Electoral Studies 59 (2019) 64–77

Contents lists available at ScienceDirect

Electoral Studies

journal homepage: www.elsevier.com/locate/electstud

Majority protection: The origins of distorted proportional representation☆

André Walter*, Patrick Emmenegger

Department of Political Science, University of St. Gallen, Switzerland

ABSTRACT

Not all proportional representation (PR) systems are equally proportional. Some PR systems favour large parties and are thus 'distorted'. What explains the origins of distorted PR? Research on the adoption of PR has identified both consensual and conflict-ridden roads to PR. We argue that these two roads to PR do not lead to the same outcome. We expect the adoption of PR by consensus to result in less proportional PR systems compared to cases in which PR is forced upon powerful parties. Empirically, we find no evidence that powerful parties introduced PR to grant minority groups better political representation. Instead, we show that when PR was adopted with the support of the most powerful party, reforms often resulted in distorted PR and small seat losses for the most powerful party.

1. Introduction

Not all proportional representation (PR) systems are equally proportional. For instance, Boix (1999, 623) shows that in Germany's interwar PR electoral system, 1.8% of all votes were needed to win one seat in parliament, while in Austria's interwar PR electoral system a five times larger vote share was necessary (8.9%). Scholars increasingly acknowledge and exploit this variation among PR systems to examine the trade-off between representation and accountability (Carey and Hix, 2011), representational inequality (Kedar et al., 2016) and the diffusion of proportionality (Bol et al., 2015). How this variation in the degree of proportionality among PR systems has come about is, however, a largely unexplored research area.

The related literature on the choice between majoritarian representation (MR) and PR electoral systems offers helpful tools to shed light on this puzzle. This diverse and fascinating literature has identified both consensual and conflict-ridden roads to the adoption of PR (Emmenegger and Petersen, 2017). For instance, several researchers emphasize the seat-maximizing strategies of established parties when facing competition from insurgent parties (e.g., Boix, 1999; Benoit, 2007; Ahmed, 2013; Leemann and Mares, 2014). In contrast, other scholars observe a rough consensus among political parties on the benefits of PR at the time of electoral reform (e.g., Blais et al., 2004; Andrews and Jackman, 2005; Colomer, 2005; Cusack et al., 2007; Calvo, 2009).

We argue that these two roads to PR do not lead to the same outcome. Electoral rules are never neutral – they *always* have distributional consequences, advantaging some parties over others in the way votes are cast and translated into seats. This is obviously true for the difference between MR and PR systems. However, we argue that this is also the case for PR systems themselves because strategic districting, district magnitude and electoral thresholds can influence the extent to which small parties can enter parliament. Therefore, the adoption of PR does not imply that small parties are no longer disadvantaged. PR systems might be considerably *distorted*. In particular, we expect the adoption of PR by consensus to result in less proportional (more distorted) PR systems compared to cases in which PR is forced upon the largest parties.

Based on the assumption that political parties try to shape electoral rules to their advantage, we expect to observe considerable *conflict* between parties concerning electoral reform. In particular, we expect parties disadvantaged by the existing electoral system to push for PR and advantaged parties to oppose PR. However, some advantaged parties may agree to PR although the disadvantaged parties are not (yet) in the position to make them to do so. We argue that advantaged parties choose this proactive strategy because it enables them to shape the rules of new PR systems to their advantage. When PR is adopted with the support of advantaged parties, and thus often based on a large cross-partisan *consensus*, we expect the reforms to result in distorted PR. In such cases, advantaged parties use district manipulation and electoral thresholds to create PR systems that secure their strong electoral positions. Hence, in these cases, an apparent consensus disguises fundamental conflicts of interest. In contrast, if PR is forced upon advantaged parties, we expect reforms to result in more proportional PR systems. In these cases, there is open conflict between parties.

☆ An earlier version of the manuscript has been presented at the annual conference of the Swiss Political Science Association in Geneva. We thank all participants as well as Georg Lutz, Jan Rosset and the anonymous reviewers for their helpful comments and Julia Sifringer for her excellent research assistance.

