Part II
THEORY

Chapter 2: Actor-Centered Institutionalism (ACI)

Actor-Centered Institutionalism (ACI) is a theoretical framework that simplifies reality as to make a situation graspable for social science purposes. It directs the researcher's attention to those aspects of a situation that it has identified as being particularly important in producing an outcome to be explained. From a set of many possible approaches, the ACI has been chosen because it suits the problem and situational requirements of Swiss WE-authorization procedures uniquely well. What the framework does, where it comes from, how it deals with key aspects of social science inference and why it is especially suitable to this research project will be discussed in this chapter. The chapter will end with this study's analytical model.

2.1.   Basic premises, function and origins of the ACI

The ACI has been primarily put to use to explain "past policy choices" (Scharpf 1997, 43). Yet its co-founder, Fritz Scharpf, views the ACI to have a broader purpose: He explicitly sees it as "[. . .] useful for developing politically feasible policy recommendations or for designing institutions that will generally favor the formation and implementation of public-interest-oriented policy" (ibid., 43). More generally, he contends that the foremost concern of the disciplines of political science and sociology "[. . .] is, or ought to be, the contribution that they could make to the understanding and the improvement of the conditions under which politics is able to produce effective and legitimate solutions to policy-problems. [The ACI] is about a set of conceptual tools that have proved their use in this endeavor" (ibid., 1). He further writes that political scientists rather should be concerned with "the capacity of policy systems to reach good choices" than being satisfied with explanations of why outcomes come about (ibid., 15). In short, it is this capacity that may be assessed by the ACI (ibid., 15). And it is exactly this capacity that the present study seeks to analyze.

As "conceptual tools", Mayntz and Scharpf (1995; Scharpf 1997, 2000b; Mayntz 2009a) propose a variety of henceforth called "analytical categories" that permit the analysis of such policy system capacities. The primary function of these analytical categories is to identify the relevant corporate actors, to

shed light on the interaction among organizations that decide and to detect how and why they produce value. This is why the ACI has been classified as "interaction-oriented policy research" (1997, 43; 2000a, 763). Indeed, this label nicely illustrates that the approach focuses on seeking explanatory power in interactions rather than in the more "substantive" characteristics of the actual problem (Scharpf 1997, 18 fn. 5). This focus also defines the framework's ontological position: Knowledge is found in corporate actors and their interactions. Nevertheless, the ACI does not pretend to provide a full-blown theory but rather sees itself as a "research heuristic that directs scientific attention to certain aspects of reality" (Mayntz and Scharpf 1995, 39). Hence, the ACI must be combined with substantive theories to derive hypotheses.

The labels "interaction-oriented" and "actor-centered" also illustrate well that the ACI has developed out of "the empirical turn" that came about in the 1960's, where institutional-structural explanations became insufficient and agency-based factors started to be recognized as important (Mayntz 2009a, 83). Although the ACI was formulated as a coherent approach first in 1995, both Mayntz and Scharpf had published extensively on one or more of its elements and had developed them since the early 70's (Mayntz and Scharpf 1975; Mayntz 1978, 1980, 1983; Scharpf et al. 1978; Scharpf 1970, 1972, 1973, 1976, 1985, 1988, 1990, 1991, 1993, 1994). Out of this very diverse set of studies, the two had developed a theoretical framework that analyzes the production of value in arrangements of political agents. In the ACI, the most important category of agents is referred to as "corporate actors". These are capable of single-handed action that is independent of the actions and preferences of the constituent individuals (Mayntz and Scharpf 1995, 43). Organizations may generally be treated as such corporate actors because they are capable of single-handed action distinct from the actions of their members.

The ACI has developed concurrently and in dependence on the three neo-institutionalisms (Hall and Taylor 1996), which have gained traction since the 1980's. Scharpf and Mayntz' understanding of institutions in the ACI comes closest to rational choice institutionalism (Treib 2015, 278). Rational choice predicts that actors maximize the attainment of their own preferences (Hall and Taylor 1996, 944f.). Corporate actors interact strategically to increase the chances of their preferences being realized (ibid., 945). Situations are often portrayed as strategic games, in which the societally optimal payoff cannot be reached without the cooperative force of institutions (ibid., 945).

Institutions are viewed instrumentally, as a pact serving to reduce transaction costs (Williamson 1999, 1979).

Yet an instrumental view on institutions as serving only the purpose of reaping maximal payoffs — although present in the later, more formalized game-theoretic developments of the ACI (Scharpf 1997) — is hardly detectable in the earlier framework formulations of the ACI. Nevertheless, the concept of transaction costs as a fundamental force shaping interactions has retained strong significance throughout the framework (Scharpf 1993, 1997, 2000b). Hence, it would be a mistake to cast the ACI as a full-scale rational choice approach. For one, the framework is built to analyze asymmetries of information between actors, which classical rational choice approaches neglect. Moreover, there are elements of the approach that play central roles in neo-functionalist and constructivist theories: Institutions shape preferences and perceptions of actors, and negotiations extend beyond strict interest-based haggling because collective problem-solving modes of interaction are deemed possible (Wagner 2012, 207). Most importantly, however, institutional effects are not seen as unidirectional and deterministic, which a standard rational choice (RC) account of institutionalism would assume. Rather, self-interested actors find themselves in an institutional setting where "[...] institutional factors provide a — stimulating, facilitating or restricting — *context* of action" (Mayntz and Scharpf 1995, 43 [emphasis in original]).

Thus, the ACI views institutions as a contextual condition shaping corporate actors and their relations, which make up the main analytical categories. Such an ontology, together with methodological choices elaborated on later, determine the ACI's understanding of causality: Corporate actors, their constellations and their modes of interaction are seen as "proximate" causes of the decision outcome under scrutiny (ibid., 46). This relegates institutional causes to the background, serving only as "remote causes", even though, in some situations, these remote causes might substantively be more important than the proximate actor-based ones. There are both causal and non-causal ACI-studies. Causal ones tend to follow a causal mechanism approach, where the qualitative identification and tracing of activities and processes that link causes with effects is put center stage (Brady 2011). In contrast, the non-causal ACI studies are simply content with a description of "how" instead of "why and how" the interplay of analytical categories has led to an output or outcome. Moreover, in view of the ACI's focus on corporate-actor explanation, the question of whether a corporate actor's individual members individuals act privately or can be said to be a representative of it has been a prominent one. Scharpf (1997, 62), following Lindenberg's (1991) principle

of declining levels of abstraction, has put it the following way: "[...] We try to get as much mileage as possible from the more easily available institutional information before we resort to an investigation of the more idiosyncratic orientations." This non-recourse to individual-level explanations as well as doubts about the representativeness of available information has led ACI researchers to be very careful in attributing causal force to an explanatory factor.
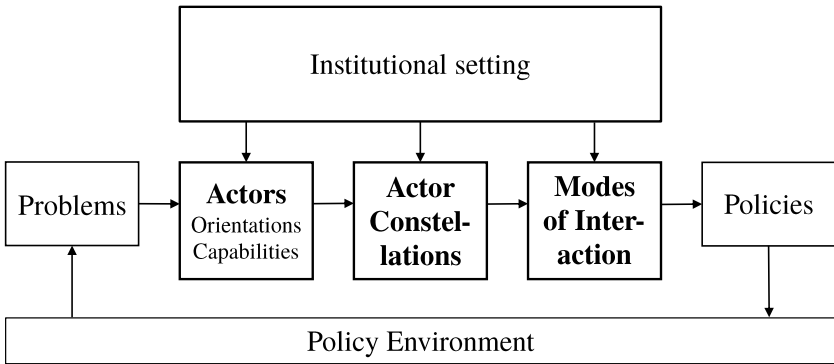
The ACI is a framework analyzing policy-making much like the well-known Advocacy Coalition Framework (ACF; Sabatier 1986; Jenkins-Smith and Sabatier 1994; Weible and Sabatier 2006; Sabatier and Weible 2007), Punctuated Equilibrium Theory (PET; Baumgartner and Jones 1991, 1993; True et al. 2007) or the Multiple Streams Framework (MS; Cohen et al. 1972; Kingdon 1995; Herweg 2015). With the ACF the ACI shares the demarcation between an external system that influences actors and the actors themselves, which negotiate based on beliefs and resources. It is different in its assumptions of actor rationality, as the ACF permits a much broader "logic of consequences" and "logic of appropriateness" to guide actor behavior. The ACI has assumed bounded rationality, as coined by Simon (1957). Moreover, as the name states, the framework focuses on *coalition* establishment and bargaining in the elaboration or change of policy with policymakers and interest groups. The ACF is often applied to the phases of agenda setting, formulation and decision-making (e.g. Capano and Pritoni 2020). The ACI, in contrast, does not emphasize coalition building and is well applicable also to other policy phases, such as implementation. Neither does the ACI seek to explain a fundamental (third-order; 1993) policy change based on feedback dynamics or narratives (so-called policy images) and public attention (Hegelich and Knollmann 2014) as does the PET. It shares with the multiple-streams framework that "policy entrepreneurs" have a fundamental role in activating policy change and that the periods of "stasis" in policy systems dominate. In the MS-framework, the coupling of the "problem-", "politics-" and "policy-streams" may lead to a "policy window" that a "policy entrepreneur" can exploit to advance her "pet project" (Zahariadis 2007). It has also been used to explain system change of higher-order magnitude. In contrast, the ACI does not emphasize the (pluralist) competition of ideas and exploitation of opportunities by politicians that are put center stage in the MS and PET approaches. Rather, it has been established to scrutinize bureaucratic decision-making, focusing systematically on the constellation between actors and on their coordination. Additionally, it clearly delineates

actors from their context and allows actors to interact without seeking to crown any actor as the "main changemaker", as the ACF, PET and MS frameworks tend to do. Moreover, in comparison with these three other approaches the ACI seems much more "defined" in terms of the permissibility of what constitutes an actor. This is handled in much broader terms in the PET and MS approaches, where actors can be individuals, associations, parties (at all levels), the public, consulting companies or even national governments.

Still, even when seeking a theoretical framework that is applicable to decision-making in the implementation phase of the policy cycle, which is what has been searched for in this research project, there would be alternatives: The most famous and time-tested one would be Ostrom's Institutional Analysis and Development (IAD) framework (1986, 2011). Even though it could be made to fit through targeted selectivity and adaptation to the workings of administrative networks, the IAD has been chiefly applied to the governance of natural resources in common-pool ownership settings (e.g. Ostrom 1990) and was therefore discarded from consideration.[27] Even Scharpf himself recognizes the two approaches' large similarities and equivalence in terms of institutional understanding, the importance of resources and interactions, and the need to separate an institutional environment analytically from the main objects of analysis, the actors (Scharpf 1997, 36). Feiock's (2013) Institutional Collective Action (ICA) framework was also considered but then discarded due to its preoccupation with economic externalities (something that I excluded from the scope of analysis for reasons of simplicity), its overemphasized reliance on transaction costs as an explaining mechanism for collaboration and its central argument of "fit" between problem aspects and the degree of institutionalization required to efficiently solve a problem. Its specific appeal would have been its "problem-centeredness" and its sensitivity to different degrees of local autonomy, yet the lack of richness in development of the framework and the above-mentioned downsides finally outweighed. Hence, the most suitable theory framework for present purposes has been the ACI.

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27 See also the "Institutional Resources Regime" (Varone et al. 2002), which was discarded for the same reason.

Figure 2.1: The ACI's analytical categories.

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                    │       Institutional setting        │
                    └──────────────────────────────────┘
                         │          │          │
┌──────────┐   ┌──────────┐  ┌──────────┐  ┌──────────┐   ┌──────────┐
│ Problems │ → │  Actors  │ →│  Actor   │ →│  Modes   │ → │ Policies │
│          │   │Orientations│ │ Constel- │  │of Inter- │   │          │
│          │   │Capabilities│ │ lations  │  │  action  │   │          │
└──────────┘   └──────────┘  └──────────┘  └──────────┘   └──────────┘
      ↑                                                         │
      │        ┌──────────────────────────────────────────┐     │
      └────────│            Policy Environment              │←────┘
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Notes: Sourced from Scharpf 1997, 44, bold emphasis in original.

2.2. *The framework and its analytical categories*

Having discussed the central tenets of the ACI and delineated it to related approaches, this section presents its analytical categories. Figure 2.1 depicts them and reveals how they are seen to be related to each other. As marked in bold, the central analytical categories are "actors", their "constellations" and their "modes of interaction". These are influenced (or embedded) by the "institutional setting". The characteristics of the problem under consideration feed into the decision-making process that is captured with the analysis of actors, constellations and modes of interaction. This process results in a policy or, in the present case, an administrative decree ("Verfügung"). The policy, in turn, affects the policy environment, which itself helps define the problem and its characteristics. This analytical scheme will be adapted to serve the purposes of this study. In what follows in this section, the three central analytical categories are presented in detail.

2.2.1. Actors

When speaking of actors, the ACI refers mostly to "fully integrated" ones, so-called corporate actors. These are distinguished from other types of composite actors by having a "[...]high degree of autonomy from the ultimate

beneficiaries of their action and whose activities are carried out by staff members whose own private preferences are supposed to be neutralized by employment contracts" (1997, 54). This type of actor is associated with formal organizations or corporations with some degree of hierarchical direction. Less integrated actors, such as movements, clubs, coalitions (etc.), are less independent from their members' preferences. As a consequence of primarily investigating corporate actors, the ACI treats conflicts along the external boundaries of actors, not within them (Treib 2015, 297). Mayntz and Scharpf argue that this focus is motivated by pragmatism and parsimony. As discussed in section 2.1., inward, micro- or individual-level explanations only have "[...] to be taken into account whenever the institutional and situational context cannot sufficiently explain the (non-)action under scrutiny" (1995, 50).

What is important to receive agency and thus be recognized as an analytical unit in the ACI is that actors must be able to take strategic action that goes beyond the mere and direct pursuit of member preferences (Scharpf 1997, 58). This requires that members at least partially converge in their interpretation of a situation, otherwise collective action-taking is made impossible. Neither is full convergence desirable, as researchers investigating the cognitive dimension of collective action, such as Janis' groupthink-phenomenon (1972) or Haas' "epistemic communities" (1992), demonstrate. Nevertheless, at least a partial overlap of member preferences must be present, and there must be some capacity that allows member conflicts to be settled in order for strategic action to be taken as a collectivity (Scharpf 1997, 58). Moreover, actors must dispose of some resources in order to take such strategic action. Many scholars would argue that this is essential: Actors can be recognized as such only if they have "means of reaching decisions and acting on some of them" (Hindess 1989, 89 in Hodgson 2006, 9).

However, having the capacity for strategic action could still refer to actors that are less integrated than corporate actors. So why has the ACI empirically focused on discussing corporate actors? There is a purely practical reason to this: In the ACI, corporate actors are organizations, and in bureaucratic settings, the organization is the predominant form of collective action. But in reality even within studies that apply the ACI there have been widely diverging understandings of what it means to be an organization: Whereas the classical account by North defines organizations loosely as being "[...] made up of groups of individuals bound together by some common purpose to achieve certain objectives" (1994, 361), this criterion would be applicable to any type of composite actor in Scharpf's understanding. The Scharpfian

criticism would be that this broad criterion is essentially equivalent to the non-sufficient requirement for being an organization of the capacity for strategic action.

I argue that both North's (North 1994) very loose as well as Scharpf's (1997) very strict understanding of an organization are not particularly practical for empirical research. Especially since the ACI focuses on external relations of actors, I argue that internal decision-making is allowed to vary, and the term of organization therefore need not be restricted to the type of corporate actor. However, in addition to North's (1994) lax definition, I contend that still at least some additional formal criteria must be met for an actor to be classified as an organization. I maintain that, in addition to strategic action capacity, a composite actor must at least have defined membership criteria, decision-making principles and must distribute tasks and responsibilities internally (Hodgson 2006, 8) to be called an organization. Such a middle-ground definition in no way lessens the theoretic stringency of the ACI, as it has been conceived to be applicable to all types of composite actors. There is a certain risk in conflating actor types, because the ACI has formulated different consequences for decision-making for each and there is a loss in precision. But what is lost in precision is gained in simplicity, especially because the present definition of organizations comes much closer to the colloquial understanding of the term.

Normally, the fulfillment of any composite-actor definition conditions is assumed. When is it reasonable to strictly test for their fulfillment? In the present case, organizations demonstrate their capacity for strategic action by answering my surveys. Regarding the formal criteria, these are sufficiently large to be evaluated "from a distance" in case of doubts. The constitutive criteria of an organization are thus tested indirectly, through content cues. Such a test, I would argue, is parsimonious, practical and entirely unproblematic.

What is much more problematic than the test of whether an actor is an organization is that interviewees and survey respondents may reply not on behalf of their organization but on behalf of their private selves (Mayntz and Scharpf 1995, 50f.). Indeed, it is not always clear to the researcher what degree of internal autonomy a respondent has been granted in her position to act on behalf of the organization (ibid., 50f.). If strict comparability were envisaged, this would require that only people with a similar capacity to engage the organization were asked to be interviewees and respondents. Yet such a criterion is impractical, because the scope of engagement depends not only on the size of the organization but also on the position of the person that has the substantive information the researcher is after. This is a perennial

problem of social sciences: Does, e.g., the "state" act if an individual acts on its behalf? Scharpf suggests to be practical: If there is spoken or written evidence or a high likelihood that the response is grounded in its respective "unit of reference" (Scharpf 1997, 60f.), meaning the organization, then its engagement may be reasonably assumed. This requires that respondents are always prompted to reply on behalf of the organization and that there is some background knowledge that allows for the placement of the respondent within her organization.[28]

So much for being classified as, and speaking on behalf of, an organization. As all composite actors included in the present study are organizations in the sense defined above, it cannot presently be measured whether there is an effect of a more or less integrated organization. Rather, the relevant performative dimensions of actors in the ACI are their capabilities, meaning their resources to put something in action, and their orientations (preferences), revealing why and how they might go about their actions. On the latter, Scharpf (ibid., 84ff.) distinguishes between relational and individual orientations. The former discuss the orientation an actor tends to interact with (individualism, solidarity, competition, altruism, hostility), the latter refer to preferences on a selected policy problem. Empirically, it seems difficult to establish the former, as it can be doubted whether such relational "interaction orientations" can be self-standing, devoid of content. Their separate measurement would be a difficult undertaking, especially in a more quantitative and comparative manner, as is the case here. Hence, the examination of relational interaction orientations was dropped. Instead, actor orientations, meaning preferences through core- and policy-belief items, will be measured by using surveys.

2.2.2. Actor constellations

The importance of analyzing actor constellations is derived from the realization that actors[29] are *interdependent* when producing a solution (ibid., ch. 4). This is the case for the formulation of a policy as much as it is for policy implementation. Under conditions of increasing complexity, single-handed and *independent* implementation decision-making has become rare,

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28 As the participants in my surveys were not anonymous to me (fully to the outside though), I am completely able to satisfy these requirements for the research project at hand.

29 From here onwards, actors and organizations are treated as synonyms.

if not inexistent. Hence, outputs are rarely to never the product of any single organization's doing. But neither are outputs the result of aggregated, yet unconnected single actions (Mayntz and Scharpf 1995, 60).

This recognition drove Mayntz and Scharpf to conceptualize the contributions of actors and their interactions to the value produced in coordinated decision-making. Actor resources (capabilities) and orientations, simply put, define their engagement, which may or may not stand in conflict with other actors' engagement on the problem. In earlier theorizations, the authors understand actor constellations as describing a "structural pattern" (ibid., 60), i.e. a picture of involved actors where their position is defined by their resources and orientations vis-à-vis each other. The authors view actor constellations as a map of the relative positions of actors to each other with regard to a problem under consideration. In Scharpf's later and more formal theorization on the subject in 1997, he described the actor constellation as the level of (potential) conflict between players based on simplified two-by-two game-theory matrices with outcomes as payoffs and resources as strategies (ibid., 72ff.). The two conceptions are not mutually exclusive, yet they require different analytical foci.

For the game-theoretic approach, reaching the necessary degree of formalization for a real-world situation tends to be difficult if not impossible. First, the theoretically appropriate number of game-theory matrices with two actors is already at 78 (Rapoport et al. 1976); more actors would complicate the picture to the point of uninterpretability (Mayntz and Scharpf 1995, 64). If additionally multiple levels of government were involved and co-dependent, then these multi-level games (e.g. Putnam 1988) would require an additional prohibitively complicated game-theoretic formalization. Second, the formalization would require to distinguish problems by their "levels of conflict" between the actors that are involved in solving it: At one end, there are games of "pure coordination" (maximal gain trough concerted cooperation), and at the other, there are games of "pure conflict" (zero sum — what one actor wins the other loses). In between, there are so-called "mixed motive" games, whose actor constellations have different levels of conflict and will thus lead to taking different actions depending on the payoffs.[30] But

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30 In ascending order of level of conflict: In the "assurance" game, the player that cooperates may end up with the worst possible outcome if the other does not choose the benefits of their cooperation. In the "battle of the sexes", there is a common interest in coordinating the choice, but both players would individually prefer a different option (conflict over distribution). In the "prisoner's dilemma", an actor is always individually better off if she chooses not to cooperate, but both actors would be individually (and

in real-world interactions, there are usually multiple aspects of a problem that need multiple strategies for solving. For formalization to be possible, the problem aspects would need "decoupling", meaning that many related interactions would need to be set aside (Scharpf 1997, 80). But where actors — especially in implementation settings in Switzerland — generally meet more than once and on multiple subjects, problem-solving is a matter of multiple years of coordination and (non-)cooperation, and decoupling can not only be dangerously misleading, it might also not be able to catch the central core of the problem that parties seek to solve.

Hence, to give empirical meaning to the relative positioning of actors in constellations, I have resorted to Mayntz and Scharpf's (1995, 62f.) earlier alternative modeling approach: Social Network Analysis (SNA). Such an approach is capable of detecting the underlying patterns of structure and showing potential power relations (ibid., 63), while it does not need the formalization of payoffs and approximation of game-types and strategies. Conflict-levels can still be measured. Moreover, SNA tools are accessible and usable for comparative studies. An additional advantage is that a large and burgeoning literature has developed using SNA tools to empirically test propositions from policy-analysis frameworks (see Börzel 1998; Isett et al. 2011). A take on reality, where relations embedded in network of actors are what matters to explaining policy outcomes, is very fitting to the ACI. So far, SNA has frequently been applied in connection with the ACF (Ingold 2008, 2011; Matti and Sandström 2011; Fischer 2012; Leifeld 2013; Nohrstedt and Olofsson 2016), but also with Ostrom's IAD (Ostrom 1990; Ostrom et al. 1994; Ostrom 2009; Olivier 2019; Schlager et al. 2021; Baggio et al. 2016) or both (Herzog et al. 2022; Blake et al. 2020). Despite the very good fit, social network applications explicitly using the ACI have not been prominent (exception: Kriesi and Jegen 2001). Implicitly, however, most network studies investigate the "relative positioning" of actors vis-à-vis each other, which the ACI has theorized as actor constellations, yet leaving out reference to the ACI or other theoretical frameworks. Studies that carry the labels of "stakeholder analysis" (see e.g. Prell et al. 2009; Lienert et al. 2013) or "collaborative network governance" (Berardo et al. 2020), to give two examples, could also

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collectively) better off if they cooperated. In this game, the non-cooperative solution is individually and collectively the second-worst of all possible options. The resulting Nash equilibrium is the joint defection. This is also the preferred strategy in the next higher level of conflict, the "game of chicken", but this time the non-cooperative solution is the worst for both actors individually and collectively as well (Scharpf 1997, 73ff.).

be seen to be essentially guided by an "actor-centered" approach to modeling the relative positions of actors in networks.

Hence, there is dearth for an in-depth ACI application using social network analysis tools. Many different tools that map actors in their relative (power) positions are available (Scott 2017; Borgatti and Ofem 2010; Wasserman and Faust 1994). As "mapping" measures I will suggest criteria such as the number of organizations, the number of veto players, reputational power, discretionary power, the existence and intensity of agreement and conflict or the existence and intensity of trust and mistrust. Chapter 6 will provide the details on their operationalization and empirical application.

2.2.3. Modes of interaction

Importantly, actor constellations need to be delineated from the "mode of interaction" that could be understood similarly: The mode of interaction, in contrast to the constellation, provides information about the "form of coordination" (Mayntz and Scharpf 1995, 60), i.e. information on the rule that governs how the decision can be made or the problem solved. Modes of interaction refer to the rules which govern actors' interactions. In illustrative terms, the actor constellation describes the map of an organizational arrangement, while the mode of interaction defines how action is taken in it.[31] Mayntz and Scharpf (ibid.) — excluding the "exit-option" (Hirschman 1970) — define four ideal-type modes of interaction: One is the unilateral or mutual adjustment to the other's decision, the second is the negotiation, the third is voting, and the fourth is the use of hierarchical direction (Mayntz and Scharpf 1995, 61; Scharpf 1997, ch. 5–8). Although Scharpf does not explicitly label it as a separate mode, there is a fifth decision rule called "negotiations in the shadow of hierarchy" (ibid., 197ff.). In this mode of interaction, negotiations are held against the backdrop of use of hierarchical direction. This reflects the bureaucratic reality that "[...] policy proposals are usually produced through a 'nexus' of horizontal negotiations among lower-level units within and across ministries and with outside actors in parliament, in political parties, as well as

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31 The theoretic and empirical separation into constellations and modes of interaction is difficult, because many aspects of both analytical categories influence each other: A decision rule shapes the relative position of actors, but the relative position of actors also impacts which decision rule is selected, who applies it and how it is applied (Mayntz and Scharpf 1995, 60).

in interest organizations" (ibid., 198). Superiors give their negotiating teams credible "threat options", and negotiations will be systematically influenced by an anticipated decision by the superior(s) (ibid., 198).

In combination with the conflict level stemming from the actor constellation, these five ideal types differ both by their capacity to reach welfare-optimal solutions and their ability to address conflicts over the "fair" distribution of gains. All five modes can be welfare-efficient in situations of low to medium conflict. In high conflict, however, it is only the hierarchical direction and, by extension, the decision-making mode of negotiations under the shadow of hierarchy that can reach welfare-efficiency.[32] But there are strict conditions attached to hierarchical direction solving a problem welfare-efficiently, such as the "near decomposability" of the organization-internal structure (Simon 1962). Regarding the criterion of fairness in the distribution of gains, modes of interaction such as unilateral decision-making or mutual adjustment based on knowing each other's position on a problem are not even responsive in situations of low conflict (Lindblom 1965).

For comparative studies, attributing one of these five modes of interaction to each case is impractical. The problem is the following: How would one measure effects of these modes in an arrangement of organizations in which all organizations decide more or less by the same mode? In the present case of WE-authorization procedures in Switzerland, it can reasonably be expected that the mode of decision-making in implementation comes closest to negotiations under the shadow of hierarchy. But if the mode remains the same while the production of value is different across cases, the mode cannot serve as an explanatory factor and would need to be discarded. Hence, to capture effects of such forms of coordination, one needs to develop much more fine-grained distinctions to be applicable in comparative implementation studies capturing the realities of modern European bureaucratic work.

