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Direct Democracy and Political Trust: Enhancing Trust, Initiating Distrust–or Both?

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Abstract: *This study investigates the relationship between direct democracy and political trust. We suggest a solution to the controversy in research centering on positive versus negative effects of direct democracy by analytically differentiating between the availability of direct democratic rights and the actual use of those rights. Theoretically, greater availability of direct democratic rights may enhance political trust by increasing citizens' perception that political authorities can be controlled as well as by incentivizing political authorities to act trustworthily. In contrast, the actual use of the corresponding direct democratic instruments may initiate distrust as it signals to citizens that political authorities do not act in the public's interest. We test both hypotheses for the very first time with sub-national data of Switzerland. The empirical results seem to support our theoretical arguments.*

Keywords: Direct democracy, Political trust, Switzerland, Cantons, Institutions, Public Opinion, Initiatives, Referendums

Introduction

Can direct democracy enhance citizens' trust in political authorities or does it indeed initiate distrust (Dyck 2009)? The concept of political trust has been the subject of numerous studies and its supposed decline is an evergreen in the public debate (Levi and Stoker 2000). Moreover, trust is regarded as an essential resource for the functioning of democratic systems as it "provides leaders more leeway to govern effectively and institutions a larger store of support regardless of the performance of those running the government" (Hetherington 1998: 803).[1] Or put more metaphorically, "political trust functions as the glue that keeps the system together and as the oil that lubricates the policy machine" (van der Meer and Dekker 2011: 95). In recent years scholars as well as commentators were quick to diagnose a lack of trust in political authorities (see Norris 2011), be it due to the financial crisis, political scandals, lack of accountability, or a political system that fails to give citizens a voice.

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[1] See Sztompka (1999: 156, 164) and a recent study by Marien and Hooghe (2011) for further arguments.

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In this respect, participatory democrats and proponents of direct democracy invoke that citizens can be "educated" by direct democratic institutions (Smith and Tolbert 2004), that people in direct democracies participate more in politics (Dyck and Seabrook 2010; Tolbert and Bowen 2008; Tolbert and Smith 2005; Tolbert et al. 2001), are more socially engaged (Boehmke and Bowen 2010; Tolbert et al. 2003), protest less (Fatke and Freitag 2013), show more interest and knowledge in politics, and are more supportive and efficacious (Bowler and Donovan 2002; Bühlmann 2007; Mendelsohn and Cutler 2000; Schlozman and Yohai 2008; Tolbert et al. 2003; also contrary Dyck and Lascher 2009). This suggests that increasing people's influence in politics promises to be a cure against the current crisis of democracy (Cain et al. 2003). But can direct democracy really "repair the frayed ties" between citizens and political authorities (Citrin 1996: 268)?

Recently, researchers lay greater focus on the impact of context for political trust (Zmerli and Hooghe 2011). In view of the relevance of the relationship between direct democracy and political trust, it is thus even more surprising how little research has been carried out so far that actually tests the influence of direct democracy on political trust. Indeed, to our knowledge only three empirical studies can be found:[2] Hug (2005) presents a macro-analysis of 15 post-communist countries and finds no significant relationship; Citrin (1996) and Dyck (2009) analyze data from the United States, and whereas Citrin (1996) finds no difference in aggregate trust between initiative and non-initiative states, Dyck (2009) in fact reports a negative influence of direct democracy on political trust. Hence, he contradicts the optimistic expectations of participatory democrats. In general, empirical studies so far have been limited to the USA and some Eastern European countries.

Therefore, we want to shed further light on the relationship and suggest an answer to the controversy between direct democratic promises and the negative (or, at least, ambiguous) empirical evidence. First, we argue that controversial scholarly positions might to some extent be based on different conceptions of direct democracy. A first conception focuses on the institutional barriers to the use of direct democratic instruments. A second conception focuses on the actual use of direct democratic instruments. For both of these conceptions of direct democracy we expect different effects on political trust. Second, we investigate this relationship for the very first time in a country considered to be the most direct democratic country in the World, Switzerland. With both a long tradition and a wide array (and variation) of direct democratic instruments, the Swiss cantons provide ideal grounds for our empirical analyses.

The article is organized as follows: We start by presenting the two concepts that are of interest here, direct democracy and political trust in the Swiss context. Next, we outline and explain the mechanism between those two concepts, in other words why one should expect direct democracy to increase or decrease political trust. Subsequently, we elaborate on the operationalization of concepts, discuss potential confounding factors and present our methodological approach. Afterwards, we present our empirical results as well as robustness checks and some further analyses. Finally, our findings are summarized and discussed in the conclusion.

Direct Democracy and Political Trust

Direct democracy and political trust are widely-studied concepts in political science. In its most basic sense, trust is a relational concept in that it exists between a truster and a

[2] Despite the title of their book chapter, Smith and Tolbert (2004) analyze external political efficacy.

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trustee, and the former makes herself vulnerable to the latter since the trustee has the capacity to do her harm or betray her. Trust is seldom unconditional in that it is "given to specific individuals or institutions over specific domains" (Levi and Stoker 2000: 476). Trust judgments generally reflect beliefs about the trustworthiness of the trustee. Trustworthiness can be generally equated with a trustee's commitment to act in the truster's interest (Levi and Stoker 2000: 476; see also Hardin 2002). Political trust, a sub-concept of trust, can be conceived as a judgment made by an individual with regard to a specific political actor or institution, for example governments, parties and administrations (Levi and Stoker 2000). In sum, political trust then can be understood as an individual's expectation that a political actor will act in her interest.[3] Generally, it is important to differentiate different targets of political trust. For instance, Hibbing and Theiss-Morse (1995: 15f.) investigated attitudes toward different political institutions and lamented that explanations of (the crisis of) confidence in the political system display a major deficiency, namely the inattention to components of the political system.[4] Empirically, trust levels differ considerably across sub-national entities and for different political institutions in Switzerland (Freitag 2001). Thus, differentiating between institutions as well as sub-national entities seems essential. Since we compare cantons, trust in cantonal authorities is the variable of interest in our analysis.

