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The Partisan Composition of Cantonal Governments in Switzerland, 1848-2017. A New Data Set

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Abstract: *Scholars increasingly use Swiss cantons to examine the effect of democratic processes and institutions on political, economic and social outcomes. However, the availability of political indicators at the cantonal level is limited, in particular for longer periods of time. We introduce a novel data set on the ideological and partisan composition of cantonal governments, covering the period 1848-2017 for most cantons. In this research note, we describe our data collection efforts and present some descriptives on the political development of cantonal governments in order to illustrate the data's potential. In particular, we look at the political strength of different parties and factions, the number of parties in government, government volatility and the nationalization of the party system. Our data thus provide new opportunities to examine political, economic and social outcomes as well as the formation of party systems in the Swiss cantons.*

Keywords: Comparative politics, Switzerland, Swiss cantons, Government, Political parties

Introduction

Political scientists, sociologists and economists often use Swiss cantonal data. On the one hand, Swiss cantons feature widely different political institutions, rights and processes (e.g. Stutzer 1999; Vatter 2002; Giger et al. 2011; Bühlmann et al. 2013; Lachat and Kriesi 2015; Walter and Emmenegger 2018). On the other hand, given that the Swiss political system is highly decentralized, cantons have wide-ranging autonomy over political, economic and social matters such as public budgets (e.g. Feld and Kirchgassner 2001; Vatter and Freitag 2007; Emmenegger et al. 2018), social policies (e.g. Armingeon et al. 2004; Walter 2018, 2019) or immigration policies and minority rights (Christmann 2010; Manatschal 2011). This variation in the institutional setup and public policies allows researchers to exploit cross-cantonal and temporal differences in policy-making to address important topics such as tax competition (e.g. Wasserfallen 2014; Gilardi and Wasserfallen 2016) or the effects of direct democracy and electoral systems on public policies (e.g. Freitag and Vatter 2006; Funk and Gathmann 2011, 2013).

In highly decentralized political systems such as Switzerland, state-level (cantonal) governments are powerful political actors (Vatter 2016). In particular, according to the Swiss constitution, jurisdiction rests with the cantons unless the constitution explicitly awards jurisdiction to the federal government. As a result, cantonal governments play an important role in several policy fields. For instance, the cantons are the responsible actors in policy fields such as education or religion. In other policy fields, the responsibility is shared with different tiers of government such as agriculture or social security. In fact, only about a third of the Swiss public budget is spent at the federal level. On the revenue side, cantons are the main recipient of income from direct

taxation. As a consequence, the federal government in Switzerland is also dependent on cantonal authorities in the area of policy implementation. Lastly, cantonal governments are consulted when national policies are drafted in the pre-parliamentary phase. State-level governments are thus key political actors in countries such as Switzerland and their ideological and partisan composition therefore of great analytical relevance (Vatter 2018).

However, many political indicators for Swiss cantons are available only for the most recent years. For instance, the Swiss Federal Statistical Office provides data for the party affiliation of the members of cantonal governments only since 1980. This lack of data for earlier periods is rather unfortunate, because the partisan composition of cantonal governments is a central explanatory variable for the variation in many public policies (e.g. Schmidt 1996; Knill et al. 2010; Schmitt and Zohlnhöfer 2017). Without doubt, any large-N study on government activities, political processes and public policies that does not account for the partisan composition of governments is likely to be subject to an omitted variable bias.

This research note introduces a new and comprehensive data set on the partisan composition of cantonal governments. For 17 cantons, our time series covers the period starting with the creation of the Swiss federal state in 1848 or subsequent first elections under the new constitutional rules until 2017. In some cases, we were able to extend the coverage to even earlier periods. For another seven cantons, existing sources have allowed us to cover the ideological and partisan composition of cantonal governments from some point in the second half of the 19th century onward. In two cases, Appenzell Innerrhoden and Jura, the time series starts in 1928 and 1978 respectively. The canton of Jura seceded from Bern and did not exist before 1978. In the case of Appenzell Innerrhoden, we were not able to determine the ideological orientation of all members of government before 1928.[1] Table 1 below provides the complete list of cantons with the years included in the data set. A description of our sources and our coding decisions can be found in the online appendix. The full data set will be made available on both the authors' website and a public repository.[2]

In the following, we discuss our data collection strategy. Subsequently, we present descriptives on the development of cantonal governments in Switzerland in the period 1848 to 2017. More precisely, we provide evidence for the validity of our data by demonstrating that our descriptives align with existing knowledge on the political developments in the Swiss cantons. In addition, we show that our data allow to produce new insights regarding, for instance, the evolution of government volatility or the nationalization of political parties.

The Data: The Partisan Composition of Cantonal Governments

This research note introduces a novel data set on the ideological and partisan composition of cantonal governments. The assignment of members of cantonal government to political parties is straightforward for much of the 20th century. In contrast, parties did not exist in the 19th century in most cantons (for the emergence of political parties in Swiss cantons, see for instance Ladner (2004a: 344-345) and Vatter (2016: 100-119)). In order to maintain consistency, we follow Gruner 's (1977) categorization of political factions instead of party labels when tracing developments over the complete period 1848-2017 (see also Gruner 1978a,b). We therefore start the time series by distinguishing between the three main camps of the "radical" movement

[1] Still today, partisan affiliation is downplayed in cantonal politics in Appenzell Innerrhoden.

[2] The data can be found at Harvard Dataverse and the author 's personal website.

Table 1: Coverage of Data on Cantonal Executives

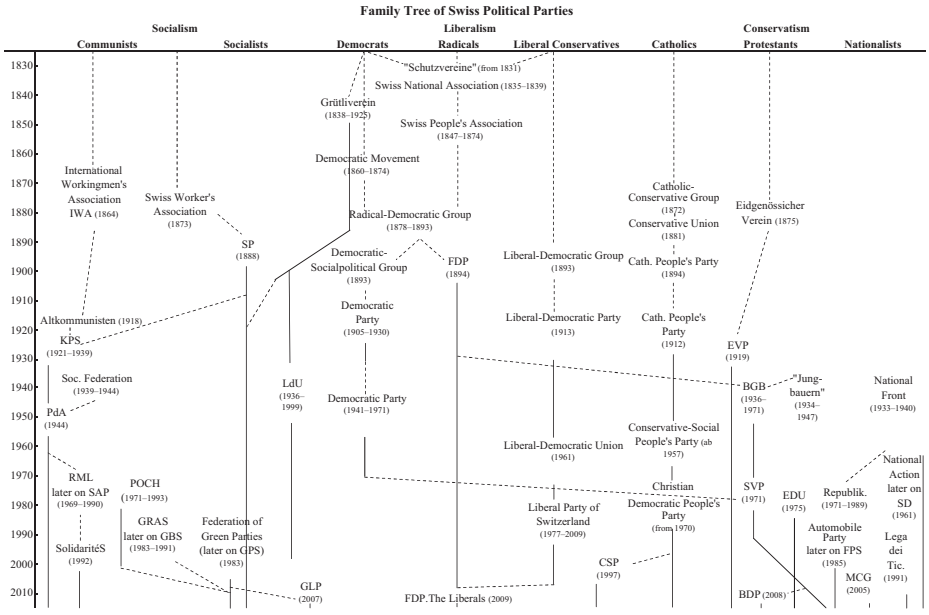
Canton	Coverage
Aargau (AG)	1885-2017
Appenzell Ausserrhoden (AR)	1894-2017
Appenzell Innerrhoden (AI)	1928-2017
Basel-Landschaft (BL)	1832-2017
Basel-Stadt (BS)	1803-2017
Bern (BE)	1846-2017
Freiburg (FR)	1847-2017
Genf (GE)	1847-2017
Glarus (GL)	1887-2017
Graubünden (GR)	1848-2017
Jura (JU)	1978-2017
Luzern (LU)	1848-2017
Neuenburg (NE)	1848-2017
Nidwalden (NW)	1850-2017
Obwalden (OW)	1868-2017
Schaffhausen (SH)	1876-2017
Schwyz (SZ)	1848-2017
Solothurn (SO)	1856-2017
St. Gallen (SG)	1839-2017
Tessin (TI)	1848-2017
Thurgau (TG)	1848-2017
Uri (UR)	1888-2017
Waadt (VD)	1845-2017
Wallis (VS)	1848-2017
Zug (ZG)	1848-2017
Zürich (ZH)	1850-2017

