

Article

Public, Private, or Inter-Municipal Organizations: Actors' Preferences in the Swiss Water Sector

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Abstract: To improve sustainable service provision, the public sector has been repeatedly subject to administrative reforms. Yet, the question arises of which types of organizations might be preferred. To address this, we systematically analyze which water supply organizations decision-makers and stakeholders, across different levels of government in Switzerland, prefer. We find that the actors prefer public organizations that involve coordination between municipalities and reject private organizations. Distinguishing between different actor levels reveals a distinct pattern, mainly related to the level of responsibility: the national (confederation) and regional (cantonal) actors only prefer coordination across municipalities, where local politicians lose a degree of control. In contrast, the local actors prefer those organizations where they can maintain democratic control the most. However, such organizations are not expected to perform sustainably, mainly because of lengthy decision-making processes, lack of access to external funds, and short-term financial planning. We, thus, conclude that, at the local level, there is potentially a trade-off between democratic values and performance.

Keywords: administrative reforms; organizational autonomy; coordination; actor preferences; water sector; Switzerland



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1. Introduction

To improve sustainable service provision, the public sector has been repeatedly subject to administrative reforms [1]. The aim is to re-organize or create new structures to enhance coordination amongst a variety of actors to co-manage service provision and to improve sustainable functioning, effectiveness, and efficiency [2,3]. Simply because an organization is expected to be more sustainable, effective, and efficient [4], it may not be deemed preferable by the concerned actors. For instance, a new organizational type might affect existing authority, shift competencies, or be at odds with actors' interests and values [5]. However, it is crucial for successful reforms that they are supported by decision-makers and stakeholders [6]. Moreover, different actors play a key role in drafting reform proposals and implementing them [7]; thus, what they prefer seems crucial to ease reform design and implementation [8]. Furthermore, new policies or changed organizational types have faced opposition both by (local) decision-makers and stakeholders in various contexts [9,10]. The issue of preferences thus becomes all the more pressing in the context of public service provision in general and, specifically, about such vital services as public water supply. In this context, we ask what types of organizations are preferred by stakeholders and decision-makers in the water sector.

To answer this question, we first review the literature on administrative reforms and types of organizations. An analysis of such reforms requires an assessment of traditional state-centered types of service delivery and New Public Management (NPM) arguments, in terms of establishing organizations with increased autonomy from public authorities for service delivery [11]. We specifically look at coordination and organizational autonomy.

We then conduct an empirical analysis of stakeholder and decision-maker preferences for different organizational types in the water sector.

To cope with challenges of austerity, aging infrastructure, and climate change impacts, such as flooding and droughts, responsibilities in the water sector have been spread across different actors and multiple centers of power at different political levels [12]. The Swiss water sector provides an interesting context to assess actors' preferences, as the support of diverse actors is critical in the context of Swiss direct democracy [13].

The remainder of this article is structured as follows. We first address the administrative reforms and types of organizations proposed in the literature. Following this, we first present our methods before showcasing our results from a survey among decision-makers and stakeholders in the Swiss water sector to assess the degree to which actors prefer different organizational types. Finally, we discuss the feasibility and potential developments of administrative reforms and types of organizations in light of the empirical results.

2. Administrative Reforms and Changes in Types of Organizations

As single municipalities are often overloaded with new duties, conventional and fragmented approaches are perceived as insufficient to accomplish tasks sustainably, efficiently, and effectively [2,14]. Against this backdrop, administrative reforms and changes in types of organizations call for decision-making and administration to become consolidated, where public and private actors join to tackle common tasks as a result of functional interdependencies rather than political boundaries [15,16]. Such structural reforms involve the creation of larger organizations (typically supra-municipal) to provide a service [17].

Such changes can be differentiated by two key criteria: (1) the degree of coordination, as derived from the literature on administrative consolidation; and (2) the degree of organizational autonomy, meaning the degree of decision-making freedom from government, as derived from the New Public Management literature [14,18]. Our focus is on organizations that provide a service rather than serving a coordinative function (e.g., councils of government). Coordination refers to centralization with substantial horizontal interaction [19]. As shown in Figure 1 and Table 1, the coordination of actors to jointly provide a service can range from no joint work to co-managing and sharing responsibilities for service supply tasks, finances, and infrastructure [2,20].

