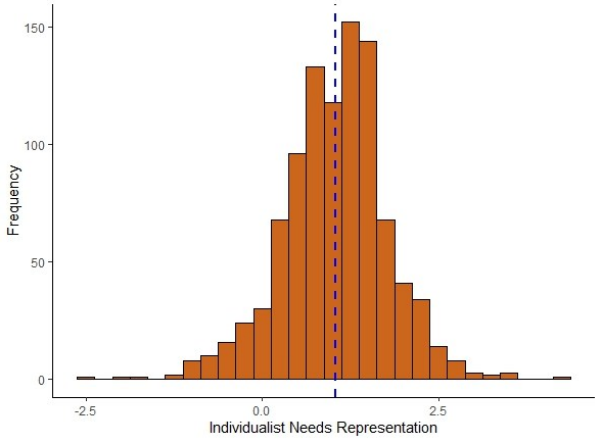

Figure 11 Distribution of Individualist Needs Representation (general regression)

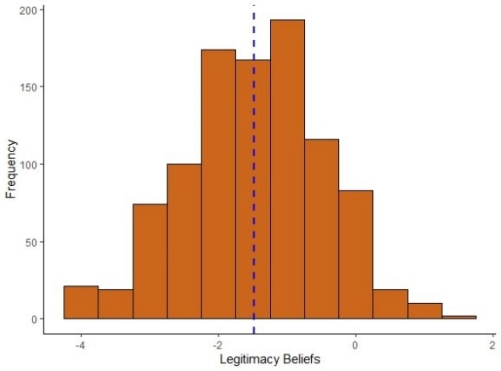

Figure 12 Distribution of Legitimacy Beliefs (general regression)

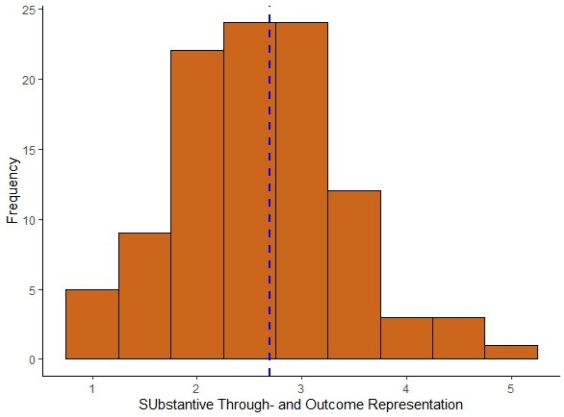

Figure 13 Distribution of Substantive Through- and Outcome Representation (specific regression)

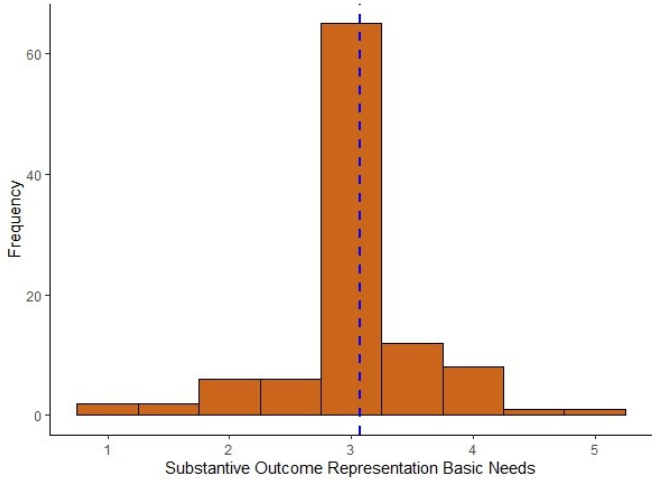

Figure 14 Distribution of Substantive Outcome Representation of Basic Needs (specific regression)