* Corresponding author.
E-mail addresses: andre.walter@unisg.ch (A. Walter), patrick.emmenegger@unisg.ch (P. Emmenegger).
URLs: https://andrewalter.netlify.com/ (A. Walter), https://pemmenegger.com/ (P. Emmenegger).

https://doi.org/10.1016/j.electstud.2019.02.002
Received 20 September 2018; Received in revised form 31 January 2019; Accepted 1 February 2019
Available online 27 February 2019
0261-3794/

We examine these expectations using the adoption of PR in Swiss cantons, which Rokkan (2009, 157) has identified as a prominent example of the consensus road to PR. In addition, Lutz and Zila (2009) seem to corroborate Rokkan's conclusion by showing that in several Swiss cantons, large cross-partisan majorities supported the adoption of PR. Besides being most-likely cases for the consensus hypothesis, such a within-country analysis helps reducing the number of unobservable and unquantifiable historical differences because all cantons are subject to identical constitutional constraints and similarly affected by broader political, societal and economic trends, while still providing considerable variation in the design of PR systems (Pepinsky, 2019).

To preview our results, we find evidence that PR was often forced upon dominant parties after minority parties had gained legislative majorities or successfully employed popular initiatives. In contrast, political reforms by consensus typically resulted in distorted PR, in which the dominant parties' seat share loss was smaller than in cantons where the dominant parties did not support the reform.

Our arguments travel well beyond the Swiss case. Recent contributions on the adoption of PR by *large established parties* show that the resulting electoral systems were typically highly distorted. For instance, the July 1918 electoral reform in Germany introduced only five electoral districts with at least four seats, while the remaining 382 electoral districts had at most three seats (Schröder and Manow, 2014).[1] Similarly, while the Norwegian Liberals and Conservatives agreed on a PR proposal in 1917, the electoral reform's effects were diluted by establishing a number of low magnitude districts (Cox et al., 2019, 16–17). Unsurprisingly, both parties still gained almost 5% more seats than votes in the first election under PR (Mackie and Rose, 1982, 302–305). Another case is Belgium where the dominant Catholic Party preemptively introduced low magnitude PR in 1899 in order to maintain its political position well into the 20th century (Emmenegger and Walter, 2018b).

In the following section, we review the literature on electoral system choice and forward our theoretical expectations. After discussing the research design, we present the empirical results. A final section concludes.

2. Distorted proportional representation

The literature on electoral system choice in democratic countries in the early 20th century primarily focuses on the choice between MR and PR electoral systems. It has identified both consensual and conflict-ridden roads to the adoption of PR.[2] Several scholars argue that the adoption of PR is the result of political conflict and seat-maximization strategies (e.g., Boix, 1999; Alesina and Glaeser, 2004; Benoit, 2007; Ahmed, 2013; Leemann and Mares, 2014). For instance, the prominent socialist electoral threat thesis suggests that the adoption of PR was a reaction of established parties to the rise of socialist parties following suffrage extension (Boix, 1999).

In contrast, other researchers observe a rough consensus among the major parties on the benefits of PR, although these contributions suggest rather different mechanisms. For instance, Rokkan (2009, 157) argues that in particular in the period before the First World War and thus before socialist parties became serious electoral threats, PR was adopted as a form of minority protection to safeguard the political system in Europe's ethnically most heterogeneous countries.[3] Relatedly, Calvo (2009) observes that electoral competition under MR can increase seat-vote distortions, uncertainty and the sensitivity of electoral regimes to redistricting. Suffrage expansion and the resulting increase in the number of parties could lead to "significant partisan biases that [also] adversely affected well-established parties" (Calvo, 2009, 256) – especially when these parties had "inefficient geographic distributions of support" (Rodden, 2009, 5). In addition, as actors in situations of high uncertainty prefer electoral rules that reduce the risk of becoming absolute losers, parties are expected to develop a general preference for a more inclusive electoral system such as PR (e.g., Andrews and Jackman, 2005; Colomer, 2005). Finally, PR also had a strong normative appeal. Blais et al. (2004, 184) observe "a large consensus in favour of PR" because "PR was perceived at the time to be a 'good idea'" although "some parties were less enthusiastic or more reluctant than others".

With regard to the choice between PR and MR systems, there is thus considerable evidence in support of explanations emphasizing conflict *and* explanations observing consensus. Because electoral rules *always* have distributional consequences in terms of how votes are cast and translated into seats (Kedar et al., 2016), we consider it unlikely that seat-maximization strategies played no role at all. Hence, it remains challenging to explain how the (inevitable) distributional consequences of electoral system reform can be aligned with the observed cross-partisan consensus in several cases. In the following, we aim to contribute to resolving this apparent contradiction by arguing that the consensual and conflict-ridden roads to PR lead to different degrees of proportionality *of the resulting PR systems*.