Direct democracy, our explanatory variable, is an inherent feature of the Swiss political system. In fact, Switzerland with its long tradition of direct democratic participation is often considered to be the most direct democratic state in the World (Schmitter and Trechsel 2004). Swiss citizens have a wide array of direct democratic instruments at their disposal to decide directly on issues through popular votes. On the cantonal level, these instruments consist of the constitutional initiative, the legislative initiative, the legislative referendum (in optional and mandatory form), and the fiscal referendum (also in optional and mandatory form). The specific configurations of these direct democratic rights, however, vary substantially from canton to canton. Institutional barriers to a direct democratic process are the number of signatures needed, the respective time period allotted to launch initiatives and optional referendums, as well as the financial threshold for fiscal referendums. Whereas in some cantons these barriers are low, facilitating the exercise of direct democratic rights, in other cantons the requirements are so high that direct democratic processes are hardly possible.

However, extensive direct democratic rights do not necessarily imply that the corresponding instruments are frequently used by citizens. Although neither institutional barriers nor use of direct democratic instruments can be viewed as entirely independent (Eder

[3] Regarding the origins of political trust, Mishler and Rose (2001) refer to two large theoretical traditions. On the one hand, cultural theories hypothesize that trust in political authorities is exogenous with regard to political variables. Accordingly, these theories assume that political trust is generated outside of the political sphere. People have beliefs that are based on cultural norms which they have learned during early-life socialization (Mishler and Rose 2001). For instance, scholars like Putnam (1993) and Inglehart (1997) argue that political trust is an extension of interpersonal trust that is projected onto political authorities. On the other hand, institutional theories hypothesize that political trust is politically endogenous and a consequence of the performance of political authorities (Mishler and Rose 2001). This is, obviously, much in line with the reasoning of neo-institutionalism. Citizens evaluate performance more or less rationally. Political authorities that do not perform well generate distrust; political authorities that perform well generate trust.

[4] Well known is also the debate about the meaning of the decline of trust in government in the United States. Miller (1974) and Citrin (1974) argued whether this decline mirrored a rejection of the political system and the institution "government" per se or rather a rejection of the incumbent government. This debate emphasizes the importance of distinguishing between regime and the authorities, but failed to acknowledge the different "vital objects of support" in modern political systems namely political institutions (Hibbing and Theiss-Morse 1995: 16).

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et al. 2009), they are not highly correlated with one another in the Swiss case (Barankay et al. 2003; Stadelmann-Steffen and Vatter 2012). When investigating the relationship between direct democracy and political trust, it is crucial to take this distinction into account. Reflecting the nuanced conception of institutions as both "rules-in-form" as well as "rules-in-use" (Sproule-Jones 1993), we also differentiate between formal institutional rights and the actual use of direct democratic instruments in our analysis. Especially, with regard to their impact on citizens' attitudes and evaluations, the theoretical arguments differ fundamentally as we will outline below.

Theory and Hypotheses

Whether direct democracy has a positive or negative (or, for that matter, no) effect on trust is, of course, ultimately an empirical question. Nevertheless, differences in theoretical predictions and ambiguous empirical evidence may be due to different conceptions of direct democracy. As noted earlier it is important to make a distinction between the availability of direct democratic *rights* and the actual *use* of the corresponding direct democratic instruments. It seems worthwhile considering these conceptions separately and discussing in what way these conceptions are related to political trust. Moreover, we take the above mentioned distinction between the individual truster and the trustee (the cantonal authorities) into account when arguing how individual political trust is affected by direct democracy.[5]

Availability of direct democratic rights and political trust

How does the institutional availability of direct democratic rights affect the trust relation between citizens and political authorities? As noted previously, direct democratic instruments may enhance citizens' control of and influence on political authorities. Departing from a veto-player perspective Hug and Tsebelis (2002) analyze multi-dimensional models and show that the availability of direct democratic instruments enhances the agenda-setting power of the median voter. Elaborating further on this argument, Hug (2004) investigates policy consequences of direct democracy and argues that policies are closer to the median voter's preferences than without direct democratic instruments present. This, as Hug (2005) claims, should also manifest itself in higher levels of political trust because policies in direct democracies are more in line with the voters' wishes. Similarly, Citrin (1996: 286) hypothesizes that "initiatives and referenda impel governments to revise their policies so as to take account of majority opinion and that doing so ultimately raises the public's trust in established institutions."

Hence, extensive direct democratic rights enhance a citizen's role as a veto player in the political process. Whereas political authorities in purely representative democracies are not that closely tied to their citizens as they can only be voted out of office at the end of the legislative turn, by contrast in direct democracies citizens can keep their agents on a much

[5] In doing so, we depart from a neo-institutionalist perspective, which focuses explicitly on the relation between institutions and individuals (Huckfeldt et al. 1993). In that sense, institutions offer and alter incentive structures that in turn affect individual behavior and preferences (Kaiser 1997: 421; Mayntz and Scharpf 1995: 43). Put differently, individuals form their preferences within a contextual framework of institutions that incentivize behavior (Hall and Taylor 1996; Immergut 1998; Offe 2006). Hence, direct democratic institutions adopt the role of explanatory variables affecting individuals.