Table 1. Organizational types differentiated by degrees of coordination and autonomy.

Organizational Type	Coordination	Organizational Autonomy		
		Legal Framing	Financial Authority	Democratic Control
1. Public bureau	Single municipal entity; not providing services to others			Citizens have direct voting rights on financial issues
2. Contractual consortium	Municipality providing services to other municipalities on a contractual basis	No legal personality, under public law	Lacking financial autonomy	Except for contract municipalities, citizens have voting rights on financial issues
3. Inter-municipal association	Multiple public actors	Own legal personality under public law	Financial autonomy, with supervision by public authorities (e.g., subnational or national admin.)	Delegated decision-making through municipal authorities; varying decision autonomy for an association's institutions (depending on statute)
4. Public joint-stock corporation		Own legal personality under private law	Financial independence without supervision by public authorities	Decisions delegated to the general assembly of shareholders and managing board

Table 1. Cont.

Organizational Type	Coordination	Organizational Autonomy		
		Legal Framing	Financial Authority	Democratic Control
5. Public Private Partnerships (PPP)	Multiple public and private actors	Own legal personality under public or private law	Financial autonomy without supervision by public authorities	Decisions delegated to the managing board of the organization, with the representation of public authorities
6. Private company *	Typically, a single private actor	Own legal personality under private law	Financial autonomy without supervision by public authorities	Decisions delegated to the managing board, without representation of public authorities

* Note: the private company is only conceptually introduced here; we do not have a private company in the three case study regions empirically investigated in this paper. Source: own representation.

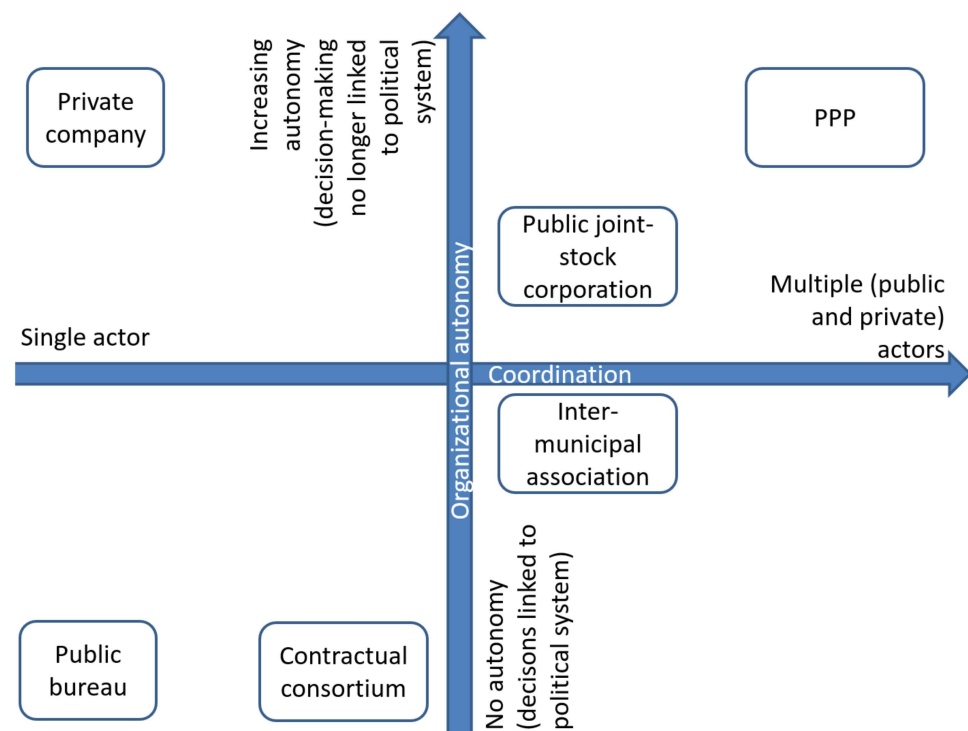


Figure 1. Six organizational types with differing degrees of coordination and autonomy (source: own representation).

