

Factors Influencing Civil Society Success in the Co-Creation of Digital Public Policy¹

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Abstract

Digitalization, broadly defined as the integration of digital technologies into all aspects of life and society, affects the co-creation of public policies, including stakeholders. Most digital civil society organizations have been set up during the past decade. Therefore, the question arises: What factors determine successful co-creation of digital policies – that is, policies specifically designed to address the challenges and opportunities arising from digitalization itself? Drawing on data from a survey of 37 Swiss digital civil society organizations and platforms, we studied the capacities of digital civil society in co-creating digital policies. We conclude that digital civil society is advanced in terms of knowledge of digital technologies and their opportunities and threats. However, more skills are required in communication, policy advocacy, and participation skills to effectively co-create digital public policies.

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Introduction

Integrating digital technologies into operation and delivery of values (digitalization) has reached not only the economic sector but also civil society, most recently on a larger scale since the COVID-19 pandemic. Digitalization pushes society to do things differently than it is accustomed to, like building and adopting new technologies in everyday life (Gordon, 2019). It raises interest of researchers on impacts of digitalization and co-production (defined as participation on producing public goods by those who consume them) and co-creation (defined as participation on shaping public policies by lay people) (Brandsen and Honingh, 2018; Lember et al., 2019; Wouters et al., 2023).

Gathering interests in civil society (we cover non-profit organizations and individual civic engagement under this term) leads to economies of scale and sharing of know-how on the part of individuals. Many activities in civil society are now increasingly being handled digitally, ranging from communication, data collection and processing through to decision-making. In addition, an increasing number of stakeholders have made digitalization, its opportunities, and risks their primary mission. However, ‘digital civil society’ does not mean traditional civil society organizations using digital tools. It possesses distinct characteristics. These organizations often operate in a more decentralized, network-based manner, leveraging technology for rapid mobilization and communication. They may have a greater focus on issues like data privacy, online freedom of expression, digital inclusion, and the ethical implications of technology. The field of operation – the digital sphere – inherently influences their structure, strategies, and relationships with other actors, including government and the private sector. This project acknowledges these distinct characteristics and focuses specifically on organizations whose primary mission revolves around shaping the societal impacts of digitalization, not just using digital tools for existing tasks.

To study the role of civil society in shaping digital policy (the digitalization of public services and policies to empower citizens to use digital tools), we selected Switzerland. Swiss civil society is sizable, with high volunteer involvement and lower government support (Helmig et al., 2017). This unique structure provides an excellent opportunity to study the role of civil society in co-creation. In this country, civil society does not receive a huge amount of support from the public sector. Thus, civil society does not implement public sector policies directly, but is instead independent with engaged people.

Digitalization is an issue pushed by business, even if it relates co-production and co-creation (Surva, 2022) because the providers are strongly business-oriented (Seeliger and Sevignani, 2022). In Switzerland, digitalization has been perceived as a business and public sector domain. (Estermann et al., 2018) point out that

business models are enablers of the digital society in Switzerland. They also stress that both the public and business sectors perceived civil society to be in a mediating role between these two sectors. Such a role for civil society would foster networking, dialogue among stakeholders, and receive political support (from the public sector) and innovative solutions from the business sector. Still, there is a gap in our knowledge of the role of civil society in shaping digitalization. This is concerning because digitalization increasingly affects our society (e.g., Chat-GPT as a recent example). Civil society might have the capacity to positively shape how the effects of digitalization affect our society. We therefore aim to fill this gap regarding the role of civil society in digitalization by applying the perspective of co-creation (a collaboration of lay people on policy designcreation – see the definition in Brandsen and Honingh, 2018). According to Hantrais and Lenihan (2021), Chakravorti et al. (2020, p. 36), point out that Switzerland belongs to digitally advanced countries concerned with social equity, inclusion, and trusting attitudes. This makes co-creating approaches very fitting, enabling all stakeholder inclusion, mutual trust, and equity development. Moreover, Hantrais and Lenihan (2021) stress the importance of a human-IT interface and engagement with users.

In our analysis, we concentrate on co-creation as we see it more important than co-production. Co-creation shapes policies and, thus, creates the framework for co-production in a systemic way. There are various papers about using digital tools to participate in co-creation, but we see a gap in the knowledge of co-creation of digital policies itself.

For co-creation, people need expertise, know-how and skills to make a reasonable contribution. One of the common obstacles in co-creations is a lack of such competencies (Vamstad, 2012; Williams et al., 2016). In such a case, people are unable to contribute (Loeffler and Bovaird, 2016). Co-creation in digitalization is even more challenging as it requires not only soft skills, but also knowledge about digital technologies (their threats and opportunities), and capacities to use them. Not everyone possesses this knowledge. To be active on social media does not mean that a civil society organization is skilled in digitalization. The current stream of literature speaks about communication and advocacy using digital technologies (Aykurt and Sesen, 2017; Waeterloos et al., 2021). However, this is not the theme we introduce in our research. Our study focuses on a different role of civil society, namely how civil society can actively influence digitalization as a policy.

To add to our knowledge about digital civil society in shaping public policies, we concentrate on the following research questions: What factors determine the perception of successful co-creation of digitalization? What can Swiss digital civil society offer to other partners in digitalization?

It is important to acknowledge the multifaceted nature of “digital policy.” This term encompasses a wide range of policy areas, from cybersecurity and data protection to digital inclusion, e-government, and the regulation of online platforms. The specific type of policy, and the form of governmental intervention (e.g., broad framework legislation, specific regulations, or technology-driven solutions like RegTech), will significantly influence the dynamics of co-creation. For example, co-creating policy on data privacy might involve different stakeholders and processes than co-creating policy on the use of artificial intelligence in public services. While this study takes a broad view of digital policy, recognizing the diversity within this field is crucial for understanding the context of co-creation.

1. Literature Review

1.1. Co-Creation in Policy-Making

The concepts of co-creation have gained popularity among researchers during the past decade (Brandsen et al., 2018). With the current problems of public budgets and austerity (Cepiku et al., 2016), these concepts provide an excellent opportunity to help the public sector provide high-quality services and policies.