As a more refined measurement, I propose to capture the "extensiveness" of coordination between the collective actors that are involved in such WE-authorization procedures: Within and between the five modes of interaction, one can distinguish between two extremes on the continuum of coordination extensiveness. On one end, there is the unilateral or mutually adjusted

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32 If the negotiators have the same superior, i.e., if they are agents of the same principal, then this mode of interaction has the same welfare-efficiency and distributive capacities as the mode of use of hierarchical direction. However, if negotiators have different superiors, then the mode is approximated by the solution capacity of negotiations.

absence of coordination[33], and on the other end, there is "positive" coordination, in which participants explore all possible options together and in-depth, thus having reduced (if any) veto positions and evaluating each option to maximize the welfare of all participants individually and in total (Scharpf 1994). In this form of coordination, all actors are deeply embedded in relations with all possible other actors, making it very transaction-cost-intensive (Scharpf 1997, 133). But positive coordination both permits the solving of higher-conflict problems and is likely to allow an in-depth treatment and decision on the distribution of gains (ibid., 132ff. Scharpf 1993, 1994, 1972). Towards the endpoint of the other extreme, non-coordination, there is also a form of non- or minimal coordination that has been theorized inductively, given Mayntz and Scharpf's (1975) experience with the German bureaucracy: "negative" coordination (see also Scharpf 1994, 1993; Mohr and Scharpf 1997; Lindblom 1965). In this form of (non-)coordination, actors, "[...] in choosing their own courses of action, are required to avoid inflicting damages to the protected interests of the other actors involved" (Scharpf 1997, 112). This means that every actor has a veto position and will therefore only accept propositions that are Pareto-superior to the status quo (ibid., 114). Lindblom (1965) has called this form of coordination "deferential adjustment". Such a coordination only requires minimal engagement among the participants. In comparison to positive coordination, in which coordinative ties grow exponentially to the number of additionally included actors,[34] in negative coordination these ties rise only linearly, which is why it has exceptionally low transaction costs in comparison. However, the solutions that can be found using negative coordination must by definition be Pareto-superior to the status quo, i.e., there have to be present welfare gains for all individual participant actors. Whether or not distributive bargaining is possible using the form of negative coordination depends on the level of conflict of the actor constellation; it is possible yet unlikely in cases of high conflict. In positive coordination, in contrast, the solution space is much larger, as participants accept individual losses if they are compensated and if the overall gains outweigh the overall losses. Going further than Pareto-optimality, this solution space satisfies the Kaldor criterion (1939) of welfare optimality. The

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33 In parametric adjustment (Lindblom 1965), the actors do not care about each other's positions and present take-it-or-leave-it propositions.
34 The formula of the number of relations is the following: $n(n-1)/2$, where n is the number of actors.

criterion states that a policy is acceptable if all losers could be compensated by the winner's gains (Scharpf 1997, 91).[35]

Hence, as a mode of interaction it is the extensiveness of coordination that will be measured, attributing the level of "negative coordination" to projects in which actors are not well-embedded and/or are in non-intense relations with each other, and "positive coordination", if they are. As concrete measurements, this project will propose the following variables: the formality of coordination, the prevalence of negotiation versus the use of hierarchical direction, number and density of collaborative relations as well as their intensity, number of access points for external interest organizations and betweenness. These measures are defined, and their application is discussed in detail in chapter 6.

2.3.   Past applications of the ACI

The context of the rise of the ACI is one where multiple policy-analysis frameworks have competed for scholarly attention but have also been interlinked to fruitfully complement each other (see section 2.1.). The ACI has found its place in the European policy sciences predominantly in the German-speaking regions. Indeed, the ACI has been widely applied in Mayntz and Scharpf's professional orbits (Treib 2015, 291) around the Max Planck Institute for the study of Societies,[36] where both had worked as directors between 1985 and 1997 (Mayntz) and 2003 (Scharpf). Since the formal inception of the entire framework in 1995, countless theses (in German) have been formulated using (parts of) the ACI, coupled with any sort of substantive theory that allows for the formulation of hypotheses. In addition, as the ACI is actor-centered like the IAD or the ACF, many further studies have (implicitly) borrowed elements of analysis from actor-centered analytical frameworks. This makes it difficult to trace the origin of ideas, such as the focus on corporate actors instead of individuals or the delineation of institutions and structure from actors and agents. Quite obviously, the ACI has also borrowed intellectually from many others streams of policy analysis (e.g. Simon 1957; Lindblom 1965; Williamson 1985; Sabatier 1986; Coleman 1987; Hirschman 1970), and thus, what may be detected as implicit remnants of the ACI in studies may

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35 The criterion does not require that there will be compensation, it just says that losers *may* be compensated (Scharpf 1997, 91).

36 www.mpifg.de

not in reality be attributable to it. However, not only was the ACI influenced by many studies itself, it has also substantively contributed to developments in strands of literatures that have reached maturity as distinct fields in political science today: For example, the literature on multi-level problem-solving, federalism, supranational decision-making, theories of administrative effectiveness, veto player theory and, more generally, the literatures incorporating the dynamics of governance have profited significantly from the studies on which the ACI is based on.

Nonetheless, studies that explicitly apply parts or the entirety of the ACI have become increasingly rare over the last decade. This is due to its image as an "old" and "dusty" framework that the modern literatures has surpassed. I would strongly argue to the contrary: Its unique suitability to explain the generation of value within bureaucratic decision-making in policy processes is still unmatched. With the exception of the IAD, no theoretical framework on policy processes that the author is familiar with is so complete in terms of its theoretic foundation while retaining flexibility in terms of scope of application: Unlike the ACF, MS or the PET, the ACI is easily applicable also to other phases than pre-parliamentary and parliamentary policy-making, such as implementation.[37]

There have both been ACI studies that have extracted only certain analytical categories from the framework (e.g. "the mode of interaction" in Benz et al. 2016) and those that have applied it using the full spectrum of all analytical categories.[38] Especially book-dissertations (e.g. Walther 2017; Fuchs 2012; Flick Witzig 2011; Wälti 2001) have been prone to using the ACI in its full formulation, given the book format's available space to develop it properly. This also explains why most ACI studies are, in fact, full-length books dealing with one or maximally a handful of cases.

In fact, most ACI studies stem from in between 2000 and 2010: For example, Buntrock analyzed how the European Coal and Steel Community went about solving problems (2004), Bartle investigated the impact of corporatism on

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37 Of course, Ostrom's Nobel-prize winning Institutional Analysis and Development framework (1986, 1990, 2011) has been much more developed, both regarding extensions of theory and empirical applications, and it could also be applied to decision-making in a policy implementation phase. Yet, given its focus on natural and common pool-resources, an application to analyze the generation of value through administrative arrangements would require substantial tweaking.

38 The number of citations for Scharpf's main publication on the ACI (Scharpf 1997) has been cited 4'630 times in Google Scholar, as of 30.09.2022.

decision-making in the telecommunications sector in Norway and Switzerland (2006), Von Maravic looked at the link between administrative reform and corruption in German municipalities (2007) or Vatter et al. used it to explain the coherence of Swiss foreign policy towards South Africa (2005). It has also been applied to, e.g., communication patterns of political executives (Baumgartner 2010; Heinze 2012), even to tracing changes in public media governance (Ploch 2017). In fact, ACI applications have often focused on policy-field specific decisions, such as in health policy (see e.g. Manow 1994; Ovseiko 2002; Mur-Veeman et al. 2008), in science policy (see e.g. Hohn and Schimank 1990; Braun 1997; Kamm 2014), information technology governance (e.g. Schmidt and Werle 1998; Bendrath and Mueller 2011), forest policy (e.g. Dobšinská et al. 2013; Sonnhoff et al. 2021), education (e.g. van Lieshout 2008), agriculture (e.g. Coleman 2001; Olofinbiyi and Mogues 2016), migration (e.g. Lutz 2017) and even in energy policy (e.g. Kriesi and Jegen 2001; Löhr 2020). There are also theoretical treatises building explicitly on the ACI, like the literature on political steering capacity (Luthard 1999; Mayntz 1997, 2002). Last, the framework itself has also received attention, and several scholars have proposed tweaks and extensions, mostly focusing on the micro-level foundation of organizations that was widely felt to have been given insufficient attention by Mayntz and Scharpf (Schmidt 2003; Etienne and Schnyder 2010; Pancaldi 2012).

Mayntz and Scharpf have also applied the ACI — or what they later labeled as such — themselves (e.g. Scharpf 1987, 1996; Mayntz 1988; Mayntz and Wolf 1994). Yet these empirical studies do not represent what the two scholars are known for: Instead, Renate Mayntz has been widely credited for her profound and acute theorizing, be it on bureaucracy and organizations (e.g. Mayntz 1972, 1984), on policy implementation (e.g. Mayntz 1980, 1983) or, later in time, on the foundations of sociologically relevant actors or on determinants of governance constellations (1997, 2002, 2009b, 2015). In contrast, Fritz Scharpf has been famous for two large contributions to political science: The first is his expertise on European multi-level governance. This includes the theory and empiric research on the process of EU-integration (1985, 2001a),[39] the sources of the EU's legitimacy (Scharpf 1999) and how various institutions of the European Union have gone about solving problems (Grande and Jachtenfuchs 2000; Scharpf 2003, 2006a). His second

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39 For comments and applications of his contribution to the study on European integration, see Bieling and Lerch 2012; Börzel 2010; Benz et al. 2016; Benz 2015, 2006; Héritier and Rhodes 2011; Hartlapp 2011.

credit is the literature that thrived on the "joint-decision trap" (Scharpf 1976, 1988, 2006b, 2009; Falkner 2011). This literature describes a situation of "blockade" where neither institutional nor policy reform is possible due to the vertical and horizontal interdependences of competences and resources between actors distributed across multiple levels of government. These actors may additionally be subject to a demanding mode of interaction, which even further strengthens the "blockade". However, instead of these two singular contributions, many scholars would see Scharpf's main contribution as a combination of the two: By analyzing joint supra- and intergovernmental decision-making in the EU, he provided the impetus for the further development of general theories of multi-level governance, or what is known today as (multi-level) territorial politics (Scharpf et al. 1978; Scharpf 1985, 1988, 1999, 2001a, 2003, 2006a).

2.4. Applying the ACI: towards an analytical model

This section presents the road to an analytical model that will be applied to study the selected problem of WE-authorization procedures. Culminating at the end in the presentation of the model (section 2.4.4.), all necessary elements are gathered along the way: First, I show why the ACI is suitable to analyze the present problem (section 2.4.1.). Following thereafter, a discussion of the roles of institutions and policy rules is in order (section 2.4.2.). This will permit the delimitation of context from agent, institution from organization. As a last element before the presentation of the analytical model (section 2.4.4.), I shall clarify the study's stance in the structure-agency debate (see 2.4.3.).

2.4.1. Why the ACI is suitable to analyze the problem

I now turn to describing and reasoning theoretically why the ACI has been chosen and how the selected methods align with the underlying theoretical framework. First, I shall make explicit the lesser-known normative aspects in the ACI. Second, the move away from the ACI's traditional dependent variable of past policy choice to implementation decisions is justified. Third and last, the use of quantitative methods within the ACI approach is explained and defended.

Normativity

The ACI may be used not only to explain how a certain policy decision was taken but to analyze determinants of the value produced and distributed, due to a decision taken within an actor constellation. The latter "evaluative" function of the ACI requires an understanding of value and distributive justice. Hence, judgments of value — what is a "good" outcome — cannot be evaded (see Scharpf 1997, 15). But the ACI is meant to be used in such a way: Indeed, in Scharpf's opinion, the normative aspects of policy research should not and cannot be separated from the positivist ones (ibid., 13). He writes that in social science research "[…] we are necessarily involved as much in identifying and explicating appropriate normative standards as we are engaged in collecting and interpreting empirical information" (ibid., 13). Hence, he regards an explicitly normative use of the framework as productive: "[F]rom a pragmatic point of view, […] it is important that policy research be able to describe and compare the effects of different modes of interaction in terms of the normative or evaluative criteria of 'good' public policy […]" (ibid., 89f.). Thus, following Scharpf, the ACI *should* be used to assess the "policy system capacity" to reach "good" choices (ibid., 15) — and this is what will be done in this research project.

This normativity might appear trivial for evaluators, whose business it is to measure the actual production of value and deal with questions of distributional justice. However, for the classically trained (academic) social scientist, who pursues the goal of conducting objective research, normativity is seen to be something undesirable, interfering with presumed "objectivity" (Vedung 2017b, 59). For the *scientific* exercise of conducting evaluations, accepting normativity is fundamental. Normativity is the point of an evaluation's basic definition: For Scriven (1991, 1), an evaluation is "[...] the process or determining the merit, worth and value of things". This illustrates well how researchers are dependent on their perspectives and norms in their choice of indicators, scales and values to be measured.

But what may be done to address this normativity and, at the same time, satisfy the scientific ideals of validity, generalizability and replicability to come closest to the ideal of objectivity? Normativity-laden analyses tend to fulfill neither one of those three: They do not contain valid measurements, because they are considered subjective; neither are they reproducible nor generalizable for this reason. Kreienkamp et al. (2020) find that normativity is inherent in all stages of the social science research production, not least due to the current structure of funding and publication incentives. They suggest

that, next to structural changes to the research production process, one partial solution to counter the ever-present subjectivity is a focus on robustness of findings. Another one, they claim, could be a stronger focus on reflexivity, making assumptions and choices explicit. Furthermore, given the current "replication crisis" (Bryan et al. 2021; Blaszczynski and Gainsbury 2019), transparency is in high demand already, but, crucially, transparency merits an even more prominent discussion in the research production cycle.

Regarding the present study, I accept normativity as a necessity and try to counter it by applying the two recommended strategies: As the reader will see, much emphasis is attributed to the robustness of the results, erring on the side of caution. This is expected to increase the generalizability of the findings. Moreover, to increase transparency, the project reports as many decisions and considerations as I assume the reader can take without getting lost in non-necessary details. The definition of value, gains or merits will be especially important in two of my dependent variables of problem-solving effectiveness. The requirement of transparency is also applied to theoretical and methodological choices. In total, transparency is expected to increase the validity of measurements while reducing problems of replicability at the same time.

Applying the ACI to an implementation process

Many ACI studies have tended to trace decision-making on a meso- and macro-level (e.g. Buntrock 2004; Bendrath and Mueller 2011), investigating all phases in a policy cycle or not paying particular attention to them. Given this bird's-eye analytical level, the classical application for the ACI has been to investigate encompassing projects of policy reform (e.g. Bartle 2006; Coleman 2001; Von Maravic 2007). Usually, there is one macro-level "principle" of social coordination that is in analytical focus.[40] Hence, the present study's focus on the single phase of implementation in the policy-cycle could be understood as unusual or even inappropriate. But the focus on applying the ACI to an implementation procedure can easily be justified, for three reasons: First, it is well within bounds of the scope of application of the ACI. Second, the conditions for the creation of value through interaction are very similar

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40 For the three studies just cited this would be "social corporatism" (Bartle 2006), "market liberalization" (Coleman 2001) or "decentralized corruption" (Von Maravic 2007).

in the implementation phase as they are for general, macro-level political coordination. Third, the present lower-level focus on administrative politics in implementation mirrors the overall political cleavages regarding the problem well. These three arguments shall now be explained in said order.

The ACI can measure the capacity of a policy system to reach "good" choices (Scharpf 1997, 15). Following Scharpf, an analysis of such a system capacity entails an assessment of two dimensions of value production. He has discussed them as "dimensions of legitimacy" due to theoretic considerations on democracy (1999). Concretely, he understands the dimension of "input legitimacy" as value being produced for the voter by elected politicians negotiating and formulating a policy ("government by the people"). The second dimension of "output legitimacy", in contrast, refers to the production of value for voters as measured by an output's impact ("government for the people"). Hence, if system capacity is measured by looking at both value production dimensions, then the focus on aspects of output legitimacy due to this study's selection of analytical focus on an implementation process simply divides the overall scope of analysis in half. Moreover, there is no reason to assume that the tools that work to analyze system capacity could not also be applied to one of its dimensions. For future reference, output legitimacy is regarded as equivalent to PSE, the main dependent variable of this study.

Moreover, applying the ACI solely to an implementation process is also fully non-problematic because the conditions for the production of value are similar in this phase of the policy cycle to macro-level political coordination in the sector. In the concrete case of WE-authorization procedure, the actors that tend to be involved in concrete authorization procedures of a WE project (and thus in implementation) are also active in policy formulation. Most are thus present in both dimensions of value production, input and output legitimacy. Concretely, specialized offices of administrations that prepare draft legislation on the topic also assess WE projects. Most involved NGOs are federated. Their local section is involved in concrete projects, and their cantonal or national offices attempt to guide policy development. Still, there is one exception to the congruence of sectorally important actors and important implementation actors: The industry association SuisseEole is active primarily on creating "better" legal conditions for its sector and rarely deals with concrete WE projects other than as a consultant on political topics upon request. Hence, the actors involved in implementation are more or less the same as those involved in the overall process, with the one important excep-

tion mentioned. But this is not problematic for an implementation application, as the presence and actions of SuisseEole in the sector is not expected to change the actor constellations among other involved actors. Even if it is not present, strategizing in actor constellations is expected to happen as if it were: Departing from the assumption of bounded rationality, organizations involved in implementation act in anticipation of their potential gains, losses or power position in the policy-making phase, where SuisseEole is present. Thus, the strong interrelation and dependency of input and output legitimacy lead to interaction strategies that are very similar in implementation as in the policy formulation phase and on the macro-level of coordination.

An ACI application to an implementation phase is also phase-appropriate because all political cleavages of the sector of WE in Switzerland are represented in it. Policy-formulating efforts tend to reflect the perceived wrongs of the implemented authorization procedure, given that this has been the sector's longstanding problem (Stadelmann-Steffen et al. 2018, 131). Due to the politicization of the issue, it is very probable that the sectoral cleavages surrounding the problem have been established in the implementation phase as well. This is visible in the fact that the implementation topic of WE-authorization procedure has become a politician's issue, with which one may attract or repel voters. In this sense, the truism that administrative politics is simply politics "by other means" (Herd and Moynihan 2019) has been inverted: In the present case, politics has simply taken up administrative politics. Moreover — and this is valid for Swiss implementation in general — the adoption of policy-making dynamics in administrative implementation or its inverse have been well-documented (e.g. Giauque et al. 2009; see section 3.2.1.). Hence, regarding the main lines of conflict, a focus on implementation would be a representative selection to describe the overall sectoral cleavages, simply on a lower analytical level and in a specific phase.

A quantitative ACI application?

With one exception (Kriesi and Jegen 2001), to the author's knowledge, all studies that have fully applied the ACI have pursued either qualitative or small-n comparative research designs. Describing actor constellations and their interactions already requires researchers to be parsimonious in their selection of the number of collective actors. This represents a small- or large-n quantitative aspect that is inherent to all ACI case studies. Nevertheless, because they focus on one country and one problem, such studies are still

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classified as qualitative research even though within these studies one might analyze the development of political coordination over a longer period of time, with changing actor constellations and multiple institutional contexts. This begs the question which level of analysis is commonly resorted to when categorizing research designs as either of the two research paradigms: As a way around it, it is suggested not to take the number of cases as a (misleading) criterion but to follow Creswell (2014, 32) who distinguishes the two paradigms by the criterion of "words" (qualitative) versus "numbers" (quantitative). Seen this way, the distinction becomes one between "exploring and understanding the meaning individuals or groups ascribe to a social or human problem" (ibid., 32) versus attributing numbered data to variables that can then be analyzed using statistical procedures. Obviously, there is much middle ground to these polar opposites (Newman and Benz 1998).

This study applies statistical procedures to analyze variables. To what extent can such a methodological approach be justified when selecting a framework that has guided much qualitative research for close to 30 years? Starting with the most important argument first, there is no theoretic reason not to go the quantitative way. The ACI is not formulated restrictively in terms of applicable methods, and the framework is not "less strong" in terms of its explanatory power if numbers instead of words are resorted to.

In fact, the ACI's epistemological position — how to provide an understanding of reality through methods — has been almost fully qualitative *by tradition only*: A quantitative application, and hence an epistemological switch, is acceptable, as it is only reductive in terms of the depth of meaning of concepts, operationalizations and interpretations. Given the advantage of (well-bounded) generalizability when using quantitative methods, a superficial operationalization and interpretation is a price worth paying for — especially when there is dearth in quantitative, not qualitative knowledge on the problem, as is the case for WE-authorization procedures in Switzerland. One important advantage in this regard is that quantitative applications, if done correctly, factor out the unsystematic.

The format of the present study as a book is able to make up for the loss of depth of meaning, at least partly. Moreover, the richness in statistical results and the fine-grained data will paint a vast yet detailed picture of the implementation problem in question, thus approaching a "thickness" in results that could match more qualitative accounts on the subject while also aiming for limited generalizability.

Causality

The switch in epistemological position towards the use of quantitative (statistical) methods must entail an adaptation of the present project's understanding of causality. As foreshadowed in the general explanations on the ACI in section 2.1., ACI studies have been careful in attributing the causal label to explanatory factors. Scharpf sees the framework's role as follows: The ACI "[...] should provide an ordering system that describes the location of, and the potential relationships among, the many partial theories or more limited 'causal mechanisms' (Little 1991, 15–17) that we could in fact draw upon for the theoretically disciplined reconstruction of our nearly unique cases" (1997, 30). Put simply, Scharpf views a mechanistic understanding of causality as productive but does not make the identification of causal mechanism the ACI's goal. Rather, the goal has been "a theoretically disciplined reconstruction of [...] the case" (ibid., 30).

As is the case of many applications in the social sciences, the present research undertaking cannot claim to identify and trace causal mechanisms understood in the sense of the "mechanistic school" of causality. Analyzing the "transmission of causal force" (Beach and Pedersen 2013) cannot be done justice in quantitative-comparative research designs. Especially if a mechanistic approach requires that the causal elements demonstrate effects with "law-like regularity" (Little 1991), then the present study cannot pretend to investigate mechanisms. If, however, one resorts to Hedström's influential definition of social mechanisms requiring the demonstration of an interaction between entities and activities that bring about change (Hedström 2005),[41] then I would argue that Mayntz' and Scharpf's ACI, as applied in this project, satisfies this less strict requirement. Hence, the study does not pretend to investigate mechanisms stricto sensu, although I argue that an analysis applying a full-blown ACI could potentially satisfy at least the less stringent requirements of a mechanistic approach as coined by Hedström.

The issue of causality for the present study also remains problematic if one were to adopt an understanding of causation that is more in line with quantitative approaches, such as the neo-Humean school of regularity (see Brady

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41 "Mechanisms consist of *entities* (with their properties) and the *activities* that these entities engage in, either by themselves or in concert with other entities. These activities bring about change, and the type of change brought about depends upon the properties of the entities and the way in which they are linked to one another" (emph. in orig., Hedström 2005, 25).

2011). The actual assumptions depend on the statistical model, but with the standard regression techniques, multicollinearity, normality and homoscedasticity, they tend to be strong assumptions that may overestimate the size and significance of an effect. Moreover, in a modern understanding of statistical causation, even the discovery of robust, significant and non-negligibly sized effects of controlled correlations does not suffice to be classified as causal. Additionally, modern causal inference would require to incorporate statistical advances in either counterfactual analysis or structural equation modeling. Inferring causation statistically, Pearl (2009, 99) maintains, cannot be done with observational studies (that follow the school of regularity) alone.

In consequence, no methods in this study pretend to lead to causal results, because they do not satisfy criteria of either the mechanistic nor today's quantitative ideal type for causal inference as defined by Pearl (2000, 2009).[42] Nevertheless, there are steps that were taken to approach the ideals of both schools of causality:[43] This study's analytical model divides the overall research question into three analytical links instead of modeling the overall relation in once. In this sense, it gets closer to identifying the "causal cogwheels" in the form of intermediate links, which could potentially be transmitting causal force, without, however, analyzing whether and how this is indeed the case. The extensive description further benefits the depth of meaning and represents a step towards the qualitative ideal that has been understood here as applying a mechanistic understanding of causality. Additionally, as a step towards the more quantitative ideal, some results are further tested using (Bayesian) mediation analysis. Moreover, including a time-series/cross-sectional analysis, as well as focusing on the estimation of survival models that allow for the censoring of data, is considered beneficial in this regard. What is more, the many different methods applied to analyze the research question may be considered a plus for both schools.

There are two further aspects of the chosen methods that might be considered advantageous, as they increase certainty in the non-spuriousness of the correlational results. This certainly does not make them causal, but

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42 Nevertheless, the reader should not be caught off guard when reading terms like "factor" (*syn.* determinant, explanatory variable) or "effect on XY". Using these terms does not imply causation. I simply attempt to follow the jargon of a non-specialized quantitatively oriented political scientist.

43 Not satisfying either is problematic as readers could decry a lack of epistemological focus. To this criticism, I would reply that the many chosen statistical methods and the embedding in a framework to analyze the research question present a great advantage of diversity instead.

being more certain about a statistical association is certainly a plus. First, the Project Characteristics Survey is a census, i.e. a full population survey (of all WE projects under some cut-off criteria), and this reduces statistical bias. Second, in some analyses I resort to threshold criteria based on the results of automated combinations of model factors. These robustness thresholds then make the call of whether relations are deemed statistically significant — and this also increases certainty in the correlational findings.

2.4.2. The roles of institutions and policy rules

Delimiting the context from the organizations that engage with it is the purpose of the next few paragraphs. As briefly touched upon in the section on the ACI's main tenets (section 2.1.), the ACI views institutions as "remote causes" compared to the behavioral aspects of actors, which it treats as "proximate causes" of an outcome (Mayntz and Scharpf 1995, 46). Scharpf (1997, 38) builds on North's concept of institutions as "humanly devised constraints that shape human interaction" (1990, 3-5). Mayntz and Scharpf scoped this famous definition to make it applicable to socio-political actor arrangements. Hence, the ACI limits institutions to "[...] defined, practiced and sanctioned [...] rules that must additionally allow for the "mutual predictability" of social action beyond the realm of personal relations" (Mayntz and Scharpf 1995, 47). For them, North's definition is insufficient in that these constraints cannot simply "exist and shape" but must be understood, shared, applied and socially sanctioned in case of disrespect.

What is left open in the ACI, and thus for the researcher to decide, is the question to which extent the stability of a rule over time is deemed as constitutive of an institution. Most researchers would likely agree that there must be a minimal degree of stability of a rule over time to be considered an institution. In consequence, following Jepperson (1991), this research project additionally requires that institutions be relatively stable across time. Not doing so would result in problems when modeling the strength of institutional effects and would thus bias statistical results. Hence, for the present study, with a horizon of 1998–2022, the stability of the selected institution of decentralization is a necessary assumption.

Even when having these definitional criteria (a defined, practiced, sanctioned and stable rule) in mind, it is possible to arrive at widely divergent applications and political science literatures: On one hand, the institutionalist literature tends to use the term as closely overlapping with "the polity". In

this understanding, institutions become the "form" of politics (Sager et al. 2017a), ordering and providing the organizational frame for political action (see e.g. Bernauer et al. 2018). Naturally, this literature tends towards applying a macro-level analytical perspective to institutions, thereby identifying parliaments, governments or large-scale structural political phenomena (e.g. democracy, decentralization) as such. The institutionalist literature focuses on constitutions (political system principles) and refers to policy fields only in a highly aggregated manner, if at all. On the contrary, the policy literature understands institutions as much more disaggregated legislation-based prescriptions. In this policy-understanding, a rule need not be a system but can refer to a single low-level rule-in-use, say a municipal rule determining who has access at which point in time to a piece of land to let animals graze (Lloyd in Hardin 1968). Or institutions can refer to "policy principles", which, for example, denote the basic rules of functioning of the WE sector. A policy-analysis understanding of institutions can further be formal, as in a policy, or informal, as stemming from practice, or both. In short, the political institutions literature and the policy literature differ regarding the level of aggregation to which they apply the term of "rule", by the selectivity of their choice (constitution or policy) and whether they allow informal rules.

The two literature branches also differ with regard to the role that is attributed to institutions in their respective analyses. In policy-analysis frameworks, institutions have a function and tend to be referred to as contextual conditions. They tend to be cast aside in order to give the main categories of analysis the desired analytical focus. In the ACF, for example, institutions structure interactions (Sabatier and Weible 2007, 197). In the MS, institutions determine the attention span of policymakers and of policy entrepreneurs (Zahariadis 2007, 75). Like in the ACI, they are conceived as remote factors that structure actor constellations and interactions (Mayntz and Scharpf 1995; Scharpf 1997). In contrast, in the institutionalist literature institutions are much more ends by themselves. Although their analysis might still reveal that institutions serve a specific function, they are never relegated to an "analytical background". This is not to say that the political institutions literature does not use the form and functioning of institutions as an independent variable, checking their contribution to, e.g., a variable of performance, as shown in the introduction. The performative aspects employed, however, tend to be cross-sectional, macro-level variables of change, stability, quality of democracy or public spending. The point is that the policy literature and the institutionalist literatures differ starkly by their analytical focus on institutions and in many cases whether they are treated as functional or as ends-by-themselves.