New Public Management (NPM) reforms focus on reforms within an organization that stipulates flat hierarchies. NPM reforms call for establishing organizations with increased autonomy from public authorities for service delivery, including privatization or contracting out to private firms [11,21]. NPM addresses the increasing independence of service providers at the operational level and the decreasing direct influence of public authorities as well as democratic participation [22]. In other words, emphasis has been placed on the “clear separation of political and managerial roles” [14] (p. 332), resulting in increasingly autonomous organizations for public service provision where citizens have little control over their water management [23]. The operator would no longer have to be embedded within the municipal administration, as municipal governments delegate their authority to a new organizational entity, which has its legal personality and a statute [17]. Organizational autonomy can be differentiated between legal framing, financial authority, and democratic control [18]. Combining different degrees of coordination and organizational autonomy, we identify six organizational types in Figure 1 and Table 1.

First, the public bureau is fully integrated into the local public administration, citizens have direct voting rights on financial issues, and services are limited to the municipality (no coordination). Second, the level of coordination can differ both across as well as within the contractual consortium, the inter-municipal association, and the public joint-stock corporations. These can all be seen as forms of inter-municipal coordination [24] which aims at establishing structures to enhance coordination among municipalities and a variety of actors to co-manage service provision [2,3]. Assessing the concrete level of coordination remains an empirical question in terms of how many municipalities are involved in an organization [25]. A central element is that all decision-making is now delegated to municipal authorities and is no longer connected to the citizens. Third, Public-Private Partnerships (PPPs) differ from other organizations in the sense that they can include private actors alongside municipalities. This results in both higher levels of autonomy from the political system but also increases the level of coordination among actors [22]. Finally, the private company, as conceptualized in this article, involves a high degree of autonomy, but no coordination, as it is conceived as a single actor. A central aspect here is that all decisions are made by private actors with no public representation.

Coordination and autonomy might stand at odds with each other, as organizational autonomy can lead to more fragmented organizations if, for instance, single private providers take over small-scale infrastructure. However, different types of organizations can also include elements of coordination and autonomy, as service providers can gain autonomy from local politicians (municipal governments) by creating a larger organization and sharing managerial and operational responsibilities between public and private partners [1,21,23].

The above reforms and organizational types are broadly applicable to utility sectors such as electricity and gas (also referred to as network industries), which entail fixed and extensive infrastructure systems to deliver services. However, there are some specificities of the water sector that make it different from other utility sectors. Water is a bulky resource that cannot be cheaply transported to different places. Hence, water is typically locally sourced. This has led to the local organization and management of the water supply, often with de-facto local monopolies [12]. In addition, municipal water supply is not a marketable product—its price is not determined by a market price, as with electricity or gas; it is typically set and heavily regulated by the government. This leads to a lack of market competition and strong public control and management [12].

3. Materials and Methods

Switzerland is an ideal country to study actors' preferences for different types of organizations in general, and in the water supply sector in particular. First, its federalist structure and direct democratic institutions provide significant decisional and implementation competencies to regional and local authorities. Thus, with varying institutional and organizational settings, analyses of local service provision embedded in a multi-level federal system are highly relevant [26]. Second, administrative reforms with changes in the types of organizations currently play an important role in the Swiss water supply sector [27]. However, in Switzerland, full-scale or material privatization, in terms of the divestiture of the infrastructure from public to private actors, is non-existent; only one Swiss waterworks is privately owned [26]. Surveys show that water users in Switzerland have a strong preference for public organizations and that they are satisfied with the current system [28]. Current reforms in the Swiss water supply sector involve increased coordination among water suppliers (typically municipalities) with increasing autonomy from the political system, such as through inter-municipal associations or public joint-stock corporations.

As shown in Figure 2, our study covers the subnational jurisdiction (canton) of Basel-Landschaft in Northern Switzerland, representative of the Swiss plateau in terms of socio-demographic and economic structure, as well as geophysical conditions, encompassing diverse organizations. We also include the national perspective, by including actors at the federal level in our analysis. While water supply in Switzerland in general is abundant, in this region there have been droughts, with water scarcity particularly in the hilly

regions [29]. This region includes contested and failed consolidation endeavors. Of the selected types of organizations (see Figure 1 and Table 1) all but the fully privatized company already exist in the water sector within Basel-Landschaft. The private company is not considered here, as it is not relevant to the Swiss context; the empirical analysis investigates the preferences of five of the six organizations presented in Table 1 and Figure 1.