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shorter leash. More precisely, availability of direct democratic rights should affect both truster and trustee in the trust relation. *Directly*, the truster perceives that she has a better capability to *control the trustee*. Put differently, extensive direct democratic rights give citizens the perception of ability to ensure the trustee's commitment to act in the interest of the truster. With such instruments at hand, citizens as principal in the democratic process are aware that they can make sure that their agent acts the way they want him to. The result is a more favorable trust judgment.[6]

Second, there is an *indirect* effect via the trustee. The trustee may *anticipate the possibility* of control and corrections by the truster and accordingly behaves more trustworthily. Hence, extensive direct democratic rights do not only affect the truster directly, they also provide an incentive for the trustee to behave more trustworthily and to act in the interest of the truster. As a result political authorities should be more responsive when direct democratic rights are available in the sense that they anticipate citizens' preferences and take them into account in their policy-making and political decisions (Papadopoulos 2001).[7] Increased trustworthiness by the trustee should, in turn, positively influence the trust judgment by the truster. Just as Van der Meer and Dekker (2011) link trustworthy behavior of the state to the subjective evaluation by trusting citizens, it seems reasonable that a successful trust relation as such facilitates a virtuous circle of trustworthiness and trust development. All in all this leads us to hypothesize: *The more extensive direct democratic rights in a canton, the higher political trust should be (H1).*

Actual Use of Direct Democratic Rights and Political Trust

As we outlined before, the positive effect of direct democratic rights does not necessarily apply to the actual use of these rights. Above we argued that the mere possibility to sanction the trustee via direct democratic instruments can enable a trust relationship between citizens and political authorities. These sanctioning instruments of the principal hang over the agent like the metaphorical "Sword of Damocles". However, just with any trust relation, the trust relation between citizens and political authorities suffers if the truster observes the necessity of her sanctions. Hence, frequent use of direct democratic instruments should have the opposite effect than the mere availability thereof.

Again, the actual use should affect both the truster directly, as well as indirectly via the trustee. First, the direct effect on the truster is precisely that citizens, who frequently observe sanctioning of political authorities through the application of direct democratic instruments gain the belief that their agents do not act how they are supposed to since direct democratic processes are obviously necessary to correct their actions. In short, political authorities that need correction cannot be trusted. To this point Citrin (1996: 286) notes that the application of direct democratic instruments decreases the authority of elected officials. Perceiving the necessity of sanctions despite the very existence of such a

[6] Underscoring this connection, Bühlmann (2007: 244) concludes in his study that already the mere presence of direct democratic rights (and not their actual use) has an effect on political support. Moreover, Bernhard and Bühlmann (2011) find that direct democratic rights increase political efficacy and Scheidegger and Staerklé (2011) find that the perceived political powerlessness is related to political trust.

[7] Akin to this logic it is argued that direct democratic rights result in less mismanagement, less corruption and less abuse of power (Citrin 1996). Moreover, Kirchgässner et al. (1999) find that there is less public spending, less public debt, and higher GDP in direct democracies. Similarly, Freitag and Vatter (2000) show a positive effect of direct democracy on economic performance. Generally, such positive effects of direct democracy are crucial for the citizens' perception of government performance, which in turn could positively affect political trust.

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"Sword of Damocles" intensifies the disappointment by citizens as the trust they have put into their political authorities by voting them into office is betrayed (Dyck 2009: 544).

Second, frequent use of direct democratic instruments affects the trustee, too. If political authorities are constantly sanctioned and corrected they do not feel the same obligation to honor the trust of being voted into office. They might simply follow their own agenda rather than acting trustworthily toward their citizens.[8] Moreover, the implementation of direct legislation is generally beyond the influence of citizens. Political authorities can therefore "steal" initiatives at the implementation stage (Gerber et al. 2001). Obviously, citizens perceiving this dilution lose trust as a consequence. As repercussion on the citizens, untrustworthy behavior by political authorities inhibits any successful trust relation with the citizenry. Instead, a setting of frequent votes on initiatives and referendums widens the scope and intensity of political conflict between citizens and political authorities (Dyck 2009: 545).

In sum, we hypothesize that there is a negative effect of the actual use of direct democratic instruments: *The more extensive the actual use of direct democratic instruments in a canton, the lower political trust should be (H2)*.

Research Design

Before turning to the empirical investigation, we briefly outline how the concepts are measured and present other individual as well as contextual factors that should be controlled for. Appendix A summarizes the operationalization of all variables, Appendix B provides descriptive statistics.

Political trust in cantonal authorities is measured with the following question: "I will read the names of some important institutions and organizations to you. Please tell me each time, how much trust you have in this institution, if '0' means 'no trust' and '10' means 'complete trust.'" Respondents can then choose how much trust they have in "cantonal authorities" on an 11-point scale. We measure the *availability of direct democratic rights* with an index calculated by Fischer (2009). First suggested by Stutzer (1999), this index considers availability and barriers for each of the four direct democratic instruments in the Swiss cantons: the constitutional initiative, the legislative initiative, the legislative referendum, and the fiscal referendum. Values between one and six reflect the legal requirements for each instrument in terms of required signatures, time period to collect signatures, in the case of the legislative referendum, whether it is optional or mandatory, and for fiscal referendums, the financial threshold. The resulting four sub-indices are averaged into one index.[9] The second conception, the *actual use of direct democratic instruments*, is measured by averaging the number of all cantonal initiatives and optional referendums per year from 2002 to 2006 (Année politique Suisse). The number of mandatory referendums is deliberately excluded from the measure as is does not fit to our theoretical argument: An institutionally required and automatically triggered referendum can hardly be perceived

[8] Even if political authorities are more responsive as a result of these institutions this might have a negative effect. Acknowledging higher responsiveness through direct democracy, "citizens become more aware that without their input, elected representatives shirk" (Dyck 2009: 546).

[9] Some cantons require many signatures, offer only a short time period in which to collect them, do not have a mandatory (only an optional) legislative referendum, and a high financial threshold. Such cantons thus exhibit high legal requirements and score low (i.e., close to one) on the index of direct democracy. Cantons with low legal requirements score high (i.e., close to six). Coding for thresholds and corresponding index points is described in detail by Stutzer and Frey (2000).