To avoid confusion, this study, which uses elements of both institutional understandings, needs to take sides and make compromises (see Knoepfel 2002 facing this issue as well). For reasons of practicability, this study chooses the political institutions understanding, referring to macro-level systems of rules as institutions and to more disaggregated rules simply as policy rules. The main institution under scrutiny of decentralization is treated as a macro-level aggregate. Its dimensions and components are referred to as institutional rules.

However, following the ACI, this study separates a policy context from an institutional one and treats all policy rules that do not stem from the constitution as policy rules. Given the problem-oriented nature of the ACI, applying the framework necessarily entails the selection of such rules. Nevertheless, I would like to reiterate that the present study does not treat these policy rules (that influence actors) as an institution, as policy-analysis frameworks classically would. Instead, these policy rules will be classified as part of the policy context, even though policy researchers would likely criticize the separation of an institutional from a policy context to be arbitrary.[44] Yet, from the perspective of an institutional researcher that investigates constitutions, the separate placement of (other) policy rules into a different category is entirely unproblematic. It is a simplification, of course, but, as this separation is actually foreseen in the ACI's delineation of analytical categories, this study abides by this delineation.

A traditional application of the ACI would also mean that institutions are understood as contextual factors and have a function, instead of treating them as ends by themselves: Here, the main institution under scrutiny is treated as an independent variable, like in many applications of policy-analysis frameworks and like in the institutionalist literature with performance as a dependent variable. This study also agrees with the ACI in that institutions have a function. However, it takes issue with the ACI's relegation of institu-

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44 As policy analysts would point out, this is unduly restrictive and problematic, because a policy rule, just like an institution, can shape actor behavior. Moreover, this categorization neglects that some policy rules demonstrate a higher "degree of institutionalization" or "invulnerability" (Dryzek 1983) than others (Howlett 2019; Capano and Woo 2017). Separating an institutional from a policy environment could also be considered to be arbitrary because changing a "policy core", just like a political system principle, would entail a higher-order reversal process than changing a "peripheral" rule (Hall 1993). Still, I maintain this categorization in the present study for reasons of simplicity.

tional explanations to "remote" causes. Rather, it hoists institutional factors to the same explanatory proximity as the more actor-centered factors.

2.4.3. On the attribution of agency to contextual actors

The quarrel between structure and agency has been an eternal issue in political science (Heugens and Lander 2009; Lewis 2002; Sibeon 1999) with each theoretical framework needing to justify its stance on the subject. As mentioned, in the ACI, agency is attributed to actors independently of their constituents unless there is reason to suspect otherwise, in which case agency is attributed to the actor's individual members (Scharpf 1997, ch. 3). But where is the boundary between those actors understood as part of the analytical category of "actors" and those that have been relegated to the context? And do actors in the context lose their agency and become structure? This study's stance on these two questions is the subject of this section.

Identifying the boundary between those actors that are placed in the analytical category of actors and those placed in the context is an exercise of formulating and applying theoretical criteria (see e.g. Sager et al. 2001). In the present study, the demarcation criterion was held simple, using the policy phase of implementation compared to other phases of policy-making: All organizations that have taken part in an implementation arrangement of a WE-authorization procedure were considered to be part of the analytical category of actors, whereas all that have not been found to be directly involved were relegated to the context. The issue of whom to include and to exclude within the analytical category of actors has been much more difficult: This is because the criterion of involvement of organizations in implementation arrangements could not be defined across all projects in the same way. This is because projects have advanced to different degrees and involvement fluctuates over the duration of the authorization procedure. Again, the chosen approach was pragmatist: Involvement was simply determined based on secondary data project descriptions or taken from answers by the survey respondents (see section 6.1.).

But how should one deal with actors that are crucial to the sector and hence to the problem situation but are not directly involved in implementation arrangements? This consideration stems from the desire to present a simplified yet empirically accurate image of a policy problem. In the present study, the actors in question are the political parties. They cannot be examined as part of the analytical category of actors as they do not directly take part in

an implementation arrangement. But would the ACI allow to relegate actors to the context? *Prima facie*, researchers would be left wondering whether to treat them as context or as actors and thus would not know whether to understand them as structure or agency.

This leads us to the second question of whether agency can be attributed to actors placed in the context. Generally, the terms of context or structure imply stability, while the terms of actors or agency imply variability. In an extreme understanding, this would mean that the context is understood to be completely invariant across time, producing a constant effect on actors. In such an extreme case of contextual invariance, an actor that would be placed in the context could not be attributed agency. However, an understanding of complete contextual invariance cannot be combined with the regularity approach of causation that is the staple of more traditional quantitative approaches, because something invariant cannot explain something that varies.[45]

A different take on structure and agency refers to the context or structure as a force that actively shapes an actor's constitution, actions, constellations and modes of interaction. The context or the structure are not passively being shaped, only actors are. In such an understanding, context and actors differ only in the direction of expected relation but not regarding their variability. This means that structure does not imply stability but only refers to an analytical restriction, under which structures cannot be the receiving ends of impacts. Agency in turn also does not imply variability, it simply refers to allowing agents to be also on the receiving end of effects. An actor placed in the context would then be allowed to vary like any other actor, yet it would solely be restricted to enter the analysis as an active, not as a passive entity.

This study follows the second understanding of context and actors, because an assumption of contextual invariance cannot be combined with regressions. I argue that the assumption of a static context may be relaxed to accommodate for agents in the context. I would also argue that few to no ACI scholars would subscribe to such an extreme understanding of structure as a fully invariant context. In fact, not allowing minimal variability would likely also cost the context much of its explanatory force and would be considered unrealistic, especially in more qualitative settings. Thus, I concur with actors in the context only being treated as shapers (active), not as actors that are being shaped (passive). This approach sits well with statistical methods, as it allows

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45 Correlation is not required for more qualitative understandings of causation, such as the mechanistic approach.

the treatment of these contextual actors as independent variables (that must be allowed to vary by definition).
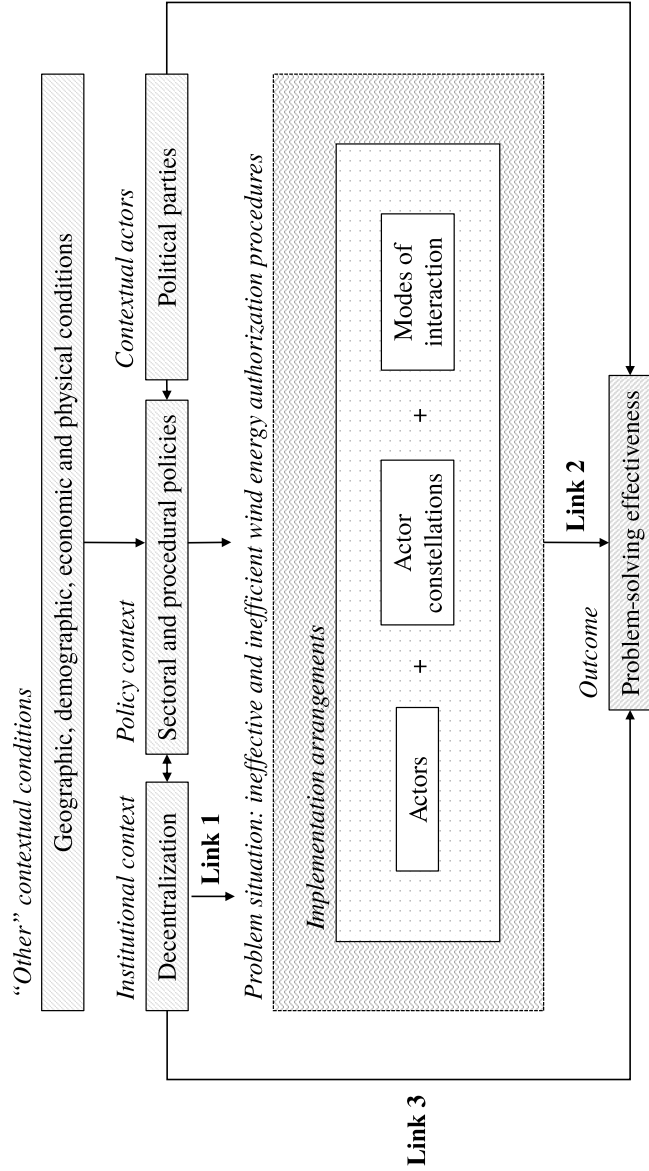
2.4.4.   The analytical model of this study

The preceding sections in this chapter presented the theoretic framework of the ACI and explained its suitability for the present study. It also embedded the research project in meta-theoretic debates, focusing on those aspects where the present application is likely to differ from a stylized "typical" one. To adapt the ACI to the present project, slight tweaking was needed regarding mainly the epistemological position to allow for a quantitative treatment of the problem under consideration, with all dependencies that follow, such as a departure from qualitative mechanistic causality to a correlational approach, the "approximation" of explanatory importance of contextual variables with actor-centered ones and the selected attribution of agency to a contextual actor. The function of this chapter so far has been to set the stage for the presentation of the complete analytical model, which shall be presented now.

For the analytical model of this study, the ACI has provided the background on the analytical categories. It allows to identify those aspects in interaction-oriented policy-making that have been demonstrated in the past to produce value. Figure 2.2 presents said model. But as the ACI is only a "research heuristic", not a full-blown theory, as Mayntz and Scharpf (1995) point out, much additional substantive theory is necessary to answer this study's research question. Theory on the main concepts of decentralization, implementation arrangements and PSE is thus necessary to provide testable hypotheses. Figure 2.2 shows how these concepts are assumed to be related to each other. The arrows (implying statistical association) are labeled with "links 1, 2 and 3", and the numbering presents the order in which the links are investigated. The first link examines decentralization effects on implementation arrangements, the second investigates implementation arrangement effects on PSE, and the third link short-circuits the analysis from decentralization to PSE.

   Figure 2.2 can be read as follows: Labels of an analytical category are in *italics*, the content of an analytical category, if it is not identical to the label, is written in regular font. The shading differs between contextual conditions, the problem situation that includes the ACI's three main analytical categories, and the performance measurement of PSE. As mentioned in the run-up to this analytical model description, the context contains a category of institutions,

Figure 2.2: The present study's analytical model.

"Other" contextual conditions

Geographic, demographic, economic and physical conditions

Contextual actors

Political parties

Policy context

Sectoral and procedural policies

Institutional context

Decentralization

Link 1

Problem situation: ineffective and inefficient wind energy authorization procedures

Implementation arrangements

Actors + Actor constellations + Modes of interaction

Outcome

Problem-solving effectiveness

Link 2

Link 3

Notes: Analytical categories indicated by rectangular boxes with different shading per category, labels in italics, material "content" in regular font, links of correlational association in bold font, numbered by order of scrutiny.

one for policies and one for contextual actors. What has not been mentioned so far but is also important in view of explaining the outcome of PSE is the residual category of "other" contextual conditions. For example, depending on the model, it is necessary to control for population density or wind potential to explain whether a canton hosts a project.

The choice of decentralization as an institution has already been, and will be, amply debated. Regarding the role of political parties as contextual actors, they will be presented in section 4.4.. Their role is analyzed separately and is developed theoretically in this study in a much more limited manner than the decentralization effect. Suffice it to say here that they are crucial actors for problem-solving, even though they are not directly involved in the implementation of WE projects. Regarding the policy context, the study makes a difference between sectoral and procedural policies. Briefly stated, sectoral policies are broader in scope and less easily changeable. They refer to more general rules of policy fields where WE is only a part of (e.g. energy, spatial planning, construction). Procedural policies, in turn, refer to the rules of the authorization procedure that are specific to each WE project.

The figure also contains some simplifications that should not lead to confusion: For example, it is not expected that the category of "other" contextual conditions only influence the policy context and not contextual actors or institutions, as the only arrow would indicate. Rather, I regard it as most likely that, over the horizon of observation of this study (1998–2022), it has most strongly impacted policy-making and has affected the other two less. Regarding the missing arrow between contextual actors and the institutional context, the arrow was left out for reasons of graphic depictability. Political parties likely do and have impacted decentralization, but this is not an aspect that is investigated here. The attentive reader will further notice that, as discussed, the contextual actor only affects other analytical categories but is not affected itself by others.

Chapter 3: Deriving and developing the main concepts

As the title states, this chapter conceptualizes the three main substantive concepts used in this study: the institution of decentralization, implementation arrangements and problem-solving effectiveness. It proceeds systematically, by first tracing the meaning and use of the concepts in the Swiss case and then defining, delimiting and operationalizing them in detail. This is done for each of the three concepts subsequently (sections 3.1. to 3.3.). Importantly, the chapter does not theorize the relations or *links* between the three concepts, as this is the function of the chapter that will follow hereafter.

3.1. *Decentralization*

The topic of this section is to process existing research and present the state of the literature on decentralization. It starts with briefly elaborating on the history of the concept in general and in Switzerland, followed by the concrete investigation into the actual process of (de)centralization in Switzerland (section 3.1.1.). Thereafter, it breaks down the concept into a digestible definition that is adopted for empirical use later on (section 3.1.2.).

3.1.1. Decentralization in the Federation of Switzerland

If decentralization is understood simply as the "[...] transfer of power and resources away from the central government" to a territorial subdivision (Schneider 2003, 33) and if one is willing to apply the term to historic political systems "avant la lettre", then decentralization may be observed in territorially organized political systems throughout history as if it were innate to it (Mueller 2015, 4). Even Sumerians (ca. 4500–1900 BCE) lived in a network of theocratic city-states that were divided into villages and subdivided into hamlets (Diakonoff 1974). The Persian empire is said to have efficiently functioned with — at times — five nested levels of government.[46]

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46 The king ruled centrally, but satraps and sub-satraps were in charge regionally, with additional local subdivisions and administrators looking after local issues (see Faraz-mand 2009 for the Achaemenid Empire).

In today's Western political science literature, contemporary understandings of decentralization are only exceptionally traced to ancient or medieval political systems; rather, the birth of the territorial division of powers is commonly attributed to US-American constitution of 1787 (in force 1789) and the "Federalist papers" (1787/1788) that were written to defend the new constitutional document in view of the constitution needing State ratification (Hamilton et al. 2009). Hamilton[47], Madison[48] and Jay[49] went to great lengths to explain and illustrate all institutional aspects of the proposed constitution to New York's voting public, writing over 175'000 words in a span of less than a year (Adair 1944). Like James Madison, who feared that constituent states would gain power and weaken the center over time, Tocqueville, in his treatise of American democracy, also expected the gradual erosion of the center (2010, 528–627). In contrast, Bryce found that the powers of the central government had actually increased in the 19th century, although not to the extent Madison had expected (1995). Bryce was also one of the first scholars "[...] to think systematically and comparatively about the centripetal and centrifugal forces leading to centralization and decentralization and the constitutional devices countries, federations included, could adopt to contain them" (Dardanelli et al. 2019a, 3).

In fact, the Swiss experience of crafting a constitution, and especially the vertical division of power, has been very much influenced by the adoption and politics surrounding the US-American constitution of 1787 (Hutson 1991; Rappard 1941; Vatter et al. 2020b; Troxler 1848; Brühlmeier 2023). Both political systems continue to be very similar today with regard to Lijphart's (2012) second dimension of federalist-unitary dimension. Regarding the executive-parties dimension, both showed marked majoritarian elements in their beginnings, although the United States showed an even "purer" form of majoritarianism, whereas Switzerland had swiftly moved to the consensual side over time (Vatter et al. 2020b). Like the United States, Switzerland also experienced a vertical centralization of powers over time since its birth as a Federation in 1848 (Dardanelli et al. 2019b; Fagagnini 1991, 48f. Wälti 1996, 8; Nüssli 1983; Church and Dardanelli 2005, 170). The process shall now be investigated in detail.

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47 Wrote 51 of the 85 papers: Numbers 1, 6–9, 11–13, 15–17, 21–36, 59–61, 65–85 (Adair 1944).
48 Wrote 29 papers: Numbers 10, 14, 18–20, 37–58, 62–63 (ibid.).
49 Wrote five papers: Numbers 2–5, 64 (ibid.).

In the beginning years, the central level (Federation) only held very few legislative powers, and the cantons continued to be a completely self-sustained polity. Only currency and money supply, defense and external affairs were policy-domains in which the Federation was competent. It also regulated concrete matters such as postal services and customs. In this beginning phase, cantons were essentially self-financing: They were almost fully unrestricted with regard to their taxation powers and could borrow money in an unlimited manner (Dardanelli and Mueller 2019, 9). A major step of centralization, after the end-of-19th-century task shifts to the center of railway and military matters, was the unification of codes of law (civil code 1914, penal code 1937). After the Second World War, centralization had been especially marked with the growth of the "interventionist" state (Vatter 2020, 435f.): The constitutional article on economic matters of 1947 attributed decisive economic competences to the center. Larger welfare state and social security reforms occurred in the second half of the 20th century, with nuclear energy being attributed to the Federation in 1958 and the limited energy competences in 1990 (ibid., 435f.). A recent, deeply substantive reform of the vertical power balance called "NFA"[50] had been in preparation since 1990, was accepted by popular and cantonal vote in 2004,[51] and went into force in 2008 (Arens 2020, 63ff. Vatter 2020, 437ff.). The reform disentangled responsibilities of 17 previously shared tasks, reorganized the steering and implementation of 17 remaining shared tasks, identified nine tasks of horizontal intercantonal cooperation and set up a new fiscal equalization scheme between the cantons (Arens 2020, 64; see also Braun 2009). Yet, this reorganization did not result in aggregate changes of decentralization, because it centralized some powers (e.g. national roads) while it decentralized others (e.g. airports) in the same policy field (Dardanelli and Mueller 2019, 13). The level of decentralization remained largely the same despite the initial motivation for the reform being the "creeping centralization" in the 1960's and 1970's (Braun 2009, 315).

In Swiss political science today, the most encompassing measure of decentralization in Switzerland has been proposed by Dardanelli et al. (2019a). In their study, the authors differentiate between the subnational units' extent of legislative powers, their range of administrative powers, and they provide a summary indicator of subnational expenditure or income (see Watts 2008).

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50 In German: "*N*eugestaltung des *F*inanzausgleichs und der *A*ufgabenteilung zwischen Bund und Kantonen".
51 With 64.4% popular yes-votes; and only the cantons of SZ, NW and ZG were against it.

Figure 3.1: Legislative (top) and administrative (bottom) decentralization in two policy fields in Switzerland, 1850–2010.
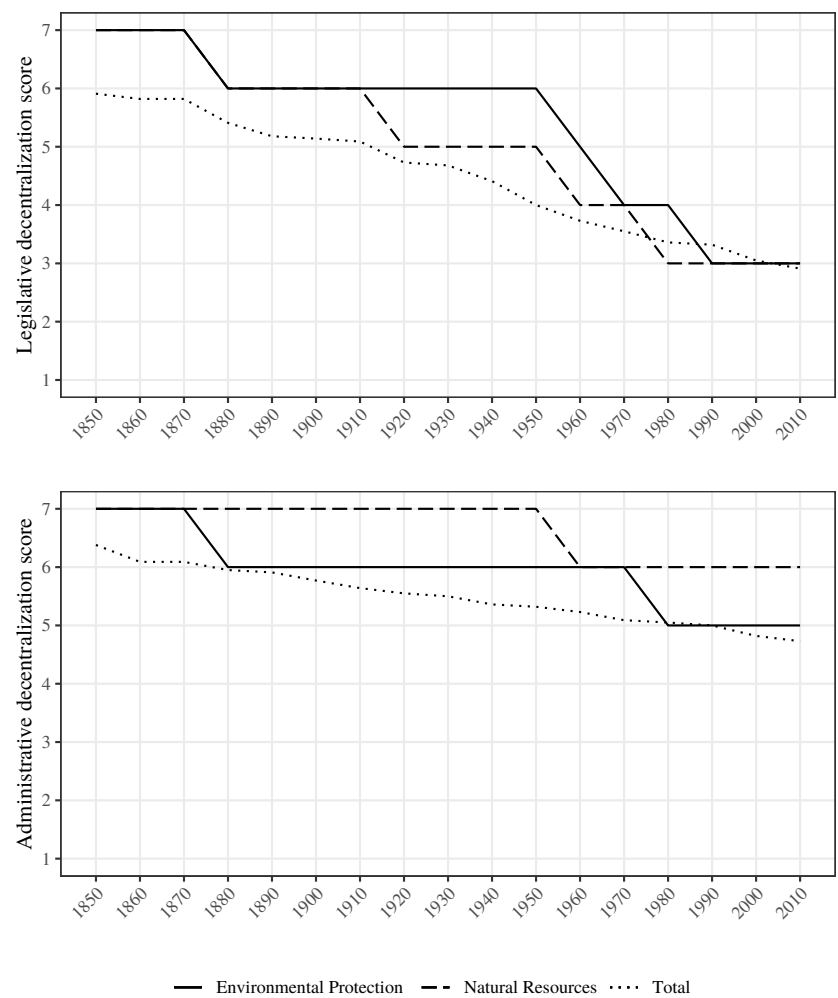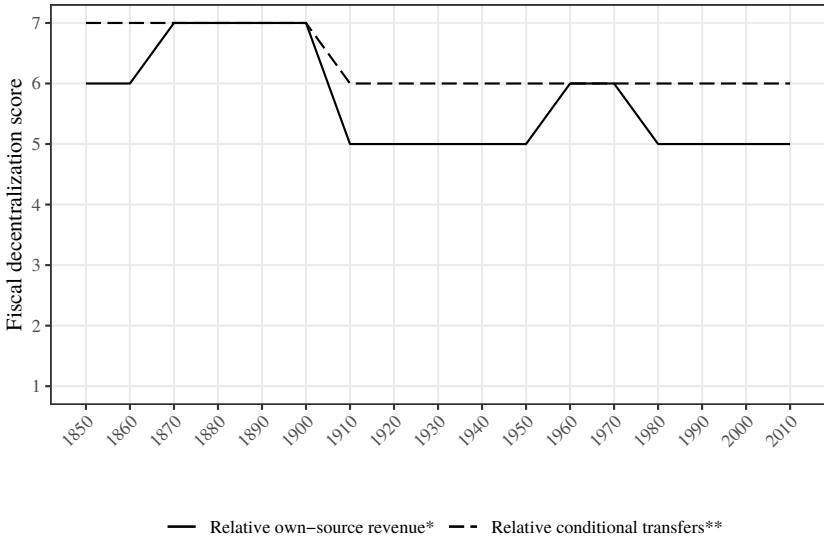

Source: Adapted from Dardanelli and Mueller (2019). Coding: 1 = exclusively federal government; 2 = almost exclusively federal government; 3 = predominantly federal government; 4 = equally federal government and the cantons; 5 = predominantly the cantons; 6 = almost exclusively the cantons; 7 = exclusively the cantons.

This already foreshadows the discussion on the concept (in section 3.1.2.) that decentralization does not only refer to legislative competences but also to competences in implementation (administration). In a special issue of *Publius* (vol. 49, issue 1), decentralization scholars have applied said measures to compare Australia, Canada, Germany, India, Switzerland and the United States over time. For Switzerland, Dardanelli and Mueller (2019) coded the trajectory of these three measures of decentralization for the years 1850–2010. Figure 3.1 shows the developments of the legislative (top) cantonal and administrative (bottom) cantonal powers over time for the two policy fields that come closest to the present topic of WE-authorization procedures (environmental protection, natural resources), in addition to the total mean. A decentralization score of "7" indicates an exclusive cantonal competence, a "1" shows an exclusive federal competence.

In terms of legislative powers, the slow-growing centralization distribution follows the "grand caesuras" of the constitution of 1874, the First World War and the immediate aftermath of the Second World War. The two selected policy fields are slightly more decentralized than the Swiss mean. The difference is especially marked right after the Second World War, but in 2010 the two policy fields' decentralization scores are fully at the mean. But the discussion on these details hides the overall point: At no point in the Federation's history has either of the two policy fields been almost exclusively or exclusively federal. In comparison, administrative centralization has been much slower over the course of time than the legislative. The two policy fields follow the mean administrative decentralization closely. For environmental protection, the constitution of 1874 introduced a very slight centralization of 1 point. Another point towards greater centralization was gained in 1980 (likely due to some centralized provision of the 1979 spatial planning law). The natural-resources policy field only gained a single point in decentralization over these 160 years, after the Second World War. At no point in time is administrative decentralization in these two policy fields more centralized than being "predominantly" administered by the cantons.

The cantonal dependency on federal funds over time is depicted in figure 3.2. It shows the proportion of own-source revenues out of total cantonal revenues and the proportion of conditional grants out of total cantonal revenues. The extent of the conditional grants only lost a single category-point in 1910 (from a proportion of 0–10% to a proportion of 11–25%) and has stayed there ever since. The proportion of cantonal own-source revenue has fluctuated a bit more, including two moves towards greater decentralization in spite of the overall trend going towards greater centralization. It moved

Figure 3.2: Fiscal decentralization in Switzerland, 1850–2010.

Source: Adapted from Dardanelli and Mueller (2019). * Proportion of own-source revenues out of total cantonal revenues. Coding: 1 = 0–14%; 2 = 15–29%; 3 = 30–44%; 4 = 45–59%; 5 = 60–74%; 6 = 75–89%; 7 = 90–100%. ** Proportion of conditional grants out of total cantonal revenues. Coding: 1 = 86–100%; 2 = 71–85%; 3 = 56–70%; 4 = 41–55%; 5 = 26–40%; 6 = 11–25%; 7 = 0–10%.

from 75–89% to 90–100% in 1870, dropped by two category-points in 1910 to 60–74% and, after a brief stint in the 1960's back to 75–89%, has remained on the level of 60–74% ever since. Thus, overall, cantonal reliance on its own sources has dropped from almost 100% in the 1870–1900's to about two-thirds in 2010. Conditional transfers, in turn, have increased, but at a very low level from almost irrelevant to about 1/6th of cantonal income in 2010.

In comparison, Switzerland's decentralization trajectory is fully in line with developments of other "classic" federations, moving from a highly decentralized to a centralized federation (Dardanelli and Mueller 2019, 2). Following these authors, Swiss centralization is driven by the increase in central government legislative powers. Administratively and fiscally, the cantons have remained decentralized over time. In the administrative sphere, Switzerland, together with Germany, has the most decentralized system of the compared federations (Australia, Canada, Germany, India, Switzerland,

United States). Fiscally, Switzerland finds itself in between the more decentralized Canada and the more centralized United States.

3.1.2. Delineation and application

Before one may arrive at a definition of decentralization that can be operationalized and does justice to the burgeoning literature on the subject, two clarifications are needed: First, the relation between federalism and decentralization must be clarified. Second, there is a necessity to bring order into the terminological chaos regarding the *dimensions* of decentralization. Only then, in a third step, may a coherent definition of decentralization be derived. Thereafter, as a fourth step, the definition must be made applicable to the present project, and to do this, conceptual issues and positions will be discussed.

Delineating decentralization from federalism

Defining decentralization is first and foremost an exercise of delineation. There is a plethora of related terms whose meanings are partially, fully or not at all overlapping, depending on the author and the study. Defining and delineating terms has been inherent in the literature for two reasons: Conceptual development is regarded as a key contribution to the literature, and the literature thrives also due to semantics. But there is a good reason for this, as the concepts need to be fully coherent with their empirical measurement. For these reasons, clearing up the "conceptual muddle" (Schneider 2003, 34f.) is usually only possible for a single study, such as the present one, unless scholars were willing to develop a dictionary that is widely accepted and applied.[52] Hence, as a starting point and for the purpose of the present research project, I shall consider and delimit decentralization from its main "rival" concept of federalism. In passing, this exercise shall also clarify understandings of authority and autonomy.