Figure 2. Map of Basel-Landschaft (red) in Switzerland. Source: commons.wikimedia.org (accessed on 12 June 2022).

To assess the actors' preferences, we surveyed decision-makers and stakeholders. We distinguish between those two kinds of actors for several reasons: formal decision-makers, such as municipal and subnational governments, are responsible for administrative reforms. These actors are also known as the political elite, and such studies have a long tradition in research on public policies [29]. However, concentrating on a wider array of actors, so-called stakeholders, particularly makes sense in situations where citizens or private companies are heavily involved in decision-making or implementation [29]. Public service delivery in general, and water supply in particular, is characterized by such multi-level involvement of public and private actors [30]. For this reason, we also include stakeholders such as water technicians, water suppliers, engineers, and interest groups (see Table A1 in Appendix A) in our analysis. We identified the actors by first assessing who has formal decision-making competences and then, through interviews and discussions with the Canton, pinpointing which additional stakeholders are relevant for our research question. We asked the respondents to answer on behalf of their organization and we selected the heads of the organizations.

A total of 172 actors participated in the survey between September and December 2015. We conducted a mail survey, sending the questionnaire by postal service. Actors were reminded by e-mail and with phone calls. The overall response rate was 90.1% (see Table A1 in the Appendix A). For the five types of organizations relevant for our study (see Table 1; as no private company exists, we do not include this) we created a four- and five-item index capturing the key organizational characteristics (see Table A2 in Appendix A). Survey participants were asked to evaluate each item on a scale ranging between "fully agree" (+1.5) and "fully disagree" (−1.5). Based on the scores for each question, indices (weight = 1) for each organization were calculated. Aggregating all items per organization then allows for assessing the preference for each type of organization for all decision-

makers and stakeholders. We display aggregated results (preferred organizational type) for different actors.

We distinguished between national (confederation), regional (subnational jurisdictions, i.e., cantons), and local (municipalities) actors to see if hierarchical and jurisdictional levels might reveal any difference in preferences. However, affiliation might have a substantial influence on actors' preferences, as reforms might affect existing structures and interests [5]. Hence, we further distinguish between seven actor categories (see Table A1). The first is the "confederation" and includes the federal offices responsible for water supply. The second is the "canton" and encompasses a broad variety of departments from the subnational administration as well as representatives from the executive branch. Third, members of municipal councils and mayors are embraced in the type "municipalities." This includes representatives of very small municipalities as well as larger cities and covers different political parties. Fourth, the "water technicians" operate at the local level—and, in particular, in small municipalities—and are responsible for the operation and maintenance of the local water infrastructure. This can range from a part-time job, municipal staff, or a service provided by a private firm. "Water suppliers" include representatives from waterworks (semi-autonomous from municipality) and fall under the fifth category. Sixth, several engineering companies are involved in water supply management, mostly in terms of consulting and planning activities; these are categorized under "engineers." Finally, the seventh category covers the "interest groups" that include a broad variety of professional associations as well as environmental interest groups. This classification distinguishes the main players involved in the water supply. While some overlap is, in principle, possible (e.g., municipal delegates in water associations or membership in professional associations), in such cases another representative was asked to respond to the survey. Only in one case was this not possible.

4. Results

Figure 3 shows the average actors' preferences for the five types of organizations (cf. Figure 1 and Table 1). We show this for all actors surveyed, and then distinguish between the decision-makers (those who have formal decision-making rights) and the rest of the stakeholders. The figure reveals a positive assessment for three types of organizations, namely public bureau, contractual consortium, and inter-municipal association, with the latter scoring highest, making it the most preferred organizational type across all actors. The contractual consortium scores higher than the public bureau. In contrast, both the public joint-stock company and PPP are rejected, the former being most strongly disapproved of.