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Table 1: Overview of direct democracy scores as well as cantonal means of trust

Canton	Number of Obs.	Direct democracy: Availability of rights 2003	Direct democracy: Actual use 2002-2006	Trust toward political authorities
Geneva	595	1.75	3.8	5.57
Ticino	519	2.25	2	6.45
Vaud	156	2.42	2.6	6.43
Neuchâtel	107	2.73	1.2	5.56
Fribourg	104	2.79	0.6	6.57
Berne	299	3.02	1.4	6.58
Zurich	648	3.5	3.2	6.56
St. Gallen	123	3.52	1.6	6.83
Valais	90	3.58	0.2	6.69
Jura	118	3.71	0	5.80
Thurgovia	110	4.33	0.4	6.76
Basel-Town	107	4.40	4	6.63
Lucerne	102	4.42	2.2	6.85
Zug	102	4.48	1.4	7.29
Obwalden	110	4.63	0	6.97
Grisons	98	4.83	0.6	6.68
Appenzell O. R.	116	4.92	0	7.03
Schwyz	123	4.93	0.8	6.8
Schaffhausen	117	5.02	0.8	7.06
Uri	102	5.13	0.6	7.29
Solothurn	89	5.25	2.6	6.27
Argovia	145	5.44	1.4	6.29
Appenzell I. R.	109	5.44	0	7.84
Basel-Country	97	5.48	3.2	7.07
Glarus	106	5.5	0	6.90
Mean	*176*	*4.14*	*1.38*	*6.67*
Std. dev.	*161*	*1.13*	*1.26*	*0.52*

by citizens as necessity to sanction political authorities. We test both operationalizations of direct democracy separately to ensure a comprehensive account of direct democracy and to strengthen our empirical investigation. Table 1 provides an overview of the direct democracy scores as well as aggregate measures of political trust in 25 cantons.[10]

Moreover, our analysis accounts for several alternative factors that are commonly referred to in the literature (e.g., Rahn and Rudolph 2005) by including them as control variables. On the individual level several factors should influence political trust (e.g., Bühlmann 2007). Presumably, political trust varies systematically with gender, age and level of education. Women are supposed to be more critical toward political authorities as they are less well represented. Elderly citizens have more experience with political authorities and thus should display a higher level of trust (Richardson et al. 2001). Besides, it is assumed that education enables citizens to better understand and to take part in politics

[10] The 2007 Selects survey did not collect data for the canton Nidwalden because the number of candidates did not exceed the number of seats, i.e. the only candidate who presented himself was automatically elected in this canton (Lutz 2008: 52).

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and thereby gather experience, which in turn facilitates the development of political trust and diffuse support (Milbrath 1966; Richardson et al. 2001; Scheidegger and Staerklé 2011). Moreover, we assume that Catholics display higher levels of trust. In contrast to Protestantism that emphasizes individualism and self-reliance, Catholicism is more at ease with the reliance on authorities (Elazar 1966; Bühlmann 2007). Furthermore, Scheidegger and Staerklé (2011) show that a feeling of being materially at risk is connected to trust. Following a similar logic we include unemployment status as a variable in our models. Finally, the perception whether the state of economy has worsened is included as a further individual-level control. Therefore, we model age, sex, level of education, catholic denomination, unemployment status and perception of the economic development as individual control variables.

Just as we include these variables on the individual level, we also need to account for systematic differences between contextual units. Obviously, cantons in our sample display certain idiosyncrasies that may be related to both direct democratic institutions and political trust. In order to avoid systematically biased or spurious relationships we add two further contextual controls to our analysis. To some extent these should be objective performance measures of political authorities. National income might be regarded as a broad indicator of performance, which has shown to be a determinant of political trust levels in cross-country studies (Mishler and Rose 2001). In addition we include a measure of the financial state of cantons that takes into account several indicators of how well a canton manages its financial state. As argued above, more extensive direct democratic settings should be paralleled by less mismanagement and less public debt (Citrin 1996; Kirchgässner et al. 1999). Individual data used in the analysis comes from the Swiss Electoral Studies which is part of the Comparative Study of Electoral Systems (CSES) project. The 2007 survey used in our analysis included 4,392 telephone interviews in 25 cantons (except the canton Nidwalden).[11] Contextual data was taken from official statistics.

From a comparative perspective it seems advantageous to use the context of Swiss subnational entities to investigate our research question. Compared to country-level analyses, Swiss cantons exhibit a substantial degree of similarity with respect to several institutional and societal aspects. In other words, the cantons have many characteristics in common that can be treated as constants, while they differ regarding the configuration of the here investigated concepts. Finally, the individuals investigated here are nested within institutional contexts that are thought to exert an influence on them. To estimate these contextual effects we apply varying-intercept models (Gelman and Hill 2007; Steenbergen and Jones 2002).

Empirical results

We estimate several models to investigate the effect of direct democracy on political trust. Preliminary analyses reveal that trust in cantonal authorities systematically varies between cantons (0-Model context variance is 0.23). Thus, there seems to be contextual differences that affect political trust making it methodologically appropriate to model contextual effects such as that of direct democracy.

[11] 2,005 of these interviews were from a national representative sample and a further 2,387 interviews were conducted in order to ensure at least 100 respondents in small cantons. Additionally, in three cantons (Ticino, Geneva, and Zurich), the number of interviews was increased to a total of 600 per canton.