Electoral systems such as the one originally used in Swiss cantons (MR with multi-member districts) lead to large electoral disproportionalities (Colomer, 2007). The beneficiaries of these disproportionalities are typically large established parties (Rodden, 2009). For these parties, moving to PR would result in significant reductions in seat shares. Therefore, they have few reasons to support such a reform. In contrast, small and emerging parties are punished by such electoral systems, because they often suffer from geographically inefficient distributions of votes. Hence, for small and emerging parties, moving to PR would typically imply significant improvements in their seat to vote ratios. Given these distributional consequences and in line with the literature on electoral system choice (e.g., Calvo, 2009; Leemann and Mares, 2014), we expect parties disadvantaged by the existing electoral system to push for PR, while advantaged parties will fight the adoption of PR.

So far, this is a familiar argument about the distributional consequences of electoral systems. Yet, in the Swiss case, advantaged parties sometimes seemingly supported the adoption of PR (cf. Lutz and Zila, 2009, 14). How can we account for this surprising observation? In the following, we develop our argument with three steps. First, in the relevant period, advantaged parties in all cantons were under pressure to support the adoption of PR, because it was considered the more democratic electoral system. Second, not all PR systems are equally proportional. Rather, PR electoral systems can be designed to secure the position of advantaged parties. Third, advantaged parties cannot be expected to publicly reveal that they are trying to create such 'distorted' PR systems. In the following, we discuss these three points.

[1] The post-war electoral system of November 1918, adopted by the revolutionary Council of the People's Deputies, prescribed considerably larger districts.

[2] The distinction between consensual and conflict-ridden paths to PR is not meant to be a typology but simply an observation about the different mechanisms emphasized in the literature. Below, we will argue that these two paths to PR are systematically related to the degree of proportionality of the resulting PR systems.

[3] The impetus for such minority protection have often been prolonged periods of ethnic conflict. However, the minority protection thesis suggests that *at the time of electoral reform*, the major parties agree on the benefits of PR (cf. Calvo, 2009). We thank an anonymous reviewer for alerting us to this point. Boix (1999, 621) shows that ethnic and religious fragmentation has a positive effect on the adoption of PR in small countries, while in large countries, federalism "operates as a (quasi-perfect) substitute for PR and minimizes potential pressures to abandon a plurality/majority system". Yet, this explanation does not convince for the Swiss case, because the highly federalist Swiss political system should have played the same role in protecting ethnic and religious minorities.

Interest in alternatives to MR systems had been rapidly growing throughout the 19th century. After Thomas Hare had proposed the first PR system in 1864, attention increasingly focused on this electoral system. In 1865, the *association réformiste* was founded in Geneva, which from 1868 onwards used its bulletin to spread ideas about electoral system reform and the adoption of PR (Carstairs, 1980, 2). The first country to use PR was Belgium in 1899, although some Swiss cantons already adopted PR in the 1890s. Three decades later, the majority of existing democracies had introduced PR for national elections (Colomer, 2005). According to Blais et al. (2004, 184), these developments indicate that PR was generally perceived to be a "good idea", because "it was considered consistent with the principle that each vote should count the same". This consensus lasted until the onset of the Second World War, which with the accompanying collapse of several democracies using PR challenged the consensus on its democratic virtues (Blais et al., 2004, 186).[4]

Yet, although facing considerable public pressure, parties advantaged by MR rules often have little interest in adopting PR. What can they do in such situations? We argue that these parties sometimes find the solution in the 'fine print' of electoral laws. Although the literature often treats the adoption of PR as a discrete event, there are in fact large differences between real-world PR systems. Most notably, several factors influence their effective degree of proportionality (Kedar et al., 2016). District sizes might be small or electoral district boundaries might be drawn to create safe seats for established parties or reduce the insurgent parties' ability to win seats. In a similar vein, electoral thresholds might be used to deny smaller parties access to parliament. Hence, just because PR is adopted does not necessarily imply that insurgent parties are no longer disadvantaged. Rules concerning district sizes or electoral thresholds might make PR systems quite disproportional. Researchers must therefore examine the *effective* degree of proportionality of PR systems (Taagepera and Shugart, 1989).