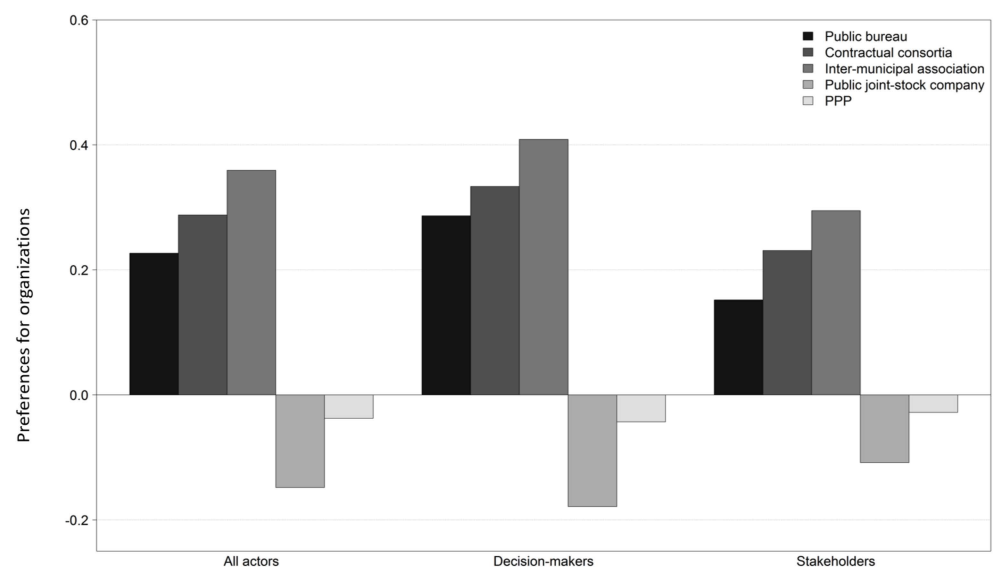


Figure 3. Average preferences for organizational types. Source: own representation.

Differentiating between decision-makers and stakeholders shows a similar pattern across the two groups and reflects the general pattern found for all actors. However, as Figure 3 shows, decision-makers seem to have a more pronounced view regarding all organizational types than the stakeholders. This suggests that the decision-makers have more distinct preferences in contrast to the stakeholders, but this could also result from a stronger heterogeneity of the stakeholder group.

Distinguishing between the three different actor levels (national, regional, and local actors) reveals a distinct pattern, mainly related to the level of responsibility, from local to national (Figure 4): the national (confederation) and regional actors seem to prefer only one organizational type, namely the inter-municipal association. The local actors are overall rather positive about all organizational types (except the public joint-stock corporation) but prefer the more decentralized and non-autonomous means of the public bureau or contractual consortium than the other organizational types.

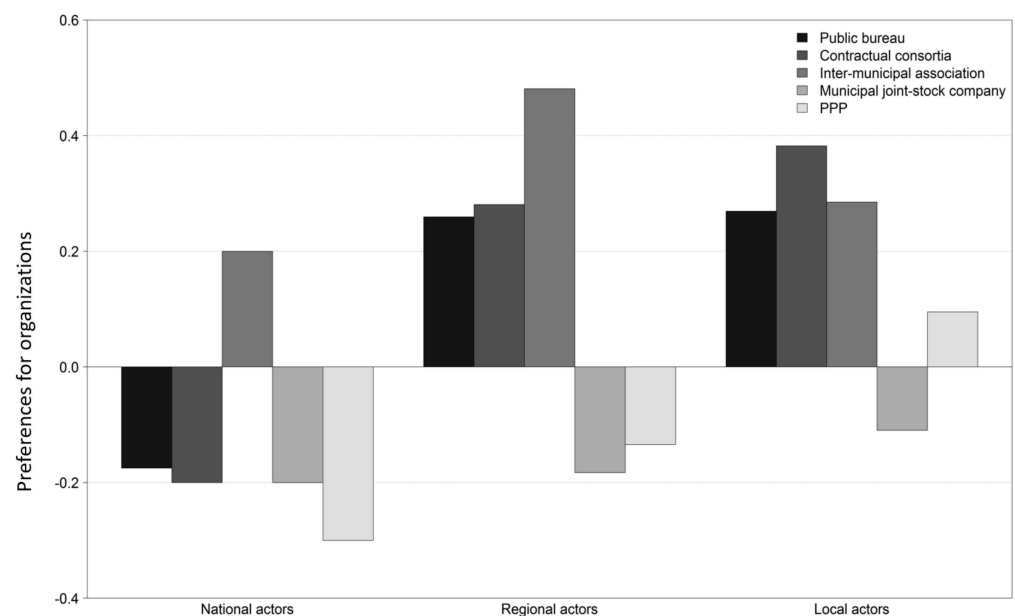


Figure 4. Preferences for organizational types across levels. Source: own representation.