Co-creation differs from co-production approach. It refers to situations where lay people take part in creating public policies, while co-production refers to participation of lay people on producing public goods that they consume (Brandsen and Honingh, 2018). From this perspective, co-creation has an impact on a broader range of stakeholders, whereas co-production affects only those individuals who are directly involved in the production of public goods. Following this definition, these two concepts distinguish in the difference in participation and decision-making between operative production (co-production) where no policy-making is needed and strategic planning (co-creation) where policy-making is the core of the activities (Potluka, 2021).

Since both sides, i.e., the public sector and citizens, have control over the outcome of the processes, co-creation become an attractive option. The public sector can achieve savings by utilizing resources provided by individual people. This kind of participation is also advantageous for individuals as they control the quality of goods, services, and policies (Lindenmeier et al., 2021; Loeffler and Bovaird, 2016).

We focus on digitalization because it is becoming an increasingly integral part of everyday life and public policies, among others to mention education (Bonny and Cahlikova, 2025; Tomczyk, 2024), or spread of digital technologies in

healthcare (Ruyobeza et al., 2025). The elements of the supporting role of digitalization are, for example, fast communication, datasets as assets, and data collection, which aid effective and efficient decision-making (Bernholz et al., 2013; Häussler, 2021; Horak and Bodensterfer, 2017; Montalvan Castilla and Pursiainen, 2019). However, we see a gap in that the role of civil society in shaping digital policies has not been studied extensively, unlike other types of policies.

Civil society tends to take the role of an educator in the socio-political reality of the digital age (Daskal, 2018). This concerns access to information, knowledge about rights, understanding of the topic, the ability to act based on information, and advocacy for digital rights (Daskal, 2018). Platforms have become a popular tool activating the involvement of civil society in co-creation. This supports the creation of public value through co-creation (Meijer and Boon, 2021), for example, when enabling volunteers to find organizations to help (Mos, 2021; Trautwein et al., 2020).

However, the role of digital civil society in co-creation is not without its complexities and potential contradictions. On the one hand, their technical expertise and familiarity with digital platforms could make them valuable partners in co-creating digital policies. They might possess unique insights into the needs and concerns of online communities and be able to facilitate broader citizen engagement. On the other hand, the very nature of some digital civil society actors, particularly those with activist or hacker backgrounds, might lead to a lack of trust from government entities. Concerns about security, data privacy, or ideological differences could hinder collaboration. The perception of these organizations as potentially disruptive, rather than constructive, could limit their influence in formal policy-making processes. Therefore, it is crucial to examine not only the potential for co-creation but also the barriers and tensions that might exist.

1.2. Conditions for a Successful Co-Creation

To successfully co-create public policies, stakeholders on all sides must be willing, able, and have the systemic opportunity to co-create (Hager and Brudney, 2011; Haski-Leventhal et al., 2018; Loeffler and Bovaird, 2016). Whether or not stakeholders can make policy is dependent on the political system and the culture of participation and digital technologies only echoes the approaches (Lember, 2018; Lember et al., 2019; Wouters et al., 2023). The mutual relationship of relevant actors in the co-creation varies across countries and political systems. The Swiss political system is open to the participation of citizens, and the costs associated with participation in the political process are low (van Houwelingen, 2018). The question of willingness touches on the motivation of actors on both sides. We

have also addressed this issue in our research to ensure that we have not overlooked certain factors. The primary goal of our research is to ascertain whether the Swiss digital civil society has sufficient capacities (skills and knowledge) for co-creation. This encompasses not only knowledge of digitalization, but also policy advocacy and participation skills. For that reason, we include the question on the politicians target groups in our analysis (Q10), frequency of invitation to political discussion (Q15), and the age of the stakeholder from civil society (Q2) as we assume that if they are active in these fields, and older, they dispose with skills and knowledge on how to successfully proceed in co-creation.

Co-creation have its limits that stakeholders need to take into consideration. Political representatives can feel threatened and avoid these approaches, limiting their political power and imposing responsibilities on them that do not relate to their decisions (Loeffler and Bovaird, 2016). Moreover, stakeholders can differ in their understanding of co-creation and participatory decision-making (Crompton, 2019; Lember, 2018; Lember et al., 2019).

There are also challenges on the side of participating individuals. Not everyone can work with digital technologies (for example, due to various data formats, security, skills, access, and costs) (Bernholz et al., 2013; Häussler, 2021; Horak and Bodendorfer, 2017; Montalvan Castilla and Pursiainen, 2019). In such a case, a coordinated effort in an NPO can help in sharing knowledge and skills and improves the chances for successful co-creation (Potluka, 2021). Thus successful participation in co-creation requires willingness to collaborate and to do conceptual work (Estermann et al., 2018) where NPOs can provide effective mutual support among members of an NPO.

Financial capacities and volunteering are among the most crucial aspects of capacities within civil society. Long-term growth of assets is perceived as the essential attribute of financial health within civil society organizations (Bowman, 2011; Fagan, 2006; Potluka et al., 2017). It provides resources for other activities in civil society like operational knowledge, expert knowledge and political networks, and hiring personnel (Carmin, 2010). The latter resource is a specific issue in civil society because it concerns not only paid staff but also volunteers (Studer and von Schnurbein, 2013; von Schnurbein et al., 2023).

Beyond financial and personnel resources, networks and network governance are also among the assets that affect the results of co-creation. For a network and co-creation to be successful, trust, legitimacy, learning, power, and fairness should be present in the networked governance and co-creation (Larsson, 2019; Wegner and Verschoore, 2022). Civil society is regarded as a crucial stakeholder adding to the legitimacy of the whole process and counterbalancing the interests of the business and public sectors (Estermann et al., 2018; Larsson, 2019).

Moreover, we understand co-creation as a process in which political decision-making belongs to politicians. Civil society is taken as an advocate of ideas helping politicians to solve complex societal problems (Ansell and Torfig, 2021).

1.3. Current Experience from Digital Co-Creation and the Role of Civil Society

Co-creation in digitalization has become popular. However, many obstacles still prevail. Lack of trust on the part of both the public sector and civil society is accompanied by formalized approaches. Reluctance to listen to other partners or dependency on funding undermine the impact of co-creation in digitalization (Rodríguez Müller et al., 2021).

Low trust among stakeholders leads to formal approaches to collaboration and a need to implement additional regulations. As a consequence, this formality reduces the effects of co-creation. These formal approaches are manifested in a lack of information about further actions, realistic results, and are thus only vague declarations. On the other hand, positive examples exist where civil society has defined specific goals with specific outcomes, like in education, digital piloting, open government data, dissemination platforms, or various applications (Rodríguez Müller et al., 2021).