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Table 2: Random-intercept models of direct democracy and political trust

	(1)	(2)	(3)	(4)	(5)	(6)
Age	0.007***	0.007***	0.007***	0.007***	0.007***	0.007***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Sex	0.054	0.056	0.054	0.056	0.054	0.055
	(0.061)	(0.061)	(0.061)	(0.061)	(0.061)	(0.061)
Education	0.027***	0.028***	0.028***	0.028***	0.028***	0.028***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Catholic	0.198***	0.199***	0.190***	0.202***	0.202***	0.200***
(Dummy)	(0.067)	(0.066)	(0.067)	(0.067)	(0.067)	(0.067)
Economy worse	-0.461***	-0.450***	-0.462***	-0.449***	-0.456***	-0.450***
(Dummy)	(0.103)	(0.103)	(0.103)	(0.103)	(0.103)	(0.103)
Unemployed	-0.355	-0.350	-0.355	-0.350	-0.356	-0.351
(Dummy)	(0.263)	(0.263)	(0.263)	(0.263)	(0.263)	(0.263)
Direct democracy:		**0.272*** **		**0.264*** **		**0.189** **
Availability of rights		**(0.067)**		**(0.070)**		**(0.080)**
Direct democracy:			**-0.146** **		**-0.234*** **	**-0.131***
Actual use			**(0.074)**		**(0.072)**	**(0.079)**
Financial state				0.012	0.033	0.013
				(0.086)	(0.089)	(0.081)
National income				0.403	3.731**	1.953
				(1.394)	(1.572)	(1.618)
Constant	6.008***	4.883***	6.209***	4.675***	4.509***	4.478***
	(0.186)	(0.328)	(0.209)	(0.621)	(0.663)	(0.603)
Observations	4'225	4'225	4'225	4'225	4'225	4'225
Number of groups	25	25	25	25	25	25
-2 * loglikelihood	17'659	17'647	17'656	17'646	17'649	17'644
Context variance	0.209	0.113	0.175	0.112	0.126	0.098

Notes: Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; independent variables are bold.

The empirical results of six models are displayed in Table 2. Model 1 includes only individual control variables. In Model 2 and 3 the variables of direct democratic rights and actual use of direct democratic instruments are added. Model 4 and 5 test the robustness of the effect by adding contextual controls. In Model 6, finally, both direct democracy and all control variables are included, thus representing the strongest test of the theoretical argument.

The main results can be described as follows: First of all, most of the individual control variables in Model 1 are significant and affect political trust in the expected direction. Namely, age, education and catholic denomination have a positive effect and a negative economic evaluation is associated with lower political trust. This suggests that the estimated model is in principle useful for the explanation of political trust. More importantly, however, Model 2 and 3 show the effect of direct democracy: While the availability of direct democratic rights measured by Fischer's (2009) index of institutional barriers have a positive effect on political trust, the number of popular votes on initiatives and optional referendums has a negative effect. Both effects are statistically significant and reduce context variance to 11.3% and 17.5% respectively. Moreover, the direct democracy variables remain significant in Models 4 and 5 even after controlling for contextual characteristics of

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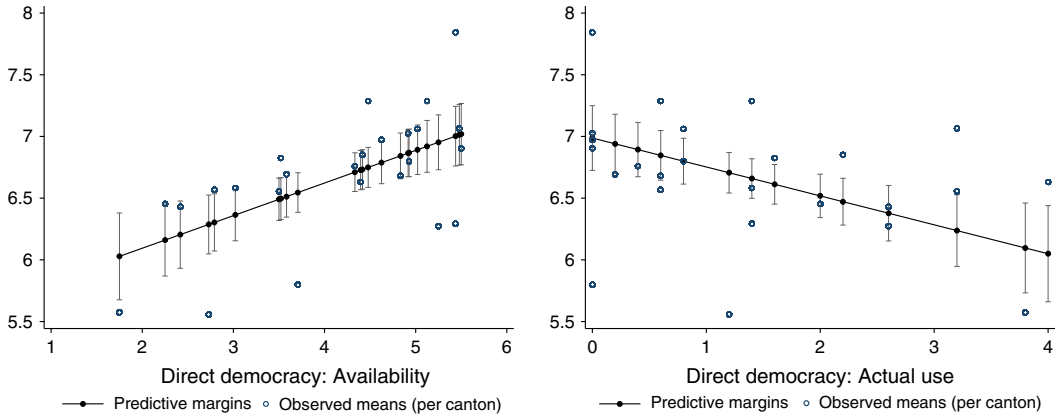
Figure 1: Predictive margins of political trust with 95%-Confidence intervals



cantons. They also pass the last test in Model 6 with both direct democracy variables included. These results are in line with both our hypotheses about the diverging effects of direct democracy: More extensive direct democratic rights lead to higher political trust. More extensive use of these rights, however, leads to lower political trust.[12]

To evaluate the substantive size of the effect, we plot predictive margins of political trust for all levels of our direct democracy variables for Model 4 and 5. Figure 1 shows a change in political trust of roughly one point (on the 11-point scale). On the left side, political trust increases from 6 to 7 going from the cantons with the least to the cantons with the highest availability of direct democratic rights. On the right side, we observe the corresponding decrease from the least to the most direct democratic canton in terms of actual use. At first, the difference of one point might not seem great but considering how many (individual as well as contextual) factors are crucial for the development of political trust in general, the effect size of direct democracy is substantial and quite remarkable. Furthermore, observed means of cantonal trust (as indicated by circles) can be found in most (about 19) cases within the confidence intervals of predictive margins. Only means in about six cantons with more extreme values for direct democracy and fewer respondents differ from predicted levels of trust. The relationship remains nonetheless the same: A fitted OLS regression line (not shown in the plot) between direct democracy and aggregated means of political trust closely resembles the predictive line in the plot.

Robustness and Further Analyses

The empirical results certainly require further testing. Three issues in particular arise. A first issue concerns outliers. As we are dealing with a limited number of level-two units

[12] Sometimes urbanization and size of canton are found to affect the number of popular votes (Trechsel 2000) and are also possibly connected to political trust. In analyses not documented here, we, thus, added further control variables to our models: a dummy indicating whether an individual lives in a rural or urban area, the size of the canton in km^2 and the number of inhabitants. These variables are, however, not significant in our models, do not change the model estimates substantially, and are therefore excluded. Results are available from the authors upon request. This finding is also in line with Eder (2010: 144) and Vatter (2002: 328), who find no significant effect of urbanization on the number of initiatives and referendums when controlling for other factors.