(Radicals, Democrats, Liberals) as well as the Catholic Conservatives and the Protestant Conservatives. As political parties increasingly came into existence in their modern form (from the late 19th century onward), we also discuss them individually. In this process, we rely on the "family tree" of Swiss political parties (see Figure 1) created by Vatter (2016: 116), which nicely links to Gruner 's categorization of political factions.[3]

To address the problem that formal party organizations did not exist in the 19th century, we have grouped political factions into the three ideological categories "socialism", "liberalism" and "conservatism". Following Gruner (1977) and Vatter (2016), we add Communists, Socialists and Social Democrats to the "socialism" category. The category therefore captures all factions that aim at extending state intervention to achieve redistributive goals. In contrast, we have assigned all factions to "liberalism" that incorporate social reformist as well as liberal ideals, namely the Radicals and the Democrats. Finally, we denote factions as "conservative", which oppose state intervention to reduce inequality, usually combined with strongly federalist attitudes.

[3] We thank Adrian Vatter and the Nomos Verlag for allowing us to reprint a translated version of Figure 1.

Figure 1: The "Family Tree" of Swiss Political Parties



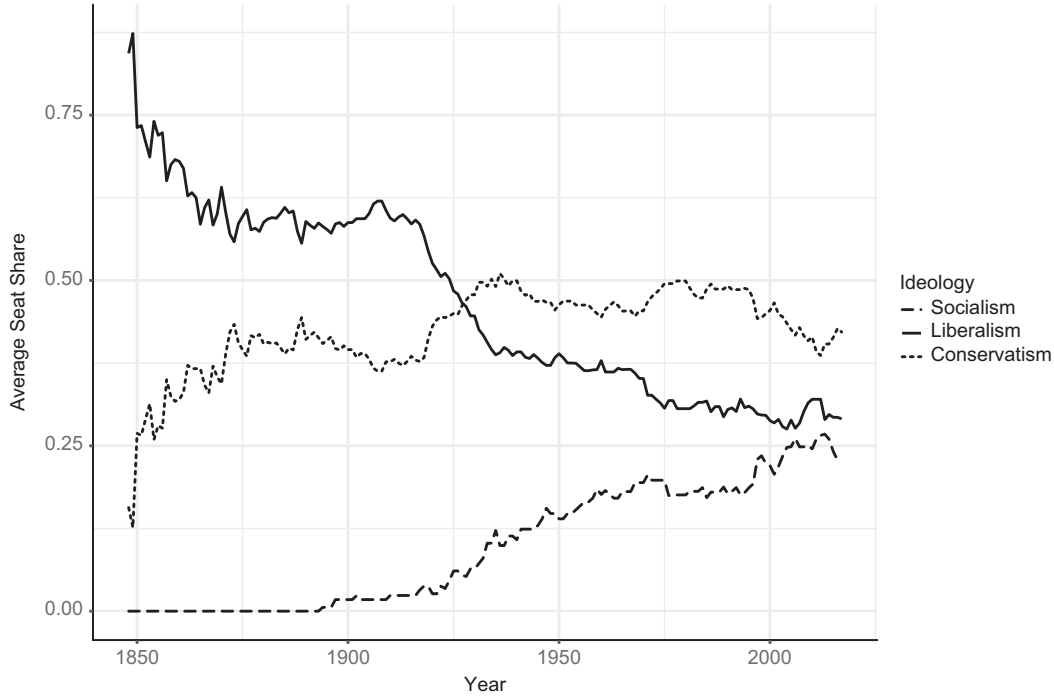
Source: Vatter (2016: 116); original figure in German, translated by the authors. [Correction added on 3 December 2018, after first online publication: source information for Figure 1 has been added below the figure.]

Examples are the Liberals (sometimes referred to as Liberal Conservatives),[4] the Catholic Conservatives and the Protestant Conservatives as well as the Farmers' Party (the predecessor of the Swiss People's Party). Please note that this categorization is informed by these groups' ideological and political profile in the second half of the 19th and the first half of the 20th century. As the ideological transformation of the Democratic Party and their merger in 1971 with the Farmers' Party (BGB, now the Swiss People's Party) shows, the ideological orientation may change over time (see also Figure 1). Hence, this categorization should be used with great care.

We have relied on a number of sources to identify the members of government as well as their party affiliation or, in case of the 19th and the early 20th century, their ideological orientation. Most importantly, Felder (1993) provides a comprehensive survey of members of government and their party affiliations in all cantons up to 1992 based on archival research. We have cross-checked the data and extended their coverage up to 2017 by using data from the Federal Statistical Office and recent cantonal electoral statistics for the period 1980-2017. What is more, the coverage of Felder 's (1993) data for the 19th century differs considerably between cantons, especially with regard to the ideological orientation of

[4] In contrast to Vatter (2016), we have decided to assign the Liberal Conservatives to the "conservatism" category for a number of reasons. First, most Protestant Conservatives joined the Liberal Conservatives at the end of the 19th century (Gruner 1978b), suggesting that both groups followed similar ideologies such as federalism and opposition to state intervention. Second, the Liberal Conservatives were often the main opposition party to the often dominant and more centrist Radicals in the Protestant cantons, thereby occupying a similar position to the Catholic Conservatives in the Catholic regions.

Figure 2: Mean Seat Share by Ideological Groups, 1848-2017



government members. Put differently, in a lot of cases, Felder (1993) provides the names but not the ideological orientation of the government members. To extend the data for most cantons back to the mid-19th century, we have consulted a large number of canton-specific sources such as history books and publications of public institutions ("Staatskalender", "Ämterverzeichnisse" etc.) as well as the Historical Lexicon of Switzerland and Gruner (1978b). In several instances, we have also contacted and visited the cantonal archives directly to obtain information. The coverage of our data is reported in Table 1, whereas a comprehensive list of the sources can be found in the online appendix.

Political Developments in Swiss Cantons

In the next sections, we present some descriptives on the political developments in Swiss cantons from 1848 to 2017. The main goal of these sections is to provide evidence for the validity of our data by demonstrating that our descriptives align with existing knowledge on the political developments in the Swiss cantons. In addition, these sections illustrate potential usages of our data. We focus on four aspects that have received considerable attention by students of Swiss Politics (e.g. Ladner 2001, 2004b; Vatter 2002; Bochsler et al. 2016). First, we examine long-term developments in the ideological and partisan composition of cantonal governments to gauge the political strength of different parties and factions. Second, we analyze the development of cantonal party systems by using the number of parties in government. Third, we explore how government volatility evolved in the period 1848 to 2017. Finally, we turn to the nationalization of the Swiss party system.

The Political Strength of Parties

Figure 2 plots the average representation of socialist, liberal and conservative political groups and factions in cantonal governments from 1848 to 2017. The figure is based on data from all 26 cantons. More precisely, the data is available for 17 cantons from 1848/50 onwards. The remaining nine cantons are added based on data availability (see Table 1).