Clearly, the adoption of such distorted PR systems is a second-best solution for dominant parties, because MR electoral systems are on average more beneficial for dominant parties and offer more opportunities for institutional engineering by means of redistricting (Colomer, 2007; Martinez i Coma and Lago, 2018; Emmenegger and Walter, 2018a). In addition, as Carey and Hix (2011, 384) show, even in case of rather small districts, PR is quite effective at reducing disproportionalities between parties' vote shares and seats in parliament. Hence, we cannot expect dominant parties to push for the adoption of PR. Yet, dominant parties might agree to PR when confronted with such demands or facing public pressure (Quintal, 1970; Norris, 1997; Reed and Thies, 2003). However, in such situations, we expect dominant parties to minimize the 'cost' of new electoral system by introducing distorting elements. In this way, the dominant parties can steal the other parties' thunder, although without giving up all of their advantages.

Finally, dominant parties are unlikely to admit that they are introducing distorting elements to new electoral laws. Rather, we expect an apparent consensus to disguise fundamental conflicts of interest. Policy preferences are always expressed in a strategic context, in which public statements cannot always be taken as the actors' true preferences. Revealed policy positions are often second-best solutions because policy actors have come to the conclusion that their first-best solution is no longer attainable or alternatives to some form of compromise might be even less desirable. Electoral system reforms, in particular, facilitate compromises centred on second-best solutions, because they often concern multiple non-independent issues such as the size and structure of electoral districts (Jacobs and Leyenaar, 2011; Bedock, 2017; Emmenegger and Petersen, 2017). In addition, PR might not always be the parties' most important concern (Boix, 1999). Electoral system reforms thus offer plenty of opportunities for strategic behaviour and the linkage of different issues. Researchers must therefore consider the possibility that support for PR might not reflect a genuine interest in PR but is rather the result of a bargain in which support for PR is the cost for achieving another political goal or avoiding worse political outcomes.[5]

These considerations allow us to formulate two expectations for the empirical analysis. Based on the familiar argument that electoral systems have distributional consequences, we expect to observe considerable conflict between political parties on the adoption of PR. Most notably, we expect parties disadvantaged by the existing electoral system to push for PR and advantaged parties to defend the MR electoral system. Yet, these conflicts might not always be discussed in the open. Hence, an analysis of conflict must also consider the possibility that the adoption of PR was part of a larger political bargain and thus a second-best solution for the established parties. As a result, the coding of party positions on electoral reform must cast a wide net. In addition, since advantaged parties have no interest in giving up their privileges, disadvantaged parties must often force them to do so. However, whether these parties can enforce PR is a function of political power. Not all advantaged parties are equally dominant. As a consequence, we expect that the less dominant the advantaged parties are, the more likely we observe the adoption of PR. We thus formulate the following hypothesis:

Hypothesis 1. The more politically dominant the advantaged party is, the longer it will take before PR is adopted.

Second, we argue that some advantaged parties might agree to PR although the disadvantaged parties are not (yet) in the position to make them do so. Advantaged parties are likely to rely on such a strategy when facing public pressure, because PR enjoys considerable support within the population as the more democratic electoral system (Blais et al., 2004). This strategy is a proactive response to a possible electoral threat (Boix, 1999), which allows the advantaged parties to reform the electoral system on their terms rather than leaving its design to their political opponents.[6] Since parties are typically well informed about the geographical distribution of their voters (Rodden, 2009), and with each election adding new information, we can expect them to be in the position to tailor districts and thresholds to their needs.[7]

This proactive strategy has thus a great advantage. It enables advantaged parties to shape the concrete rules of the new PR system to their advantage. When PR is adopted with the support of advantaged parties, we expect the reforms to result in distorted PR. In the case of distorted PR, the new electoral system – although now proportional – is created in a way to secure the advantaged parties' strong electoral position (as reflected in small or inexistent seat losses following electoral system change). In contrast, if PR is forced upon the advantaged parties (i.e. the advantaged parties fought the reform until the end), we expect the reform to result in a more proportional electoral system (as reflected in lower effective electoral thresholds) and the established

[4] In Switzerland, this situation was further accentuated by the several decades long struggle for the adoption of PR at the national level (Natsch 1967, 1972; Gruner, 1978; Szekendy, 2018). In this debate, the advocates of PR at the national level were sometimes defending MR systems at the cantonal level and vice versa. Switzerland eventually adopted PR at the national level in 1918.

[5] Whether advantaged parties can be convinced to enter such bargains is influenced by the extent to which advantaged parties need other parties to achieve certain goals. The more powerful the advantaged parties are, the less willing they are to engage in compromises.