Following Hooghe et al. (2016, 18), "[c]entralization and decentralization are poles of a continuous variable describing the extent to which authority is handled by the central government versus any government below". This

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52 Many would likely — and justifiably so — contend that this would be futile for the literature thrives of conceptualizations.

definition, while simple, has some implications, which are left implicit: There is an extent or "stock" of authority at lower government level(s) and at the central level, and the two can be understood relative to each other, on a continuous dimension of authority. Moreover, the definition presupposes the existence of "governments below" in addition to a central one. Fully hidden in this definition is also the recognition that governments are organized territorially and nested. Moreover, the term of authority needs clarifications: The very existence of such governments below presupposes that there must be subnational institutions, resources and competences, because they could not be said to exist otherwise. In other words, subnational governments must have some authority. Following Riker (1975, 101), authority is read as a level of government having "[...] some activities on which it makes final decisions". The final-decision criterion means that authority refers to the capacity or competence (or both) to decide autonomously. The extent of authority could thus be seen to denote the extent of autonomy. But in a popular reading of authority and autonomy, such as Hooghe et al.'s (2016) Regional Authority Index (RAI), the two are not synonymous. Instead, the RAI conceives of regional authority as including issues on which lower-level governments may only co-decide at the central level (shared rule). Thus, in contrast to Riker (1975), authority can also refer to issues on which a subnational government can co-decide but not decide autonomously. In such a broader understanding, authority is essentially a competence or capacity — either to decide in final instance and/or make one's voice heard at the central level. But if this is accepted, as this study does, then authority is equivalent to the constitutive criteria of subnational governmental actors, namely capacity and competence. Interestingly, the capacity to strategic action is also the constitutive criterion of a composite actor in the ACI.

At this point, autonomy needs to be more clearly separated from authority: In the RAI's (2016) understanding of authority, which is accepted here, autonomy is not a precondition. But inversely, is authority necessary for autonomy? I argue that capacities and competences are necessary but insufficient for autonomy. For autonomy, the final decision must also be attributed to the entity of government claiming it. Hence, in the present study's understanding, authority refers to the capacity for strategic action that encompasses all competences, meaning those on which the governmental entity can finally decide by itself as well as those that it can decide on in concertation with others. Authority will also be used synonymously with "powers". Autonomy, in contrast, only refers to the part of authority in which an entity has the final decision-making power.

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The degree of decentralization could thus be understood as the relative size of the stock of authority between subnational and national governments. But this requires a definition of what could be considered as part of stock: As part of the stock, relatively uncontested and discussed centrally in the more recent literature (as in Dardanelli et al. 2019a) is the notion of legal competences. Separated by policy field, legal competences can be summed up and tracked over time (see Dardanelli et al. 2019b).[53] Yet, there is debate on whether decentralization should include more than policy-field legal competences. What about competences outside of policy fields, i.e. of institutional design? Should administrative competences be included? What about the competence to co-decide about central government constitution changes? In the conceptual development of the RAI, these competences are included in their understanding of authority (Hooghe et al. 2016, 19). Less contested are the inclusion of institutional design and of administrative competences. But regarding co-decision competences at the central level, many would exclude them from the stock of authority, as they are often regarded as a constitutive criterion of the concept of federalism as opposed to decentralization.

Hence, a delineation of federalism and decentralization is needed. If, as parts of decentralization, one were to include policy-field administrative and legal competences and competences of institutional design, but not those of central-level co-decision, in the subnational stock of authority, decentralization could be understood as a part of federalism. In such an understanding, decentralization would consist of only the autonomous authority-components of federalism. Transposed to the classical definition of federalism as self- and shared rule (Elazar 1987), this would equate decentralization with self-rule. For example, Dardanelli et al.'s (2019a) measurement of decentralization follows such an understanding.

In contrast, other scholars fully equate decentralization with federalism, which is understood as a combination of self- and shared rule authority (e.g. Giraudy and Niedzwiecki 2022; Harguindéguy et al. 2021; Brancati 2006). The advantage of such a view is its simplicity; the disadvantage is that the two concepts have been shown to measure different phenomena (e.g. Blume and Voigt 2011; Rodden 2004) and thus should not be conflated theoretically.

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53 Crucially, counting the stock would also require that stock units be given to the level of government that retains the residual competence. But since it is conceptually difficult and practically infeasible to estimate the number of stock units that could be counted as to make up total residual power, stock considerations can only be relative to each other and cannot reflect absolutes.

Other authors have tended to regard federalism as a constitutional-level design attribute and decentralization as the distribution of policy competences: For example, Blume and Voigt (2011, 242) contend that the two terms "[...] simply distinguish between different levels of decision making: federation is a constitutional-level characteristic, whereas the term decentralization describes a policy choice at the postconstitutional level." Such an understanding would refer to federalism as the division of authority based on the constitution versus a division based on any other sources of legal rules.

Still others use the term of decentralization to comprise self- and shared rule but apply it to a different level of government: They compare differences between within-subnational levels, not subnational differences with regard to the national (central) level (e.g. Mueller 2015; Ladner et al. 2019a). Shared-rule on this local level (labeled "interactive rule" in the Local Autonomy Index (LAI)) then refers to co-decision competences of sub-subnational governments in subnational governments, either on policy or on subnational government constitutional design.[54]

What would the stock of authority be in the four mentioned understandings? In the first understanding of decentralization as self-rule, the stock contains all legal competences of the subnational entity on which it can cast final decisions (autonomy). This includes competences in all policy phases and subnational institutional design rules that have not been fixed by the central government. In the decentralization-equals-federalism understanding, the stock of authority would additionally contain shared rule competences of the subnational unit at the national level. But for shared rule competences it is unclear to which level these competences should be attributed.[55] The

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54 In fact, the literature has provided plenty of decentralization measures (see Harguindéguy et al. 2021 for a recent overview). I shall only name a few: Most famous would be the ordinal-scale measurement of federalism by Lijphart (1999) as a dichotomy of federalist versus not federalist states. Woldendorp et al. (2000) constructed an "autonomy index" containing the components of fiscal centralization, subnational autonomy, local government autonomy and centralization. Treisman (2002) distinguishes between autonomy, residual authority and the existence or absence of a subnational veto. Arzaghi and Henderson (2005) distinguish the formal government structure from the political responsibilities of the regional level. Gerring and Thacker (2008) built an index of "centripetalism" based on the formal investigation of the (federal) constitution, the election competences of subnational governments and to which extent regional governments are administratively supervised.

55 In many countries, a subnational unit can co-decide on national legislative proposals at the central level and can also co-decide on reforming the constitution. Does this mean that national level competences are part of the subnational competences as well,

third understanding of decentralization refers to policy competences outside of constitutional provisions. Here, the subnational stock of competences would contain all subnational self-rule policy competences. To which extent shared-rule competences and subnational self-rule competences of institutional design are included would depend on whether the constitution contains rules on subnational institutional design and central shared rule.[56] The fourth and last understanding views decentralization as federalism, like the second one, but, unlike it, this last understanding contains only competences of the sub-subnational level vis-à-vis the subnational level. In this understanding, decentralization contains the entire self- and co-decision competences of the sub-subnational level at the subnational level. Here, the question remains whether sub-subnational shared competences at the subnational level should be attributed to the subnational or the sub-subnational level.

Formally, the (fourth) understanding of decentralization as federalism applied to the within-subnational level is compatible with the national-level understanding of decentralization as self-rule, excluding shared rule of the subnational at the national level. This is because co-decision competences (of the sub-subnational) at the subnational level may be understood as self-rule from a national-level perspective.[57] Conceptually, however, this understanding of decentralization is inconsistent in that the inclusion of shared-rule aspects (or its equivalent of sub-subnational units at the subnational level) depends on the level of government. To be conceptually stringent, a combination of self-rule and a shared-rule equivalent of the sub-subnational at the subnational level would need to be labeled as "federalism on a subnational level", not decentralization. But this labelling would be highly inaccurate because of its disregard of the origin of federations, of the "constitutional bargain" (Riker 1964) that has led to the formation of federations and that has continued to foster a federal culture (Elazar 1987, 78f. Burgess 2012). Attributing the label of federalism to political systems on a lower level than the national is thus not permitted for historical and cultural reasons. This leaves the present study with the following possibilities for decentralization: Either one is practical and compatible but disregards conceptual stringency

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because they can co-decide on it? The true answer to this question would be "partly", but how would this count in terms of stock of competences?

56 What about if policy competences are also organized in the constitution? In Switzerland, for example, policy-field principles are to be found in the constitution, whereas in other countries this is not the case.

57 This is the case unless national rules determine how sub-subnational units must co-decide in subnational governments.

and includes a "shared rule" equivalent of the sub-subnational at the sub-national level, or one is conceptually consistent and only includes self-rule aspects on both the sub-subnational and the subnational levels.

For this study, I follow the understanding of decentralization to include sub-subnational self-rule and the equivalent of shared rule of the sub-subnational at the subnational level (or full subnational self-rule), under the exclusion of subnational shared rule at the national central level.[58] This follows the (first) understandings of decentralization as self-rule and the (fourth) understanding as within-subnational self- and the equivalent of shared rule of the sub-subnational level to the subnational level. The third understanding of decentralization, where federalism is about constitutional institutional design and decentralization is meant to refer to the distribution of policy powers, is disregarded for the sake of simplicity. In consequence, the relative stock of authority to measure decentralization will thus consist of the following elements, depending on the level of government that is compared: For the international comparison, it will refer to legal and administrative competences of self-rule and to self-rule institutional design. For the subnational comparison (cantons in Switzerland), sub-subnational self-rule administrative and legal competences, sub-subnational local self-organizational competences and sub-subnational co-decision competences at the subnational level will be included. These co-decision competences of sub-subnational levels at the subnational levels are attributed as competences of the sub-subnational level *relative* to the subnational level to avoid the problem of attributing them to a single level.

Classifying decentralization types

Now that the scope of powers to be included has been disentangled along the larger lines of the theories of decentralization, it is essential to delve into the *functional* differentiations of decentralization. Commonly applied is a classification proposed by Watts (2008, 171ff.) into legislative, administrative and financial competences. Yet Watts' contribution has first and foremost been a summary effort, as many before him have made similar categorizations (see Schneider 2003; Rodden 2004). This is also what Dardanelli et al. (2019a)

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58 The within-subnational and the within-national decentralization do not have to be combined to measure full decentralization; normally, the decentralization of each level of government is equally labelled "decentralization".

have proposed and Dardanelli and Mueller (2019) have used to measure the decentralization within Switzerland (see section 3.1.1.).[59]

This-threefold distinction is widespread, but there are productive alternatives. Rather than being inspired by the division of powers in policy-making to classify decentralization types, Mueller (2015, 2022) has proposed a three-fold distinction based on perspectives following the common division into the triad of political science perspectives of "polity, policy and politics". Yet this approach does not overlap with the administrative, legal and fiscal division-of-powers approach just discussed. Neither perspective can really be classified as legal, administrative or financial. Mueller's non-conformity has an advantage: Empirically, and for Switzerland, his dimensions of polity-, policy- and politics-decentralization are sufficiently uncorrelated with each other to be understood as factually and realistically separate (Mueller 2015). Yet the disadvantage is that his dimensions do not follow the logic of the policy cycle (legal = formulation; administrative = implementation). As a further difference, Mueller subsumes fiscal perspectives of decentralization under the policy perspective, whereas most others, especially fiscal feder-alists, classify fiscal approaches as a separate category that measures the overall material importance of competences.

Another alternative to Watt's (2008) and Mueller's (2015) classification, for Switzerland, has been developed by Ladner et al. (Ladner and Keuffer 2021; Ladner et al. 2019a, 2015) and has been given the name of LAI. His classification does not follow policy-cycle separation-of-powers criteria or analytical perspectives on political systems but simply the two-fold clas-sification of variables into either shared- or self-rule, without additional classification criteria. This is consistent with the above-mentioned second and fourth understanding of decentralization and also mirrors the popularity of the international comparative counterpart, the RAI. However, it remains ignorant of more fine-graded classifications within sub-subnational shared- and self-rule. Its advantage is its simplicity in the two-dimensional structure of the index, its disadvantage is its lumping together of empirically useful sep-arations of powers into categories, such as Watt's (2008) distinguishing the phases in the policy cycle and Mueller's (2015) discrimination by analytical perspective.

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59 Legislative competences refer to policy formulation and administrative to implemen-tation competences. Judicial competences have been excluded from Watt's (2008) analysis for matters of relevance to the concept of decentralization.

Table 3.1: Dimensions of decentralization investigated in this research project by level of comparison.

Comparison		Policy	Polity	Politics
Within-national Mueller (2022)	Self-rule	• Fiscal, • Personnel, • Administrative decentralization	• Giacometti-index • Local autonomy*	–
	Shared rule	–	–	• Electoral, • Representational, • Direct-democratic decentralization
International RAI (2016)	Self-rule	• Policy, • Fiscal, • Borrowing autonomy	• Institutional depth	• Representation

Notes: * This is a perception measure.

For the current project, as I did for the definition of decentralization, I follow an international and a within-national comparative approach. For the within-national (or cantonal) one, this project chooses Mueller's index of decentralization because of its proven empirical validity for Switzerland.[60] The empirical chapters will therefore follow the logic of perspective (polity, politics and policy) on the political system of Switzerland. Importantly, although this is not shown in the text, all calculations and estimations have been repeated for all indicators of Ladner et al.'s (2015) LAI for reasons of robustness.[61] Hooghe et al.'s RAI (2016; see also Shair-Rosenfield et al. 2021) does not capture and code the (in international comparison relatively subtle) differences in decentralization between the 26 cantons in Switzerland. The LAI, in contrast, measures both international and cantonal differences.[62] Caution dictates that the LAI and Mueller's index (2022) should also be interpreted differently due to differences in their coverage of time. Mueller's measure contains an unconventional mix of a variety of sources covering different points in time: For example, his perceived local autonomy item contains averaged data from the municipal secretary surveys of 1994, 2005 and 2009 (from Ladner et al. 2021), uses the Giacometti-index from 1941 for an indicator of polity and takes data on relative municipal expenditure and income ranging from 1997 to 2008 (for administrative expenditures from 1997 to 2003; Mueller 2015, 71). For present purposes Mueller's older data from the municipal secretary survey was replaced with data from the 2017 wave (Ladner et al. 2021). Mueller's index is already cross-sectional; the LAI, however, has provided annual data from 1990 to 2014. Mean values across 2000–2014 were taken to arrive at cross-sectional data.

In contrast, for the international comparison using self-rule aspects only, I follow Harguindeguy et al.'s (2021) recommendation of applying the RAI. I chose the RAI because it can be made to correspond to Mueller's fine-graded

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60 Mueller's data (2022) and the conceptualization in his book (2015) are not fully congruent regarding the subdimensions of the politics dimension. In the data, they are classified as representational, electoral and direct-democratic decentralization, but in the book there are many more subdimensions that each have a single measure. They are equivalent in meaning, but I follow the setup of the data, not the book.

61 The LAI seeks to mirror the RAI, but on a within-national level, where it was "possible" and deemed "reasonable" (Ladner et al. 2019b, ch. 2, fn. 6; Ladner et al. 2015, 4).

62 Some of the LAI's component variables do not vary over the Swiss cantons, and they were therefore excluded from calculations. These are: organizational autonomy, institutional depth, central or regional access, fiscal autonomy and financial self-reliance.

distinction by perspective (polity, politics, policy), whereas it would not correspond with Watt's (2008) functional division. Mueller's (2015) politics dimension can be understood as the RAI's shared rule).

Table 3.1 presents the dimensions of decentralization used in this research project. I will only discuss them briefly and conceptually here, leaving descriptive analytics (mean values, SD, maps) to the empirical part in sections 6.2. and 9.1. As mentioned, for the within-national comparison on Switzerland I rely on Mueller's index of cantonal decentralization (2022), which is based on his book from 2015.[63] In the policy dimension, Mueller includes fiscal, personnel and administrative decentralization as components. Fiscal decentralization refers to the percentage of municipal revenue and expenditure of the total municipal and cantonal public expenditure. Personnel decentralization counts the percentage of the number and salary of local staff compared to all public staff and all salaries of public staff within a canton. Administrative decentralization covers the municipal administrative expenditures as a percentage of all within-cantonal and cantonal expenditures.[64] For the polity dimension, Mueller includes the very old three-category Giacometti-index (Giacometti 1941) and a measure of perceived local autonomy, as rated by municipal secretaries from the surveys by Ladner et al. (2021) from 2017.[65] In the politics dimension that includes only shared-rule aspects, there is an electoral, representational and direct-democratic component. Electoral decentralization contains four indicators that measure the degree of municipal co-decision power over cantonal parliamentary and executive elections.[66] Mueller's representational decentralization investigates to which degree there is inner-cantonal *cumul des mandats*, meaning the

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63 Unless otherwise indicated from here onwards, Mueller's (2022) index serves as a basis for all within-national comparisons on Switzerland. For legibility reasons, I will not cite his study every time his index is mentioned.

64 Multiplying the three shares (whose mean is taken in case of multiple indicators per component) with each other equals the policy-dimension score.

65 To arrive at the polity dimension, the two component values are standardized and their mean is taken.

66 The (1) indicator of regionalism measures on a scale from 0–4 whether and how regional (below canton, above municipality) prefects and assemblies are elected, if at all. Because these take away municipal electoral power, a centrally appointed prefect without an assembly is most centralized (= 0), whereas a directly elected assembly and an elected prefect is most decentralized (= 4). The (2) indicator of territorial quotas captures whether some local or regional territories enjoy quotas in cantonal executives or parliaments. They exist for both chambers in BE (= 4) and in VS only for the executive (= 2). All other cantons are coded as 0. Party decentralization (3) is an indicator that measures to which extent the local level selects candidates for cantonal

share of elected officials that have mandates both in a municipality as a president/mayor and on the cantonal level. This is a measure of local personnel power at the cantonal level.[67] The last component of the politics dimension is called direct-democratic decentralization. It contains a single indicator and measures the easiness with which municipalities (its people and officials) may challenge cantonal legislation or propose new cantonal legislation.[68]

For the international comparison in the European chapter (see chapter 9), only self-rule aspects are being investigated. The RAI's (Hooghe et al. 2016)[69] country scores are weighed by population. In the RAI's policy dimension,[70] there is a policy, a fiscal and a borrowing autonomy component. The policy autonomy component measures the range of policies for which a regional government is responsible.[71] Fiscal autonomy refers to the degree to which a regional government may independently tax its population.[72] The borrowing autonomy captures the extent to which a regional government can borrow

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parliamentary elections. If candidates are selected solely on the cantonal level and without local inputs, this is coded as fully centralized (= 0). If, in contrast, candidate selection happens only on the local level subject only to district-level approval, this is coded as fully decentralized (= 4). The last (4) indicator for the dimension of electoral decentralization is the number and size of constituencies for cantonal parliamentary elections. Here, the higher the number and thus the closer the electoral district comes to the municipal boundaries, the higher the decentralization. Cantons that have only 1 electoral district of cantonal size (TI, GE) are coded as fully centralized (= 0), cantons that rely on municipalities or very small electoral districts are coded as fully decentralized (= 4). The electoral decentralization dimension is then calculated as the mean of the four indicator scores.

67 There are two indicators to this component, whose mean is taken to get to the component score. These are: (1) the share of members of cantonal parliament who are mayors as well and (2) the share of municipalities that are represented in cantonal parliament with their mayors.

68 This component is coded as follows: The maximum score (= 4) is reached if a municipality can both propose cantonal constitutional provisions and challenge cantonal legislation. The minimum score is attributed in case municipalities can do neither.

69 I proceed as with Mueller's index: I shall not cite the RAI every time when it is mentioned from here onwards.

70 I inferred this dimension to the RAI for reasons of comparability, though the RAI does not have it "in reality".

71 A "0" indicates a very weak authoritative competence in four selected policy fields, a "4" indicates authoritative competences in at least three of them. See their code book: Shair-Rosenfield et al. 2021.

72 The maximal score (= 4) is attributed if the regional government sets the base and the rate of at least one major tax. A minimal score (= 0) is attributed if the central government sets both base and rate of all regional taxes.

money.[73] In the polity dimension, the RAI's component of institutional depth measures the degree to which a regional government is autonomous rather than deconcentrated. Deconcentration is to be understood as being a central government outpost, in hierarchical subordination.[74] The component of representation in the politics dimension of the RAI is not to be confused with Mueller's shared-rule component of representational decentralization, even if they have the same label. In the RAI, the component of representation refers to a self-rule aspect: It measures the degree to which a region has an independent legislature and executive.[75] The self-rule aggregate score is then the sum of these five components.

Conceptual issues: process vs. static, normative vs. objective

In the dedicated literature, an important point of contention in the literature is whether to understand decentralization as a process or as a static situation. Essentially, the literature has asked whether time should be considered as a part of the concept or be treated as a separate analytical dimension. Friedrich (1968, 7), for example, spoke of federalism being "a process of federalizing", Rodden (2004, 489) sees it as "[...] a process — structured by a set of institutions — through which authority is distributed and redistributed". The modern literature's incorporation of dynamics either as a noun in "federal dynamics" (Benz and Broschek 2013) or as an adjective in "dynamic federalism" (Popelier 2021) also points in this direction. The recent focus on time when analyzing federations is opposed to the literature analyzing federalism as an artifact of legal interpretation of constitutions (e.g. Majeed et al. 2006; Watts 1998). In turn, for Rodden (2004, 489) decentralization is

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73 It is coded as follows: A "0" is attributed if the central government prohibits regional borrowing. A "3" is given if a regional government can borrow without restrictions.

74 The maximal score (= 3) is attributed if the regional government is non-deconcentrated in general purpose and has an administration that is not subject to a central government veto. A minimal score (= 0) is given if there is no functioning general purpose administration at the regional (below national, above municipal) level.

75 The component score is summed from two indicators: (1) For a legislative assembly, a maximal score (= 2) is assigned to cases where it is directly elected, a minimal score is assigned if there is no regional legislature (= 0). For the regional executive (2), the maximum score (= 2) is ascribed to when it is directly elected or appointed by a regional legislature. The minimum score (= 0) is given to cases where there is no regional executive or where it is appointed by the central government.

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a status, "[...] a particular distribution of authority." Mueller (2015, 2) states that it can be seen as both, but that the core is "a situation".

How can these different points of view on "process vs. situation" be squared theoretically? In strict terms, nothing is not a process; without time, situations would be meaningless. The inverse is also true, in the absence of situations, time alone would not allow us to identify any object of interest. In social sciences , however, the practicality must be in the foreground: If a situation does not change in the analyzed respects and in the context that conditions it, then it is appropriate to assume a situation, for reasons of simplicity. In case of change, the situational assumption fails, and time would need to be incorporated in a scientific analysis. But it is argued that, rather than time needing to be an integral attribute of the concept of decentralization, the inclusion of time should reflect a methodological choice. Choosing a method that incorporates time needs to be grounded in the test of stability or change of a concept in the unit of analysis across the observational time span, not in the concept itself. Hence, the concept of decentralization is treated as a static situation, but how it is analyzed differs either between static (cross-sectional) or process-based (time-series, panel, etc.) methods.

The second and last point of contention that merits some discussion is the normative versus the objective deployment of the concept of decentralization. Even today, federalism (and/or decentralization) is regularly touted as a tool for conflict resolution in post-conflict or ethnically diverse societies (e.g. Keil and Alber 2020; Anderson 2013). The debate on whether and under what conditions this is the case is by no means settled and constitutes its own branch of the political science literature (on the debate, see Erk and Anderson 2009 or Brancati 2006). For example, in the 1980's, federalist principles were adopted in many newly democratic Latin American countries in the promise of governing more responsively regarding local or regionally different preferences (Stein 1999). Scholarly interest on the topic of federalism has also exploded in the years after the fall of communism in Europe (Karmis and Norman 2005). However, the path has been full of deceptions: Rodden (2004, 481) maintains that there has been "growing disappointment" with federalism's promises and that this disappointment was especially marked among developing countries.

The perceived beneficial consequences of federalist organization provide the basis for a normative theory on federalism. Rodden (2009, 357), arguing historically, states that, "[...] at least since Montesquieu, theorists of feder-alism have viewed it [federalism] as a solution to a basic challenge — how

to extend effective government beyond the confines of the city-state." Fiscal federalists have seen virtue in federalism because its vertical division of power curbs "[...] government's natural tendency towards excess" (Rodden 2009). Some scholars would even go as far as claiming that the very core of federalism should be understood as normative. Federalism, they maintain, going back to Aristotle, Althusius and Tocqueville, has always been about limiting powers and thereby enabling the possibility for the ruled to pursue the "good life" (Scott 2011, vii).

There is certainly some truth to the basic normativity of the concept — especially when one is interested in its performative aspects, like in the present research project. However, being interested in the performance of decentralization does not require a conception of the "good life" by extension. Moreover, the research project does not seek the appropriate scale for the benefit of human interaction and is not fueled by desires to call for more equality or more freedom. Rather, decentralization is understood technically, as a structural principle that can be — and this is crucial — both conducive to problem-solving effectiveness and/or affect it adversely. Rather, the source of normativity is the measurement of problem-solving effectiveness to a much greater extent than it stems from decentralization. Handling normativity in a transparent way, regarding the ACI, for decentralization and for PSE has been chosen as a way to address these issues (see section 2.4.1.).

3.2. *Implementation arrangements*

Implementation arrangements, as the term will be employed, are organizational networks in an institutional context that translate given policy provisions into action in order to solve a societal problem. Organizations may be public or can be private companies, associations or any composite actors, as long as they fulfill the criteria of being an organization. These actors stand in a constellation, i.e relative positions of power and interests to each other, and coordinate problem-solving and their activities in at least a unilaterally negative mode (see 2.2.). Before embarking on the task of situating the concept in the current political science literature, some remarks about implementation concepts and studies in Switzerland are in order.

3.2.1.   Implementation in Switzerland

How has implementation worked concretely in Switzerland? To concretize the discussion of the history of administration, one must necessarily depart from a description of the extent of competences of the Swiss subnational government levels, the cantons. In decentralized settings, subnational units can have any combination of a range of legislative and administrative powers, with the exception of having almost no legislative powers, because then these systems would not be classified as decentralized anymore. But what political systems can have is reduced legislative but many administrative powers (Hueglin and Fenna 2015).[76] Two ideal types have been crystallized from the combination: First, there is "administrative federalism" (ibid., 54), where subnational units, in addition to implementing their own legislation, also administer central-state legislation. Reality tends to be more chaotic: Subnational entities might have to administer central policies but have retained very few legislative competences, questioning these units' autonomy. Or they have meaningful legislative competences, but they barely have implementation tasks, in which case the label is put in question. As a second ideal type, there is "divided federalism" (ibid., 53), in which each level of government implements its own legislation. This means that they implement exactly what they have the legislative competences to adopt. In this case, the steering capacity of a subnational government is thus directly tied to the extent of its legislative competences. In contrast, in administrative federalism, administrative competences could also be used to compensate for a lack of legislative steering possibilities.

In this typology, Switzerland is of the administrative federalism sort ("Vollzugsföderalismus"; Germann 1986, 347): In principle, "[t]he cantons shall implement federal law in accordance with the Federal Constitution and federal legislation." This principle is inscribed in article 46 para. 1 of the federal constitution (BV). Yet until the constitution of 1999, the principle had been implicit (Fleiner 2002, 116), although certain competence dispositions in policies had precluded it partially and earlier: The environmental protection clause (Art. 74 para. 3 in the 1874 Constitution) introduced in 1971 (Imholz 2005), for example, had made explicit an administrative division in environmental law. This can serve as an example of the fact that historically the

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76   In case political systems have neither legislative nor administrative powers, there is no decentralization. The case of a subnational unit having legislative but no administrative powers, is empirically irrelevant.

principle of cantonal implementation of federal legislation has been scattered throughout legal documents (Fleiner 2002).

However, in the history of the modern Swiss Federation, such a division of labor (or "functional separation", see Linder 2012, 142) came naturally, or as Vatter (2018, 95) has put it, "[e]stablishing cantons as implementing agencies was in fact both necessity and political intent." The modern federation of Switzerland being the successor to the "XIII Orte", which were then loosely connected by the 1815 federal treaty, had no administration at the newly established federal level (ibid., 95). The Federation thus had no choice, it had to resort to, and build on, cantonal administrative powers. Ever since, cantons have continued to be reluctant to reduce their administrative powers (2018, 95), and this is the reason why the Federation of Switzerland has always been decentralized administratively (see section 3.1.1.).