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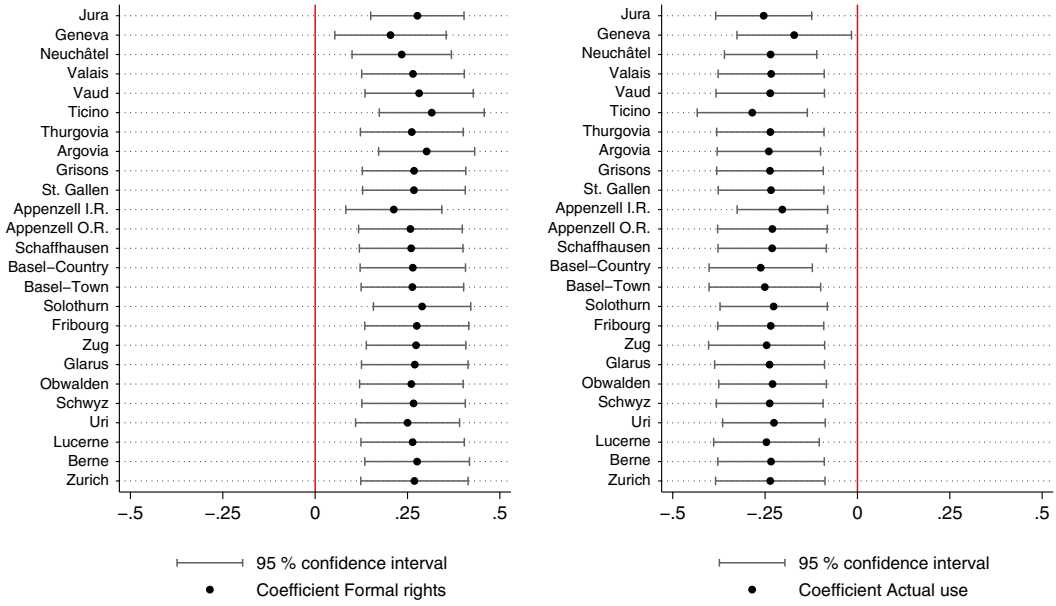
Figure 2: Coefficients excluding single cantons



(here, cantons), the danger exists that results are dominated by a few observations, thereby casting doubt on the reliability of estimates as well as conclusions. Therefore, we re-estimate our Models 4 and 5 (Table 2) several times, each time excluding one canton (and its respondents). Although this kind of manual jackknifing represents a strict test for influential cases (excluding in some cases several hundred observations), the coefficients of the direct democracy variables remain statistically significant in all 25 separate models. Figure 2 illustrates the direct democracy coefficients in the 25 separate models excluding single cantons. Based on these results, we can conclude that the significant relationship is not due to single outlying cases.

A second issue concerns causality. It has long been argued that institutions are endogenous to collective action by individuals (Foweraker and Landman 1997). With regard to the formal institutional conception, though, direct democratic rights represent an inherent feature of the Swiss democratic system, which has been stable for decades (Geser 1999). Direct democratic rights that have been formally present during the socialization processes of several generations leave their imprint on attitudes rather than the other way round. Therefore, in our view, it seems only plausible to argue that the long-term contextual condition of the formal institutional conception of direct democratic rights causally affects volatile individual attitudes, and not vice versa (Davis 1985). However, with regard to the actual use of direct democratic instruments this argument is less applicable. On the one hand, it could well be that low levels of political trust are the cause of more frequent use of direct democratic instruments. On the other hand, one may argue that direct legislation in Switzerland is primarily initiated by unions, parties, local action groups or other organizations and not by the broad citizenry. In other words, the vast majority of people does not initiate direct democratic processes actively, but rather experience processes passively after their initiation.

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The models we estimated up to this point do not allow for solving this "causal" puzzle empirically; rather, they merely reveal a negative association between the use of direct democracy and political trust. One approach to estimate causal effects with cross-sectional data is to resort to instrumental variables. In general, it is difficult to find proper instruments that satisfy the necessary assumptions (see e.g. Bound et al. 1995; Sovey and Green 2001). An instrument should be related to the independent variable of interest, and second, should not be related to the dependent variable other than through the independent variable (Legewie 2012: 137).

While reasons to initiate direct democratic processes are manifold, whether those result in actual popular votes hinges on the capability to collect enough signatures. And meeting this requirement is obviously easier where many people are around to sign petitions. As stated by Verbrugge (1980: 138): "[h]igh density provides more opportunities for informal contact and assistance because people are more accessible." Hence, we argue that population density influences the frequency of popular votes and instrument the actual use of direct democracy with the population density of a canton. Regarding the first assumption, population density is indeed highly ($r = 0.63$) and significantly ($p < 0.01$) correlated with the use of direct democratic instruments. In what regards the second assumption we assume that population density affects political trust solely via the use of direct democracy conditional on different control variables. Accordingly, we estimate two-stage least squares regression models with robust standard errors clustered by cantons and accounting for all control variables mentioned before. As can be seen from both models in Table 3, the now instrumented effect of direct democratic use is still negative, of substantive size and statistically significant. Even when controlling for additional variables such as urbanization and size of canton, which could potentially mediate an indirect effect of population density on political trust, the estimates do not change.[13] Bearing the limitations of our instrument and potential selection bias in mind, we carefully interpret this result as indication that there really is an effect running from the use of direct democracy to political trust.

Thirdly, often in cross-cantonal comparative research on Switzerland, the significance of language regions is raised. Differences between German speaking and Roman parts have shown to be important factors in Swiss politics and relevant for many societal aspects (Freitag and Stadelmann-Steffen 2010: 477). In fact, language regions roughly coincide with the prevalence of direct democratic rights as can be seen in Table 1: While direct democratic rights are more extensive in the German speaking part, cantons in the Roman part are more oriented toward a representative model of democracy (Kriesi 1998; Ladner 2007). We, therefore, test our model again accounting for language regions by including a dummy variable. Table 4 shows that trust levels indeed differ significantly between language regions. The negative effect of actual use of direct democracy on political trust does not change under this additional control.[14] But the effect of formal direct democratic rights is not significant anymore when controlling for language regions. This is hardly surprising since the extent of direct democratic rights and language regions run along the

[13] For instance, population density could have other indirect effects on political trust via other variables such as economic development etc. However, we are fairly confident that we control for these indirect effects for the most part. Hence, that part of the instrument should be left over that really has no direct or indirect relationship with trust.