The activities of civil society organizations are often financed from sources other than public funding such as donations or grants. This approach fosters civil society's independence while representing its interests and increases the quality of activities as it lacks bureaucracy. In addition, another benefit of such an approach for civil society is that it is easier to attract donors and grants, because the collaboration or activity is validated by the public sector, which raises confidence in project outcomes.

Multiple examples showcase the public sector's work with people organized within civil society to achieve a better outcome in relation to various policies and projects related to digitalization. The nature of this collaboration varies depending on the policy area. For instance, in the development of open data portals (a form of data governance policy), civil society organizations might contribute by identifying relevant datasets, developing user-friendly interfaces, or advocating for data transparency. In contrast, in the development of regulations for online platforms (a form of regulatory policy), civil society might provide input on issues like content moderation, freedom of expression, and user rights. The participation of associations of organized people with skills in digitalization is a typical approach, because they are already acquired the skills pertinent to accomplishing the goals of such cooperation.

Communication and advocacy using digital technologies (Aykurt and Sesen, 2017) should be used when reaching out to the active part of civil society that

possess the skills needed for co-creation and building trust between different stakeholders. For instance, open calls online or on social media calling for participation in various projects, pilot projects or working groups that focus on the co-creation of policies or implementation has the potential to reach civil society and make it feel welcomed and valued.

2. Data and Methodology

To collect data, we conducted an online survey and organized a workshop. The online survey was conducted on the Qualtrics platform from 19 July to 17 November 2021. As Switzerland has several national languages, the survey was made available in German, French, and Italian. This was done to obtain a more representative sample. An English translation of the survey can be found in the appendix.

The workshop was held on 6 July 2021 with the participation of 13 civil society experts from Switzerland. We invited those experts who are the most influential within the digital civil society (e.g., they are engaged in various platforms within both civil society and the public sector). During the workshop, we discussed questions about the role of civil society in shaping digital policies in Switzerland. The reason for organizing the workshop was the intention to enable participants more space to express their ideas and experience with co-creation of digital policies in Switzerland. Moreover, it helped to triangulate the results from the survey.

2.1. Selection of Organizations for a Survey

The target group for the survey was the digital civil society in Switzerland that deals with the social challenges of digitalization and works to ensure that the spread of digital technologies is shaped in the interests of society. We used the definition of civil society by Salamon and Anheier (1998) and applied an additional criterion, namely that these entities must be concerned with digitalization (simply using digital technologies does not meet this requirement). This distinction is crucial: we are not studying traditional civil society organizations that have adopted digital tools, but rather entities whose existence and purpose are fundamentally intertwined with the digital sphere and its societal implications. The said target group is primarily comprised of organizations founded due to a digital societal challenge and which are experts in digitalization. Organizations from traditional civil society were also invited to complete the survey. These organizations were not initially experts in digitalization, but have partially modified their missions and tasks due to the challenges of digitalization. Due to the importance of this distinction, we included this information in our analysis (see Q1 from Annex 2,

and Table 3). The survey did not cover organizations that use digitalization merely as a technical tool, as a means to an end, and to better fulfill their tasks (e.g., solely using websites to inform their target groups).

We selected the list of contacts in four steps. First, the survey was based on the CEPS database of Swiss associations and foundations, where all organizations with a purpose relevant to digitalization were filtered out. Since the CEPS database only contains officially registered organizations. At the end of 2020, 13,514 charitable foundations were registered the commercial register along with 9,513 associations (Guggi et al., 2021). From this list of organizations, we selected only those organizations whose purpose is clearly relevant to digitalization. Their stated mission contains at least one of the keywords relevant for digitalization (for the list of keywords, see Annex 1).

For this selection, we used the keywords in multiple languages. This approach ensured that the result included organizations with missions written in German, French, Italian, and English. After this filtering, 2,173 foundations and 580 associations remained in the sample. The mission of some organizations contains more than one of the keywords.

Although the keywords related to digitalization appeared in the mission statements of many organizations, this does not mean that these organizations are engaged in digitalization.

Therefore, in the second step, we increased the relevance of the sample by applying further exclusion criteria. These exclusion criteria were used to refine the relevance of the sample further: (i) the organization is in a state of liquidation; (ii) if a foundation or association uses a website to promote itself but does not systematically address the issue of digitalization; (iii) the organization is a pension fund. This criterion only applies to foundations; (iv) the organization is closely associated with a company. This last criterion was checked on the Internet.

Third, we added informal communities and structures that are not officially registered in the Swiss Commercial Register. For this reason, we conducted Internet search and added 64 cases of informal structures to the resulting sample. We also included individuals in the sample who we assume play an essential role in informal digital structures.

Fourth, the last round of the selection process was conducted in collaboration with the Stiftung Mercator Schweiz, knowledgeable with the digital civil society. The result is a list of 99 organizations that we consider to be the core of digital civil society organizations in Switzerland. We asked these organizations to fill out the questionnaire (for the list of the questions, see appendix).

From the 19 July to the 17 November 2021, we received 49 responses of which 37 full that we used later in the QCA. This represents 49.5% (37.4%) of all identified

stakeholders were asked to participate in the survey. Of these, 29 organizations were set up specifically because of digitalization issues. Eight organizations are connected to classical civil organizations, but reoriented their activities towards digitalization. For more information describing the sample, see Annex 3.

The method of data collection also imposes certain limitations on our research. The measurements remain based only on the subjective statements of the respondents (self-assessment). Due to the anonymization of the data, we cannot merge the data with the actual information, e.g., published in annual reports in case of registered NPOs. Thus, the results about the real capacity of civil society must be taken cautiously.

2.2. Qualitative Comparative Analysis

We apply qualitative comparative analysis (QCA) to find factors leading to a successful perception of co-creation among representatives of digital civil society. We operationalize the success and failure of co-creation by NPOs using the answers on the question 25 from the survey (see Annex 2). This method applies Boolean algebra and deterministic approach to analyze factors leading to a result (Ragin, 2008). The method sequentially tests whether the tested factors lead to the result, or a combination of them (generally speaking if A happens, then C happens; or if A and B happen simultaneously, then C happens, etc.). It means it tests whether we observe the pre-defined result (in our case perceived success in co-creation) when a particular factor is at place (for example, an NPO concentrates on cyber security) or a combination of factors is at place (e.g. concentration on cyber security together with transmission of knowledge).