The literature has distinguished three "types" of Swiss federal policy implementation by the cantons: a "uniform", a "variable" and an "experimental" one (Balthasar 2022; Sager et al. 2017a).[77] The uniform type refers to a unified, nationwide implementation by the administration of the central government. This is administered predominantly by the central government itself, such as in the fields of national highways or science promotion and funding. The central authorities may (or be factually forced to) delegate the heavy lifting to para-state organizations, as for economic policy, vocational education and training or regarding accident insurance (Balthasar 2022, 637). This type of implementation is rare, because the constitutional principle of subsidiarity (Art. 42, 43 and 43a BV) has also been applicable to the subset of duties that are administrative in nature (Fagagnini 1991, 54).

In Switzerland, cantons retain the residual competence in implementation. The principle designates that power is only to be centralized if cantons are "unable to perform" the required tasks or if these tasks "require uniform regulation" (Art. 43a para. 1 BV). In matters of implementation, the federal authorities can only become active if the constitution assigns such tasks to it (Art. 42 BV), which can be decided on by the Federal Assembly. With a view to the medium-strong legislative centralization coupled with the much less strong administrative centralization (see section 3.1.1.), uniform

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77 Obviously, cantons and municipalities need not only implement federal policy, they also implement their own in realms where they have the legislative power. Municipalities also administer cantonal policies in addition to their own, much like the cantons do for federal policy. However, the typology and what will be elaborated upon in the following only refer to the cantonal implementation of federal policy.

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implementation presents well-delineated exceptions to the general rule. Even in the field of defense, a classically centralized affair, the federal state has spent "only" 91% of spending in 2018, leaving 9% to the cantons (Vatter 2020, 436).

The variable type of implementation denotes the norm of Swiss federal policy implementation. In this type, the general division of labor between governments has been summarized as follows: "The federation maps, the cantons implement" (Rieder et al. 2014, 568). The choice of the verb "to map" to denote the federal creation of legislation already shows that cantons tend to have large margins of discretion in administrative matters. This discretion is frequently summarized as follows: "Cantons do not only implement, they program" (Linder 1987; see Vatter 2018, 96; Sager and Rüefli 2005, 105f.). Linder has famously described what administrative programming means:

> "Administering political programs is no unidirectional linear procedure of execution but much rather a process of social negotiation and implementation, containing a multitude of actors. Its foreseeability is limited in many sectors. The political factor has shown to be decisive for the dynamics of the implementation of programs." (1987, 222)

Here, Linder describes the variable implementation type as a procedure of networking that is inherently political and where the administration only retains limited steering capacity. In his 1987-study, he makes it very clear that the implementation of federal policy is a social process, in which there are no "automatic procedures" (ibid., 217), and he quotes Rhinow (1979 in ibid., 217) stating that "each application is also a creation of new law." He also strongly stresses the politics of cantonal implementation, detecting "power plays" between involved actors (ibid., 218; Spörnli et al. 1998) while attributing "politically meaningful margins of action" (Linder and Mueller 2017, 176) especially to cantons and municipalities. Moreover, procedural politics (Howlett 2000) have been shown to be crucial for the dynamics of variable implementation (see Linder 1987, 222).

In view of the policy fields of interest to this study, environmental, energy and spatial planning policy, they can all be classified as variable: In all of them, there is a clear delegation of the majority of implementation tasks to cantons, but there are also some federal-level agencies involved in implementation (for a study on spatial-planning implementation failures, see e.g. Müller-Jentsch and Rühli 2010). In fact, WE projects are implemented across all three levels of government.

The last type of federal policy implementation has been labeled "experimental" (Matland 1995; see also Kissling-Näf and Wälti 2006; Sager et al. 2017a; Balthasar 2022). Following Kissling-Näf et al. (2006, 536), this type designates a form of cantonal implementation where there are no stable federal legal dispositions. Administrative "pilot and demonstration projects" are the result. Matland (1995) has seen this type applied to policy questions that contain low levels of conflict and where cantons have a large margin of action. Moreover, an experimental implementation is applied when federal dispositions are ever-changing and ambiguously formulated and if the causes of the problems are unknown or disputed due to complexity (Rieder et al. 2014, 575). The literature has further reported implementation applications of this type when there is high pressure for a fast solution of any problem and there is no time for planning or coordination (ibid., 575). Often-cited examples of this type of implementation are the "urban living labs" that have been designed to foster innovation in cities for greater sustainability (ibid., 575; see also Geels 2011).

Organizing the implementation of federal policies predominantly in the variable type has advantages and disadvantages.[78] The major advantage of variable implementation is that the program may be tailored to cantonal needs and the cantonal problem situation (Balthasar 2022, 638; see also Sager et al. 2017a). This can further the effectiveness of problem-solving, may help to use limited resources efficiently and promote the acceptance of a proposed program (ibid.). Diverse successes and failures of cantonal implementation programs also resemble a laboratory, where a canton may adopt the "best" solution after it has been proven as such through implementation by other cantons. This is the famous "laboratory" hypothesis, its origin being judge L. Brandeis of the US-American Supreme-Court (1932; see also Sager and Mavrot 2015, 178; Vatter and Wälti 2003; Kübler and Widmer 2007). These two advantages of variable implementation — tailored efficiency and best-practices sharing — are generally held high in the federalism literature (e.g. Wisemant and Owen 2018; Oates 1999).

The disadvantages of variable implementation also must be acknowledged. The major one is the lack of equal treatment due to different places of residence within, say, neighboring municipalities in two different cantons with otherwise very similar circumstances of living (Balthasar 2022, 639). Given that variable implementation allows large-scale weighting of cantonal inter-

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78 I will not refer to the other two types, because they are irrelevant for the policy fields of the present study.

ests in implementation (Kissling-Näf and Wälti 2006, 542) and in view of the sometimes "creative" (Balthasar 2022, 639) implementation programs that cantons try to sell as being in accordance with federal legal dispositions, equality of outcomes across cantons is often not reached. Art. 43a para. 4 of the constitution states that "universally provided services must be made available to every person in a comparable manner", but arguably Switzerland has repeatedly violated this constitutional provision (Sager 2003, 325).

Still, it must be acknowledged that problem-pressures across cantons are also very different (Balthasar 2022, 638). Mountainous, sparsely populated cantons (e.g. GR, VS) present different challenges to governance than city-center cantons (BS, GE). A uniform "scattershot" approach to equalized implementation could thus be considered neither effective nor efficient. Differences in administrative programs also result from the strong divergences in smallness, resources and political will between cantons (Linder and Vatter 2001, 107f. Vatter 2018, 97f.). Smaller cantons might neither possess the necessary knowledge, the personnel and the financial resources to execute a federal legal rule "sufficiently". Neither might they be motivated to design a program for a problem they perceive as inapplicable to their cantons. Additionally, as Battaglini and Giraud (2003) point out, the cantonal political systems also exhibit very different "cultures of statehood": The readiness to formulate societal interventions, as well as the depth and strength at which societal groups are targeted, diverge strongly. These so-called "policy-styles" (ibid.) have also led to widely diverging implementation outcomes.

Whether the divergence in implementation outcome is perceived as positive or negative often depends on a cantonal population's politics. An adaptation to local situations is clearly desired given the system design (Rieder et al. 2014). But what exactly is considered to be excessive or lacking is essentially a political question. But nonetheless, there are also deficits of implementation that are universally agreed upon (see e.g. Sager 2003; Imboden and Michel 2012). Balthasar (2022, 643) has separated deficits by sources of inadequacy: Deficits have a factual, structural or material dimension. A *factual* deficit results from the non-use of opportunities, low cantonal motivation or cantonal political blockades. A *structural* deficit is one where the cantonal administration is not given enough competences or where the federal framework conditions are ambiguous ("programmed deficits"). A *material* deficit is when societal developments have surpassed the appropriateness of a (past) solution (ibid., 643). Regarding mostly the factual, but in the long term also the material and structural deficits, political consensus on the cantonal and federal level has been identified as the key component of effective

implementation solutions (Linder 1987, 221ff. Vatter 2018, 100).[79] It should
further be considered that, even if an effective solution has been found to
solve the problem, the solution might still not be adequate considering its
environment. The solution might affect an individual, a company or, say, a
forest in a manner that is disproportionate in comparison to the societal gains
from effective problem-solving (Sager 2007).

Which instruments are at the cantonal disposition to administer a program?
There are two stages: Setting up a program internal or external to the ad-
ministration requires other instruments than the decision whether to evaluate
entitlements (such as construction permit decrees) of individual companies
and persons. In a first stage, a program is set up internally to the adminis-
tration, in which case no contracts or agreements are needed. If there is an
external component to the implementation arrangement, then public or private
contracts or even informal agreements may need to be concluded. This erects
the capacity to decide administratively in a second stage of implementation
on the individual-concrete case. Not all programs need individual-concrete
decision-making, however. Regulatory or "indirect" steering instruments
(Mayntz 1980; Braun and Giraud 2003), among which there are financial
incentives, persuasive instruments (e.g. "nudging"; see Varone et al. 2019 for
the energy sector) and others, need no decision in the form of a second-stage
individual-concrete decree. In contrast to those "indirect instruments", Braun
and Giraud (2003, 149ff.) label those instruments that do require such a
decision from the second stage "direct" steering instruments. These decide
on the provision of goods and services to those entitled. Second-stage ad-
ministrative output instruments are frequently decrees, but they also come
as, e.g., inspections or consultations (Knoepfel 2011).

To test for the adequacy of implementation solutions, the federal author-
ities are armed with many instruments of control based on Art. 49 para. 2
BV. If they deem a cantonal implementation federally unlawful, they would

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79 If consensus in the cantonal implementation arrangement and the federal legislature
   is high, the implementation solution can be expected to be problem-appropriate,
   even innovative. If, however, consensus is low on both levels of government, no
   sincere implementation solutions are developed. There are also situations in which
   the federal consensus is low, yet cantons agree that a problem must be dealt with. In
   such situations, the federal framework-rules will be instrumentalized by cantons. But
   this is rare, because it is very likely that, if consensus is low at the federal level, this is
   also the case on the cantonal level. Last, it is also possible that there is a high federal
   consensus, but the cantons do not agree how to solve the problem. This often leads to
   an incomplete and partial implementation solution (Linder 1987, 221ff.).

technically even be allowed to apply force. Following Tschannen (2007, 362–371), the array of possible controls is extensive. But to understand the range, a legal distinction has to be made first: The constitution distinguishes federal "controls of compliance" of cantonal legislation (Art. 186 para. 2 BV, called "federal *enforcement control*") from federal "measures to enforce federal law" (Art. 173 para. 1 lit. e BV, called "federal *execution measures*").[80] Regarding federal enforcement control, federal departments check and approve cantonal legislation and relegate it to the Federal Council in case of disputes (Art. 186 para. 2 BV and Art. 61 lit. b RVOG). Additionally, the federal administration may initiate an investigation, and cantons must hand out relevant documents ("Amtshilfe", Art. 44 para. 2 BV). Another federal enforcement control possibility is that the federal authorities may write so-called "circulars" ("Kreisschreiben"), in which they provide instructions on how to implement the federal law. These instructions are legally binding. There are also judicial methods of federal enforcement control at the disposition of federal authorities.[81] Another possibility to contest cantonal implementation is for individuals to file complaints against an administrative decision, but this would not be classified as a federal compliance control measure (ibid., 364–369).

Regarding federal *execution measures*, the second possibility of control by federal authorities, the Federal Assembly may decide on sanctions, or a specific law may also designate the Federal Council to be competent in this matter. These sanctions can consist of the withholding or the reclaim

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80 Additionally, a federal execution measure ("Bundesexekution", Art. 173 para. 1 lit. e BV) is not to be confused with a federal intervention ("Bundesintervention", Art. 52 BV). Federal interventions in cantonal matters are called to protect the constitutional order in a canton and assist cantonal authorities in restoring order. Federal execution measures, in contrast, are targeted against cantonal authorities whose actions federal authorities deemed to be against federal law. Federal interventions will not be elaborated upon.

81 Some laws (e.g. USG) attribute the competence to lodge administrative complaints ("Behördenbeschwerde") to the federal state (Art. 82, 89 para. 2 lit. a BGG), in which case it may challenge a verdict of last or sometimes (e.g. in spatial planning) earlier cantonal court instance before later-instance cantonal or federal courts. If, in addition to a compliance litigation, the division of powers between the Federation and the cantons is disputed, the Federal Council may file a legal suit ("Klage"). There is also a third judicial possibility, based on Art. 186 para. 4 BV, allowing the cassation of cantonal laws and ordinances by federal courts due to the intervention of the Federal Council. This is a very rare, almost theoretical case outside the regular remedial procedure (Tschannen 2007, 364–369).

of subsidies (as in Art. 30 RPG), can refer to a so-called "execution by substitution", meaning the implementation of the disputed measure by federal authorities at cantonal costs (as explicitly foreseen in Art. 37 RPG), or can denote a military intervention by last resort (Art. 173 para. 1 lit. d and Art. 185 para. 4 BV, Tschannen 2007, 370f.).

The federal authorities have never used the military as a federal execution measure. In 1884, the mere threat of sending the military into the canton of TI has sufficed to annul its decision on measures in connection with National Council elections (Wili 2004). Softer measures of enforcement control happen frequently, however. There is the automatism of the federal administration checking and approving cantonal legislation. Because of the strong institutional and policy-interlinkages and the need for long-term cooperation and coordination resulting therefrom, the federal authorities have been very careful in initiating additional controls (Vatter 2020, 455). This "shadow of the future" (Scharpf 1997), as it has been named, has effectively prevented the seeking or escalation of conflict. Implementation instructions by circulars are rather common (e.g. regarding the vote-tallying by computers in 2003 (BBl 2003 419) or regarding the right to vote of the Swiss living abroad in 2002 (BBl 2002 4636), see Tschannen 2007, 365). An example of a federal investigation into cantonal implementation was the inspection of cantonal civil registries in 2004 by the federal Bureau of Civil Registry Affairs (ibid., 365). Sometimes the federal authorities can just ask for documents (such as, e.g., the report of the cantons on the implementation of the employment law as written in Art. 41 para. 2 ArG, see ibid., 365) and base the decision to initiate an additional compliance control measure thereon. The judicial challenging of implementation measures (Flückiger et al. 2000; Byland et al. 2015) is rather frequent in the sense that individuals, rather than the federal authorities, appeal against a cantonal administrative decision that concern an individual (e.g. a construction permit). Some federal laws foresee a right of federal authorities to lodge complaints, such as the spatial planning law (Art. 34 RPG), the federal law on forests (Art. 46 WaG) or the internal market law (Art. 9 BGBM) (see Kiener 2017). A famous case, in which the Federal Council filed a legal suit against a canton regarding the distribution of competences, was in 1939, when two initiatives in BS collided with federal law (BGE 1D 19_1939).

3.2.2. Delineation and application

Now that the functioning of implementation in Switzerland has been elaborated upon, it is time to turn to the concept of implementation arrangements. In this section, I shall define it and embed it in the existing literature on the concept.

Defining implementation arrangements

The executive and the administrative function denote something similar: "Executing" means to do or perform something planned or refers to making something work. "Administering" implies managing, controlling or giving something (Cambridge University Press 2009). Whereas the executive tends to allude to top-level management, and administration usually refers to the organizations which they direct, the terms have also been used interchangeably to speak of implementation. I understand implementation as the process of carrying out (executing) and interpreting pre-made policy rules, transforming words into practical societal interventions and managing (administering) these actions.

In historic bureaucracy research, implementation "avant la lettre" has always been part of debates on public administration, its efficiency and effectiveness. Naturally, implementation has been analyzed using the yardsticks of the day. Only in 1973, with Pressman and Wildavsky's seminal contribution entitled "Implementation: how great expectations in Washington are dashed in Oakland", a literature carrying the label of implementation studies began to develop. At the time, what was perceived to be missing were theories that would close the gap between governmental intention and the achievement of results (Imperial 2021, 2). After their study, the literature on implementation skyrocketed. This popularity coincided with the time New Public Management (NPM) began to take hold. In fact, it seems likely that the fragmentation of agencies, the focus on performance and competition, and the strong critique against formalism and inflexibility seen in NPM critiques have strongly contributed to igniting the growth of implementation studies.

The first generation of implementation research (see, e.g., Darthick 1972; Van Meter and Van Horn 1975; Bardach 1977) has ex-post been categorized as using a "top-down approach". It concerned itself with the legal provisions and focused on the actions of mandated organizations and mandators. This early literature neglected the institutional context and politics within

administrations. In this approach, implementation problems were seen to be reducible through explicit and detailed preprogramming of procedures. A second generation, later summarized as "bottom-up" implementation studies, started to reverse-engineer (or, in the parlance of the day, "map backwards") outcomes to structures, agencies and policies (Elmore 1980). It saw implementation as a result of constant bargaining among administrative actors, each focused on keeping discretionary power. It included the institutional context and emphasized the importance of street-level bureaucrats (Lipsky 1969, 2010). Administrative politics became central considerations. These second-generation studies were more descriptive and less prescriptive (Imperial 2021). Quite logically after a thesis and an antithesis, there followed a synthesis, labeled as a "third generation" (Goggin 1990), "implementation structure" (Hanf 1982) or "network" approach to implementation (Heclo 1977; Hjern and Porter 1981). The analogy of the synthesis approach used to be a game of chess: Rather than just understand programs, principles (e.g. black figures) or street-level bureaucrats and contextualized agents (e.g. white figures), one needed to learn about the game that combined them, not their individual actions (Imperial 2021, 7). Many modern policy-analyses approaches, especially the ACI and the IAD, but also the ACF, built on this "network" understanding of policy implementation.

In this third-generation network approach, the unit of analysis is the "implementation structure", which refers to organizations that are partially or fully involved in parts of or in several programs standing in sequential, reciprocal or pooled interdependence to each other. This structure then becomes the means of purposive implementation action (ibid.), and sometimes it is even considered a self-standing institution (Peters 2014). The approach emphasizes policy problems, rather than principals, street-level agents or programs. Problems are often too complex and multifaceted for a single organization to solve: Hence, multiple actors across several levels of government and/or across the public-private divide are needed. In these implementation structures, horizontal (private-public) and vertical (levels of government) accountability work side-by-side (Imperial 2021; see also Bressers et al. 1994).

The present study using the ACI fits perfectly to such a "networked" approach to implementation: Actors, their constellations and their modes of interaction provide for the necessary rigor when analyzing an otherwise overburdening complexity of implementation structures. This research project thus subscribes to this structural or "third generation" understanding of im-

plementation. In consequence, the choice of actors to be analyzed is based on their formal as well as their practical role in implementation procedures. In the present study on WE-authorization procedures, the selection was made based on a criterion of documented involvement and complemented by survey respondents (see the discussion on boundary-setting in section 2.4.3.). A further advantage of this approach is that it allows the integration of many involved actors in the selected WE-projects that are not actually public agencies. Many participants in implementation arrangements are (federated) associations, companies or other organizations.

There is a debate in the literature on whether to include the institutional context as part of the concept of implementation arrangement or whether institutions should be understood as external conditions. Sager and Gofen (2022, 348) refer to the implementation arrangement as comprising the institutional setting and the organizational design, i.e., they equate the larger implementation polity with implementation arrangements. Hence, they conflate institutions with organizations and also structure with agency. Such an approach to define implementation arrangements is permissible if there is no difference in the expected explanatory role of structure (institutional context) and agency (actors/organizations). Nevertheless, given the role the debate between structure and agency has had in social science more generally and in the policy-analysis frameworks more specifically (see section 2.4.3.), this is at odds with the ACI. Rather, the present study follows Hanf (1982, 170), who defines the implementation arrangement as follows: It "[...] is the set of relevant actors, through which the relevant interactions may then be studied." In this latter understanding, an implementation arrangement only refers to the agents (organizations), not to the implementation polity (institutions).[82] Such an understanding seems to be more appropriate for the present research undertaking.[83]

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82 Kenneth Hanf has worked with Mayntz and Scharpf; see, e.g., Scharpf et al. 1978; Mayntz 1978, which serves to explain their closeness in conceptualizations.
83 Implementation arrangements are not to be confused with the related concept of "local regulatory arrangements" (Blake et al. 2020; Viallon et al. 2019; Schweizer 2015), as the latter designate a policy solution as a materialized temporary consensus regarding a problem to be solved (Schweizer 2015, 142). An arrangement, in the sense of a local regulatory arrangement, is a web of rules (including or excluding institutions) and informal agreements, not a web of actors as I understand it for the present study.

Placing the project in the literature

To apply the concept of implementation arrangements to the present study, it needs to be embedded in the major debates and requirements surrounding the topic. This implies taking sides on issues that have plagued the concept: To start with, there is the principal-agent problem that has been analyzed throughout the implementation literature. It has led to catchy (but outdated) aphorisms such as principals having the "right to decide" and agents having the "right to act" (Braun 2000b). More commonly known, however, is the notion of "rules-in-form" denoting the principal's power versus "rules-in-use" referring to the agent's interpretation and application of them (Ostrom et al. 1994, 34). In the present study, the principal-agent problem is not given special attention, because the chosen network approach, the multi-level setting and the WE-authorization procedure would make them hard to identify: Federal, cantonal and municipal legislatures are each only partial principals, and the cantonal and municipal institutions could be understood as agents of the federal legislature due to their subordinate dependency. As for the agents, the category cannot be clearly attributed to organizations as well. The cantonal administration is mainly in charge (does this make it a principal for implementation?), but the federal and municipal levels may also decide independently on matters of secondary importance or on details. The roles that actors take in this regard are thus far from clear-cut. More generally, however, I mostly focus on rules-in-use, but the rules-in-form are necessary to understand them. In fact, while neglecting the dynamics in the phase of policy formulation, I present the rules-in-form in section 5.2., but in order to analyze PSE and its determinants, I rely on interpretations and actions taken, hence, on the rules-in-use.

A second important theme in the literature regards the acceptance or refutation of the administration-politics dichotomy, as if there were nothing in between (Svara 2001). The role of politics in administration has indeed been a major topic in administrative research. Whereas top-down literature tends to abide by it, the bottom-up literature clearly refutes it. Especially vocal on the topic is the literature on street-level bureaucracy, claiming that administration is politics and that, fundamentally, street-level bureaucrats formulate important aspects of policy by themselves (see Hupe and Hill 2007). Howlett (2000) argues that there are procedural policy instruments that administrators might themselves decide on. Procedural politics define the procedure and structure the relationship among actors involved in the implementation arrangement.

Beyond "substantive" policy instruments (Vedung 2017a) in the principal's policy arsenal, the definition of procedural instruments might be fully or partially in the hands of administrators.[84]

For the present study, I follow the argument of procedural *and* substantive politics being part of administration, because there has been ample evidence of the importance of politics in Swiss variable implementation, as demonstrated in section 3.2.1. WE-authorization procedures in Switzerland have indeed been very politicized, and this has been especially obvious in recent times (see chapter 1).

The present study also attempts to address several other persistent issues (Hupe 2014) in implementation research: First, surprisingly little systematic, comparative implementation knowledge has been generated (Goggin 1986, 1990; Hupe 2014; Imperial 2021). This is mainly attributed to the strict case-study orientation of the implementation literature that did not provide many portable findings (Imperial 2021, 22). To an extent, this is a problem that is non-treatable given the necessity of including context specificities that reduce portability. Nevertheless, Hupe (2014, 16) recommends the "[...] further development of a comparative perspective, across policy domains and national boundaries for greater knowledge accumulation and synthesis." In the present study, I seek to establish such a comparative perspective. Second, Hupe (ibid., 10f.) warrants a shift in analytical focus towards greater emphasis on lower-level empirical variation in outputs and outcomes, rather than evaluating a centrally pre-formulated goal. Such a requirement of lower-level attention to outputs and outcomes can clearly be fulfilled in this study: Not only does it focus on the lower-level (procedural) characteristics of WE-projects, but the dependent variable of problem-solving effectiveness is partially evaluated by stakeholder organizations themselves. Third, Hupe (ibid., 11f.) maintains that there is dearth in taking the policy-politics nexus more seriously in implementation studies. Again, in this study the inclusion of actor preferences, but also of political contextual collective actors, heeds this call.

Aside from Hupe's (ibid.) calls for literature development, there are further gaps in the literature as discovered by other implementation scholars: Sager

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84 Procedural policy instruments and procedural policy rules, how I use the term in this study, should not be confused: Procedural policy rules refer to the rules on the procedural design of the WE-authorization procedure. However, in the present case, it is clear that the adoption of these rules is at least partially in the hands of administrators.

and Gofen (2022, 349), for example, decry a lack of literature on institutional and organizational aspects of implementation. Applying the ACI on an implementation matter, as this research project does, responds to this call. But also in terms of the research agenda on public management networks, the research project fits very well: O'Toole (2015, 368) states that "we need to know much more about the ways in which networks and networking behavior can shape performance [...]." Using implementation arrangements conceptualized as networks as both independent and dependent variables obeys this demand. Indeed, the project "treats networks seriously" (O'Toole 1997b), as it focuses on ways in which networks impact performance.

3.3.   *Problem-solving effectiveness*

This section is about defining and embedding the third main concept used in this study, next to decentralization (section 3.1.) and implementation arrangements (section 3.2.). It follows the same structure as the two previous conceptualization sections: I start with a section on the state of the matter in Switzerland (section 3.3.1.). Thereafter, the concept is defined and embedded in the literature's debates that surround it (section 3.3.2.).

3.3.1.   Problem-solving effectiveness in Switzerland

Let us accept for the moment that the ultimate end of policy-making is solving problems (Turnbull 2006, 7) and that effectiveness is simply a judgment about the value, merit and worth of the solution (see Scriven 1991, 1). These concepts will be developed in section 3.3.2. What is important for now is that a policy-problem, its solution and its goal(s) are defined and devised somewhere in the policy-making process and that the solution is labeled as effective if the goal has been reached using an optimal instrument and the optimal amount of resources. I shall first start with shedding some light on the specificities of Swiss public problem-solving, and secondly I will conduct an in-depth conceptualization of the term ending in an operationalization of the term for the present study.

The peculiarities of Swiss public policy problem-solving

The Swiss political system shows some unique features that impact the policy-making- and thus the problem-solving process. Because the present study is focused on the implementation phase of the policy-making process — and the specificities of this policy-making phase have been developed in section 3.2.1. — I will only focus on important, Swiss-specific attributes of the process of solving problems that have been shaped by key institutions.

The three institutions of federalism, consociational democracy and direct democracy, known as the "Swiss Specifica" in international comparison, together with the disputed tradition of neutrality in international affairs (Cottier and Liechti 2008; see also Linder and Mueller 2017, 471ff.), have crucially formed problem-solving in Switzerland (Sager et al. 2017a, 21ff.). To parliamentary work, instruments of direct democracy are a threat. The famous "sword of Damocles" (e.g. Vatter 2020, 292) that looms over parliamentarians when adopting a policy has forced parliaments of all levels of government to integrate opinions of those that could trigger a referendum. If a legislative proposal solves the problem, then a "referendum-immune" ("referendumsfest") proposal solves it faster, because it is not popularly challenged. This factually forces parliament to propose policies that are expected to be in line with the citizens' will (Neidhart 1970; see also Papadopoulos 2001; Christmann 2010). Launching a popular initiative may also possibly speed up problem-solving. Direct democracy amounts to another (institutional) veto player that has a clear status-quo bias (Brunetti and Straubhaar 1996; Sager et al. 2017a). Depending on the choice of direct-democratic instrument, direct democracy may have a slow-down and an acceleration effect on the problem-solving process (Vatter 2020, 370f.). More generally, it has served as an instrument of control of citizens over the work of their parliaments and executives (Sager et al. 2017a, 23).

The Swiss consociational democracy (Lehmbruch 1968; Lijphart 1968, 1977) has more recently been said to be "in crisis" (Hermann 2011; Vatter 2020), mainly because the requirement of full-fledged elite cooperation has lost significance in the last 30 years (Vatter 2020, 533; Bochsler and Bousbah 2015). This is not to say that elite cooperation has become unimportant — Klöti et al. (2014, 197) still see it at work speaking of consensus-seeking as an "informal rule" that needs to be obeyed. Yet the principle certainly does not carry the force anymore it had between the 1960's and the 1980's. This, along with increased partisan polarization (Bochsler et al. 2015; Kriesi 2015), affects the dynamics of public problem-solving.