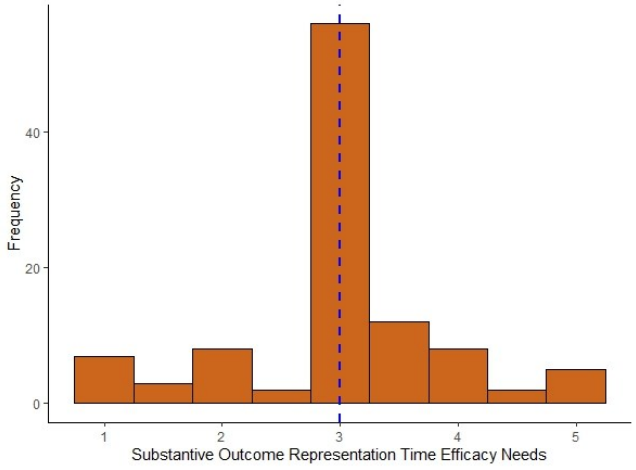

Figure 15 Distribution of Substantive Outcome Representation of Time Efficacy Needs (specific regression)

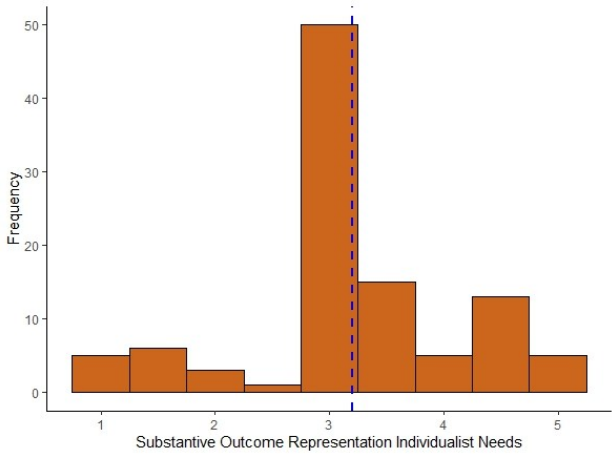

Figure 16 Substantive Outcome Representation of Needs (specific regression)

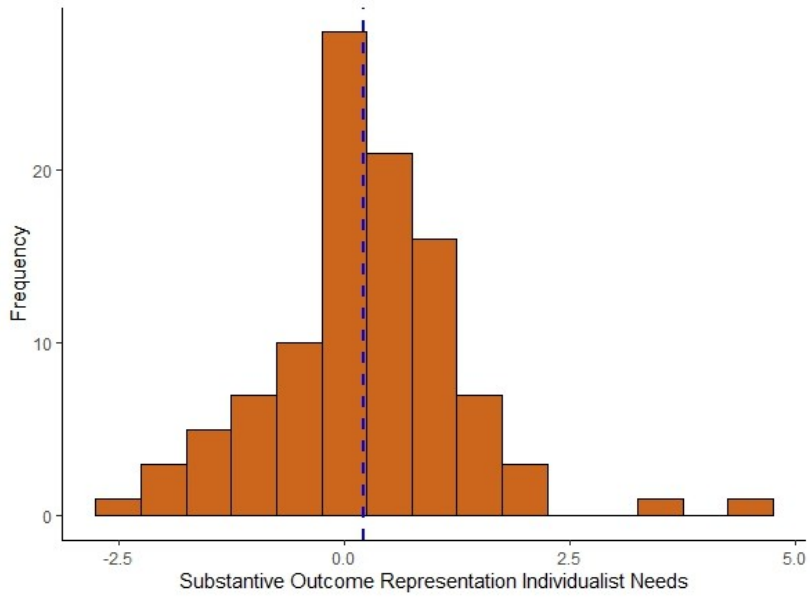

Figure 17 Distribution of Delta Legitimacy Beliefs (specific regression)

Table 27 General Regression on Time Efficacy Needs Representation (Robust SE)