Besides different levels, diverse actors may have diverging interests regarding reforms in the water supply sector. Thus, Figure 5 displays the average actor preferences for the five organizational types across the seven actor categories (Confederation, _Canton, Municipalities, Water Associations, Engineers, Water Technicians and Interest Groups).

As Figure 5 shows, public joint-stock corporations are rejected by all actor categories except the water associations, most notably by actors at the national level. PPPs are slightly supported by municipal actors and water technicians but rejected by all other actors. This support for a PPP by local actors might reflect that several tasks (e.g., water quality control, infrastructure maintenance) for local water supply are increasingly carried out by private companies rather than by municipal employees. However, there is broader support for organizations under public law with a strong link to the municipalities. This is particularly reflected in the support for inter-municipal associations, but also for public bureaus and contractual consortia. In particular, the key actors—municipal actors as well as actors from the canton—clearly approve of these three organizational types. Municipalities show stronger support for contractual consortia and traditional public bureaus, but somewhat less support for inter-municipal associations, which would remove key competencies from the local to the regional level by sharing these with other municipalities. The engineers and water associations also strongly prefer municipal coordination, with inter-municipal associations being the clear winner. Despite their partiality to municipal-based organizations, water technicians are cautious in their assessment. This might result from the fact

that the water technicians would be the actors most directly affected by changes in the type of organization. Though national actors and interest groups do not support organizational structures that exclusively focus on the municipality as a service provider, they more strongly endorse institutionalized coordination among municipalities in terms of an inter-municipal association. Overall, the broad support for inter-municipal associations across actor categories implies a demand for enhanced coordination among municipalities for water supply.

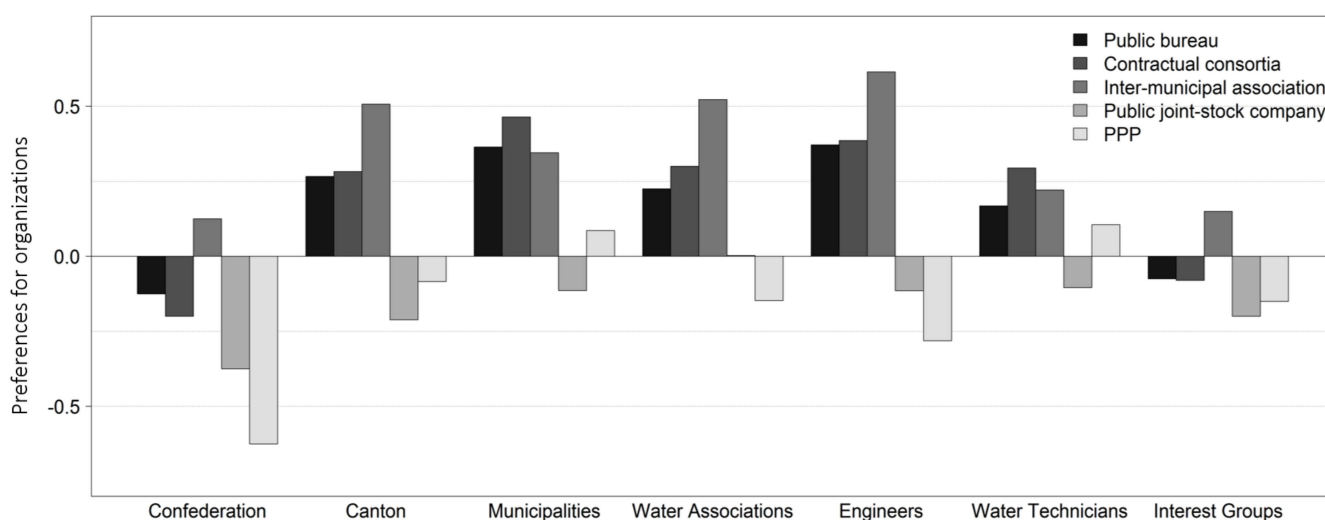


Figure 5. Average actor preferences for organizational types across actor categories. Source: own representation.