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Regarding federalism, the globalization and Europeanization of Swiss politics has led to a decline of the importance of the cantons for federal-level policy-making (Sager et al. 2017a, 28). The Federal Council, for example, negotiates with the European Union, often without consulting the cantons first (Linder 2010, 87ff.). Cantonal powers to veto federal legislation through the Council of States, the second chamber of the Federal Assembly, are small to inexistent (see Freiburghaus 2023). The conference of cantonal governments, the central organization of executive horizontal federalism, founded in 1993, has provided some counterweight since (Vatter et al. 2020a, 457; see also Arens 2020). Cantonal power has arguably also reduced itself in recent years regarding the institutionalized pre-parliamentary consultation procedure: In comparison to powerful interest organizations (that can easily trigger a popular vote), smaller cantons have had difficulties in making their positions heard (Sager et al. 2017a, 33).[85] In addition, the requirement for cantonal majorities ("Ständemehr") for constitutional changes in addition to the citizen's majority has also contributed to institutionalized inequalities in "voice" (Hirschman 1970). A voter in AI almost carries 40 times the weight in the cantonal vote than a ZH citizen (Sager et al. 2017a, 27f.). The reader should further keep in mind that many other issues, arguably less important than fundamental laws and state organizational principles, are debated on the constitutional level, making the application of this highly unequal rule very frequent. Moreover, current challenges in federalism of smallness and starkly unequal resources as discussed in section 3.2.1. also shape problem-solving in that they add a dimension of inequality to a Swiss person or organization's frequent voice.

The extensive vote casting of Swiss citizens on all important matters has a strong integrative force on policy-making. The "informal rule" of consensus-seeking among political elites (Klöti et al. 2014, 197) reinforces this, as does the pre-parliamentary consensus procedure. Cantonal veto power on the federal level, if it exists at all, would strengthen the need to strive for consensus in a federal policy proposal. The additional cantonal majority to the popular majority when voting on constitutional changes also mandates the disproportionate integration of the popular opinion (not the government's opinion) of small cantons. These factors all lead to an exceptionally strong

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85 Sciarini (2014b) relativizes the strength of the influence of the pre-parliamentary consultation procedure on final policy-consensus. The consultation procedure does not reduce a high level of pre-parliamentary conflict in later parliamentary discussion. Neither does it reduce the probability that a referendum is triggered.

input legitimacy (Sager et al. 2017a). In comparison to output legitimacy, for which there are no instruments of citizen control or participation, except for some law-specific provisions (e.g. in spatial planning), input legitimacy tends to be very strongly emphasized by the Swiss political system of solving public problems.

Does the strong input legitimacy pour into output legitimacy and, thus, into implementation? Clearly, the "basic dictum of acceptance" that characterizes the input-side of Swiss policy-making (ibid., 260) extends its reach into implementation as well: Schenk (2000) argues that the political culture of consensus has essentially contributed to cantons needing to aim at the "social acceptability" ("Sozialverträglichkeit") of an implementation solution. Cantonal authorities are culturally forced to seek solutions that fulfill an "objective assessment of general acceptability" (ibid.). Generally speaking, the strong focus on acceptance or acceptability has the consequence of exceptionally slow policy-making, formulation and implementation alike (Sager et al. 2017a, 40). Its clear advantage is the high legitimacy of a proposed solution in formulation, but also in implementation. An outcome can only be deemed legitimate (and thus effective) if the input and the process were deemed legitimate in the first place. In other words, not only does the strong input legitimacy extend into greater output legitimacy for Switzerland, but the output legitimacy is crucially dependent on, and builds on, input legitimacy.

Evaluation in Switzerland

The peculiarity of a strong input legitimacy has shaped the Swiss policy-cycle and also defined access points for evaluations (Sager et al. 2017b). Giving an overview over the development of studies of effectiveness in Switzerland amounts to presenting the Swiss specificities and history of the use of evaluations. This is what will be done in the subsequent paragraphs.

Widmer sees four phases in the development of evaluations in Switzerland (Widmer 2017): The first pioneering phase of evaluation in Switzerland started in the 1980's (Derlien 2020). Compared to the head start in the United States after the Second World War, Switzerland began to practice evaluations much later. Having had full employment after the Second World War, there was simply no demand for evaluations, as Widmer contends (2017, 55). Moreover, direct democracy and the federalist state organization had also limited the demand for additional feedback to the government in the early days (Bussmann 1995).

In the first Swiss phase, evaluators pursued no exchange across policy fields, and no commercial intent was visible (Widmer 2017, 56). Evaluations simply "popped up" here and there (ibid., 56). As an example, an important implementation evaluation study appeared in 1980, which dealt with the acquisition of land by foreigners in Swiss spatial planning legislation across time (Delley et al. 1980). The second Swiss phase, between 1990–2000, was marked by the beginning institutionalization of evaluation: The EJPD founded a working group on evaluation ("Arbeitsgruppe Gesetzesevaluation" — AGEVAL), and the professional association called the Swiss Evaluation Society (SEVAL) was founded in 1996. It established its sectoral quality standards in 2001 (Widmer 2017, 58). The discipline-founding national research program no. 27 called "Effectiveness of state interventions" was launched in 1990 and completed in 1995 (Bussmann et al. 1997, 331-335). This second phase ended with the new constitution in 1999, in which Art. 170 BV mandated that "federal measures are evaluated with regard to their effectiveness" (Widmer 2017, 58).

In the third phase, from roughly 2000 to 2010, the new constitutional article gave off a strong signal (Horber-Papazian 2015, 319), although its direct influence on the growth of the sector has been debated (Widmer 2017, 59). The constitutional provision was implemented by the Federal Council in 2004, but the article has not yet been universally applied (ibid., 59). Nevertheless, evaluation became an instrument that newly encompassed all legislative activity, whereas before the provision it was a selective instrument of parliamentary control (Bättig and Schwab 2015). In this third phase, private companies gained ground and, together with academia, collected comprehensive experiences in the field (Widmer 2017, 60). Still, the evaluation sector had not yet been highly consolidated in this phase. Many self-employed persons still offered to conduct evaluations without having acquired the professional skills, i.e. those skills that were seen as mandatory by the sector's association (ibid., 60).

In the fourth and currently ongoing phase since 2010, the professionalization of the sector has given way to an "industry" (ibid., 62) that has begun offering standardized evaluation products on small-scope questions (ibid., 61). In international comparison, the Swiss evaluation sector is comparably mature (Jacob et al. 2015). Widmer (2017, 61) laments that presently the connection to critical social sciences has got lost and that evaluation companies have become very risk-averse and non-innovative. Moreover, he states that mandators and mandatees have been captured in a purely "bureaucratic routine", where evaluations have come to resemble "audits" more and more

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due to their focus on compliance. In this ongoing phase he has also noted the involvement of fewer academics (ibid., 62).

Most evaluations in recent year were commissioned to external evaluators, and most mandators are public, with the Federation taking the top rank in terms of number of mandates (Pleger et al. 2017). In terms of reasons why one mandates evaluations, based on the scrutiny of the formulation of legal provisions on evaluation, Wirths et al. (2017, 165) find that by far the greatest motivation for administrations is to be able to steer the direction of services and resources ("Leistungssteuerung"). The importance of public mandates of evaluations is not least due to many constitutional clauses and provisions in laws of the cantons and the Federation. A large part of evaluations is thus not borne out of individual will or topical importance but of legal compliance.[86] In terms of public demand, Balthasar (2007) found that younger policy fields have greater demand for evaluations. Additionally, Widmer and Bewyl (2009) point out that the actor constellation of mandators is key to evaluation demand: Neither a constellation that is too conflictive nor one without conflict lifts demand (ibid.).

In the policy fields with which the present study is concerned (energy, environment and spatial planning), Balthasar and Strotz (2017, 93f.) have found diverging demand: Between 1999 and 2015, the BFE has mandated 92 evaluations. In comparison, the Federal Office for the Environment (BAFU) in the same time span has mandated 62, and the Federal Office of Spatial Development (ARE) (spatial planning) only 24. Over the 28 federal agencies for which data are available, they find a range of 4–169 evaluations, with a mean of 44.7, a median of 20.5 and a standard deviation of 48.2. As the data exclude those agencies that did not evaluate at all, the mean overestimates the real value. What is clearly visible is that the BFE's and BAFU's evaluation activities are above average, whereas the ARE's is below. They find that the BFE has experienced a decline in demand since 2004 and especially since 2010, with the instrument of the evaluation being less important in 2016 than in 2000. The decline is attributed to the non-renewal of the program "Energie 2000". This went hand-in-hand with a remarkable reduction in available fi-

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86 13 cantons have a constitutional clause on evaluation, twelve have such a clause in laws, one canton (NW) does not yet have a single clause (as of 2017, Wirths et al. 2017, 159). On the cantonal level, this amounts to a total of 269 clauses, where the legislation in the large cantons of ZH, BE and GE contain the most (ibid., 157f.). On the federal level, there are 53 clauses inscribed in laws (ibid., 157f.). Wirths et al. (ibid., 172) find that a surprising 86.5% of this total of 322 clauses have already been implemented at the time of their study in 2017.

nancial resources for evaluations in all other energy topics as well (Balthasar and Strotz 2017, 106). Today, the BFE still evaluates what it must to legally comply with the clauses in energy legislation (ibid., 107). As mentioned, the picture is minimal when the federal and cantonal legal clauses that affect the fields of energy and spatial planning are compared to education, the most frequently evaluated policy field of all (Wirths et al. 2017, 163): 15% of evaluation provisions concern education, but only 1.5% affect energy. 2.9% of clauses affect spatial planning, 6.2% the environment.

The present research undertaking presents an evaluation of effectiveness at the nexus of energy, environment and spatial planning that does not represent a standardized, off-the-shelf evaluation product. Rather, it presents a methodologically advanced in-depth assessment of multiple operationalizations of the concept of problem-solving effectiveness. It follows the large majority of studies in that an external object to the author's own institution is evaluated. The study is not commissioned but freely proposed by the author. Although this is for others to determine, care has been taken that this study can be said to fully follow the evaluation standards posited by SEVAL of 2016.

3.3.2.   Delineation and application

After having elaborated on the specificities of Swiss problem-solving and evaluations, in the present section I now finally turn to developing and operationalizing the concept of problem-solving effectiveness. At first glance, the term of problem-solving effectiveness is long and seems overly complicated if it is just to denote "how well" a public-policy problem has been solved. On second thought, however, there is more to it: First, there is the process of solving a problem, or the production of value. Then, as a second step, there is the determination of how well the problem has been solved.

Problem-solving

The attempt to solve political problems may be considered as old as the first enactment and implementation of a rule by someone holding political powers. The process that problem-solving implies — namely the integration of different perceptions on whether something is a problem and how it could potentially be attacked (best) — lie at the very heart of politics. Thus, problem-

solving is regarded as inherent to collective action in any societies past and present. What is comparatively new, in contrast, is the model of policy-making as a *science* of problem-solving that originated in Harold Lasswell's (1951, 1971) concept of the "policy sciences" (Turnbull 2008, 72). Following Turnbull (2006, 2008), Lasswell's work has been responsible for the breakout of the policy sciences from the general political-science approaches at the time. Building on Dewey's (1933) conception of knowledge as problem-solving, Lasswell "made problem-solving the defining characteristic of policy analysis" (Turnbull 2008, 73). By doing so, he founded the novel discipline of policy sciences, which he understood to be an interdisciplinary undertaking that needed to include the perspectives of academics and practitioners alike (2006, 3f.). He argued that, due to the complexity of social problems facing decision-makers, the policy sciences should fundamentally pursue a multi-method inquiry (ibid., 3f.). Overall, Lasswell viewed a scientific "problem orientation" regarding political matters, referring to the novel policy sciences, as conducive to democratic well-being (Turnbull 2008, 75).

After this foundational moment, the history of problem-solving can be told from different angles: Lodge and Wegrich (2014) discuss the history of public problem-solving as being deeply intertwined with the development of capitalism. Another perspective on problem-solving may also be derived from how the issue of problem complexity (Peters 2005, 356ff.) has been dealt with over time. On this matter, the most-often cited caesura is Rittel and Webber's (1973) formulation of "the nature of 'wicked' problems'" (see Peters 2017). Their point of departure was that they discovered that the existing planning literature at the time had only been equipped to analyze "tame" problems. For these tame problems, an "exhaustive formulation can be stated containing all the information the problem-solver needs for understanding and solving the problem — provided he knows his 'art' of course" (Rittel and Webber 1973, 161). For "wicked" problems, however, the solution and the problem are concomitant to each other: Finding the solution is the same thing as finding the problem, or in other words, the problem cannot be defined until a solution has been found. This changed the previously dominating view that objective and neutral "planning" by governments would effectively solve problems (Scharpf 1973; see also Luhmann 1971). Essentially, defining problems and solutions, as Rittel and Webber (1973) found, needs to move to

the realm of politics (Peters 2017).[87] A second milestone was reached with Schön and Rein's (1994) contribution of "frame-reflective policy analysis" (Hisschemöller and Hoppe 1995, 41), which advocated for an investigation into the consequences of non-overlapping perspectives on a problem ("intractable controversies"). This has triggered many scholarly quests on how to structure problems and thereby work on solutions (ibid.). Another milestone was reached in 2005, when Peters (2005) proposed an argument of congruence between the choice of instruments, with which to solve policy problems, and the nature of the underlying problem at hand. This has allowed scholars to investigate congruence and disconnects. Various later problem formulations, such as "super-wicked" (Lazarus 2009; Levin et al. 2012) or, more recently, "turbulent" problems (Ansell et al. 2021), have gained scholarly attention. But it remains to be seen whether they really advance the literature through delivering systematic new insights on solving public problems.

The scientific treatment of public problem-solving and the appropriate incorporation of complexity first require definitional and conceptual groundwork, which shall be focused on in the following: Lasswell (1971, 56) defined a problem as "a perceived discrepancy between goals and an actual or anticipated state of affairs". The reduction or elimination of this discrepancy then denotes the (partial) solving of it, representing an improvement over an antecedent state of affairs. Lasswell's (ibid., 56) wording of "perceived discrepancy" makes it clear that the definition of the problem, of the goal and even of the solving itself are essentially an interpretative effort (Spector and Kitsuse 1977; Rittel and Webber 1973). In other words, for public problem-solving to happen, a political system must first define and frame a problem as such (Peters 2005; Hoornbeek and Peters 2017; Lodge and Wegrich 2014). Moreover, the political system must also regard the problem as "appropriate for pursuit of resolution by government(s)" (Thomann et al. 2019, 40), thus meriting public intervention. In the implementation process of devising possible solutions, an implementation arrangement also has to agree upon one or multiple goals when interpreting the implementation mandate. Solutions are commonly understood as public interventions that would effectively allow the reaching of the goals that the implementation arrangement (or the legislator) has set.

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87 Rittel and Webber's (1973) very influential article has been cited 22'302 times in Google Scholar (as of 20.10.2022). Citing it has become a "fad" (Peters 2017). Its ubiquitous use provides a nice example of "conceptual stretching" (Sartori 1970).

Agreeing upon and delimiting a problem, a solution and a goal essentially happens twice for federal legislation in Switzerland, especially if the traditional, most common path of variable implementation is applied: First it is the Federal Assembly's job to see the need for public action, set it on the agenda and debate about how to define and solve it appropriately. Once a policy has been formulated and adopted, the cantons implementing it begin anew (unless the Federal Assembly has already regulated in detail). Cantonal problem-solvers must also agree on the characteristics of a problem, on a goal and then on an intervention that fits both the legislator's and the cantonal administration's goal. This has to be achieved while aiming not only at effectiveness but also incorporating other rationalities, such as legal compliance, proportionality, economic constraints and political legitimacy (Bogumil 2003).

As mentioned, this study focuses on the implementation stage of policy-making, thereby excluding the stage of policy formulation. In system's terms, the study focuses on throughputs and outputs (Schmidt 2013; Schmidt and Wood 2019), not on the input of formulating a policy. In implementation, based on pre-existing policies, cantonal administrations will attempt to figure out how to design an intervention that best solves the problem for their local context under all given constraints. The modern literature on problem-solving states that designing an intervention represents a problem of congruence between problem characteristics and the goal(s), while incorporating existing constraints (Peters et al. 2018; Peters 2005). This literature has developed a flurry of conditions, criteria and aspects to assess congruence (see, e.g., Thomann et al. 2019; Irepoglu Carreras 2019; Hoornbeek and Peters 2017; Peters 2005; Raab et al. 2013). What this literature also points out is that congruence is likely contested as well, representing an individual or actor-level judgment of appropriateness, merit and worth of an intervention.[88]

So if problem-solving in the throughput-phase of implementation is essentially about coming to terms with a subjective problem, a goal, a constrained

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88 In seeking congruence, implementors may commit two types of errors, leading to policy failure or unintended consequences: First, they might wrongly assume an intervention's behavioral effect on the target group (theoretical error; see Balthasar and Fässler 2017, 295). Second, their hypothesis of effect is correct, but there is no desirable effect nonetheless (implementation error; see ibid., 295). Case studies finding unintended consequences of policy implementation are abundant (see, e.g., Chollete and Harrison 2021; Campbell 1979; Brady et al. 2014; McCullough 2012; Grantham 2001), going back to Merton's (1936) landmark study on unanticipated social consequences of purposive action.

intervention and its perceived congruence, how can positivist researchers analyze it? Here is where the ACI becomes useful: It proposes analytical categories that capture the essential politics of the implementing bureaucracy. Assessing a problem and its solving is equivalent to assessing the generation of value in an implementation arrangement using the familiar analytical categories of actors, their constellations and modes of interaction in an institutional and in a policy context. These analytical categories allow for taking a shortcut (a "heuristic"; see Mayntz and Scharpf 1995, 39), because the ACI approximates the problem and the solution by using actor orientations as well as behavioral and institutional characteristics in a networked situation of implementation. It can also deal with various definitions of goals. Hence, the ACI allows for the analysis of the process of solving public problems and of the "administrative capacity" (Lodge and Wegrich 2014; Thomann et al. 2019; Scharpf 2001b) that the process presupposes.

Effectiveness

Normally, the measurement of whether and how far the discrepancy between a past, the current and the desired state is reduced is called evaluation. Hence, the detection of effectiveness is an undertaking of evaluation. As one could expect, producing information on effectiveness of public interventions has been as old as the attempt to solve public problems themselves: Historically, political strategists, advisors and consultants have created and exploited informational advantages to the betterment of implementation for political rulers for millennia. Although in terms of process and goals they might not have much in common with modern policy evaluation, their function has remained the same. Strategists and advisors provided ideas to improve a state of affairs for rulers without them having to sacrifice power, resources or social standing. Here are a few famous examples: Aristotle was hired by King Philip of Macedon as a tutor to Alexander the Great (Vedung 2017b, 16). The great Roman orator Marcus Tullius Cicero, in "De Officiis" (2009), wrote about the stoic duties, the dos and don'ts of statesmen. His brother, Quintus Tullius Cicero, wrote a famous manifesto on how to win elections called "Commentariolum Petitionis" — the "little handbook on electioneering" (2007). The renowned astronomer Tycho Brahe was summoned to read King Frederick II of Denmark's horoscope to aid and abet the monarch's undertakings (Vedung 2017b, 16). But the most famous political consultants in history, without a doubt, is the Florentine diplomat Niccolò dei Machiavelli, whose treatise

"De Principatibus" (Dei Machiavelli 2014) instructed countless rulers on how to do their job to reap the benefits of power. His dictum that leaders should emulate the fox ("astuzia e accorta prudenza" — shrewdness and cunning prudence) and the lion ("impeto et violenza" — impetuosity and violence) to remain firmly in power continues to reverberate in politics today (Lukes 2001, 562; see also Barlow 1999).

Concerning the modern literature and practice of policy evaluations, authors contend that there have been various turning points. What is undisputed is that the modern evaluation of public programs developed distinctly, yet in a strongly interconnected manner with the literature on implementation and public administration. The writing and commissioning of evaluations in the modern sense started in the United States and in the industrializing economy of the turn of the 19/20th century (Daniels and Wirth 1983). The end of the Second World War is often mentioned as another turning point, where large-scale publicly funded and scientifically driven evaluation programs began to be established (ibid., 36). At that time, policies were often experimentally tried before they were actually implemented (ibid., 37). By the mid-1970's, policy evaluation had reached its integration as an integral component of the policy-cycle (ibid., 39). Each federal program had to be evaluated, and the heyday of implementation research began (ibid., 39), while confidence in the viability of experimental evaluations from after the Second World War had faded (Vedung 2010, 268). Hence, in line with the implementation literature, a bottom-up perspective began to emerge, providing alternative bottom-up methods such as client-oriented or stakeholder evaluations (ibid., 268). Concurrently, at the turn of the 1970's/80's, the zeitgeist pointed towards a neo-liberal turn in evaluations. As Vedung (ibid., 270) notes for this phase, "[w]hat was novel was not that goal achievement, effectiveness, efficiency and productivity became catch phrases but that these objectives were to be achieved by government marketization instead of stakeholder involvement or scientification from the top down." Another turning point by the mid-90's let evaluators shift towards radical empiricism, moving away from expert opinion to systemic data, setting randomized controlled trials as the gold standard (ibid., 273). This time, however, the impetus did not come from defense corporations or "great society programs", as it had in the post-war science-driven wave, but from social medicine and social work, including private actors and academia (ibid., 273). In 2023, it is argued that this is still the predominant mode of evaluation — maybe with an addendum of the growing importance of "high speed" and a digital rationality when conducting an evaluation project.

Concretely, any scientific treatment of effectiveness must first grapple with different understandings of effectiveness that vary widely across the literature (Turrini et al. 2010). How much, if any, value is actually generated in implementation arrangements represents an actor's judgment of effectiveness. There are those that understand effectiveness as a network's capacity to innovate and bring about change (O'Toole 1997a; Goes and Park 1997). Others regard the survival of an organizational network as an effectiveness criterion (Agranoff 2003; Weiner and Alexander 1998). Still others advocate for the use of ratings of (ex-post) satisfaction of stakeholders (Klijn and Koppenjan 2000, 149) and/or recommend the application of a "win-win criterion" of Pareto-optimality (Klijn and Koppenjan 2016). Aside from differences in meaning, effectiveness can also be studied at different levels of the network. Researchers studying street-level bureaucrats and their service provisions have tended to view client-level service quality as the core indicator of effectiveness (Provan and Milward 1995; Conrad et al. 2003; Jennings and Ewalt 1998). A broader perspective is taken by others that evaluate a network's effectiveness based on whether it serves the community it is integrated in (O'Toole and Meier 2004; Provan and Milward 2001).

Scholars have further debated to which extent the context must be included in network effectiveness evaluations. One line of effectiveness research explicitly focuses on the context and the mechanisms, relating them to the outcomes (CMO-model, Pawson and Tilley 1997). In contrast, in recent years, multi-criteria assessments of effectiveness have massively gained prominence in the scientific literature (Vanegas-Cantarero et al. 2022, 3), but the context has got lost or out of sight. Instead of multiple criteria for a single policy, another possibility of acknowledging implementation complexity has also been to evaluate effects of multiple policies at once by using a single criterion (Knill et al. 2024).

Because "assessment criteria are an element of value, not of fact" (Simon 1976), effectiveness can be literally anything: The literature's common denominator has historically meant nothing more than "[...] how well the organization is meeting the needs or satisfying the criteria of the evaluator" (Yuchtman and Seashore 1967, 34). Nevertheless, there are some points of reference for common understanding: For example, a prominent branch of the literature views an intervention as effective if it has attained a pre-set goal, is optimally deployed in terms of resources and constraints, and has legitimacy (Bazzoli et al. 2003; Weiss et al. 2002). Within this branch of the literature, following Knoepfel et al. (2015, 284ff.) one can differentiate between studies that relate goals to the problem ("pertinence"), to the in-

tervention ("effectivity") or to the outcomes ("efficacy"). Studies on these three evaluation objects come in either causal or non-causal flavors, and they employ either qualitative or quantitative methods.

This study's understanding of problem-solving effectiveness

This study has selected a goal-oriented understanding of effectiveness of the sort that uses aspects of the two relations of effectivity and efficacy between evaluation object and the goals. In addition, it is context-sensitive: The study relates the intervention (concrete authorization procedure of each WE-project) and the outcomes to goals in a given institutional and policy-setting. The pertinence of the problem is not investigated, but the relation between goal and problem has been described in the introduction to demonstrate the topic's social and scientific relevance. The approach is associational, not causal, because the empirical strategy does not allow a causal identification *stricto sensu* (see 2.4.1.). In consequence, the study understands effectiveness as measuring the change in discrepancy of value, merit and worth associated with a public intervention between a pre-intervention situation, a post-intervention situation and the imagined reference situation, in which the goals are completely fulfilled. In other words, I measure the distance between a value (on the goal-dimension) attributed to the pre-intervention problem situation, the post-intervention situation and the goal, and then I compare these discrepancies. As mentioned previously, the difficulty in measuring stems from the fact that all three evaluation objects (before, after, goal) are elements of actor-level judgments of value.

But how can effectiveness measures be generalized under such conditions? If the goals and problem perception are completely dissimilar in an implementation arrangement, as they tend to be in WE-project authorization procedures in Switzerland, then measuring the discrepancy in value before and after a public intervention with respect to a goal is meaningless because stakeholder organizations would not agree on either problem, intervention or goal. Hence there is not a unique dimension that could be traced from the problem to the intervention all the way to the goal. There are two possibilities to address this problem.

The first possibility is to resort to actor-level data: If every stakeholder can define its own problem, intervention and goal understandings, then actor-level data can simply be aggregated. This approach follows the understanding of effectiveness as the "strategic constituencies model" (Sharma and Singh 2019;

Henri 2004; Zammuto 1984; Connolly et al. 1980) and has been prominently applied in the network effectiveness literature, because it incorporates the complexities of coordination and the perspectives of multiple network participants into the measurement of effectiveness.[89] Such an operationalization may also be said to follow the "relativist" approach (Zammuto 1984, 607), which argues that there is no primacy of judgments of certain organizations or stakeholder-groups over others: Each stakeholder's evaluative judgments gets the weight of the inverted number of participating organizations in the network (see Connolly et al. 1980). Concretely, each stakeholder assesses its own pre- and post-intervention value distance from her own goal and reports this. These individual value differences on the problem-to-goal dimension associated with an intervention can then be aggregated. For the case of Swiss renewable-electricity projects, there is evidence that stakeholder goals differ strongly (Díaz et al. 2017). Nevertheless, some intersubjective unit comparability is still necessary. For example, reported amounts of value must still refer to the same or very similar subject, and respondents must maintain a similar perception of value, merit or worth, otherwise the ratings cannot be aggregated.

The second possibility is not to resort to disaggregated actor-level data but to accept diverging definitions of problems, goals and interventions between stakeholders and make a choice as an evaluator instead. It is important that this choice is explicit, so readers are not left trying to infer the goals of the researcher that inevitably and normatively guide the present study (see sections 2.4.1. and 3.1.2.).

From these two generalization approaches, there are three measures of effectiveness that are derived for use in the present study: The first measure follows the actor-level disaggregation logic discussed above. It collects perceived generated value for individual actors via the use of a survey. This measure is labeled as "stakeholder efficacy ratings". It relates perceived outcomes to a perceived goal. For this measure, the Network Characteristics Survey asked all representatives of participant organizations in implementation arrangements to assess the authorization procedure for the project(s) in which they were involved on the following evaluative attributes: Fairness (Scharpf 1997; Moore 1995; Zammuto 1984; Berardo 2013; Lubell 2003, 53), transparency (as a condition for trust: Paunov et al. 2019, 349; Velotti et al. 2012; Piotrowski and Van Ryzin 2007, and by its own right: Turrini et al. 2010;

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89 Alternatively, the model is also labeled "strategic model" or "ecological model", a.m.o.