Figure 2 shows that, after the civil war in 1848, the liberal groups (i.e. exclusively the Radical Party at that time) dominated most cantonal governments. However, the radical regimes in some catholic cantons (Freiburg, Wallis) were already overthrown in the elections at the beginning of the early 1850s. In addition, the Radicals were increasingly challenged and, in most instances, lost their dominant position in predominantly catholic and religiously mixed cantons such as Tessin and St. Gallen as well as cantons with a strong urban-rural cleavage (e.g. Luzern, Schwyz, Waadt, Zug). The main beneficiaries of these developments were religious parties (Catholic Conservatives and Protestant Conservatives) and the Liberal Conservatives, i.e. the political right. Yet, the average seat share of both the liberal (i.e. the Radicals and, since the 1860s, the Democrats) and the conservative camp remained at approximately the same levels from the mid-1870s until approximately the end of the First World War.

The dominance of liberalism did not last. Switzerland adopted a proportional representation system for elections to the national council (lower chamber of parliament) in 1918, which coincided with an organizational consolidation of the Swiss party system (e.g. the creation of the Farmers' Party in some cantons as a split-off from the radical movement). Starting in the mid-1890s, the Social Democrats also entered governments in the urban and industrialized cantons such as Basel-Stadt, Zürich, Genf and Appenzell Ausserrhoden. Yet their average seat share remained rather low in the first half of the 20th century. Nevertheless, the combined effect of the emergence of the conservative Farmers' Party (mostly in rural protestant areas) and the Social Democrats in urban areas put an end to the political dominance of liberalism in Switzerland (see Figure 2).[5]

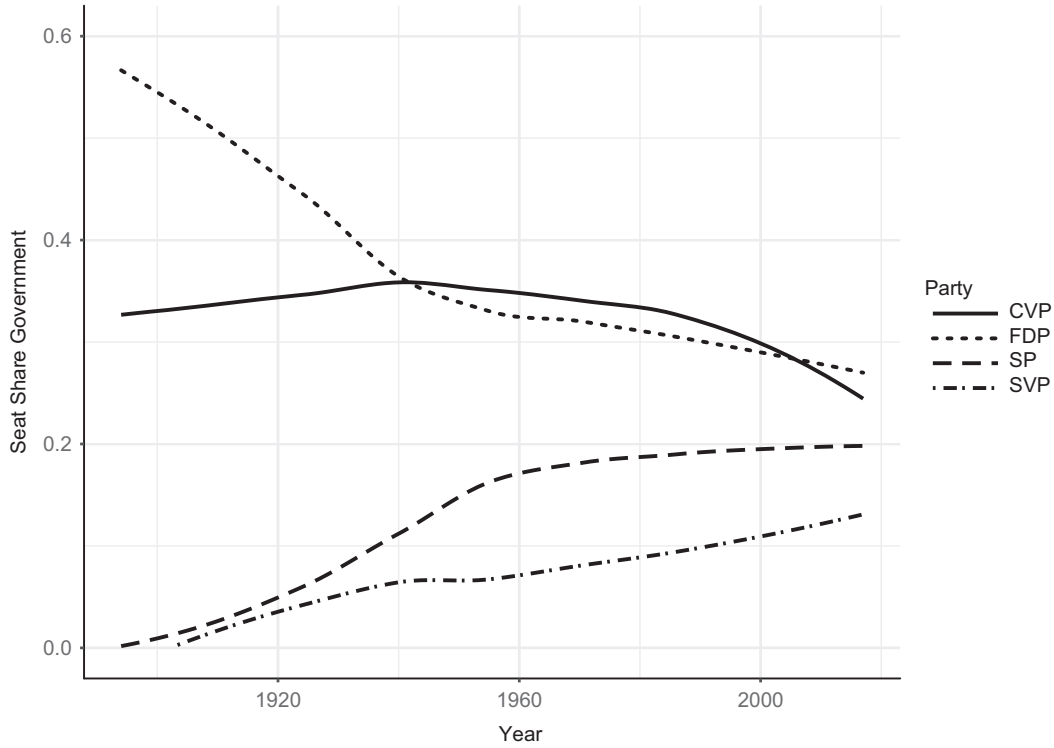
Figure 3 turns to the development of the individual Swiss parties as, from the turn of the 20th century onward, parties in the current, modern form more or less existed. Figure 3 plots the average seat shares of the four main parties in Swiss politics for the period 1894 to 2017 for all cantons: the Radical Democrats (FDP), the Christian Democratic People's Party (CVP), the Social Democratic Party (SP) and the Farmers' Party (BGB, later the Swiss People's Party, SVP).[6]

Unsurprisingly given their dominance in Swiss politics in the 19th century, the FDP experienced the most pronounced decline in political strength in the first half of the 20th century, mainly due to the introduction of proportional representation in several Swiss

[5] The development of the ideological groups' seat shares for the individual cantons can be found in figure A5 in the online appendix.

[6] 1894 is the first year for which we have data for 24 cantons. However, this is also the founding year of the FDP. The SP was already created in 1888. The CVP was created in 1912, yet its predecessor organizations are clearly identifiable. The SVP was created at the cantonal level in 1917 (Zürich) and 1918 (Bern) as the Farmers' Party (from 1936 on the national level as BGB, from 1971 onward as SVP). Since the party seceded from the radical movement, there are no predecessor organizations. We focus on these four parties because the other relevant 19th century political groups merged or disappeared. For instance, the Protestant Conservatives became irrelevant at the end of the 19th century. The Democrats lost their representation in most cantons with the rise of the Social Democrats at the turn to the 20th century and continued to exist in only few regions such as Glarus before they eventually joined the Swiss People's Party in 1971. Similarly, most Liberals joined the FDP in 1894 except in the protestant, French-speaking cantons and Basel-Stadt.

Figure 3: Mean Seat Share in Government by Main Party, 1894-2017

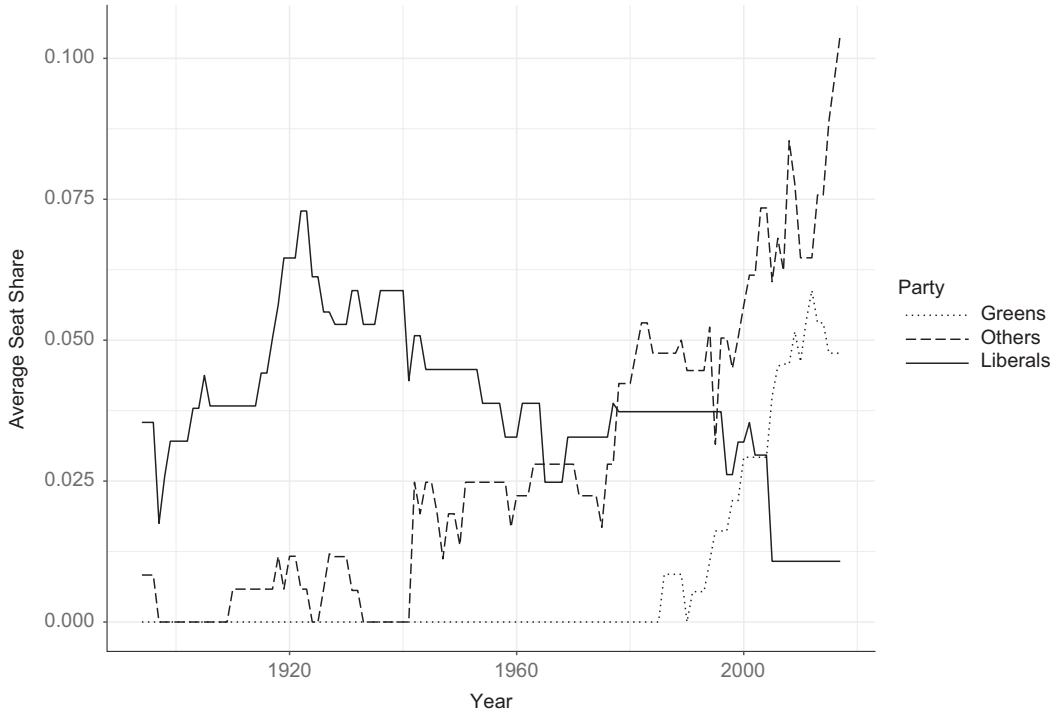


cantons after 1890 and the split-off of the Farmers' Party in several cantons. In the first half of the 20th century, the CVP was able to compensate losses in their cantonal strongholds with gains in cantons with relevant catholic minorities (Basel-Stadt, Basel-Landschaft, Genf). However, the CVP's government participation eventually declined in the second part of the 20th century, especially due to the electoral gains of the SP (and to a lesser extent of the FDP) as well as, later on, the SVP in the cantons with a large catholic population (Freiburg, Luzern, Nidwalden, Obwalden, Schwyz, Uri, Wallis, Zug). In contrast, the SP saw its membership in cantonal governments steadily increase since the beginning of the 20th century, in particular at the expense of the FDP. However, the SP's seat share has been stagnating since the 1960s. Finally, the SVP displays a very slow but steady increase in government participation throughout the 20th and 21st centuries. Nevertheless, its seat share in cantonal governments remains the lowest among the four main Swiss parties.[7]