According to our data, we know when the role of civil society is perceived as success and when as a failure. Applying Boolean algebra, we can find factors and their combinations that lead to the observed variable in our data (Ragin, 2008). This method can apply smaller samples than other methods. Thus, it is a method suitable for our research with a relatively small sample. We used STATA 13.1 SE, and the *fuzzy-set* QCA program (Longest and Vaisey, 2008) to analyze the data.

We are looking for factors influencing the positive perception of the role of civil society in co-creating digital policies in Switzerland. We operationalize the variables of intended effect (perception of success in co-creation) to values 0 and 1 (failure/success). The variables influencing our interest are dummy variables with values 0/1, or between 0 and 1 (see the list of variables in Tables 3 and 4). We discuss the results according to the percentage of causal configurations resulting in the same outcome value (consistency) and the relative importance of combinations of causality (Ragin, 2008).

3. Results and Discussion

The following section presents the perceived results of Swiss digital civil society in co-creation. Informed by our understanding of capacities for co-creation, we present the results of the financial and personnel situation of Swiss digital civil society. Moreover, an important part of the capacities is networking and network governance.

3.1. Success and Failure in Co-Creation of Digital Public Policies?

Our survey and workshop demonstrate efforts to engage civil society in co-creating digital policies. The public sector regularly invites civil society representatives to participate in working groups and policy-making processes. Only about 7% of the survey participants are not involved in a working group helping the public sector with decision-making processes (commission discussions, consultations, debates, etc.) (see Table 1). Organization size (refers to question Q20) does not affect how often policymakers or the public administration invite the organizations (see question Q15, chi-square test, $p\text{-value} = 0.000$, only the result is presented here, not the whole crosstab). On the other hand, respondents also point dissatisfaction with the results of their work in relation to the public sector (Q25). This dissatisfaction is not because either party is opposed to the involvement of civil society in co-creation.

Perceived success achieved by civil society seems to be marginal. On the one hand, majority of respondents (72%) is satisfied with the changes their activities bring about in their target groups (Q11). On the other hand, a majority believes that Swiss politics and administration do not take the concerns of digital civil society seriously enough. However, these organizations are regularly invited to participate in policy-making (see Table 1). This confirms a general willingness to co-create on both sides – civil society and the public sector.

Among the main target groups of the Swiss digital civil society are political actors (Q10, 23.0% of the respondents), the national (23.0%) and international (12.2%) public, and members of the respondents' organizations (12.2%). These results confirm that digital civil society is oriented toward the right target group concerning co-creation, but fails to achieve satisfactory impacts on public policies or position itself as a relevant stakeholder (see Table 1). Moreover, the experts in the workshop agreed that business, politics and scientific organizations dominate the advisory bodies. They confirm the potential position of digital civil society as a mediator according to the study of Estermann et al. (2018) and the prevailing dominance of other stakeholders (Larsson, 2019).

The workshop participants commented that civil society finds itself only in the consumer and data provider roles but not in the role of being able to shape the agenda.

Table 1

Intensity of Invitations to Participate in Policymaking and Satisfaction with Achieved Impacts

Satisfaction (Q27)		Frequency of being invited to take part in policy-making (annually) (Q14)				
		0	1 – 2	3 – 5	More than 5	Total
Previous votes on digital policy issues mainly had positive results.	N %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Previous votes on digital policy issues had mostly negative results.	N %	0 0.0%	1 12.5%	1 12.5%	0 0.0%	2 7.7%
Swiss policymakers and administration do not take digital civil society seriously enough.	N %	1 50.0%	4 50.0%	2 25.0%	7 87.5%	14 53.8%
Swiss policymakers and administration do take digital civil society seriously enough.	N %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Digital policy is not yet sufficiently addressed in politics and the media.	N %	1 50.0%	3 37.5%	5 62.5%	1 12.5%	10 38.5%
Digital policy is sufficiently discussed in politics and the media.	N %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total	N %	2 100.0%	8 100.0%	8 100.0%	8 100.0%	26 100.0%

Note: Not all respondents answered both questions. Two organizations with zero invitations are either newly set up or unwilling to participate in policymaking. Each respondent could select only one option. Chi-Square test with $p\text{-value} = 0.333$.

Source: Survey.

3.2. Financial and Personnel Capacities in Digital Civil Society for Co-Creation

Analysis of the financial situation of surveyed organizations confirms the importance of financial resources for implementing the organizations' visions. Concerning the organizations' budgets and their ability to achieve financial sustainability, the data confirm that larger organizations with annual budgets above half a million CHF are generally in a better position (Q20). They implement their visions easier than very small organizations (Q11) (up to 10,000 CHF annual budgets) (chi-square $p\text{-value} = 0.013$). From this perspective, the digital civil society is in a similar position as usual civil society (Bowman, 2011; Carmin, 2010; Potluka et al., 2017).

The respondents complain about the difficulties associated with financing. We also see positive aspects in the data. These are primarily related to the distribution of resources. We have identified five main funding sources, with the own resources of the respondents making up a third of the sources (Q22), followed by subsidies from private foundations (28.6%) and the public sector (19.0%). As a whole, the Swiss digital civil society is not dependent on just one type of funding source. Thus, it reduces the risk of financial problems.

The organizations of digital civil society are relatively small. They have between 0 and 5 employees (74.3% of respondents). Moreover, at least 54.3% of the respondents have more volunteers than permanent employees (the share can be even higher, see Table 2).

Table 2

Share of Volunteers in the Workforce in Digital Civil Society

			How many volunteers work for your organization? (Q18)				
			0 – 5	6 – 10	11 – 40	> 40	Total
How many employees work for your organization (FTE) (Q17)	0 – 5	N %	8 28.6%	3 10.7%	4 14.3%	5 17.9%	20 71.4%
	6 – 10	N %	3 10.7%	1 3.6%	1 3.6%	1 3.6%	6 21.4%
	11 – 40	N %	0 0.0%	0 0.0%	1 3.6%	1 3.6%	2 7.1%
	> 40	N %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total		N %	11 39.3%	4 14.3%	6 21.4%	7 25.0%	28 100.0%

Source: Survey.