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Schmidt and Wood 2019; de Fine Licht 2011), competence (managerial capacities; Head 2008; Agranoff 2006; Goldsmith and Eggers 2004; Rethemeyer and Hatmaker 2007; Bardach 1998) and perceived efficiency (see efficiency measurement) were measured on a three-point scale of agreement. A further question asked about the stakeholder's general satisfaction with the authorization procedure of the WE-project in which she was involved and on a five-point scale of satisfaction (Sørensen and Torfing 2009; Provan and Milward 2001; Klijn and Koppenjan 2000; Freeman 1984).[90] Responses that were actor-, project- and dimension-specific were then aggregated.

The other two effectiveness measures follow the "evaluator's decision" logic: The first of them, efficiency, is captured counting the number of months from the permit to set up a met mast to the entry into legal force of the construction permit or until the cut-off date of 31.12.2021. Like the stakeholder efficacy ratings, it is also a measure of efficacy, relating outcomes to a goal. The second "evaluator's decision" problem-solving effectiveness measure is the modeling of cantonal and municipal probabilities of being hosts to a WE-project. This approximates the effectivity-understanding of effectiveness, as it compares cantons and municipalities that have not undergone authorization procedures with cantons and municipalities that have. This resembles — as closely as possible with observational data — the relation of an intervention to a goal. Efficiency and hosting probabilities represent two evaluator-chosen criteria that follow two separate but broadly accepted societal goals, as will be argued now.

The efficiency criterion has been chosen because developers view the inefficiency of authorization to be the highest obstacle on the way to enlarging the production of renewable electricity from wind in Switzerland (Stadelmann-Steffen et al. 2018, 131). For developers, duration is a proxy measure of cost, because the longer a procedure takes, the more additional planning documents, assessments, notices of conformity, etc. need to be submitted. Some permits, such as the aerial obstacle permit, expire after a certain amount of time and then must be re-issued and thus re-applied for. There has been anecdotal evidence of increasing rule density on the federal
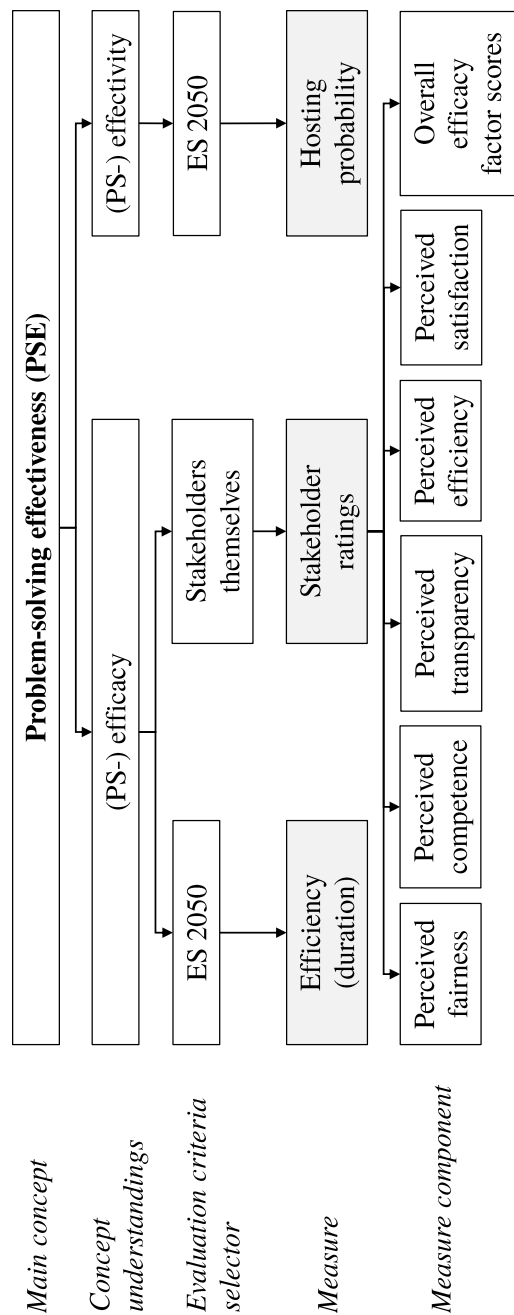
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90 Scholars would naturally ask, for example, why accountability (e.g. Bryson et al. 2006), reciprocity (e.g. Alexiou and Wiggins 2019), management/leadership effects (McGuire and Silvia 2009; McGuire and Agranoff 2011; McGuire 2002) or many other factors are not measured. The response to this critique of selectivity would be that many of the other effectiveness-furthering factors are captured and controlled for with the modeling of the implementation arrangements as independent variables, instead of conflating them with the understanding of effectiveness.

and cantonal level, which has required developers to document their project more extensively with the passing of time of the authorization procedure (interviews 15 and 20). But duration is not only a proxy of cost for developers: Rationally speaking, (fundamental) opponents have an economic interest in finding substantive grounds for opposition early in the project, because the more instances and judicial cascades they must go through, the higher the cost of involvement to them. Furthermore, efficiency in construction permit production is also a public authority concern, as the duration of public assessments, guidance and support of the other stakeholders involved is also a strain on internal resources. This is especially the case for municipal executives that often deal with WE-projects over multiple legislatures, but also for cantonal planners that coordinate the diverse land-use interests when establishing the cantonal structure plan (CSP). Efficiency is thus a goal in and by itself in the authorization procedure, and evaluating it is in the (rational and economic) interest of all categories of stakeholders. The heated public debate on WE-projects in Switzerland reflects this, as do efforts to accelerate the procedure, such as the commissioned report by Guy-Ecabert and Meyer (2016) or recent efforts to accelerate it by proposing changes in federal laws (Aemisegger and Marti 2021).

The modeling of cantonal or municipal hosting probabilities is selected as a measure of progress towards fulfilling the goals of the Energy Strategy 2050. Modeling a higher or lower probability to host a WE-project represents an investigation into institutional and policy-factors that make the realization of Energy Strategy 2050-goals more or less likely. Although this goal is chosen, it is not the researcher's personal norms that have led to the adoption of this criterion. Rather, Swiss citizens accepted the Energy Strategy 2050 (ES 2050) in May 2017 with 58.2% yes-votes (BBl 2017 4865). The WE-goal of the ES 2050 pertains to building wind power facilities as to enable a production of electricity from wind of 4.3 TWh in 2050 (Prognos et al. 2011b). Compared to the production of 146 GWh in 2021 (BFE 2022c), this amounts to a needed factor of growth of 29.5. Hence, it is argued that the analysis of institutional, policy- and behavioral preconditions that would allow for the growth of production is of public interest and merits in-depth examination. In short, the choice of such a goal is strongly legitimized by the democratic vote in 2017.

However, there needs to be a clarification regarding the understanding of the outcome in the stages of the input-throughput-output system (see Schmidt 2013), which serves as the basis of many standardized evaluations: All three measures, the stakeholder efficacy ratings, efficiency, and cantonal or mu-

Figure 3.3: The concept-operationalization tree of problem-solving effectiveness as used in this study.

Main concept

Concept understandings

Evaluation criteria selector

Measure

Measure component

Problem-solving effectiveness (PSE)

(PS-) effectivity

ES 2050

Hosting probability

Overall efficacy factor scores

(PS-) efficacy

ES 2050

Stakeholders themselves

Efficiency (duration)

Stakeholder ratings

Perceived fairness

Perceived competence

Perceived transparency

Perceived efficiency

Perceived satisfaction

Notes: The boxes shaded in gray mark the most used labels in the subsequent treatment of the concept.

nicipal hosting probability, refer to a value judgment on the throughput, rarely on the output. The throughput is the process of implementation that the WE-authorization procedure represents, the output would refer to the construction permit. This is because most WE-projects in the population have not received the construction permit (or denial decree), which means that assessment of generated value cannot be made on the output in most cases. Instead, the three measures chose attributes of the authorization procedure, meaning attributes of the throughput, as their evaluation object. In this study this leads to the unconventional view that outcomes are based mostly on throughputs, and they are only based on outputs if a WE-project has received its final authorization or refusal. But this is not problematic, because project-advancement will always be controlled for when it matters.[91]

Figure 3.3 summarizes the preceding discussion that developed the operationalization of PSE. The function of the three selected measures is to summarize the two prongs of "problem-solving" and "effectiveness". These measures of PSE should also make it clear why it makes sense to use the adjective of "problem-solving" to describe the type of effectiveness that is under scrutiny in this study. PSE is an effectiveness judgment mostly on the throughputs of implementation process, where involved organizations attempt to solve the problem of authorization procedures. Put together, problem-solving effectiveness measures the ES 2050-given or stakeholders' views on generated value, merit and worth in the implementation process, empirically in the authorization procedure or, in systems language, in the throughput.

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91 For efficiency and stakeholder-ratings, the outcome is the throughput in most cases. The cross-cantonal and cross-municipal modeling of hosting probabilities does not differentiate between those hosts that have operational projects and those that stand at the very beginning of the procedure. For hosting probabilities, the evaluation object is the judgment on whether a government finds itself in a process of hosting or not. This is a valuation of an implementation throughput. These models are based on statistically comparing "post-intervention" (hosts) and "pre-intervention" (non-host) situations.

Chapter 4: Effects in an intermediary variable design

The analytical model of this study (see section 2.4.4.) proposes an intermediary variable design with three links. The first aims at detecting effects of decentralization on implementation arrangements. The second seeks to discover effects of implementation arrangements on PSE. The overarching third link directly investigates effects of decentralization and of political parties on PSE. After having presented all necessary concepts in the previous chapter, this chapter now proceeds with theorizing the three links individually, starting with the first.

4.1.   Link 1: Decentralization effects on implementation arrangements

What are possible effects of decentralization on the ACI's measures of implementation arrangements?[92] In previous studies on decentralization effects on public policy-making, scholars have found the territorial distribution of power to matter in various regards (Braun 2000a). Most frequently debated are the following effects, which shall now be discussed in detail: proliferation of additional constraints, the number of access points, and decision-rule and conflict-specific effects due to decentralization.

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92 The effects will be discussed without debating the allocation of an effect to each of the ACI's analytical category, for reasons of simplicity. Therefore, I shall do so briefly in summary: Four of the seven detected effects refer to actor constellation aspects of implementation arrangements, the three remaining are aspects of the mode of interaction. Regarding effects of the remaining analytical category of the actors, these are measured as whether organizations take part, and whether they have veto powers. Regarding the ACI's analytical category of actor orientations on the problem itself, it is argued here that these are unlikely to be confounders of decentralization-PSE relations. This is because it can be reasonably assumed that policy-problem implementation actor orientations do not differ systematically across more or less decentralized settings.

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More overarching constraints in decentralized settings

The most prominent argument in the literature is that federally organized countries, as opposed to more unitary countries, present a greater number of "overarching constraints" for policy-making (Braun et al. 2002; Wälti and Bullinger 2000). How much of these constraints are added due to decentralization, which can also be substantially present in unitary (meaning non-federal) countries (Blume and Voigt 2011), however, represents an empirical question.

There are three possibilities to observe decentralization-induced policy-making constraints empirically: First, a constraint may denote the extent of institutional and organizational fragmentation in the policy-making process. As decentralization means the attribution of greater self-rule powers to lower-level governments than are attributed in more centralized settings, one could argue that decentralized countries need to have a higher number of participants involved in policy-making than unitary countries, because there is a lower level of government, and this lower level likely has greater competences, which require the participation of specialized organizations in addition to a lower level of government. For decentralization, there is substantial yet not overwhelming evidence that it contributes to the proliferation of government units (Grossman and Lewis 2014).

Second, an implementation constraint could also be given by the fact that in decentralized settings a local actor is a more powerful veto player in comparison to a less powerful center. There may be more veto players in more decentralized settings, because greater decentralization means greater authority of the decentralized units. There is likely to be a threshold of the stock of powers, the crossing of which lets actors become general-purpose veto players. For the implementation arrangement, a more powerful decentralized unit may make a difference for implementation arrangements (see Daehler 2014; Bednar 2008; Vatter 2006). The institutional veto-player hypothesis (Tsebelis 2002; see also Benz and Sonnicksen 2017) argues that more veto players not only increase transaction costs but also conflictuality and thereby impact policy-making. More powerful decentralized units will thus likely impact the dynamics of value creation in implementation arrangements.

Third, having more veto players in a decentralized setting could also mean that participants must resort to a different style of decision-making. Veto players are expected to resort to negotiation much more frequently or intensely in order to solve problems than if the implementation arrangement contains more players that cannot threaten the adoption of a decision (Scharpf 1976, 1988, 1996). This is also because in more decentralized settings there are

very likely to be fewer options of hierarchical direction. This argument is in strong connection with an assumption of a higher number of involved actors in implementation arrangement due to greater decentralization: With more involved implementation actors, the opportunities for negotiations increase. But this does not necessarily entail an increase in negotiation; the amount of negotiation can also remain the same. Additionally, if the fragmentation of implementation arrangement increases, it may become less likely that a single actor can impose her wishes on others, thus requiring greater negotiation. However, if a very powerful actor joins the arrangement, then it might even lead to a reduction in the use of negotiation as this powerful actor will likely try to decide unilaterally. With an increase in implementation arrangement size, the use of negotiation can thus go in both directions. But this is not the case if one considers the argument of an increase of veto players due to decentralization. Because all other actors must get them to agree, the increase of negotiation is a necessity (in situations with the same intensity of conflict).

Moreover, independently of the number of actors and veto players, an implementation arrangement in more decentralized settings is likely to host more negotiations because of the "shadow of the future" (Scharpf 1997). Because neither unilateral action nor the imposition of hierarchy is possible in a fragmented power setting, negotiation becomes the rational choice of self-interested actors — otherwise the loss of benefits in future cooperation with the same partners in other policy fields looms large. And, as it is argued, in more decentralized systems implementation actors are more frequently and strongly dependent on future cooperation.

For the case of Switzerland, effects of decentralization on unit and veto player proliferation are theorized as follows: As shown in the section on implementation in Switzerland (3.2.1.), the hallmark of administrative federations is that the various levels' administrations in decentralized political systems hold implementation decision power in a more fragmented way within policy fields than in centralized countries, where there is no fragmentation, or in decentralized divided federations, where the separation of administrative powers is more likely to be along the boundaries of policy fields. Departing from the normal case of variable implementation, federal policy will be interpreted very differently across cantons, which decide whether and to which extent they will design a program. Implementation will depend on cantonal resources, political will and federal consensus, which has elaborated the policy in the first place (see section 3.2.1.). In more decentralized settings with a stronger municipality, it is more likely that the canton cannot design

an implementation process by itself and will have to attribute more tasks to the municipality than if the setting were centralized and the canton had no relevant other co-deciders.

The canton has three options when a novel federal policy (of the type of variable implementation) must be implemented: It can decide to implement it alone, it can outsource implementation to private actors, or it can designate the lion's share of implementation to the municipality or region. In more decentralized settings with stronger municipalities it is more likely that the canton must share competences than in a centralized setting. Implementation is thus likely to follow the general pre-existing pattern of (de)centralization. But whether the canton (and municipality or region) decide to bestow competences upon a third (private) party is likely a matter of the distribution of preferences of the deciding actor constellations. But it seems reasonable to assume that, if the canton can decide alone, outsourcing to private mandatees is less constrained, because fewer actors need to agree.[93] Put inversely, in this argument greater decentralization is more likely to lead to lower implementation arrangement fragmentation beyond the general-purpose public implementation actors, because outsourcing is more constrained due to the municipalities having a say.

A municipality likely has two options: It can advocate for the execution of tasks in-house or decide on outsourcing. More powerful municipalities, in more decentralized cantons, might have more resources to execute their tasks by in-house personnel, which is not likely to lead to a change in arrangement fragmentation compared to an arrangement of reference that contains only general-purpose actors. However, having more resources at their disposition, these municipalities might also have a greater preference to externalize the execution of these tasks, which would contribute to an enlargement of the implementation arrangement with private actors.

Empirically, fragmentation is only likely to be detected if the difference in decentralization between units to be compared is one of class (centralized vs. decentralized) rather than degree (more vs. less decentralized). In Switzerland, general purpose municipalities exist in all cantons; thus, a certain degree of institutional decentralization is to be found in all cantons. In fact, examining the LAI (Ladner et al. 2015) between the Swiss cantons shows a small variance compared to the situation when Switzerland is compared with other countries. Hence, for Switzerland there must be an argument that is built

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93 This assumes that preferences of the canton are less diverging than the preferences of the canton and municipality/region combined, which is probable but not certain.

on degrees of decentralization rather than class. The question is whether greater power is associated with greater or smaller outsourcing of general implementation tasks to additional actors. This is a question of how actors use their greater powers. In consequence, greater decentralization can lead to higher or non-changing organizational fragmentation and thus to a larger or same-size implementation arrangement.[94] In consequence, in addition to a null-effect, an enlargement of an implementation arrangement due to greater decentralization is possible.

The theorizing is simpler when it comes to the number of veto players in more decentralized Swiss cantons. In more decentralized settings, it is likely that local actors, such as municipalities or regions, pass the threshold of powers needed to act as a veto player. This means that it is more likely that there are more veto players involved in decision-making in more decentralized settings. How does this affect implementation arrangements? If novel implementation tasks must be distributed, it seems likely that a municipality, which has more powers already, will succeed in capturing implementation tasks proportionately to the strength of its existing powers. A relatively weaker canton might have to proportionally offload tasks to a more powerful municipality or region. Consequentially, it seems reasonable to expect a strengthening and proliferation of veto players in implementation arrangements due to greater decentralization.

Regarding the stronger reliance of negotiations, it was argued above that effects depend on the number of organizations involved, the number of veto players and the importance of the "shadow of the future" (Scharpf 1997). For Switzerland, following the theoretic discussion, the effect of the number of organizations on the reliance of negotiations cannot be said to have a direction. For the number of veto players, a stronger reliance on negotiations is expected, as the theory would. Regarding the "shadow of the future" (ibid.), Switzerland is a case in point as it shows strongly institutionalized cooperation (Braun 2008) and Swiss organizations and people are known to highly value reciprocity (Freitag and Manatschal 2014). This is also due to the institutional constraint of consociationalism that forces an implementation agency to negotiate. Very recently, Montfort et al. (2023) have demonstrated this interdependence under institutional constraints for Swiss water governance (see also Bolognesi and Nahrath's (2020) "institutional complexity trap").

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94 The arrangement of reference contains only general-purpose actors.

The loss in reputation of an actor if she does not cooperate or collaborate will make it in the agency's rational self-interest to do so.[95]

More opportunities for influence-seeking in decentralized settings

Another frequently debated argument about decentralization effects on policy-making is the presumably higher number of access points for organized interests. Having multiple actors involved in policy-making presents an opportunity structure for organized interests for "venue-shopping" (Jänicke 2017; Princen and Kerremans 2008; Pralle 2003; Braun 2000a; Baumgartner and Jones 1993) and "level-shifting" (Pierson 1995), if not for "state capture" (Fazekas and Tóth 2016; Mueller et al. 2017). Organized interests can address multiple actors with the same problem at once and thereby increase their impact, pit agencies or levels of government against each other or use a second contact for access if a first one declines. The theory thus predicts more "windows of opportunity" present in a more decentralized setting. Greater fragmentation of actors will thus provide more opportunities for organized interests to be heard (Vatter 2005). But like the reliance on negotiations discussed above, it can also be said to depend on the number of organizations and veto players that make up the implementation arrangement. These access points are defined by policy rules and are very likely specific to policy fields. They can therefore be consequences of decentralization, if decentralization shapes the policy that defines them. Inasmuch as decentralization leads to a greater number of veto players, these veto players are likely to allocate a greater number of access points to themselves via legislation. A greater number of actors is likely to push for more access points as well.

Unfortunately, whether Swiss WE-implementation arrangements in more decentralized settings provide a greater number of access points for organized interests than such arrangements in more centralized settings is a difficult question. Even if it were the case, whether this is due to decentralization or to each canton's differing policy-field-specific rules is difficultly discernible. Regarding decentralization, access points in a policy are more likely to be attributed to already existing veto players than to new ones. Given that a decentralized setting is more likely to produce a greater number of veto

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95 As the strength of the consociationalism effect must be held constant across cantons for analytical reasons, a differing effect on the use of negotiations based on actor constellations is thus understood to stem from decentralization.

players, this means that it is more likely that arrangements in more decentralized settings provide more access points. Yet policy may also attribute an access point to an implementation participant that has not been a veto player previously but has now become one due to hosting an access point.

The WE-authorization procedure has been legally defined in detail by federal, cantonal, (regional) and municipal legal provisions (see section 5.2.). WE-projects differ strongly with regard to participation and opportunities to file complaints. But it cannot be stated to what extent this high density of policy rules has been shaped by decentralization's impacts on policymakers or by completely other considerations. For organized interests, the high procedural rule density means that there is not much to gain for organized interests in using them, as the discretion of bureaucratic actors is expected to be low. This would also mean that, even if one could venue-shop, there would not be much to gain. A decentralization-due increase of the number of veto players in implementation could shape policy in the sense that legislators will tend to provide access points to powerful implementation actors; however, given the limited bureaucratic discretion, demand for organizational influence will likely be limited. For a greater number of actors due to decentralization, the effect through policy is expected to be similar in that it could provide a greater number of access points, but these non-veto power actors will have less power in decision-making in the first place, making an impact of venue-shopping less likely.

By level of conflict and decision rule

Conflict may stem from the institutional context, from the pre-existing conflict level of the policy context and from the policy type. I shall first turn to the institutional argument: In decentralized settings, a higher degree of conflict in implementation arrangements than in centralized settings is expected, because local governments in decentralized settings have some autonomy and powers to gain or lose vis-à-vis the center. This continuous "turf war" likely adds conflict. It is assumed that more powerful local actors also tolerate higher degrees of conflict, due to the local actor being able to attach greater consequences to others in case of non-respect of their local power. Conflict can also stem from the policy context. To some extent, the policy context is subject to the same dynamics of conflict that also shape the policy type under consideration. The more policy-context conflicts are integrated into a (type

of) policy, the more the policy context can be neglected as a self-standing source of conflict.

Indeed, the level of conflict due to decentralization in implementation arrangements differs by the type of policy (Braun 2000a). Following Lowi's (1972) seminal distinction of redistributive, distributive and regulatory policies, Braun (2000a, 11ff.) states that the higher number of veto players in decentralized states may lead to particular problems with redistributive policies, because they are zero-sum by definition. Scharpf (1976) has shown that federal states have avoided dealing with such unsolvable questions under rules of unanimity or joint decision-making (see Braun 2000a, 13). More veto players are also likely to have troubles to implement distributive policies, but not as intense ones, as a policy's gains can be distributed Pareto-optimally, with no-one being worse off than before (ibid., 13). In such policies, the implementation game will be about who can benefit the most. Again assuming a higher number of veto players in implementation arrangements in more decentralized settings, this will favor the gains of veto players as opposed to those with no veto power. For regulatory policies that deal with force and persuasion for indivisible goods, there are no prominent distributional aspects, and these problems are likely solvable more easily, even in the presence of more veto players.

Additionally, the decision rule also stands in close association with the number of veto players: Under conditions of unanimity, if every actor is a veto player, an implementation solution will forcibly represent the lowest common denominator of veto players (Scharpf 1997). In such a setting a solution to a high-conflict issue will be unlikely to be found; thus, an implementation deficit will result. The requirement of unanimity is likely to be not as limiting if there are fewer involved players as a result of a more centralized setting.[96] This means that, as far as decision-making requires a greater degree of agreement, it will be particularly difficult to solve an implementation problem, let alone a highly conflictual one. In more decentralized settings that are assumed to cause a greater number of veto players, a greater degree of agreement is required, making the resolution of conflicts more difficult (ibid.).[97] It is also possible that implementation arrangements in more decentralized settings find it more difficult to resolve conflict than

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96 This argument can only be maintained if the smaller group of implementation actors, which are all veto powers because of unanimity, also holds smaller orientation (preference) divergences, which is likely, yet need not be the case.

97 Again, this is only valid if the greater number of veto players in more decentralized settings cover a wider space of preferences.

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arrangements in more centralized settings, even for the same level of conflict and the same number of veto players: Decentralized systems might tend to decide "more inclusively" without a decision rule formally requiring greater unanimity. This might be due to actors keeping in mind the value of future cooperation.

In Swiss WE-implementation arrangements, the level of conflict is expected to be high. Although it is a regulative policy that only has few distributive aspects, other than the repercussions of where to put the energy infrastructure, it has been highly politicized. It is the function of the spatial-planning policy context to deal with conflicts of this sort. Because municipalities retain more power in a more decentralized setting vis-à-vis their cantons, institutional conflict is assumed higher in more decentralized cantons. Under such conditions of conflict, an implementation arrangement with many veto players due to a more decentralized setting will have greater difficulties in finding an implementation solution that goes beyond the minimal common denominator. It might take the arrangement longer, or it might not be able to find a solution. The difficulty is reinforced because the mutual dependency of implementation actors is large: The Federation, cantons and municipalities deal with each other on multiple policies in almost all policy fields, but also many times on the same policy. Therefore, it is in the implementation actor's clear self-interest to come to a cooperative solution. More veto players and/or a "more inclusive" decision tradition of non-veto players will thus likely lead to greater difficulties of implementation arrangements in more decentralized settings to find an implementation solution to solve a problem.

4.2. Link 2: Implementation arrangement effects on problem-solving effectiveness

The literature on organizational network effectiveness has identified many factors that affect PSE. Implementation arrangements in this research project are understood as organizational networks (see section 3.2.2.).[98] The level of

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[98] Implementation arrangements are special compared to fully private organizational networks in the sense that possible actions of public actors are densely regulated, much denser than for private actors, whose scope of autonomous actions can be said to be larger. That is, unless a private actor must follow a public procedure, which, in the present case, is true for developers of WE-projects, but less valid for other non-public implementation actors. However, the relatively high density of legal rules

conflict in implementation arrangements, transaction costs in the problem-solving process, the balance of power between implementing actors, the extensiveness of coordinative embedment (so-called negative and positive coordination), value production restrictions due to the decision-rule, and the legitimacy of the problem and the process of solving it — all this will be discussed in what follows.[99]

Conflict

The literature maintains that a lower level of conflict among corporative actors positively influences organizational performance (Fischer 2015a; Robins et al. 2011; Bressers and O'Toole 1998; Head 2008; Provan and Kenis 2008; Bryson et al. 2006; Huxham and Vangen 2005; Halliday 2004). A higher level of conflict impacts an implementation arrangement's problem-solving effectiveness due to various possible reasons: There is the argument of transaction costs that increase when actors cannot agree. Higher conflict might also mean that the process of elaborating a solution takes much longer and reduces the gains due to "hardened" positions of self-interest. Conflict might also be associated with fewer negotiations. High conflict may also reduce the legitimacy of a process, of its throughput and its outcome.

As already mentioned, conflict in Swiss WE-authorization procedures in the implementation arrangement is considered to be high. It is assumed that especially opponent NGOs lead to much conflict and much pressure to justify decisions that public actors or developers take. Hence, for Switzerland one may expect the intensity of conflict to impact problem-solving effectiveness negatively due to the above-mentioned reasons of heightened transaction costs, lower reliance on negotiations and reduced legitimacy.

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is not an issue to apply knowledge from network effectiveness theories to implementation arrangements, as the literature has scrutinized organizational networks in many different forms and settings. The literature also includes studies on effectiveness of public-private partnerships (Börzel and Risse 2007; Hodge and Greve 2007), which fit the present application especially well.

99 Three of these six aspects are categorized as aspects of actor constellation in implementation arrangements, the other three are classified as part of modes of interaction. Actor orientations, although highly relevant, are omitted for simplicity and clarity of argument. The ACI's analytical category of actors, as in link 1, is present in that their number and veto power fundamentally affect the dynamics of implementation arrangements.