[14] We also re-estimate the instrumental regression in Table 3 with a dummy variable for language regions as in Table 4. The results (not documented here) remain the same. While decreasing in size (to -0.133), the coefficient of actual use of direct democracy is negative and significantly different from zero.

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Table 3: Instrumental variable regression: Actual use instrumented with population density

	(1)	(2)
Age	0.007***	0.007***
	(0.002)	(0.002)
Sex	0.036	0.006
	(0.065)	(0.067)
Education	0.025***	0.021**
	(0.009)	(0.009)
Catholic (Dummy)	0.251***	0.219***
	(0.073)	(0.080)
Economy worse (Dummy)	-0.522***	-0.587***
	(0.171)	(0.165)
Unemployed (Dummy)	-0.421**	-0.443***
	(0.170)	(0.162)
Urban or rural area (Dummy)		-0.029
		(0.211)
Direct democracy: Actual Use	**-0.306*** **	**-0.310*** **
	(0.092)	**(0.182)**
Financial state	-0.061	0.027
	(0.060)	(0.069)
National income	4.914***	0.000
	(1.401)	(1.732)
Size of canton		-0.000
		(0.000)
Inhabitants		0.000
		(0.000)
Constant	4.612***	6.369***
	(0.590)	(0.593)
Observations	4'225	4'225
R^2	0.050	0.039

Notes: Robust standard errors (clustered by Canton) in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; independent variables are bold.

same boarder and are highly correlated. In other words, language regions might work as proxy for formal rights of direct democracy (and vice versa).

How should we interpret this finding? On the one hand one might argue that the cultural traditions of the language regions are crucial for the development of trust (Mishler and Rose 2001; see Footnote 3). In that respect, direct democratic rights are shaped within the cultural tradition that embodies a favorable, trustworthy view of political authorities. It remains, however, unclear how political trust should be affected by the cultural context if not precisely by institutions such as direct democracy, which are specific to the respective context. In an attempt to disentangle the effects of language regions and formal direct democratic rights, we further test whether political trust differs significantly between language groups within the three bilingual cantons Berne, Fribourg, and Valais. From the box plots in Figure 3 it is clear that this is not the case. Evidently, there is no significant difference of political trust between language groups in the same direct democratic context. Although this result is obviously not sufficient to dismiss cultural explanations of political trust in the Swiss case, it supports the role of institutions such as direct democracy as factors (among others) influencing political trust.

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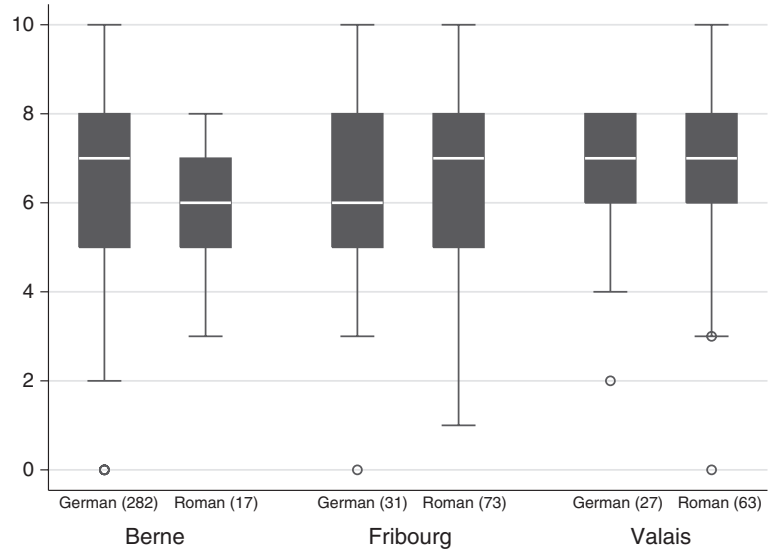
Table 4: Random-intercept models controlling for language region

	(1)	(2)	(3)
Models control for individual and contextual variables of Model 4 and 5 in Table 2			
Direct democracy: Availability of rights	**0.126**		**0.050**
	(0.096)		**(0.100)**
Direct democracy: Actual use		**-0.145****	**-0.130***
		(0.066)	**(0.073)**
German language canton (Dummy)	0.522*	0.611***	0.526**
	(0.268)	(0.189)	(0.255)
Constant	5.553***	5.513***	5.366***
	(0.733)	(0.637)	(0.702)
Observations	4'225	4'225	4'225
Number of groups	25	25	25
-2 * loglikelihood	17'643	17'640	17'640
Context variance	0.093	0.080	0.079

Notes: Standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; independent variables are bold.

Figure 3: Political trust of different language groups within bilingual cantons



Conclusion

Little systematic research has explicitly addressed the question of how direct democracy and political trust are related to each other. However, if political trust is to be considered a major asset for societies and if its decline is as urgent as claimed, it becomes absolutely necessary to investigate the impact of institutions that might eventually increase this resource. Although contextual factors receive more and more attention in political trust research (Zmerli and Hooghe 2011), only very little empirical evidence exists regarding the question whether direct democracy represents such an arrangement and fulfills the promise

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of participatory democrats or in contrast initiates distrust (Dyck 2009). And so far no study has examined this relationship in Switzerland. In this study we make a first step to fill this gap.