Cantonal governments have been dominated by the four main Swiss parties (FDP, CVP, SP and SVP). Figure 4 shows for the same set of cantons that the only other parties with significant representation in cantonal governments in the period 1894 to 2017 are the Liberal Party (successor of the Liberals/Liberal Conservatives), in particular in the period 1920 to 1950, and the Green Party since the 2000s. However, Figure 4 also shows that the

[7] The development of government seat shares by main party and canton can be found in the online appendix.

Figure 4: Mean Seat Share in Government by Minority Party, 1894-2017



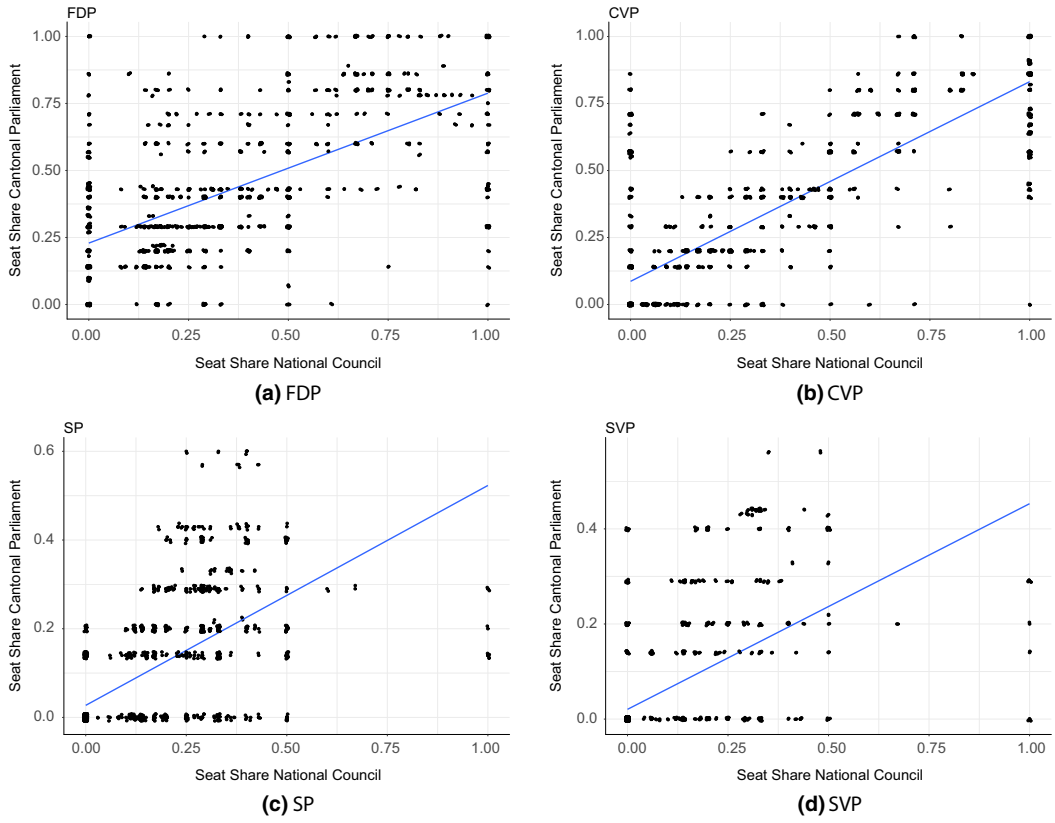
diversity of parties entering cantonal governments has increased in recent years. Hence, although the four main parties still dominate, we nevertheless observe a slow increase in diversity.[8]

How do our data on the partisan composition of cantonal governments relate to the already available data on seat shares by party in the National Council from 1848 to 2015?[9] Figure 5 shows the bivariate correlations for the four main parties (FDP, CVP, SP and SVP). Due to small cantonal districts with only few seats in the National Council,

[8] The category "other" contains the following parties: Union de défense économique (Genf: 1926-1932), Partito Socialista Autonomo (Tessin: 1987-1998), Lega dei Ticinesi (Tessin: 1996-2017), Ralliement neuchâtelois (Neuenburg: 1942-1946), Parti radical réformiste (Jura: 1979-1986), Combat socialiste (Jura: 1994), Demokratisch-soziale Partei (Freiburg: 1982-1995; Basel-Stadt: 1976-2004), Partei der Arbeit (Basel-Stadt: 1944-1949; Waadt: 1996-1997), Alliance of Independents (Zürich: 1942, 1951-1994), Grütlianer (Zürich: 1920-1928), Christlichsoziale Partei (Zürich: 1963-1974; Luzern: 1951-1970; Obwalden: 1960-2017; St. Gallen: 1942-1988; Wallis: 1993-2004; Jura: 1978-1994, 2003-2010, 2016-), BDP (Bern: 2008-2017; Glarus: 2008-2017; Graubünden: 2008-2017) and independent candidates (Luzern: 2006-2017; Uri: 2001-2009; Obwalden: 1942-1945, 1981-1989, 2017; Zug: 1920-1921; Freiburg: 1996-2011; Basel-Stadt: 1910-1918, 1976-1983; Basel-Landschaft: 1948-1958; Aargau: 1999-2008; Neuenburg: 1989-1992; Genf: 1918-1923; Appenzell Innerrhoden: 1999-2017).

[9] The seat share data for the National Council for 1848-1918 come from Gruner (1978a,b). For 1919-2015, the data is provided by the Federal Statistical Office. Gruner assigned MPs of the national council to the predecessors of today's parties based on whether those candidates were supported by electoral associations ("Wahlvereine"). Therefore, we compare the radical MPs (national level) with radical government members (cantonal level) and Catholic conservatives (national level) with religious (i.e. protestant and catholic) government members (cantonal level) for the period 1848-1894. After 1894, we can rely on the more modern party labels.