5. Discussion

Table 2 summarizes the results from the survey for the six types of organizations. We see a clear preference for public organizations—that is, those under public law and closely tied to the municipality—and retaining a degree of democratic control. Our data show demand and willingness for enhanced inter-municipal coordination, as expressed in the broad approval for the inter-municipal association. However, preferences for maintaining the link to the municipal level remain strong, indicating potential opposition to reforming traditional direct public management forms into more delegated ones. Conversely, organizational types that have very high degrees of autonomy from the political system—both in terms of financial authority and democratic control—are not preferred. Overall, the actors tend to favor solutions they know best, e.g., more direct public management rather than delegated (private) management.

Table 2. Summary of actors’ preferences of organizational types.

Organizational Type	Preference
1. Public bureau	✓
2. Contractual consortium	✓
3. Inter-municipal association	✓
4. Public joint-stock corporation	✗
5. PPP	✗
6. Private company	N.A.

Legend: ✗ indicates rejected organizations; ✓ indicates preferred organizations; N.A. = not available. Source: own representation based on the above analysis.

These results cohere with other research indicating a trade-off between democratic control and operational discretion within the characteristic of organizational autonomy [22,31]. Indeed, and on the one hand, it is particularly the specification of decreasing democratic control that

seems to lower the preferences for alternative organizations such as the public joint-stock corporation and PPP. This value of democratic control is especially strong at the local level, as the water technicians and municipalities prefer non-autonomous organizations, such as public bureaus, while the national and regional actors favor inter-municipal associations. On the other hand, and in terms of structural reforms, overall all actors prefer an inter-municipal association without a major shift in autonomy to the status quo of direct public management (public bureau and contractual consortium).

Previous work has also found that, particularly in a country like Switzerland, an argument prevails that with a strong direct-democratic tradition, organizations with high democratic control are preferred for water-related services [26]. Similarly, a national survey by the Swiss Gas and Water Industry Association representative of the Swiss population, has shown that that 93% of the population is against water privatization, which includes private legal forms [28]. Similarly, a new water law in the canton of Zurich, Switzerland, was turned down in 2019 by a popular vote, because it would have allowed PPPs (<https://www.nzz.ch/zuerich/wassergesetz-privatisierungsgegner-in-stadt-und-land-ld.1458822?reduced=true> (accessed on 12 June 2022)). The general anti-privatization argument is that the public water systems work well. The population is satisfied with the quality of drinking water and is afraid that privatization would lead to lower quality and higher prices [26].

In light of our survey results, we could infer that, in the Swiss context, the factors of governmental control and a mismatch between private and public interests appear to be central, and, in selecting an organization that would be likely to be implemented, this factor might need to be weighted more than others. Despite reform pressures and research indicating the benefits of increasing coordination and autonomy [2,3], this research shows how local, regional, and national actors in Switzerland do not necessarily prefer organizational types with decreased governmental control. Indeed, decision-maker and stakeholder preferences in this study seem to subscribe to the logic that public services should either be directly or indirectly provided by the government through direct or delegated public management, that is, by public organizations integrated into the local public administration or through inter-municipal associations.

Given that the survey was conducted seven years prior to this publication, it is important to reflect on what has happened since then. According to the Canton of Basel-Landschaft, not much has changed. There have been incremental changes in some areas, where even the inter-municipal route was difficult to pursue. Instead, the Canton has facilitated a dialogue among the stakeholders in order to find pragmatic solutions. Given the challenge of finding an appropriate and preferred organizational type, the actors have instead focused on technical solutions, e.g., connecting physically but not organizationally. The Canton hopes that this technical coordination will eventually also lead to organizational coordination.

6. Conclusions

This article analyzed actors' preferences for different types of organizations in the water sector. We argue that actor preferences in a specific context are important for sustainable solutions: when key actors who are managing water infrastructure, or are directly affected by them, support changes, this eases the realization and implementation of these reforms. We first presented different types of organizations with varying degrees of coordination and organizational autonomy, two dimensions derived from the administrative consolidation and NPM literature, respectively. We then conducted a survey which included local, regional, and national decision-makers and stakeholders, thus, key actors in Swiss water service delivery. We asked those actors which one of the five organizational types, or dimensions thereof, they preferred for the respective jurisdiction in Switzerland they are responsible for.