[6] Our argument is thus inspired by the work of Boix (1999), although Boix focuses on the choice between MR and PR systems, while we focus on differences in the degree of proportionality among PR systems. In addition, we rely on a broader understanding of "electoral threats".

[7] This proactive strategy of PR adoption is unlikely to confound the expected negative relationship between party dominance and PR adoption because highly dominant parties are less dependent on political compromises with other parties and probably also less concerned about possible future electoral threats. In contrast, if advantaged parties are comparatively weak, the minority parties are likely to be in the position to force PR upon the advantaged parties. Hence, we expect public pressure to matter most at intermediate levels of party dominance. We provide some preliminary evidence in the appendix (see Table 5) that this is indeed the case.

Table 1
The timing of PR introduction.

	Introduction PR						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
% Seat Share Dominant Party	−12.52***	−12.34***	−12.21***	−12.02***	−13.34***	−16.48**	
	(2.739)	(3.113)	(2.797)	(2.959)	(3.448)	(5.631)	
% Vote Share Left		0.125***	0.153	0.195*	−0.00763	0.0304	−0.00400
		(0.0343)	(0.118)	(0.0829)	(0.104)	(0.0770)	(0.0524)
Number of Parties			1.099				
			(0.873)				
Numb. Part.*Vote Left			−0.0209				
			(0.0397)				
Right Margin				−0.00648			
				(0.0125)			
Right Margin*Vote Left				−0.00197			
				(0.00180)			
Dominant Party*Vote Left					0.193		
					(0.142)		
Largest Vote Share Non-Socialist							−0.688
							(2.936)
Spread of PR (Public Pressure)						118.9***	105.8***
						(12.67)	(9.140)
Mean Fractionalization						−36.53	−34.45
						(27.08)	(26.91)
% Industrial Sector						12.24	22.13
						(34.63)	(40.21)
ln Population Size						185.2**	146.3**
						(71.08)	(52.36)
Cantons	22	22	22	22	22	22	22
Observations	1095	1095	1095	1095	1095	1095	1095

Note: Cluster-Robust Standard Errors in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

parties to suffer larger seat losses.[8] Our second hypothesis is thus as follows:

Hypothesis 2. PR electoral systems adopted with cross-partisan consensus are more disproportional than PR electoral systems adopted against the opposition of the parties advantaged by the previous MR systems.

3. Data

In order to test our expectations, we have engaged in a considerable data collection effort (Walter and Emmenegger, 2019). In addition, we have complemented our data with the data set compiled by Lutz and Zila (2009).[9] In this section, we present our two datasets. We use the first dataset to examine whether the largest parties' level of electoral dominance is associated with the adoption of PR (Hypothesis 1). The second dataset is concerned with the main part of our analysis. We analyze whether the conflict-ridden and consensual roads to PR lead to systematically different degrees of proportionality of the resulting PR systems (Hypothesis 2).

Our first dependent variable is a dummy that measures the year PR was adopted. As Table 2 below shows, there is considerable variance. The first canton introduced PR in 1890 (Ticino), while the last canton did so in 1992 (Uri), resulting in a time span of 102 years.[10]

Turning to our independent variables, we use the vote share of the strongest party to measure the dominance of the electorally strongest party in a canton. In addition, we control for socialist electoral threats and the alleged coordination problems between non-socialist parties by following existing research. More specifically, we employ the vote share of the left and the effective number of non-socialist parties (Boix, 1999) as well as the margin of vote shares between the two strongest non-socialist parties (Cusack et al., 2007). All of these indicators are based on Lutz and Zila (2009), which have used cantonal-level voting behaviour in national elections. However, given that patterns of national elections might differ from cantonal elections, we also employ an additional variable for political dominance by measuring the seat share of the strongest party in cantonal governments. To do so, we employ newly collected data on the partisan composition of cantonal governments (Walter and Emmenegger, 2019). The bivariate correlation of our measure of party dominance and Lutz and Zila's (2009) measure, the largest vote share of a non-socialist party in national elections, is only r = 0.42. As our analysis will demonstrate, our measure is a more precise indicator of cantonal party dominance.[11]

As further control variables, we employ socioeconomic data on the cantonal level (based on the national census). More precisely, we use the average level of religious and linguistic fractionalization to capture the social heterogeneity in every canton (Boix, 1999), control for the

[8] It could be asked why the disadvantaged parties play along, as they are likely to notice the distorting features of the new electoral system. Yet, disadvantaged parties are likely to face the same problem. Their first-best solution, a PR system without distortions, might be unattainable. Hence, distorted PR is an acceptable compromise for the moment.