Figure 5: Relationship of Seat Share in National Council and Cantonal Government by Party, 1848-2015

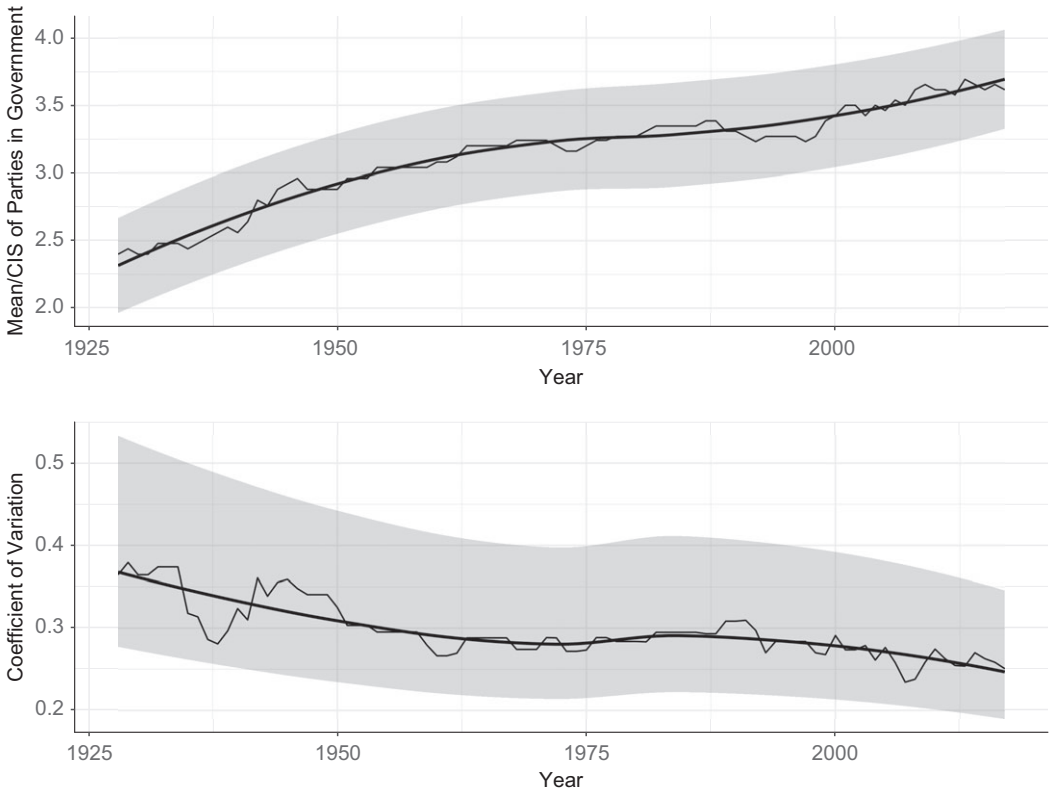


different electoral systems (PR for national elections, MR for most cantonal government elections) as well as different political dynamics leading up to elections (e.g. different topics in cantonal and national election campaigns), we would expect differences to be substantial. Indeed, as Figure 5 shows, the bivariate correlations are far from perfect. The bivariate correlation is highest for the CVP (r=0.83), which is likely due to the fact that CVP voters are (still) highly concentrated in cantonal strongholds. For the other three main parties, the bivariate correlations are considerably lower (FDP: r=0.62; SP: r=0.65; SVP: r=0.57). National-level data thus seem to be an imperfect substitute for cantonal-level data. As a result, we urge scholars to employ cantonal government data instead of relying on national council data when studying the determinants of political reforms and economic and social policies at the cantonal level.

The Development of Cantonal Party Systems

In this section, we examine the development of cantonal party systems by using the number of parties in cantonal government as proxies. Previous research has employed complex statistical models such as cluster analysis and a number of different indicators to measure party systems. However, the number of parties remains among the most

Figure 6: Average Number of Parties in Government and their Variability, 1928-2017



important variables to capture party systems and can, therefore, serve as a useful indicator to investigate long-term trends (Gruner 1977; Vatter 2002; Ladner 2004b).

In the upper panel of Figure 6, we display the average number of parties in all cantonal governments except Jura for the period 1928 to 2017 in black with the corresponding confidence intervals in grey. While mean and confidence bounds have been smoothed, we also present the raw data (squiggly line). The figure shows that the average number of parties has increased from about 2.5 in the 1920s to approximately 3.6 in the 2000s. Unsurprisingly, there has been a secular trend towards larger coalition governments in Swiss cantons.

However, has this development led to a convergence of party system size? To investigate this question, the lower panel in Figure 6 displays the smoothed coefficient of variation (black line) with confidence intervals (grey lines) and raw data (squiggly line). While it appears that the variability in the number of parties in cantonal governments has indeed decreased, the convergence trend is ultimately small and statistically insignificant. Thus, government coalitions at the cantonal level have become larger overall but not considerably more similar in terms of coalition size in the past 90 years. We suspect that this increase in coalition size without convergence is due to the increasing diversity of parties entering cantonal governments (see Figure 4).

Figure 7: Average Number of Parties in Government and their Variability, 1848-1927

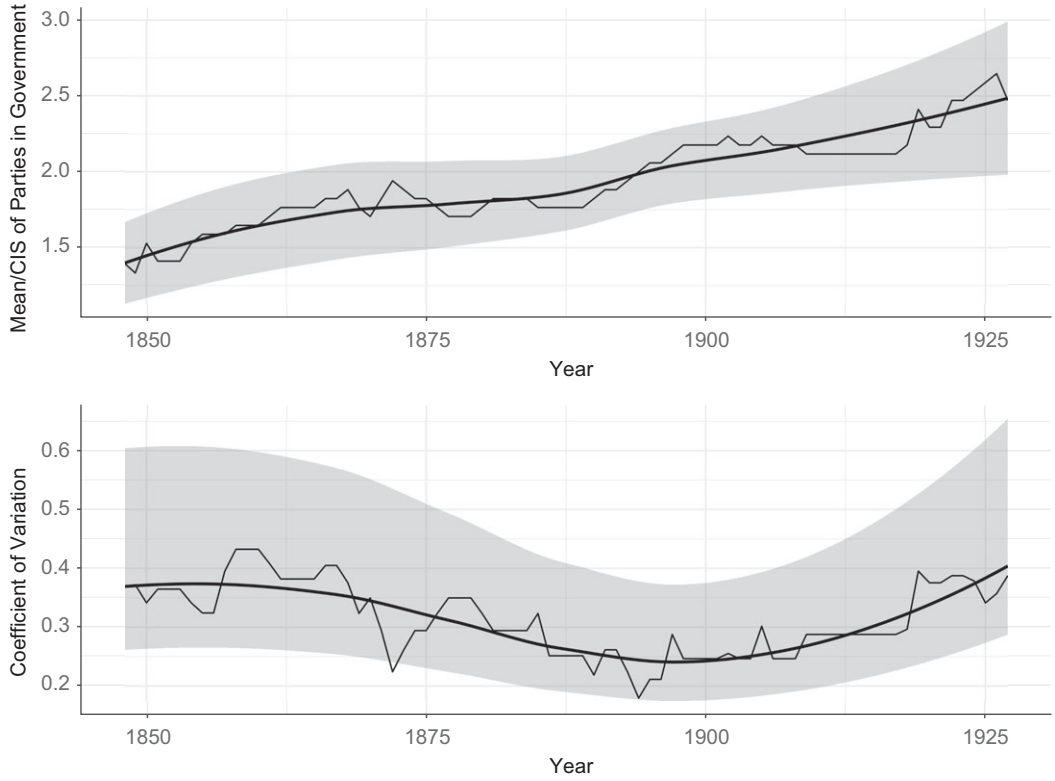
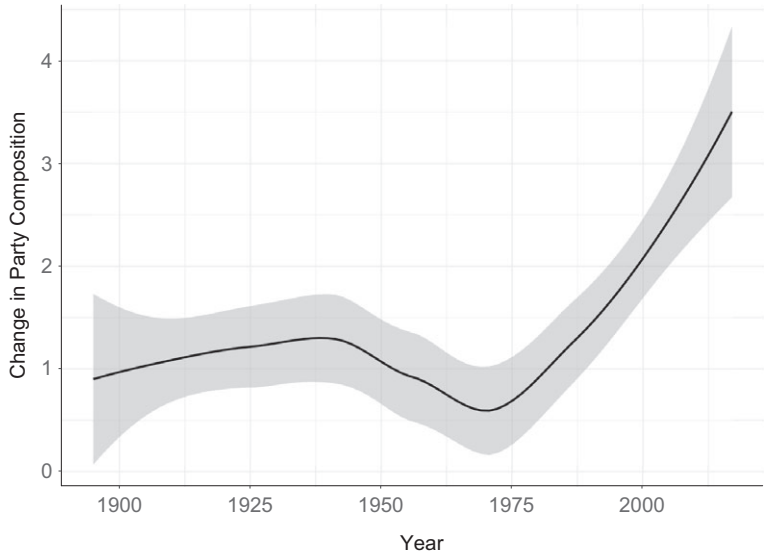