	Time Efficacy Needs Representation Model 2.2.a (robust SE)		
	b	beta	GVIF
Intercept	2.80***	-0.02	
	(0.16)	(0.06)	
Marburg	0.02	0.02	
	(0.07)	(0.09)	
Offenburg	-0.07	-0.09	
	(0.07)	(0.09)	1.90
Ottensen	-0.00	-0.00	
	(0.06)	(0.08)	
Wuppertal	0.08	0.11	
	(0.09)	(0.12)	
Demography			
Income (Reference: Above the median equivalence income)			
No Response (Income)	0.03	0.04	
	(0.07)	(0.09)	1.24
Income below Median Equivalence Income	0.01	0.01	
	(0.05)	(0.07)	
Age (Reference: 35 - 65 years old)			
Over 65 Years Old	0.13+	0.17	
	(0.07)	(0.09)	
Under 35 Years Old	0.04	0.05	
	(0.06)	(0.08)	1.31
No Response (Age)	0.10	0.13	
	(0.06)	(0.08)	
Medium/Low Education	0.01	0.01	
	(0.06)	(0.08)	1.26
Not Male	-0.09*	-0.06	
	(0.04)	(0.03)	1.08
Disabled	-0.06	-0.02	
	(0.10)	(0.04)	1.13
Modes of Transport			
Bike	0.04*	0.08	
	(0.02)	(0.03)	1.41
Car	-0.11***	-0.21	
	(0.02)	(0.03)	1.53
Public Transport	-0.28***	-0.46	
	(0.02)	(0.03)	1.20
Representation (general)			
STOR	0.03	0.03	
	(0.03)	(0.03)	1.14
DIR	0.03	0.02	
	(0.04)	(0.03)	1.19
Observations	978		
R^2 / R^2 adjusted	0.199 / 0.185		

*Notes: p < 0.001 ***, p < 0.01 **, p < 0.05 *, p < 0.1 +*

Table 28 Specific Regression on (Delta) Substantive Outcome Representation

	Delta Legitimacy Beliefs								
	b	*beta*	*GVIF*	*b*	*beta*	*GVIF*	*b*	*beta*	*GVIF*
Intercept	-0.65 (0.81)	0.17 (0.20)		-0.16 (0.73)	0.16 (0.20)		-0.02 (0.73)	0.16 (0.20)	
	Demography								
Low/Medium Education	-0.35 (0.31)	-0.34 (0.30)	1.18	-0.40 (0.31)	-0.38 (0.30)	1.16	-0.41 (0.31)	-0.40 (0.30)	1.16
Income (Reference: Above median equivalence income)									
Below Median Equivalence Income	-0.01 (0.20)	-0.01 (0.20)	1.25	-0.01 (0.20)	-0.01 (0.20)	1.25	-0.02 (0.21)	-0.02 (0.20)	1.30
No Response (Income)	0.01 (0.22)	0.00 (0.21)		-0.00 (0.22)	-0.00 (0.21)		0.00 (0.22)	0.00 (0.21)	
Not Male	0.10 (0.20)	0.05 (0.09)	1.40	0.09 (0.20)	0.04 (0.09)	1.40	0.09 (0.20)	0.04 (0.10)	1.40
Disability	-0.46* (0.27)	-0.15 (0.09)	1.15	-0.46** (0.27)	-0.15 (0.09)	1.15	-0.49** (0.27)	-0.16 (0.09)	1.14
Age (Reference: 35 - 65 years old)									
Under 35 Years Old	-0.56** (0.28)	-0.55 (0.27)	1.32	-0.61** (0.28)	-0.59 (0.27)	1.32	-0.57** (0.29)	-0.55 (0.28)	1.32
Over 65 Years	-0.08 (0.22)	-0.08 (0.22)		-0.09 (0.23)	-0.09 (0.22)		-0.08 (0.23)	-0.08 (0.22)	
	Political Involvement								
Internal Political Efficacy	0.04 (0.14)	0.03 (0.10)	1.64	0.06 (0.14)	0.04 (0.10)	1.64	0.05 (0.14)	0.04 (0.10)	1.64
External Political Efficacy	-0.09 (0.14)	-0.06 (0.10)	1.44	-0.09 (0.14)	-0.06 (0.10)	1.44	-0.08 (0.14)	-0.06 (0.10)	1.45
Local Political Interest	-0.06 (0.12)	-0.05 (0.10)	1.50	-0.10 (0.12)	-0.08 (0.10)	1.50	-0.08 (0.12)	-0.07 (0.10)	1.49
	Representation								
DIR	-0.08 (0.21)	-0.07 (0.21)	1.28	-0.05 (0.21)	-0.05 (0.21)	1.29	-0.06 (0.22)	-0.06 (0.21)	1.30
STOR	0.09 (0.12)	0.07 (0.09)	1.37	0.09 (0.12)	0.08 (0.09)	1.38	0.12 (0.12)	0.10 (0.09)	1.37
	Basic Needs			**Time Efficacy Needs**			**Individualist Needs**		
SOR	0.35** (0.16)	0.19 (0.09)	1.20	0.23* (0.12)	0.17 (0.09)	1.23	0.13+ (0.10)	0.12 (0.09)	1.24
Observations	150								
R^2 / R^2 adjusted	0.083 / 0.038			0.086 / 0.020			0.122 / 0.038		