From this perspective, Swiss digital civil society is relatively small in terms of finances and personnel. Organizations rely more on individuals or a dozen people with knowledge of digital technologies. The limited human resources (Table 2) also shows that in regard to the public sector's decisions and co-creation, not all of these people possess both digital knowledge and knowledge of the field of participation as they need to do some other activities for these structures. This feature is probably the most important aspect that highlights the causes of dissatisfaction in civil society with the results of co-creation and participation. However, cooperation within digital civil society and networking can compensate for this limiting factor.

Furthermore, we see various resources available as a decisive factor for the perceived success in co-creation. These resources relate to volunteers, staff, funding, but also networks to create public values (Potluka et al., 2017; Su, 2018). Availability of resources affect civil society and its capacity to participate effectively (Martinelli, 2010). Thus, in our QCA analysis, we included also related questions from the survey (Q16, Q17, Q18, and Q20, see Table 3, and Annex 2).

3.3. Flat Networking Structures

Swiss digital civil society seems to be well-interconnected. The vast majority of organizations in the survey focus on Switzerland as a whole (45.2%) or are active internationally (41.9%) (Q6). The organizations are relatively well-networked with one other. About 9 out of 10 organizations are in regular contact with

at least three other organizations (51.6% of respondents have more than five contacts) (Q16). When we asked the survey participants for the names of other digital civil society organizations they are in regular contact with, we received information about the relatively flat structure of the networks. While several names appeared, these names were rarely repeated. The most frequently mentioned name appeared in only five responses, followed by a second organization with three responses. Other names appeared only twice or once. This highlights the prevailing informal structures within digital civil society in Switzerland.

Two factors can potentially explain this flat structure. The first one concerns the theme of digital civil society. Informal groups (e.g. hackers) can hardly be expected to organize themselves formally or unite under a formal umbrella organization. The second factor is the length of time digital civil society organizations have been in existence. The officially registered organizations are young. In our sample, 56.7% of respondents' organizations and platforms have been set up since 2012 (CEPS Datenbank). Thus, the governance of co-creation processes in digitalization is dominated by the other two sectors outside civil society (Estermann et al., 2018; Wang and Ran, 2023).

Such a flat structure limits the strength of civil society in co-creation. As far as the public sector is concerned, it is possible to invite stakeholders with knowledge about a specific field. However, finding a representative capable of engaging in policy dialogue, who is simultaneously able to represent digital civil society as a whole could be challenging.

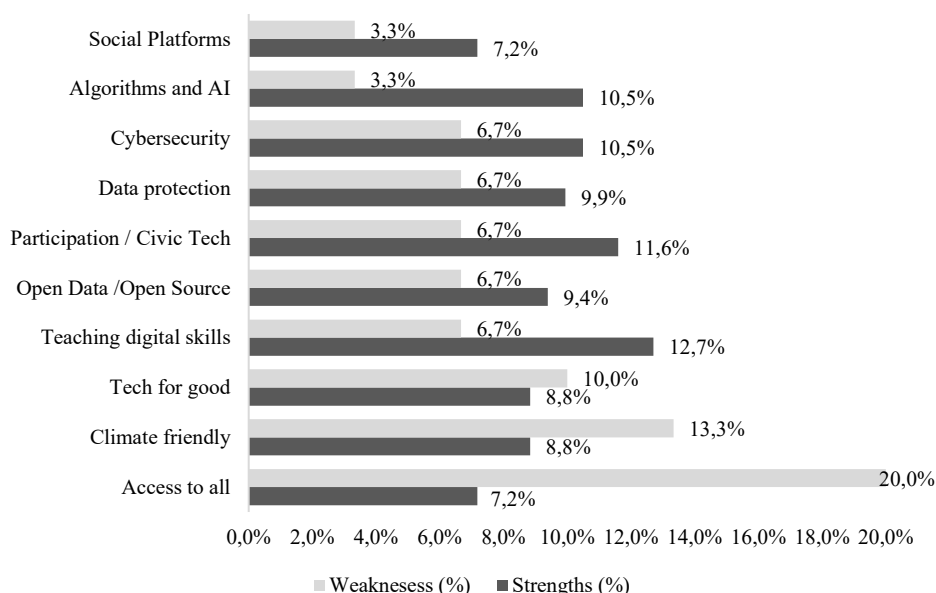
3.4. Perceptions of Strengths and Weaknesses in Digitalization

More than 80% of the respondents believe that civil society is not playing a shaping role in digital Switzerland (Q25). In particular, they criticized during the workshop the fact that Swiss politics and administration do not take the concerns of digital civil society seriously enough and that both politics and the media do not address digital public policy sufficiently.

The respondents also identified strengths and weaknesses in digitalization in Switzerland (see Figure 1). Switzerland's most significant need for action prevails in digital skills, cybersecurity, data protection, participation, and algorithms. They rate Switzerland the highest in access for all.

According to the workshop participants, civil society still does not recognize the opportunities and risks that digitalization brings. The lack of an overview and involvement has resulted in public mistrust toward the state and the economy because of their individual objectives (see the importance of trust in Larsson, 2019; Wegner and Verschoore, 2022), but civil society has not yet proved able to bridge this gap.

Figure 1
Digital Strengths and Weaknesses in Switzerland (Q23 and Q24)



Note: For Strengths, $n = 41$ (various responses from 30 organizations), and Other $n = 6$ (15.8% of total responses); $n = 208$ for Weaknesses (various responses from 40 organizations), Other $n = 7$ (3.3% of total responses); Both questions are multiple-choice: In which of the following topics do you identify (a) strengths of Switzerland and see no primary need for action? (Q23) (b) Weaknesses of Switzerland and see a current need for action? (Q24).

Source: Survey.

It is important to remember that the ever-shrinking group of people with no digital skills is increasingly being left behind and excluded. These people are precisely the target group which civil society should aim to address.

3.5. Factors Leading to the Success of Co-Creation of Digital Policy

We have tested what factors affect success in perceived opinions regarding successful co-creation of civil society on digital public policies. In the first step, we concentrated on the characteristics of the involved organizations (see the list in Table 3). None of the combinations of these characteristics provided a percentage of causal configurations above 0.8. Moreover, the overall consistency when testing single variables is also very small. Within these statistically insignificant results, we see (Table 3) that organizations set up because of digitalization during the past decade play a more critical role in the configurations. We assume this result is attributable to their better knowledge of the situation in digitalization. They respond to the overall development in the field of digitalization accordingly.