Figure 7 examines the average number of factions/parties and the coefficient of variation for the period 1848 to 1927. We plot this period separately because before 1927, formal party organizations have not yet come into existence for all political factions. Hence, Figure 7 is based on a different categorization of government members into the individual political factions as displayed in Figure 1. The figure is therefore not directly comparable to Figure 6. Data is available for 17 cantons from 1848/50 onwards. Seven further cantons are added based on data availability. For the remaining two cantons, Appenzell Innerrhoden and Jura, no data is available for the period before 1928 (see Table 1). The upper panel of Figure 7 displays an increase in the number of parties in the first decades of the Swiss federal state (1848-1870), which reflects the aforementioned loss of control of the Radicals over some of the cantons with large catholic groups or a strong urban-rural cleavage. As a consequence, the lower panel shows also an increase in the coefficient of variation. Around the 1880, the growth of coalition governments came somewhat to a stop before continuing to increase again towards the 1890s.

The Development of Government Volatility

In this section, we explore the development of cantonal government volatility. In Figure 8, we plot the annual change in party composition of all cantonal governments (except

Figure 8: Average Government Volatility for 24 Cantons, 1894-2017



Appenzell Innerrhoden and Jura) for the period 1894 to 2017.[10] Given that the data is annual but elections usually take place in three-or four-year intervals, we present only the smoothed data using LOESS, a locally weighted regression smoother. The figure shows an increase in government volatility from the beginning of the 20th century until the Second World War. The increasing volatility is most likely related to the adoption of proportional representation in many Swiss cantons (Walter and Emmenegger 2018).[11] This period is then followed by an increasing stability of governments in the third quarter of the 20th century. However, government volatility has sharply increased to unprecedented levels from the early 1970s onward. There is no indication that this upward trend is slowing down.

Can this finding be generalized to earlier periods? To answer this question, we have plotted government volatility for the individual political factions since 1848 for all cantons for which data is available by 1850 at the latest (17 cantons in total). Figure 9 shows that even the political conflict between the Radicals and the Catholic Conservatives in the founding years of the Swiss federal state, the emergence of the Democratic movement in the 1860s or the tumultuous decades preceding the Second World War have not led to levels of government instability that are comparable to today's levels.

The Nationalization of Political Parties

Finally, we look at the nationalization of political parties, which has been a prominent topic in recent research (e.g. Caramani 2004; Bochsler et al. 2016). Party nationalization denotes the homogeneity of party's electoral performance in a given territory (e.g. nation-state).

[10] We measure government volatility as the change in party composition of governments with a dummy variable. More precisely, the party composition of government changes if a party is either voted out of office or a new party gains a seat in government. Figure 8 thus displays the number of cantons with changes in the government composition in a given year.

[11] See Vatter (2002) for a discussion of the link between elections for governments and parliaments.

Figure 9: Average Government Volatility for 17 Cantons, 1848-2017

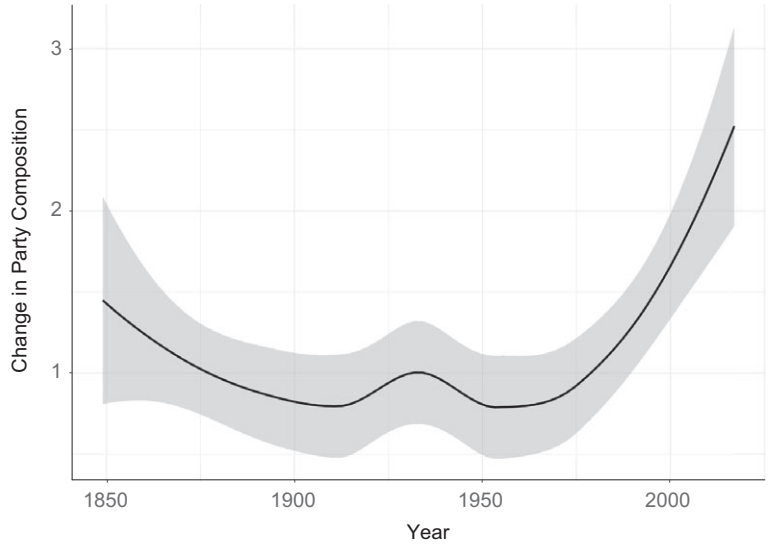


Figure 10: Nationalization of Parties (Gini of Seat Shares), 1928-2017

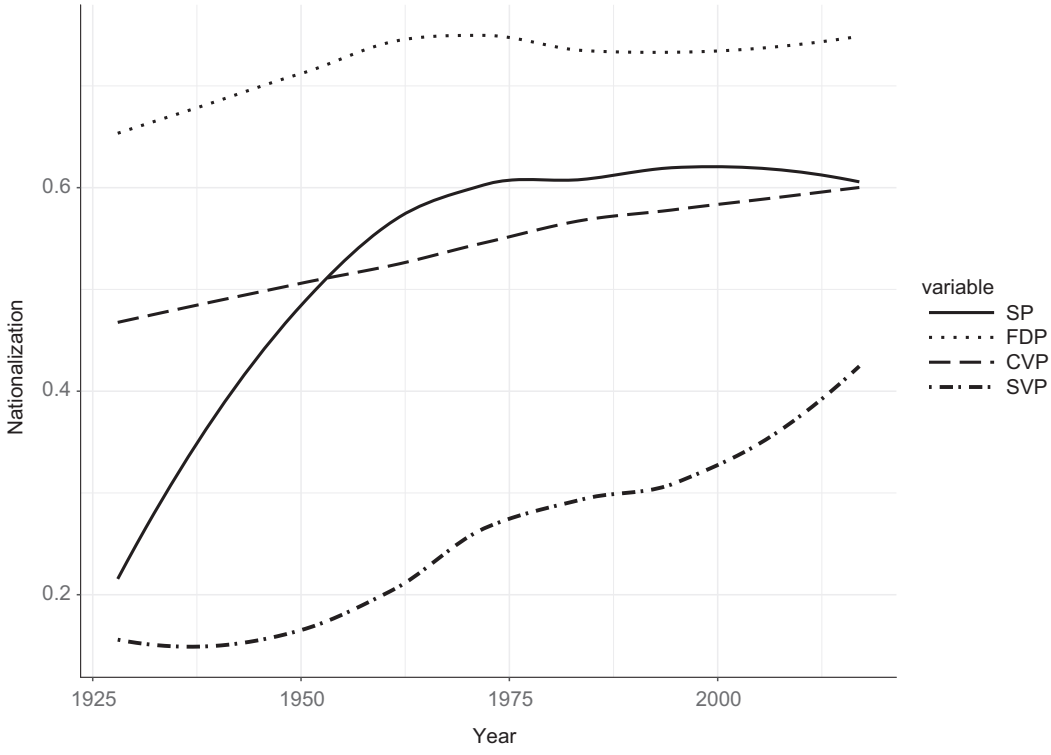
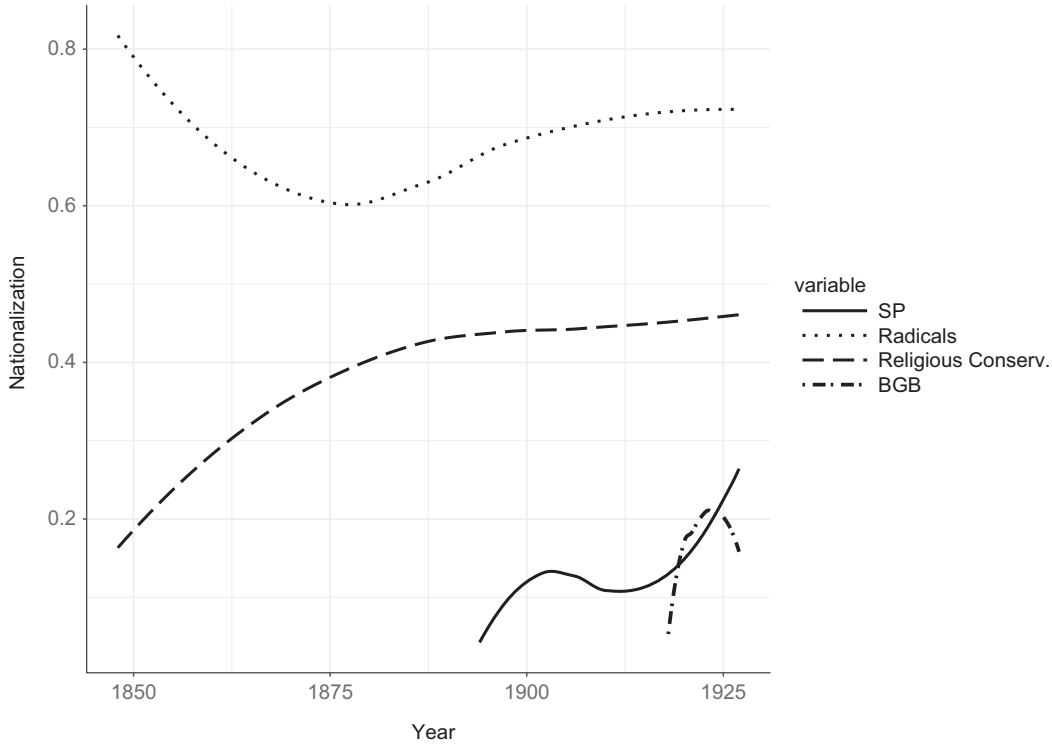