The results of this study show that the stakeholders strongly prefer public organizations in contrast to the other, more autonomous and private types. Specifically, the organizational type most preferred by the stakeholders is the inter-municipal association. According to the literature, this form of inter-municipal coordination might be a promising form of administrative consolidation, as it enables the pooling of resources, internalizing externalities, shorter decision-making processes, access to external funds, and a degree of longer-term financial planning while retaining a degree of governmental oversight [20,22]. Nonetheless, public bureaus and contractual consortia are also often preferred in the Swiss context, and mostly by local actors whose interests are vested in democratic values and control. Yet, according to the literature, such organizations are not expected to perform sustainably, mainly because of lengthy decision-making processes, a lack of access to external funds, and short-term financial planning [22,31,32]. Here, we find a classic trade-off between a focus on results, which are promoted by NPM-driven public sector reforms, and democratic values in a given context. This trade-off is most significant at the local level, where municipalities and local actors prefer the contractual consortia over the inter-municipal association, and less so at the regional and national level, where the actors favor the inter-municipal association the most.

The Swiss water sector provides an interesting context to assess administrative reforms and changes in the type of organization. The water supply structures are traditionally decentralized in Switzerland, based on the principle of subsidiarity and direct public management [26]. However, current developments, such as urbanization, aging infrastructure, or natural disasters, put water supply under pressure, ask for more sustainable and long-term solutions, and challenge the municipalities to join forces and to become (more) professionalized, through legal, financial, and democratic autonomy. Switzerland is, furthermore, an interesting case to reflect on sustainability, effectiveness and efficiency in light of actors' preferences, as direct-democratic instruments and the legal system create a multitude of veto points where (local) decision-makers and stakeholders can block an administrative reform and perpetuate the status quo. Said differently, the aspect of preference seems to be (almost) as important as the fulfillment of legally defined goals in such a system.

Future research is needed that relates actors' preferences in other political systems, where the public has different or less direct democratic instruments at its disposal to block decision-making or implementation than in Switzerland. Further analyses would also benefit from connecting an assessment of actors' preferences with goal achievement with the implications for sustainability.

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Appendix A

Table A1. Number of contacted actors (by category) of the stakeholder survey and response rate.

	Overall
1. Confederation	6
2. Canton	49
3. Municipalities	43
4. Water technicians	40
5. Water suppliers	10
6. Engineers	9
7. Interest groups	15
Overall	172
No response	19
Response rate	90.1%

Table A2. Organizational type and corresponding survey questions.

Organization Type	Survey Items
Public bureau	(1) Municipalities should be responsible for water supply (+). (2) Water extraction should be local (+). (3) Municipalities are not qualified as the owner of the primary water infrastructure (provision, storage, and transport) (−). (4) Citizens should in any case be able to vote on financial issues related to water supply (+).
Contractual consortium	(1) Municipalities should be responsible for water supply (+). (2) Coordination among municipalities is best regulated by contracts. (+). (3) Municipalities do not qualify as the owner of the primary water infrastructure (provision, storage, and transport) (−). (4) Citizens should in any case be able to vote on financial issues related to water supply (+). (5) Coordination among municipalities is best stipulated by contract (+).
Inter-municipal association	(1) An inter-municipal association does not qualify as an operator of the primary and secondary water supply infrastructure (provision, storage, transport, and local distribution) (−). (2) The primary water infrastructure (provision, storage, and transport) is ideally operated by an inter-municipal organization (+). (3) An inter-municipal organization qualifies best for ownership of the primary water infrastructure (provision, storage, and transport) (+). (4) A private organization is superior to a public organization for water supply (−).
Public joint-stock corporation	(1) For water supply, an organization under private law is superior to an organization under public law (+). (2) An inter-municipal organization qualifies best for ownership of the primary water infrastructure (provision, storage, and transport) (+). (3) Municipalities that supply water should have a higher vote share in an inter-municipal organization (+). (4) A management that is independent of the political system should be preferred for water supply (−).
PPP	(1) Municipalities should be responsible for water supply (+). (2) For water supply an organization under private law is superior to an organization under public law (+). (3) Water supply should not be managed by an external service provider (−). (4) Management that is independent of the political system should be preferred for water supply (−).

Note: values for each question range between +1.5 (fully agree) and −1.5 (fully disagree). Positive relationships between the question and the organizations are indicated by (+), negative relationships by (−). Negative relationships were recalculated to fit the scale. Source: own representation.

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