*Notes: p < 0.001 ***, p < 0.01 **, p < 0.05 *, p < 0.1 +*

Table 29 Specific Regression on (Changes in) Legitimacy Beliefs (Robust SE)

	Delta Legitimacy Beliefs (robust SE)		
	b	beta	GVIF
Intercept	0.25 (0.71)	-0.07 (0.21)	1.86
Demography			
Income (Reference: Above the median equivalence income)			
No Response (Income)	-0.07 (0.20)	-0.06 (0.19)	1.92
Income below Median Equivalence Income	-0.02 (0.20)	-0.02 (0.20)	
Age (Reference: 35 - 65 years old)			
Over 65 Years Old	-0.09 (0.18)	-0.08 (0.18)	1.90
Under 35 Years Old	-0.56** (0.26)	-0.54 (0.25)	
Medium/Low Education	-0.34 (0.33)	-0.33 (0.32)	1.48
Not Male	0.15 (0.17)	0.07 (0.08)	1.86
Disabled	0.42* (0.24)	-0.13 (0.08)	1.67
Representation			
DIR	0.05 (0.20)	0.05 (0.20)	1.38
STOR	0.01 (0.11)	0.01 (0.09)	1.23
SOR	0.21+ (0.13)	0.15 (0.09)	1.17
Observations	150		
R^2 / R^2 adjusted	0.131 / 0.048		

*Notes: p < 0.001 ***, p < 0.01 **, p < 0.05 *, p < 0.1 +*

Eidesstattliche Versicherung

Ich versichere an Eides Statt, dass die Dissertation von mir selbständig und ohne unzulässige fremde Hilfe unter Beachtung der ‚Ordnung über die Grundsätze zur Sicherung guter wissenschaftlicher Praxis an der Heinrich-Heine-Universität' erstellt worden ist.

Düsseldorf, Datum Katharina Holec

Erklärung zur Nutzung künstlicher Intelligenz

Künstliche Intelligenz wurde lediglich zur sprachlichen Glättung in englischer Sprache wurde (https://www.deepl.com/de/write) verwendet.

Sie wurde nicht zum Generieren von Forschungsfragen, dem Ausarbeiten von Textabschnitten oder zum Korrigieren von Code in R-Studio genutzt.

Lebenslauf

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Weitere Kenntnisse	
Softwarekenntnisse	R
	SPSS/Amos
	Stata
	Python Unipark/Limesurvey/Typeform
Methodenkenntnisse	Explorative und konfirmatorische Faktorenanalyse
	Strukturgleichungsmodelle
	OLS Regression
	Logistische Regression
	Fixed Effects Modelle
	Mehrebenenanalysen
	Event History Analysis

Sprachkenntnisse	Englisch (fließend in Wort und Schrift) Bosnisch/Serbisch/Kroatisch (seit Kindheit)

(Ausgewählte) Publikationen & Vorträge

Mark, Laura; Holec, Katharina; Escher, Tobias (2024). Socio-spatial justice through public participation? A mixed-methods analysis of distributive justice in a consultative transport planning process in Germany. *Case Studies on Transport Policy*.

Üblacker, J., Krause, J., Blömeke, N., Rühl, Heiko, Huseljić, Katharina. (2023) Kulturelle und räumliche Determinanten der Umsatzrentabilität von Musikspielstätten in Deutschland. *Standort* **47**, 136–144.

Huseljić, Katharina (2022). (Online) Consultations, Representation and Legitimacy Beliefs. Results from consultative planning in 5 German municipalities. Presentation at the Strathclyde Departemental Colloquium at University of Strathclyde, Glasgow on November 9 2022.

Masch, Lena; Kieslich, Kimon; Huseljić, Katharina; Wähner, Marco; Neef, Johann-Sebastian (2021): R – Ein Einführungsskript.

Rühl, Heiko; Blömeke, Niklas; Huseljić, Katharina; Krause, Johannes und Üblacker, Jan. (2021). Studie zur Situation der Musikspielstätten in Deutschland 2020/2021.