Figure 11: Nationalization of Parties (Gini of Seat Shares), 1848-1927



It thus captures the extent to which citizens' political preferences are unified across the country's territory. Party nationalization is important because, according to Caramani (2004), a high level of nationalization reflects how functional cleavages (as represented by political parties) are superseding territorial ones (as represented by regions).

We follow Bochsler et al. (2016) and measure party nationalization as the inverted and standardized Gini index of the political strength of parties in cantons. However, unlike Bochsler et al. (2016), we use the party seat shares in cantonal governments to capture the political strength of parties in cantons. Figure 10 is based on data from 25 cantons for the period 1928 to 2017 (i.e. all cantons except Jura). High values indicate a high level of nationalization (i.e. homogeneity of a party's electoral performance).

Unsurprisingly, the FDP is the most nationalized party in Switzerland throughout the whole period, as it is present and electorally strong in all Swiss cantons. Up to the 1940s, the CVP achieves the second highest nationalization score, but the rapid entry of the SP into cantonal governments from the 1920s onward (see Figure 3) allowed the Social Democrats to overtake the Christian Democrats already in the 1950s. Hence, the SP was more successful in leaving its urban strongholds than the CVP was in gaining representation in cantonal governments outside its catholic heartlands. Yet, while the SP has not been able to gain any ground since the 1960s, the CVP continues to improve its nationalization score. However, at least part of this improvement is the result of the CVP's losses in its heartlands. Finally, the SVP features the lowest nationalization score throughout the whole period, but the party has greatly improved its level of nationalization since the 1990s, which is mostly the result of its successful electoral performance outside its traditional strongholds in recent decades.

Importantly, the nationalization scores based on cantonal government data differ sharply from the nationalization scores Bochsler et al. (2016) have calculated on the basis of elections to the Swiss National Council. Yet these differences are not surprising, as the SVP has not been equally successful in gaining government representation in cantons, while the CVP continues to be the politically second strongest party in cantonal governments (see Figure 3). Hence, these differences do not question the validity of findings based on national election data, but rather reflect that centrist parties are often more successful in elections for (cantonal) governments than in elections for (national) parliaments.

Figure 11 finally shows the nationalization scores for the four main parties (and their predecessor organizations) for the period 1848 to 1927 for the 17 cantons with complete data.[12] The SP and the Farmers' Party (BGB, the predecessor of the Swiss People's Party, SVP) were founded in the late 19th and the early 20th century respectively. We look at the religious Conservatives as the predecessor of the CVP.[13] In the case of the FDP, we look at the Radicals only (as the other groups within the "liberal" movement have not necessarily joined the FDP).

Figure 11 shows the familiar dominance of the Radicals in the first years of the Swiss federal state, which was, however, soon challenged by the religious conservatives. Towards the end of the 19th century, the two parties had stabilized their position in the Swiss political landscape. During the first years of its existence, the SP was limited to a few urban strongholds. However, the party managed to enter several cantonal governments in the period between 1920 and 1960, as Figure 10 demonstrates. Finally, the BGB/SVP achieved a rather low level of nationalization during its first decades. However, from the 1960s onward, the party slowly (but steadily) gained representation in cantonal governments outside its protestant strongholds, thereby continuously increasing its level of nationalization.

Conclusion

Political scientists, sociologists and economists have increasingly turned to Swiss cantons to examine theoretically important questions. The reasons are twofold. On the one hand, Swiss cantons are characterized by considerable variation with regard to socio-economic structure, political institutions as well as public policies. On the other hand, investigations at lower political levels than the national one may allow researchers to create more sophisticated research designs emphasizing causal inference. Both conditions provide an ideal laboratory for social science research.

However, existing research suffers from the problem that data on numerous political phenomena is not available over longer periods of time. In this research note, we have introduced a new data set on the ideological orientation and partisan composition of cantonal governments, covering 170 years in most cantons (1848-2017). Given that the partisan composition of governments is a crucial indicator for a lot of comparative analyses focusing on policy outputs and political processes, our data set presents a major leap forward in the study of political developments in Swiss cantons. In addition, we have shown that national political data is only an imperfect substitute for cantonal political data and should be used with great caution. The new data thus provides unique opportunities to examine economic and political reforms

[12] The data should be interpreted with caution, given that in some cantons direct elections of governments were adopted only at the end of the 19th century

[13] Put differently, we consider both the Catholic and the Protestant Conservatives as predecessors of the CVP, because the Protestant Conservatives often cooperated with the Catholic Conservatives (Altermatt 1991). With that being said, the Catholic Conservatives constitute the considerably larger group. Except for mid-19th century Bern and Basel-Stadt, Protestant Conservatives were not able to gain representation in any cantonal government. Therefore, we have decided not to list them separately.

from the 19th to the 21st century. In addition, our data set allows researchers to investigate several important aspects of Swiss politics at the cantonal level, such as the political strength of parties, the number of parties, government volatility or the nationalization of party systems.

In addition, in order to demonstrate the data's potential and to provide some evidence for the data's validity, we have sketched the political developments in Swiss cantons across multiple dimensions. First, we have shown that the history of Swiss cantonal politics is a history of the decline of the Radical Party and, later on, the Catholic Conservatives. Second, we have documented a secular trend towards larger government coalitions at the cantonal level in the last 170 years. However, there is only limited evidence that this trend has been accompanied by a convergence in the composition of cantonal governments. Third, we have identified three main periods with high government volatility: the creation of the Swiss federal state and the subsequent decline of the radical regimes in the catholic cantons, the turn to the 20th century and the introduction of PR in many cantons, and the last quarter of the 20th century and the early 21st century. Finally, we have demonstrated that all main political parties in Switzerland have experienced an increase in their degree of nationalization.