In contrast to previous studies, we emphasize the necessity of a clear theoretical distinction between two conceptions of direct democracy, namely the formal strength of direct democratic rights and the actual use of those rights. Taking this distinction into account we develop arguments that suggest positive effects of extensive direct democratic rights and negative effects of actual use of direct democratic instruments on political trust. Our empirical analysis of the Swiss cantons seems to support this reasoning: Holding alternative variables constant political trust is higher in cantons with extensive direct democratic rights and lower in cantons with frequent use of these rights. This may serve as explanation for the ambiguity of previous results (Citrin 1996; Dyck 2009; Hug 2005).

These results, however, have to be taken with a pinch of salt. First, we need to acknowledge the role of cultural traditions in the Swiss language regions. While the negative effect of use of direct democratic instruments is not affected, the positive effect of the availability of direct democratic rights vanishes when controlling for language regions. Since extensiveness of direct democratic rights is closely related to the language regions in Switzerland, we cannot ultimately judge empirically whether cultural or institutional influences prevail in the development of political trust. From a neo-institutional perspective the latter seems obviously preferable. This institutional perspective does not deny the importance of early-life cultural influences (Mishler and Rose 2001: 31). If in fact political authorities have performed well and consistently over long periods of time (e.g. due to extensive direct democratic rights) cultural socialization as well as evaluation of this performance assumably result in similar levels of political trust (Mishler and Rose 2001: 32). Nevertheless, more studies are needed that scrutinize the relationship in different institutional and cultural settings. Second, theoretically it seems plausible that the relationship between the actual use of direct democracy and political trust may run in both ways. In this study we made a first step trying to get a better estimate resorting to an instrumental variables approach. However, we strongly recommend that future studies further scrutinize this potentially reciprocal relationship. One possible venue could be the analysis of panel data, given that there are measures for both variables at different points in time. Another approach would be more qualitatively oriented analyses of the causal mechanism.

Finally, our study represents the most recent attempt so far to analyze the relationship of direct democracy and political trust and provides evidence from an exemplary empirical case, namely Switzerland. Thereby, our contribution of the effects of direct democracy on political trust contributes to the on-going dialogue about the introduction of direct democratic procedures around the world (Butler and Ranney 1994; Scarrow 2001). With all limitations in mind, we carefully conclude from our results that from a normative point of view extending direct democratic rights is a desirable step. Lowering institutional barriers for direct democratic instruments provides citizens with participatory means to keep their authorities on a short leash and ultimately seems to raise political trust.

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Appendix A

Variable	Expected relationship	Operationalization/ Varname/Source
Political trust		Trust toward cantonal political authorities; 0 = no trust, 10 = high trust [f12804, Selects 2007]
Individual level		
Age	Elderly are less critical of political institutions resulting in higher trust.	Age in years [age, Selects 2007]
Sex	Men are less critical of political institution than women resulting in higher trust.	Dummy; 1 = Male, 2 = Female [sex, Selects 2007]
Education	The higher the level of education, the higher political trust	Level of education [f21310, Selects 2007]
Catholic	Catholics exhibit more trust toward authorities	Dummy; 0 = no Catholic, 1 = Catholic [constructed, f20800, Selects 2007]
Economy worse	People who perceive that the economy got worse exhibit lower trust toward authorities	Dummy; 0 = stayed the same/got better, 1 = got worse [constructed, f14610, Selects 2007]

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Appendix A: Continued

Variable	Expected relationship	Operationalization/ Varname/Source
Unemployed	Unemployed exhibit lower trust toward authorities	Dummy; 0 = not unemployed, 1 = unemployed [constructed, f21400, Selects 2007]
Contextual level		
Direct democracy: Availability of rights	The more extensive direct democratic rights in a canton, the higher political trust should be (H1).	Index by Fischer (2009) for 2003; 1 = restrictive rights, 6 = permissive rights
Direct democracy: Actual use	The more extensive the actual use of direct democratic instruments in a canton, the lower political trust should be (H2).	Frequency of initiatives and optional referendums per year averaged 2002-2006 according to Année Politique Suisse
Financial state	The better the financial state of a canton, the higher political trust.	Index of financial state in 2006 according to IDHEAP; 1 = poor, 6 = excellent
National income	The higher the national income of a canton, the higher political trust.	Primary national income per capita in 2005 according to BADAC; in 100'000 SFR
Language region	Political trust is higher in German speaking cantons.	Dummy; 0 = Roman canton, 1 = German speaking canton
Instrumental regression		
Population density	The higher the population density, the easier are initiatives and optional referendums, and thus the lower political trust.	Number of inhabitants per km^2 in 2000 according to BADAC
Urban or rural area	Political trust should be higher in urban contexts.	Dummy; 1 = urban, 2 = rural [stla, Selects 2007]
Size of canton	Political trust should be higher in smaller cantons.	Surface according to Swiss Federal Statistical Office in km^2
Inhabitants	Political trust should be higher cantons with fewer inhabitants.	Total number of inhabitants in 2007 according to BADAC

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Appendix B

Variable	N	Mean	Std. dev.	Min	Max
Political Trust in cantonal political authorities	4'259	6.51	2.02	0	10
Individual level					
Age	4'392	51.94	17.67	18	96
Sex	4'392	1.55	0.50	1	2
Education	4'352	6.31	3.55	0	12
Catholic	4'392	0.42	0.49	0	1
Economy worse	4'392	0.10	0.30	0	1
Unemployed	4'392	0.01	0.11	0	1
Contextual level					
Direct democracy: Availability of rights	25	4.14	1.13	1.75	5.5
Direct democracy: Actual use	25	1.38	1.26	0	4
Financial state	25	5.46	0.96	2.12	6
National income	25	0.42	0.06	0.33	0.60
Language region	25	0.72	0.46	0	1
Instrumental regression					
Population density	25	474	1'018	26	5'083
Urban or rural area	4'392	1.29	0.45	1	2
Size of canton	25	164'035	187'715	3'700	710'544
Inhabitants	25	302'128	309'042	15'471	1'307'570

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