Moreover, the size of networks follows, however with very low consistency of solutions. Nevertheless, we must be aware that the explanation uniquely attributed to those variables (unique coverage) equals zero.

Table 3

Factors Influencing Perceived Success in Co-Creation of Digital Policies

Factors (values 1 / 0)	Raw Coverage	Unique Coverage	Solution Consistency
Type (due to digitalization set up / classical organization) (Q1)	1.000	0.000	0.095
Year of the establishment (after 2012 / before 2012) (Q2)	1.000	0.000	0.167
Political stakeholders as target group (yes/no) (Q10)	0.500	0.000	0.071
Annual invitations to political working groups (more than 3 / 2 or less) (Q15)	0.000	0.000	0.000
Size of networks (more than 5 partners / 5 or less partners) (Q16)	0.500	0.000	0.100
Employees (more than 5 / 5 or less) (Q17)	0.000	0.000	0.000
Volunteers (more than 5 / 5 or less) (Q18)	0.000	0.000	0.000
Budget size (more than CHF 500'000 / less than CHF 500'000) (Q20)	0.000	0.000	0.000

Note: Total Coverage = 1.000; Solution Consistency = 0.091; in brackets, we define what questions were used to calculate the value of a factor.

Source: Own analysis based on the survey.

These results show that the combinations of typologies of organizations in our sample do not significantly affect whether organizations perceive co-creation as successful (see Table 4). In other words, we can neither say that a specific group of organizations is more successful in co-creating digital policies nor define such a group.

Table 4

Themes Influencing Perceived Success in Co-Creation of Digital Policies

Variable (values 1 / 0)	Raw Coverage	Unique Coverage	Solution Consistency
Access for all	0.429	0.000	0.176
Transmission of knowledge	0.429	0.000	0.136
Participation	0.429	0.000	0.150
Tech for good	0.429	0.000	0.200
Open Data	0.429	0.000	0.143
Algorithms and AI	0.429	0.143	0.222
Social platforms	0.429	0.000	0.222
Data protection	0.429	0.000	0.176
Cyber security	0.143	0.000	0.100
Climate-friendly technologies	0.286	0.000	0.250

Note: Total Coverage = 0.857; Solution Consistency = 0.158.

Source: Own analysis based on the survey.

Once again, the themes cannot be attributed to the success of the co-creation of digital policies. Only the algorithms and artificial intelligence achieved coverage higher than zero. Still, the values are very low. Thus, there is no specialization

in digital public policies where civil society provides specific knowledge or skills that would lead to success in co-creation.

To answer our research question on what factors determine the perception of successful co-creation of digitalization, a look at digital civil society in Switzerland shows no defining characteristics of organizations or themes that are more successful in co-creation than others. This finding confirms the nature of civil society as a system with a great diversity of interests that make it difficult for civil society to assume a leading role in political processes. As cases from other fields show, collaboration among various stakeholders engenders success (van Aalderen and Horlings, 2020). As suggested by Estermann et al. (2018), a moderating role in the debate would be appropriate for civil society.

Conclusions

Our study concluded that digital civil society has the possibility to take part in the co-creation of digital public policies in Switzerland. Even though it has such an opportunity, it is not utilizing it effectively. Although civil society organizations perceive success when working with their target groups, they complain that Swiss policymakers and administration do not take digital civil society seriously enough.

We see three factors resulting in this conclusion. By these factors, we also answer our research question on what the capacities of Swiss civil society are when co-creating digitalization policies. Firstly, the digital civil society organizations and platforms are weak in terms of finances and personnel. Secondly, these organizations are based on a voluntary basis and thus have a less formalized structure (this, however, is also a typical feature of civil societies elsewhere), making it difficult for other stakeholders to identify the relevant representatives of the digital civil society to invite to participate in co-creation of public policies. Thirdly, the networks of digital civil society are flat and thus less effective in achieving coordinated efforts in digital policy-making through co-creation. They possess strong digital skills including knowledge of the opportunities and threats, which makes them a potentially strong contributors to public policy debate, but their actual policy-making skills are weak.

To overcome the weaknesses in co-creation within digital civil society, more resources should be planned for coordination and cooperation between organizations to avoid duplication and loss of synergy. This mainly concerns formally organized digital civil society (foundations and associations). Informal groups (like hacker communities) would probably not participate in such activities.

In the foundation landscape in Switzerland, the impact of digitization on society should be brought into focus, and coordination among civil society organizations should also be clearly and unequivocally supported. Organizations with larger budgets and resources should take on this role, albeit on a voluntary basis.

The media and media professionals could collaborate with digital civil society when gathering expertise and opinions about the use of digital technologies. Civil society organizations are able to help them by providing appropriate information.

As regards our second question, if there are co-creation specifics in the digital world, we see that the analysis did not provide significant sets. This relates to both characteristics of successful organizations and themes they are active in. On the one hand, this shows that skills in both the digital and the political sphere are very similar across civil society. Nevertheless, on the other hand, it is an advantage that civil society can moderate the debate between the public and corporate sectors and, through this moderation, contribute to the co-creation of digital policies.

We are aware of the limits of our study. Firstly, we have collected data from only part of digital civil society. Secondly, the survey collects data about perceptions on success and failure in co-creation, not on the actual situation. Third, we exclusively concentrated on skilled organizations primarily oriented towards digitalization. Our research did not involve organizations beyond the group of skilled digital organizations that could possess the skills required for successful co-creation, especially those associations connected to the business sector. As we mentioned, digital policy is framed by business and the public sector. Thus, a collaboration of the civil society and business associations could serve as an intermediating bridge between the digital civil society and the business sector. These limits provide a good opportunity for the future research that should investigate whether a synergy between digitally-skilled and advocacy-skilled organizations could engender synergies in the co-creation of digital policies.

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ANNEX

Annex 1

Search keywords	Foundations	Associations
Digit* (all languages)	19	14
Cyber* (GE, FR, EN), Ciber* (IT)	2	2
Internet (all languages)	14	8
Virtual* (EN, IT), vituel* (FR, GE)	4	1
Open data (all languages)	0	0
Open source (all languages)	0	6
Hack* (all languages)	0	0
Data (EN), Daten (GE), Données (FR), Dati (IT)	66	27
Collective (EN), Kollektiv (GE), Collectif (FR), Collectivo (IT)	1	2
Human rights (EN), Menschenrechte (GE), Droits de l'homme (FR), Diritti Umani (IT)	0	0
ICT (all languages)	3	2
Information technolog* (EN, GE), technologies de l'information (FR), tecnologia dell'informazione (IT)	9	11
Total	88	59

Source: CEPS Datenbank.