However, the development of nationalization in terms of level and pace differs considerably between parties.

Yet our data set cannot only be used to analyze long-term political developments in Switzerland. Given the Swiss cantons' wide-ranging authority in several policy fields, our data can also be used to examine the effect of the partisan composition of cantonal governments or other government dynamics on public policies (e.g. Schmidt 1996; Schmitt and Zohlnhöfer 2017). In a similar vein, our data can, for instance, also be used as a dependent variable in analyses exploring the effect of socio-economic changes on the political strength of parties. There are thus plenty of research questions waiting to be answered. What is clear, however, is that any large-N study on government activities, political processes and public policies that does not account for the partisan composition of governments is likely to be subject to an omitted variable bias.

Although our new data set opens new avenues for research, a number of important tasks remain. For instance, data on the ideological composition of cantonal parliaments is still missing and, we suspect, more difficult to collect. In addition, electoral data, comparable to Erich Gruner 's (1978a; 1978b) seminal work on national elections in the period 1848 to 1917 (e.g. unsuccessful candidates, electoral alliances, vote shares), is also not available yet necessary to compute indicators of important political phenomena such as party competition or the closeness of electoral races. Furthermore, we continue to lack (publicly available) data on the development of political institutions such as direct democracy but also electoral institutions and government-parliament relationships for the whole period from 1848 onward. We suspect that some of this data in fact exists. We therefore conclude this research note with the call to make data publicly available.

References

Altermatt, U. (1991). *Der Weg der Schweizer Katholiken ins Ghetto. Die Entstehung der nationalen Volksorganisationen im Schweizer Katholizismus 1848-1919*. Zürich: Benziger.

Armingeon, K., F. Bertozzi and G. Bonoli (2004). Swiss Worlds of Welfare. *West European Politics* 27(1): 20–44.

Bochsler, D., S. Mueller and J. Bernauer (2016). An Ever Closer Union? The Nationalisation of Political Parties in Switzerland, 1991–2015. *Swiss Political Science Review* 22(1): 29–40.

Bühlmann, M., A. Vatter, O. Dlabac and H.-P. Schaub (2013). Liberale Romandie, radikale Deutschschweiz? Kantonale Demokratien zwischen Repräsentation und Partizipation. *Swiss Political Science Review* 19(2): 157–188.

Caramani, D. (2004). *The Nationalization of Politics*. Cambridge: Cambridge University Press.

Christmann, A. (2010). Damoklesschwert Referendum? Die indirekte Wirkung ausgebauter Volksrechte auf die Rechte religiöser Minderheiten. *Swiss Political Science Review* 16(1): 1–41.

Emmenegger, P., L. Leemann and A. Walter (2018). Intra-Elite Competition and the Origins of Direct Taxation. *Working Paper* pp. 1–31.

Feld, L. and G. Kirchgassner (2001). Income Tax Competition at the State and Local Level in Switzerland. *Regional Science and Urban Economics* 31: 181–213.

Felder, U. (1993). *Wahl aller Kantonsregierungen unter besonderer Berücksichtigung des Wahlsystems*. Zürich.

Freitag, M. and A. Vatter (2006). Initiatives, Referendums, and the Tax State. *Journal of European Public Policy* 13: 89–112.

Funk, P. and C. Gathmann (2011). Does Direct Democracy Reduce the Size of Government? New Evidence from Historical Data, 1890-2000. *The Economic Journal* 121: 1252–1280.

—— (2013). How Do Electoral Systems Affect Fiscal Policy? Evidence from Cantonal Parliaments, 1890-2000. *Journal of the European Economic Association* 11(5): 1178–1203.

Giger, N., J. Müller and M. Debus (2011). Die Bedeutung des regionalen Kontexts für die programmatische Positionierung von Schweizer Kantonalparteien: Die Positionierung von Kantonalparteien. *Swiss Political Science Review* 17(3): 259–285.

Gilardi, F. and F. Wasserfallen (2016). How Socialization Attenuates Tax Competition. *British Journal of Political Science* 46(1): 45–65.

Gruner, E. (1977). *Die Parteien in der Schweiz*. Bern: Francke Verlag.

—— (1978a). *Die Wahlen in den schweizerischen Nationalrat, 1848-1919. Wahlrecht, Wahlsystem, Wahlbeteiligung, Verhalten von Wählern und Parteien, Wahlthemen und Wahlkämpfe. Band 1*, volume 1. Bern: Francke.

—— (1978b). *Die Wahlen in den schweizerischen Nationalrat, 1848-1919. Wahlrecht, Wahlsystem, Wahlbeteiligung, Verhalten von Wählern und Parteien, Wahlthemen und Wahlkämpfe. Band 3*, volume 3. Bern: Francke.

Knill, C., M. Debus and S. Heichel (2010). Do Parties Matter in Internationalised Policy Areas? The Impact of Political Parties on Environmental Policy Outputs in 18 OECD Countries, 1970-2000. *European Journal of Political Research* 49(3): 301–336.

Lachat, R. and H. Kriesi (2015). "Voluntary PR Voting" in the Election of Swiss Regional Governments. *Swiss Political Science Review* 21(3): 419–436.

Ladner, A. (2001). Swiss Political Parties: Between Persistence and Change. *West European Politics* 24: 123–144.

—— (2004a). *Stabilitat und Wandel von Parteien und Parteiensystemen. Eine vergleichende Analyse von Konfliktlinien, Parteien und Parteiensystemen in den Schweizer Kantonen*. Wiesbaden: VS Verlag.

—— (2004b). Typologien und Wandel: Die kantonalen Parteiensysteme im letzten Drittel des 20. Jahrhunderts. *Swiss Political Science Review* 10: 3–32.

Manatschal, A. (2011). Taking Cantonal Variations of Integration Policy Seriously - or How to Validate International Concepts at the Subnational Comparative Level: Cantonal Variations of Integration Policy. *Swiss Political Science Review* 17(3): 336–357.

Schmidt, M. (1996). When Parties Matter: A Review of the Possibilities and Limits of Partisan Influence on Public Policy. *European Journal of Political Research* 30(2): 155–183.

Schmitt, C. and R. Zohlnhöfer (2017). Partisan Differences and the Interventionist State in Advanced Democracies. *Socio-Economic Review* forthcoming.

Stutzer, A. (1999). Demokratieindizes für die Kantone der Schweiz. *Institute for Empirical Research in Economics University of Zurich* pp. 1–23.

Vatter, A. (2002). *Kantonale Demokratien im Vergleich. Entstehungsgründe, Interaktionen und Wirkungen politischer Institutionen in den Schweizer Kantonen*. Opladen: Leske + Budrich.

—— (2016). *Das politische System der Schweiz*. Baden-Baden: Nomos.

—— (2018). *Swiss Federalism. The Transformation of a Federal Model*. London: Routledge.

Vatter, A. and M. Freitag (2007). The Contradictory Effects of Consensus Democracy on the Size of Government: Evidence from the Swiss Cantons. *British Journal of Political Science* 37(2002): 359–359.

Walter, A. (2018). Taking the Initiative! Direct Democracy, Coalition Governments, and Welfare State Expansion. *Journal of European Social Policy* forthcoming.

—— (2019). A Race to the Middle. The Politics of Interstate Cost Distribution and Welfare State Expansion. *The Journal of Politics* forthcoming.

Walter, A. and P. Emmenegger (2018). Majority Protection? The Origins of Distorted Proportional Representation. *Working Paper* pp. 1–31.

Wasserfallen, F. (2014). Contextual Variation in Interdependent Policy Making: The Case of Tax Competition. *European Journal of Political Research* 53(4): 822–839.

Supporting Information

Additional Supporting Information may be found in the online version of this article:

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