Transaction costs

The argument of transaction cost effects on problem-solving effectiveness has also been debated prominently (Scharpf 1997, 1993; Williamson 1999, 1985). They may be said to stand in close association with the level of conflict, but they may also exist independently in the form of "coordination costs" (see, e.g., Douma and Schreuder 2013). On one hand, a very intense coordination effort requires high actor commitment and therefore high amounts of internal resources. An overly high intensity is inefficient and may trigger group processes that lead to bad decision-making (e.g. Janis 1972). On the other hand, some transaction costs are needed to be able to coordinate an issue in the first place. This suggests that transaction costs are subject to an "inverted-u" relation with PSE (e.g. Uzzi 1996). Technically, however, the benefits of low transaction costs are not due to the costs of transactions (they are costs after all) but because coordination delivers value that could not be produced by actors acting alone. Indeed, the transaction costs will detract from the value produced through coordination the more transaction costs increase. But the benefits from collaboration will only be larger than the costs if the local or global maximum of the collaboration intensity effect on problem-solving effectiveness has been reached. If the costs get larger than the benefits, the overall effect will become negative. In general, there has been no predictive force of the argument of transaction costs. Rather, in the network effectiveness literature, transaction costs tend to be used as an ex-post justification for performance.

In the present research project, transaction costs are assumed high due to the very long duration of the WE-authorization procedure (see section 5.3.). The presumed ineffectiveness of the procedure, as lamented especially by developers and public authorities, but also by opponents, due to a general lack of "foreseeability" ("Planungssicherheit", Aemisegger and Marti 2021), would lead to the assumption that the current authorization procedure entails already very high transaction costs and that the local or global maximum of transaction costs has already been surpassed. In terms of measurement, the study decided to measure transaction costs as collaboration intensity by project and by actor (with respect to each other actor) in the implementation arrangement. Problems of local and global maxima are thereby ignored for reasons of simplicity. Hence, the study expects a high intensity of collaboration in the implementation network to be negatively associated with PSE, as it assumes that WE-authorization procedures have already surpassed the optimal point.

Positive and negative coordination

The third aspect of implementation arrangements impacting problem-solving effectiveness is the extensiveness of coordination or, in other words, the extensiveness of reliance on coordination in the process of solving problems. The idea and its effectiveness impact have been detected empirically and developed theoretically by Scharpf (1997, 132ff. 1993, 1994, 1972; see section 2.2.3.). His argument is that a greater number and more intense ties between actors are likely to open up the solution space to go beyond a Pareto-optimum, towards a Kaldorian (1939) welfare space, in which actors can accept to be losers on behalf of a socially optimal solution, because they trust that they will be compensated (reciprocity) due to the shadow of the future or due to side-deals. Actors thereby reduce their potential veto position to an absolute minimum. This requires that actors in an implementation arrangement need to be sure that no one takes undue advantage of them, meaning that each actor needs to be in "deep" and emphatic contact with everyone. This is called positive coordination.

Negative coordination, in turn, refers to the endpoint of the other side of the coordination continuum. In this latter form, actors coordinate at least implicitly: Either actors leave each other alone and take unilateral decisions, knowing the veto positions of the other veto players. Negative coordination requires them to avoid inflicting damage unto the veto players among them (Scharpf 1997, 112). Or actors actively coordinate themselves but strictly stick to their veto positions. Such negotiations only open the Pareto-optimal negotiation space, not the Kaldorian, thereby reducing possibilities for value-creating solutions. Lowest common denominator solutions are the result unless side deals and compensations are allowed. In negative coordination, finding out the positions of those actors capable of blocking a solution is done bilaterally (Scharpf 1993, 20). In this form of self-coordination, there is a clear status-quo bias (Scharpf 1997, 113) where actors do not get into the collective "problem-solving" mode that would open up the solution space (ibid., 130ff.). Yet they have to coordinate much less and actors are less embedded in the implementation arrangement (see also Lindblom 1965). In short, if positive coordination is about enabling solutions, negative coordination is about avoiding losses.

The pure form of positive coordination is unattainable because of the overly high coordination or transaction costs, which in this case increase exponentially with the number of actors, as opposed to bilateral negative coordination where they only rise linearly (Scharpf 1997, 133). Negative coordination

is undesirable because of reduced possibilities for value production, being stuck with lowest-common-denominator options. Realistically, most problem-solvers will try to resort to multiple modes for different sub-problems, rarely using one in its pure form.

To accommodate for this complexity, the study resorts to measuring the collaborative embeddedness of each implementation actor in a WE-project implementation arrangement. If in this networked arrangement each actor collaborates with each other actor, the network is said to be "complete" (see "degree" in glossary in the online appendix). This would correspond to the pure case of positive coordination. In contrast, if no actor collaborates with no other actor, this is assumed to represent the negative coordination extreme. Given that these forms of coordination are heavily reliant on the transaction cost argument of impacts on effectiveness, the study expects a positive association of positive coordination with PSE, but only up to a certain point, beyond which it should decrease because transaction costs become prohibitive. The "shadow of the future", i.e. the high dependency between each other due to expected future dealings, may lead implementation actors to pursue positive coordination to a greater extent.

Veto players

The problem-solving orientation (ibid., 130ff.) that can result from a more positive coordination style is conducive to PSE because first and foremost it allows for minimizing veto positions (ibid.). Vigorously defending a maximal veto position need not necessarily be bad for PSE; however, assuming a constant level of conflict and a greater divergence of preferences when there are more veto player participants, the literature has also discussed a positive effect of a higher number of veto players: It has been observed empirically (Weingast 1979; Roubini and Sachs 1988) and theorized (Crepaz 2002; Vatter and Freitag 2007) that veto players, such as political parties, can have "expansionary" effects through logrolling. Applied to environmental federalism, Wälti (2001, 2004) has found a positive veto player effect in Swiss environmental policy implementation: If veto positions are maintained, a greater member equality has been shown to foster productivity through

"coordination among equals", even if the coordination style (frequency or intensity) remains the same.[100]

Other scholars have found the inverse: A single and dominant veto player, who is capable of single-handed decision, is more efficient and departs more strongly from the status quo (Fischer 2015b) than many more equalized participants. A greater number of veto players is thus negatively related to PSE. This negative effect is clearly the more abundant view on veto player effects in the institutionalist literature: The classical veto player hypothesis (Tsebelis 2002, 1999) predicts stability (Daehler 2014), deadlock, immobilism, shutdowns (Crepaz 2002, 175), a lowest common denominator or no decision at all (Scharpf 1976, 1988) if there is a high number of veto players participating in implementation arrangements. Crucially, however, the negative effect expectation may only be maintained under the assumptions of more veto players bringing greater divergence in actor orientations (preferences). For Switzerland and the case of WE-authorization procedures, both the positive and the negative effect of a greater number of veto players are regarded as probable.

Coordination under the shadow of hierarchy

In cases of high conflict, no self-coordination, such as freestanding negotiations, unilateral decisions, majority voting or unanimity, is likely to solve a problem effectively unless there is a possibility for side- or package-deals (Scharpf 1997, 196). In case such self-coordination fails, there is the possibility that decisions are taken by superiors using hierarchical direction. If this is impossible for reasons of power balance due to decentralization, there is a frequently observed mode of interaction that stands between negotiations and the use of hierarchical direction: Negotiations "in the shadow of hierarchy" (ibid., 197ff.). This denotes a decision-making mode in which "[...] negotiations are systematically influenced by the anticipation of a potential decision of a minister" (ibid., 198). Like purely hierarchical decision modes (meaning the use of hierarchical authority, not merely the threat), this mode of decision-making does not restrict the negotiation space, thereby allowing the realization of the maximally possible gains (through the Kaldorian space). In comparison, other modes, like unilateral decision-making or majority voting,

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100 This would correspond to the type of "collective" veto points (Crepaz 2002; Vatter and Freitag 2007).

restrict the space of maximally possible gains in conflictive situations. Even negotiations with self-interested negotiators will not be able to reach more than the minimal common denominator in conflictive situations.

Importantly, however, the possibility of reaching maximal possible gains crucially depends on the conflictive nature of the policy problem under consideration. The conditions under which a superior may make the socially optimal decision are strict: Agencies must be strictly hierarchically nested as to have "near decomposability" (Simon 1962).[101] Furthermore, the informational and motivational problems[102] must be fully absent for the use of hierarchy to allow for maximally possible gains. Deciding using hierarchical direction or using even the threat of hierarchical direction in negotiations may thus have a positive effect on PSE in high-conflict situations.

In view of the high level of conflict in Swiss WE-authorization procedures, resorting to superior decision-making may be a productive option; however, realistically it seems unlikely in Switzerland that negotiations using superiors as threat points make a significant difference: Applied to canton-internal negotiations, such decision-making against the threat of hierarchical direction could be productive. But across levels of government in an implementation arrangement, where each has defined legal competences without much overriding possibility, the use of superior-threats is not likely to be frequent. Self-coordination seems to fit the Swiss cross-level implementation style much more closely. Nevertheless, even small gains in PSE can be deemed helpful, which is why the possible contribution of hierarchy in high conflict should not be neglected as a potential effect on PSE. One can still expect that in cases of high conflict in implementation arrangements in Switzerland there is a positive effect of resorting to hierarchical decision-making.

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101 A head unit's behavior must depend strictly on its own sub-units, not on sub-units of another head unit or of another head unit directly.

102 Informational problem: Only level-appropriate information should be transferred to superiors. Motivational problem: The problem describes an asymmetry of information between superiors and their subordinate employees, resulting in opportunism and exploitation. This may happen if personal motivations are different from collective actor motivations.

Legitimacy

Last, the legitimacy of a decision-making procedure is widely seen to have a substantial and positive impact on PSE (Klijn and Koppenjan 2016; Schmidt 2013; Bryson et al. 2006; van Raaij 2006; Börzel and Risse 2007; Scharpf 1999, 1970). The proposed mechanism in the literature is that efforts to build legitimacy foster trust among implementation arrangement participants (e.g. Human and Provan 2000) and make internal and external support resources available (Provan and Milward 2001). Legitimacy can either be enlarged if the implementation arrangement fits public opinion more closely or if it integrates more actors in its decision-making process. Theoretically, a "public opinion pivot" may be possible without participation in implementation, yet realistically the two possibilities go hand-in-hand. The pivot thus contains a "listening" and a "marketing" element: The "listening" happens through extending the circle of participation. The marketing approach foresees that, through doing research, implementation arrangements may adapt their actions based on perceived popularity of a measure. They then may also launch campaigns to increase the legitimacy of their arrangement and their actions.

In Swiss WE-authorization procedures, active legitimacy building is likely to happen with those people and organization that are affected by a WE-project and are eligible to file complaints. As these implementation procedures are highly conflictual, it is expected that actors formulate strategies to convince those affected of their viewpoints. Apart from focusing on those affected, greater public legitimacy is also likely to lead to deblocking or the giving-in of those actors participating in implementation arrangements that were previously skeptical. Legitimacy further means that an arrangement may more easily tap into the resource munificence of actors external to the arrangement (Provan and Milward 1995; Raab et al. 2015). As a consequence, the study expects a gain in legitimacy to be positively associated with the PSE of Swiss WE-authorization procedures.

4.3. Link 3: Decentralization effects on problem-solving effectiveness

After the previous two sections presented the stepwise links from decentralization to implementation arrangements and from implementation arrangements to problem-solving effectiveness, this third section theorizes the overall link as a combination of the two previous ones. Moreover, this section will add

some theory on the link of effects of contextual collective actors, i.e. political parties, on PSE.

Weaving together the decentralization links

Having so far theorized links 1 and 2 individually in this chapter, it is now time to turn to bringing them together and formulate hypotheses. Because of the multiplicity of effects and directions, this study simply follows a "competing hypothesis" design. Focusing on a single direction alone would simply do not justice to the literature and make it appear as if existing studies favored one over the other direction, which they do not. Rather, seeing the multiplicity of relations, scholars often summarize the state of the question as "still open" or claim that effect sizes are likely limited, if not indistinguishable from zero (Braun 2000a). But scientifically speaking, this is not satisfactory, and what is required is a set-up that disentangles and lists potential reasons of why a relation may be positive or negative. This is what this section is about: Combining the seven possible expectations of the first link with the six expectations of the second link, there are 42 theoretic overall link-combinations. Some of them are not likely to impact each other and were therefore discarded. If the two links were considered to be likely to influence each other, the possible overall direction was identified.[103] This approach has resulted in two possible overall relations, as formulated with this study's two hypotheses on decentralization.

> H_1: *Decentralization increases the problem-solving effectiveness of implementation arrangements in Swiss WE-authorization procedures.*

> H_2: *Decentralization decreases the problem-solving effectiveness of implementation arrangements in Swiss WE-authorization procedures.*

Tables 4.1 and 4.2 summarize the possible reasons behind why either the positive or negative relations are theoretically possible. These tables can be read as follows: Column 1 indicates potential effects of decentralization on implementation arrangements. Column 2, in contrast, links aspects of implementation arrangements with PSE. For example, in table 4.1, an increase in decentralization may lead to a higher number of involved actors, of veto

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103 Additional information on the logic of how the links were combined are available upon request.

players, a greater reliance on negotiations, higher cooperation because of the "shadow of the future", a higher number of access points, higher conflict and a more integrative decision rule. Changes in these aspects of implementation arrangements may further have a positive effect on PSE because of the many reasons depicted in the second column.

I shall make a concrete example for table 4.1 that corresponds with hypothesis 1: A higher number of actors due to decentralization is likely to increase the number of veto players, because the more additional actors there are, the more likely it becomes that one of them is an additional veto player, which might have a negative effect on PSE, assuming that there is a wider space of preferences when more veto players are present. But veto players may also have a positive effect, following Wälti's (2001, 2004) argument of negotiations becoming productive if they are held "among equals". A higher number of actors may also make the use of hierarchical direction less likely in cases of low conflict. This is because superiors will likely find it harder to decide single-handedly if more actors have been involved in negotiations. It is likely that, in a situation of low conflict, the added benefit of a superior agency letting its subordinates decide is large, because a single-handed decision will often fail in meeting the social optimum and the risk to try is higher than the potential benefit from resorting to subordinate negotiated decision-making. Furthermore, a higher number of actors may also increase the legitimacy of the undertaking, thereby furthering problem-solving effectiveness.

I shall also walk the reader through an example of the negative relation hypothesis number 2, as seen in table 4.2. Higher conflict in the implementation arrangement due to decentralization, for example, very likely increases transaction costs and decreases the frequency of negotiation. This is because actors will try to keep their distance due to higher conflict, and at the same time, if they meet, their negotiations are likely to be resource-intensive to overcome their strong conflict. Higher transaction costs, which are assumed to have surpassed the optimal point, lower PSE in implementation arrangements. Because actors in conflict are likely to not meet as frequently and discuss issues as openly as if there were no conflict, this reduces the possibility for effectiveness-enhancing positive coordination. Higher conflict might also increase the number of veto players that will not be open to minimizing their veto position and receiving compensation. This can reduce the effective solution space and may therefore be counterproductive to PSE. Higher conflict might also reduce the overall legitimacy of the undertaking. This is detrimental to PSE, because an arrangement in conflict will not likely receive much external (financial) support. A lack of legitimacy of the implementa-

Table 4.1: Possible positive-relation combinations of link 1 and link 2 factors in an overarching third link.

H_1: Decentralization increases problem-solving effectiveness, because...	
... a higher number of actors...	... increases the number of veto players.
	... decreases the number of veto players.
	... makes the use of hierarchical direction less likely in cases of low conflict.
	... increases legitimacy.
... a higher number of veto players...	... increases positive coordination.
	... has a direct positive effect.
	... makes the use of hierarchical direction less likely in cases of low conflict.
	... increases legitimacy.
... greater reliance on negotiation...	... increases positive coordination.
	... makes the use of hierarchical direction less likely in cases of low conflict.
	... increases legitimacy.
... higher cooperation due to the shadow of the future...	... increases positive coordination.
... a higher number of access points...	... increases the number of veto players.
	... increases legitimacy.
... higher conflict...	... increases legitimacy.
	... increases the number of veto players.
	... makes the use of hierarchical direction more likely in cases of high conflict.
... a more integrative decision rule...	... increases positive coordination.
	... increases the number of veto players.
	... makes the use of hierarchical direction more likely in cases of high conflict.
	... increases legitimacy.

Table 4.2: Possible negative-relation combinations of link 1 and link 2 factors in an overarching third link.

H_2: Decentralization decreases problem-solving effectiveness, because...	
... a higher number of actors...	... increases transaction costs / decreases negotiation frequency.
	... reduces positive coordination.
	... increases the number of veto players.
	... makes the use of hierarchical direction less likely in cases of high conflict.
... a higher number of veto players...	... increases transaction costs / decreases negotiation frequency.
	... makes consensus-finding and innovation more difficult.
... greater reliance on negotiation...	... increases transaction costs / decreases negotiation frequency.
... higher cooperation due to the shadow of the future...	... increases transaction costs / decreases negotiation frequency.
	... makes veto player blocking power more consequential.
	... makes the use of hierarchical direction less likely in cases of high conflict.
... a higher number of access points...	... increases transaction costs / decreases negotiation frequency.
... higher conflict...	... increases transaction costs / decreases negotiation frequency.
	... reduces positive coordination.
	... increases the number of veto players.
	... reduces legitimacy.
... a more integrative decision rule...	... increases transaction costs / decreases negotiation frequency.
	... increases the number of veto players.
	... makes the use of hierarchical direction more likely in cases of low conflict.

tion arrangement might also reduce trust that would let parties soften up on their veto positions and get to negotiations with an effectiveness-enhancing "problem-solving" state of mind.

4.4. Political party effects on problem-solving effectiveness

In this study's analytical model (see section 2.4.4.), political parties are considered as contextual actors. They are expected to show effects on sectoral policies, but also on cantonal and project-specific procedural policies. They are not considered to be participant organizations in implementation arrangements, but they are expected to at least indirectly affect the workings of implementation arrangements. There are three ways in which the study expects such indirect impacts: First, party positions might be relevant for municipal legislature, which in many cantons has substantive shaping power regarding the spatial planning of WE-projects. Second, party positions could also be deemed important on the cantonal level: Because the cantonal executive oversees the implementation procedure and the cantonal legislature designs policies to this end, the two institutions' partisan distribution is likely to be one factor that helps design the throughput in implementation arrangements. Third, it seems likely that administrators and organizations in implementation arrangements are strongly affected by the partisan priorities of the day (e.g. campaigns).

The argument follows the logic of the partisan theory that expects public policy outcomes to vary depending on the partisan compositions of its institutions, mainly its executives (Hibbs 1992; Schmidt 1996; Schmidt et al. 2007; Schniewind et al. 2009). Common assumptions, to which this study subscribes, are that parties demonstrate office-seeking, but also policy-pursuit behavior and vote-seeking (Strøm 1990). They are also broadly expected to act based on the preferences of their constituents (see Schmidt 1996, 156). The case of Switzerland actually presents a strong test of the "parties-do-matter" hypothesis, because its party system has been shown to be exceptionally weak and fragmented in international comparison (Ladner et al. 2024). On the level of cantonal comparisons, strong institutional constraints (also from the national level) and an astounding wealth of cantonal party systems (Vatter 2020; Walter and Emmenegger 2019; Ladner 2004a,b; Storz and Bernauer 2018) have made partisan effects difficultly discernible, and generally no consistent partisan effects have been found.

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Hence, resorting to investigating partisan effects on the cantonal level requires some justification, as the reader might view this question to have already been settled: In fact, the partisan hypothesis has been tested extensively around the turn of the century, using cantonal spending or other aggregated financial measures as dependent variables (see Vatter and Freitag 2002; Freitag and Vatter 2006; Feld et al. 2010; Feld and Matsusaka 2003). There have also been some partisan-hypothesis tests regarding cantonal welfare- (Armingeon et al. 2004), health- (Vatter and Rüefli 2003) or education-spending (Freitag and Bühlmann 2003). These studies found either no, unrobust or inconclusive effects of partisan actors on financial or policy-field outcomes. The cantonal findings are broadly in line with results from the US states from around the turn of the century of partisan effects under institutional constraints (Matsusaka 2004, 1995). Later on and for Switzerland, the test for partisan effects was extended to further dependent variables, such as whether political parties demonstrate an influence on the structure of intergovernmental relations between cantons (Bochsler 2009; Arens et al. 2017; Arens 2020), which — again — they do not.

Yet there are a few reasons why the question cannot be considered to be answered. The first is that studies on partisan effects on policy outcomes in Swiss cantons are practically inexistent for the policy fields of energy and the environment (see Stadelmann-Steffen et al. 2020 for a single exception mentioning the issue in passing). Thus the question of whether political parties in Switzerland have an effect on such outcomes has been left open and remains to be addressed. In consequence, the present study seeks to do this in the field of energy federalism, using outcomes of WE-authorization procedures as its dependent variables. There is also a second reason why it is important to subject the partisan hypothesis to another test: The conflictuality and ideological polarization of the political parties on all levels of government in Switzerland has increased strongly since the end of the Cold War, with marked key moments being the referendum on the European Economic Area in 1992, the rise of the right-wing party SVP in the 1990's and the election of its main agitator to the Federal Council in 2003 (Vatter 2020; Traber 2015; Bailer and Bütikofer 2015). In parallel to the national level, a marked increase in volatility of government (Walter and Emmenegger 2019) and polarization (Bochsler and Bousbah 2015; Bornschier 2015) also happened on the cantonal level (see also Bochsler 2019; Goldberg and Sciarini 2014). As a consequence of this polarization, the degree of consociationalist and/or consensual executive decision-making has been markedly reduced in governments of all three levels (Hermann 2011; Bochsler and Bousbah

2015; Klöti et al. 2014; Vatter 2020). At the same time, the importance of the parliamentary phase has gained in relative importance compared to the pre-parliamentary phase, where interest associations and groups have tended to dominate before (Sciarini 2014a). This has contributed to lifting up the relative importance of political parties with respect to interest associations. Under these changed circumstances of the institutional environment, it seems probable that parties might today carry greater weight than at the turn of the millennium, where most studies on the partisan hypothesis were conducted. Hence, the justification for investigating the partisan hypothesis does not only rely on the fact that it has not yet been tested empirically with regard to energy and environmental policy-field outcomes but also that partisan effects can be expected under these changed institutional circumstances.

In terms of direction of partisan effects regarding the example of WE-authorization procedures, there is evidence to keeping with the general expectation of center and right parties having higher levels of concern regarding acceptance of WE-projects in Switzerland (Cousse et al. 2020). This is a recognition that historically "[...] parties on the right side of the political spectrum (SVP and FDP) as well as the conservative center-right party (CVP)[104] [have] regularly oppose[d] initiatives and parliamentary motions that favor the expansion of [WE]" (Vuichard et al. 2019, 6; see also Stadelmann-Steffen and Dermont 2019). A representative survey commissioned by the Swiss newspaper NZZ on the topic of WE in the canton of ZH in 2022 (Geisseler 2023) corroborated this left-right divide regarding the favorability of WE in the canton of ZH. Hence, it would be reasonable to expect a relatively favorable political left and a relatively less favorable political center and right.[105]

Rather than partisan favorability regarding the implementation of WE-projects, which — to the author's knowledge — has not been systematically investigated in Switzerland, some studies point to electoral losses and wins due to a previously installed wind turbine in a community: Evidence from

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104 On 1.1.2021, the national-level CVP merged with the national-level Conservative Democratic Party of Switzerland (BDP) to form the party called "The Center". Except for two cantonal sections of these parties, all cantonal parties have by now changed their labels to "The Center" (state: March 2023). Because the scope of observation for parties is before 2021, I refer to the CVP by its old name throughout. The BDP is not treated.

105 There is also a study finding the same significant left-right divide for the implementation of PV installations in the Swiss Alps; see Vuichard et al. 2021

Germany supports that green parties become more successful when there is a WE-project in a municipality, along with the populist right (Otteni and Weisskircher 2022). Findings from a survey-experiment in Switzerland dispute electoral punishment and do not hint at an increase of left parties for Switzerland. In the respective study, respondents were exposed to image with and without a wind turbine that is imagined to be placed in the respondent's municipality (Umit and Schaffer 2020). However, it is questionable whether a survey experiment can adequately capture the feeling of affectedness by a large infrastructure project. Wurster and Hagemann (2019) found no partisan effects of green parties in the federal states of Belgium, Austria and Germany on the expansion of wind and solar installations. Stadelmann-Steffen et al. (2020) have treated the share of left parties in cantonal parliaments as control variables and found no effect on the deployment of small-scale hydropower plants in the Swiss cantons. However, since the Swiss partisan landscape does not tend to change radically over a horizon of the authorization procedure of a WE-project, a partisan null-effect finding is not surprising.[106]

How is partisan favorability tied to PSE? It is argued that partisan favorability increases the probability of deblocking the authorization procedure in an implementation arrangement. Favorable political parties will at least refrain from helping to stall WE-procedures or act otherwise in favor of a WE-project. Thus, the following additional hypothesis is formulated:

> H_3: *Left parties support WE-projects more strongly than center and right parties and thereby promote problem-solving effectiveness in implementation arrangements.*

In order to empirically assess the third hypothesis of this study, a few delineations, caveats and restrictions are in order. First, the "NIMBY" literature ("not in my backyard"; see Rand and Hoen 2017; Petrova 2013; Bidwell 2013) reminds us that general favorability does not equal project-specific favorability if oneself or one's constituents feel negatively affected by a project. For the present study, however, this is only marginally problematic, because municipalities express themselves on the project level, and the cantons only decide on general abstract policies. Nevertheless, cantonal politicians (that might also be mayors) could bring project-specific opportunities and grievances from their municipalities into the cantonal general abstract decision-making

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106 International studies found a reduction of vote shares for the government compared to the opposition when a wind turbine has been installed during the government's tenure (Stokes 2016; Walker et al. 2018). However, these are highly contextual findings.

process. Yet for a lack of valid alternatives, the study must assume intra-party stability of preferences between projects and general abstract policy development.

An additional assumption that needs to be made is that parties on the cantonal (and federal) level have the same programmatic direction. Giger et al. (2011) show that maintaining the assumption is difficult. They find that, indeed, cantonal party sections show programmatic diversity. However, they also discover that the cantonal sections of the same party across the cantons tend to be more similar in their political programming than two different parties within and across the cantons (ibid., 274f.).[107] On the municipal level, the assumption of nationalization is untenable: Because almost 40% of municipal executives adhere to no party at all (Steiner et al. 2021, 76) and local parties exist in about 60% of Swiss municipalities (data from 2017, ibid., 70), municipal systems are only difficultly vertically and horizontally comparable.

This calls for some analytical restrictions: First, the analysis pertains only to partisan effects of the municipal legislature, discarding the municipal executive.[108] For comparison of parties between municipalities and between cantons, the problem of different degrees of nationalization of political parties (see Bochsler et al. 2016) is circumnavigated as follows: The analysis resorts to the major national parties' vote shares of National Council (NC) elections in 2015 on the municipal level. These data are viewed as a proxy for the party constellation of municipal legislatures. On the cantonal level, additional comparisons of seat shares in executives and legislatures of cantonal political parties across the period of 2000–2018 are conducted. In general, for all partisan measures, only those political parties that are highly nationalized (>0.5, range 0–1), following Bochsler et al.'s (ibid.) study, are included. These are the following: the SP, the FDP, the SVP, the GPS and the CVP. These parties also happen to be the largest in Switzerland by far (ibid.). Next to these major parties, as the only exception, GLP data is also used for reasons

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107 Giger et al. (2011) conclude that cantonal party positions are partially explained by socioeconomic and cultural background conditions: Especially population density, reflecting the rural-urban division, and the share of French-speakers in a canton make up positional differences between the same party in different cantons. Hence, these programmatic difference determinants need to be accounted for, and they will enter the models as control variables.

108 Because municipal assemblies are the relevant political body in most cantons (except NE, SO) in the local land-use plan (LLUP)-process, no argument for the municipal executive is developed.

of interest in their position regarding their promise of bridging industrial development and green interests.[109]

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109 The GLP reaches the nationalization cut-off point of 0.5 only in the NC elections of 2011 (Bochsler et al. 2016). The party was founded cantonally in 2004 in Zurich and federally in 2007. It had its first National Council members following the federal election of 2007 (GLP Schweiz 2023).