Annex 2

Dear Ladies and Gentlemen

On behalf of the Mercator Foundation Switzerland, the Center for Philanthropy Studies (CEPS) and Con-Sense Philanthropy Consulting are collecting a mapping of Switzerland's digital civil society. For this purpose, we are conducting a survey.

The survey examines digital civil society organizations. By this we mean organizations that deal with the social challenges of digitalization and work to ensure that the digital transformation is shaped in the interests of society. This survey does not cover organizations that use digitalization “merely” as a technical tool, as a means to an end, in order to better fulfill their tasks.

Our research has shown that digitalization could also be relevant for your organization. Therefore, we would be very pleased if you could take about 10 minutes to complete the survey.

With your participation, you will make an important contribution to improving the visibility of Switzerland's digital civil society. The mapping provides Stiftung Mercator Switzerland with a solid basis to stimulate a discourse on the role and strengthening of the "Digital Civil Society" ecosystem.

Your answers will be treated confidentially and are part of a statistical survey. In the event that the mapping is published, it is possible that your organization will be mapped in a schematic representation according to geography, size, subject area or similar. It will not be possible to draw conclusions about the confidential information.

If you wish, we will inform you about the results of the survey. For this purpose, you can enter your email address at the end of the survey. We will use this only to send you the results.

This link will take you to the survey: XXX

Deadline survey: August 13, 2021

Please feel free to forward this email to any digital civil society organizations you know. The more that participate in the survey, the more meaningful it will be.

Thank you very much for your valuable support and best regards,
Francesca Giardina, Mercator Foundation Switzerland
Regula Wolf, Con-Sense
Dr. Oto Potluka, CEPS

Questionnaire:

Thank you so much for taking a moment to participate in the survey!

Our definition of Digital Civil Society

Digital civil society includes organized movements, organizations, and institutions as well as numerous unorganized or spontaneous collective actions that

- are based on voluntariness,
- subjectively pursue objectives of general welfare,
- do not perform any governmental tasks in the sense of sovereign tasks,
- are not designed to generate a profit,
- not distribute surpluses from its activities to members, shareholders or third parties,
- self-empowered and self-organized,
- Depend to a significant degree on gifts of empathy, time, material resources, and others, and
- who deal with the societal challenges of digitalization and work to ensure that the digital transformation is shaped in the interests of society.

1. Which is more applicable to your organization?

- We were founded as a result of a digital social challenge and are experts (in some areas) in digitalization. We come from "traditional" civil society and are not originally experts in digitalization. However, as a result of the challenges posed by digitalization to the general welfare, we have partially realigned or adapted the content of our tasks.
- Neither. We use digitalization as a technical tool to better perform our tasks.

Since they are primarily users: in digitalization, your organization unfortunately does not belong to our target group (for reference, please find again our definition of digital civil society below). Thank you very much for your participation! If you wish, you may of course still fill out the questionnaire. If not, you can close the window now.

2. In what year was your organization founded?

- I cannot answer
- Comment

3. In which community or city is your organization located?

- I cannot answer
- Comment

4. What is the main language of your organization? (You can choose multiple options)

- French
- Italian
- German
- English
- Other (please specify)

5. For foundations only: Is your foundation more

- Operational
- Grant making
- Operational and grant making
- Umbrella Foundation

6. How large is the impact radius of your organization according to your own assessment?

- Local
- Cantonal level
- Greater region
- National
- International

7. In which field does your organization operate? (You can choose several options)

- Culture and leisure
- Education and research
- Healthcare
- Social services
- Environmental protection and nature conservation
- Community and housing promotion
- Legal, citizen and consumer interests, politics
- Foundations and donations, voluntary work
- International activities
- Religion
- Business and professional associations, trade unions
- Other
- Comment

8. What are the majority of the social benefits targeted by your organization?

(You can choose multiple options)

- Access for all, net neutrality and accessibility
- Teaching digital skills
- Participation / Civic Tech (participation as a process of active co-creation and involvement; creation and use of new participation opportunities)
- Tech for good
- Open Data, Open Source, Open Content, etc.
- Shaping algorithms and AI and other digital decision-making systems in the interests of society and preventing social disadvantages
- Social platforms (create opportunities for exchange, promote social cohesion)
- Data protection / Privacy

- Cybersecurity
- Climate-friendly digitalization (recycling, repairing, energy-efficient, etc.)
- Other: please name
- Comment

9. What actions is your organization taking to achieve the targeted benefits?

(You can choose several options)

- Fundamental work, creating basic knowledge, research
- Political influence, mobilization, lobbying
 - What exactly?
- Awareness raising, education, empowerment, outreach, counseling
- Control/watchdog, protection of society from negative consequences of digitalization
- Innovation, develop new approaches to work
- Multiplication, spread proven models
- Alliance work, enabling networks
- Further measures, with text field
- I cannot answer that

10. What is your primary target audience? (You can choose multiple options)

- Our members
- A certain age group
 - Please name
- A particular socioeconomic group or gender
 - Please name
- Political actors and administration
- Media
- National public
- International public
- Other: please name
- I cannot answer that

11. How satisfied are you with the changes your activities bring about in your target group?

- Very satisfied
- Satisfied
- Just about satisfied
- Not satisfied
- I cannot answer that
- Comment

12. How many people do you reach on average per year, roughly estimated, with your offers/activities *directly* (target group and members; physical and online)?

Exact number or

- 0 – 50
- 50 – 100
- 100 – 500
- > 500
- I cannot answer that

13. Roughly estimated, how many people do you reach on average per year with your offers/activities *indirectly* (extended audience and people benefiting from your activities; physical and online)?

Exact number or

- 50 – 100
- 100 – 500
- 500 – 1000
- > 1000
- I cannot answer that

14. In how many working groups, commissions, expert groups, etc. outside of administration and politics that aim to exert political influence is your organization active?

Exact number or

- 0
- 1 – 2
- 3 – 5
- > 5
- I cannot answer that
- Comment

15. How often per year is your organization invited by the administration / politics to participate in political decision-making processes (e.g. commission discussions, consultations)?

Exact number or

- 0
- 1 – 2
- 3 – 5
- > 5
- I cannot answer that.
- Comment

16. With how many comparable organizations are you in regular exchange, i.e. more than 2 times per year?

Exact number or

- 0
- 1 – 2
- 3 – 5
- > 5
- I cannot answer that.
- Please name the organizations

17. How many employees does your organization have (in full – time equivalents)?

Exact number or

- 0 – 5
- 5 – 10
- 10 – 40
- > 40
- I cannot answer that

18. How many volunteers are working for your organization?

Exact number or

- 0 – 5
- 5 – 10
- 10 – 40
- > 40
- I cannot answer that

19. Does your organization have members?

If yes

- Number of individual members
- Number of member organizations

20. What is the annual budget of your organization? (Will be kept confidential)

- 0 – 10'000 CHF
- 10'000 CHF – 50'000 CHF
- 50'000 CHF – 100'000 CHF
- 100'000 CHF – 500'000 CHF
- > 500'000 CHF
- I cannot judge / I do not want to answer

21. How well does your organization manage to be funded? (Will be kept confidential)

- Problem-free
- Coming through
- Difficult. We have to cut back on our activities and our wages
- Very difficult
- I cannot judge / I do not want to answer

22. Who is your organization's most important funder? (max. 2)

- Public sector
- Benefactors and small donors
- Private funding foundations
- Private sector
- Own resources (income, including membership fees)
- I cannot judge / I do not want to answer

23. In which of the following topics do you identify Switzerland's strengths and see no primary need for action? (Several options are possible)

- Access for all, net neutrality and accessibility
- Teaching digital skills
- Participation / Civic Tech (participation as a process of active co-creation and involvement; creation and use of new participation opportunities)
- Tech for good
- Open Data, Open Source, Open Content, etc.
- Shaping algorithms and AI and other digital decision-making systems in the interests of society and preventing social disadvantages
- Social platforms (create opportunities for exchange, promote social cohesion)
- Data protection, privacy

- Cybersecurity
- Climate-friendly digitalization (recycling, repairing, energy efficiency, etc.)
- Other: please name
- I cannot answer that
- Comment

24. In which of the following topics do you see weaknesses in Switzerland and do you currently see a need for action? (Several options are possible)

- Access for all, net neutrality and accessibility
- Teaching digital skills
- Participation / Civic Tech (participation as a process of active co-creation and involvement; creation and use of new participation opportunities)
- Tech for good
- Open Data, Open Source, Open Content, etc.
- Shaping algorithms and AI and other digital decision-making systems in the interests of society and preventing social disadvantages
- Social platforms (create opportunities for exchange, promote social cohesion).
- Data protection, privacy
- Cybersecurity
- Climate-friendly digitalization (recycling, repairing, energy efficiency, etc.)
- Other: please name
- I cannot answer that
- Comment

25. Which of the following statements do you agree with?

- Civil Society stands on the sidelines and does not play enough of a role in shaping digital Switzerland
- Civil society is playing a sufficient role in shaping digital Switzerland

26. What does civil society need to help shape digital Switzerland (framework conditions, expertise, networking, promotion, visibility, etc)?

27. Which of these pairs of statements do you agree with?

- Digital policy is sufficiently discussed in politics and the media
- Digital policy is not yet sufficiently addressed in politics and the media
- Previous votes on digital policy issues have had positive results in the majority of cases
- Previous votes on digital policy issues had mostly negative results
- Swiss politics and administration take the concerns of digital civil society seriously
- Swiss politics and administration do not take the concerns of digital civil society sufficiently seriously

28. Which organization from the digital civil society (outside your own) do you consider to be particularly successful and why?

29. How do you see your organization in 10 years? (Will be treated confidentially)

- Much larger than today
- Same size
- Small
- Resolved
- I cannot judge
- Comment

30. Final remark, wish, feedback to the questionnaire

31. Name of the organization (voluntary, but very helpful for the evaluation)

Position in the organization:

32. Would you like to be informed about the results of this survey?

- If yes, please write your e-mail address here:
- No

33. By sending us the completed questionnaire, you simultaneously agree to a possible publication of the mapping. It will not be possible to draw conclusions about the confidential information.

- Yes
- No

A n n e x 3: Descriptive Statistics of the Sample

T a b l e A3a

Specialization of the Respondent Organization

	N	%
Education and research	28	18.4
Citizen and consumer interests	20	13.2
Legal system	20	13.2
Politics	20	13.2
International activities	13	8.6
Miscellaneous	13	8.6
Social services	9	5.9
Culture and leisure	6	3.9
Environmental protection and nature conservation	5	3.3
Business and professional associations	4	2.6
Community and housing development	4	2.6
Healthcare	4	2.6
Trade unions	4	2.6
Volunteering	1	0.7
Foundations and donations	1	0.7
Total	152	100.0

Note: N = 48.

Source: Survey.

Table A3b
Social Benefits Targeted by an Organization

	N	%
Teaching digital skills	30	13.0
Open data, open source, open content	23	10.0
Participation/civic tech (participation as a process of active involvement and collaboration; creating and using new opportunities for participation)	21	9.1
Data protection	20	8.7
Other	18	7.8
Designing algorithms, AI, and other digital decision-making systems in the interests of society and preventing social disadvantages	18	7.8
Access for all	18	7.8
Net neutrality and accessibility	18	7.8
Tech for good	17	7.4
Social platforms (creating opportunities for exchange)	13	5.7
Promoting social cohesion	13	5.7
Cybersecurity	12	5.2
Climate-friendly digitalization (recycling, repairing, energy efficiency)	9	3.9
Total	230	100.0

Note: N = 47.

Source: Survey.

Table A3c
Size According to Staff

	Employees		Volunteers	
	N	%	N	%
none	2	4.5	0	0.0
0 – 5	29	65.9	18	46.2
5 – 10	7	15.9	8	20.5
10 – 40	3	6.8	4	10.3
> 40	3	6.8	9	23.1
Total	44	100.0	39	100.0

Note: N = 44.

Source: Survey.

Table A3d
Geographical Scope

	N	%
Larger region	3	6.1
International	22	44.9
Cantonal level	2	4.1
National	22	44.9
Total	49	100.0

Note: N = 49.

Source: Survey.