[9] We thank Georg Lutz for kindly sharing the data.

[10] In contrast, variance in time is comparatively small in the cross-national data set used by Blais et al. (2004), because the adoption of PR is clustered around the First World War.

[11] Admittedly, data on the partisan composition of cantonal parliaments would be preferable, but such data is not systematically available before 1980. However, we believe that our dominance indicator is superior to the national election data, because direct government elections take place in multi-member districts that are often larger than electoral districts in national elections, thereby reducing incentives for strategic voting. For instance, electoral districts for national elections of both Appenzells, Basle-County, Glarus, Nidwalden, Obwalden, Schaffhouse, Schwyz, Uri and Zug ranged from 1 to 4 seats (mean 1.9), while their districts for elections to cantonal governments ranged from 5 to 11 seats (mean 7.4) in the mean year of our sample (1919). Therefore, our government data does not overstate party dominance. In addition, given that access to government participation is often regulated by voluntary proportionality (Vatter, 2002), only weak parties with vote shares below 10% are not captured by our cantonal party dominance measure. In contrast, the national elections data is more appropriate to capture the electoral strength of the left and the effective number of non-socialist parties, because small parties and the political left rarely entered cantonal governments.

Table 2
The adoption of PR: Initiatives and party positions.

Canton			Party Position				
	Adoption	Initiative	Radicals	Liberals	Democrats	Cath. Cons.	Social Demo.
Ticino	1890	X	Opp.	–	–	**Opp.**	–
Geneva	1892	X	**Opp.**	Sup.	–	–	–
Zug	1894	X	Sup.	–	–	**Sup.**	–
Neuchâtel	1894	X	**Sup.**	Sup.	–	–	–
Solothurn	1895	X	**Opp.**	–	–	Sup.	Sup.
Schwyz	1898	X	Opp.	–	–	**Sup.**	–
Basle-City	1905	✓	**Opp.**	Sup.	–	Sup.	–
Lucerne	1909	✓	Opp.	–	–	**Sup.**	Sup.
St. Gall	1911	✓	**Opp.**	–	Sup.	Sup.	Sup.
Zurich	1916	✓	**Opp.**	–	Sup.	Sup.	Sup.
Basle-County	1919	X	**Sup.**	–	–	–	Sup.
Glarus	1920	✓	**Opp.**	–	Sup.	–	Sup.
Thurgau	1919	X	**Opp.**	–	Sup.	Sup.	Sup.
Valais	1920	✓	Sup.	–	–	**Sup.**	–
Argovia	1921	✓	**Opp.**	–	–	Sup.	Sup.
Fribourg	1921	X	Sup	–	–	**Sup.**	Sup
Berne	1922	X	**Opp.**	–	–	Sup.[a]	Sup.
Vaud	1948/1961	X	**Sup.**	Sup.	–	–	Sup.
Schaffhouse	1952	✓	Sup.	–	–	**Opp.**[a]	Sup.
Nidwalden	1981	✓	Sup.	–	–	**Opp.**	Sup.
Obwalden	1984	✓	Sup.	–	–	**Opp.**	Sup.
Uri	1992	✓	Sup.	–	–	**Sup.**	Sup.

[a] In Berne and Schaffhouse, the Conservative People's Party and the Farmers Party, respectively, instead of the Catholic Conservatives.

size of the population and employ the size of the second sector to measure economic development (Boix, 1999; Blais et al., 2004; Leemann and Mares, 2014). Finally, following Blais et al. (2004, 187), we use the share of neighbouring cantons that already adopted PR to capture the public pressure dominant parties faced. The intuition here is that the spread of PR may be thought as a proxy for information and communication flows of ideas about electoral system choice among cantons. The summary statistics of our data can be found in Table 4 in the appendix.

Our second dataset captures the different effective electoral thresholds and thus different degrees of proportionality of PR systems. We have collected data on electoral quorums and the number and magnitude of districts of all cantonal electoral laws that introduced PR. Theoretically, we are interested in the majority party's ability to create barriers against insurgent parties and to protect at least 50% of all seats in parliament. Unfortunately, there is no established indicator in the literature, which captures our phenomenon of interest. In the following, we employ the effective electoral threshold in the median-sized district of a canton as a proxy. In contrast to the standard effective electoral threshold,[12] the effective median electoral threshold measures the percentage of votes that is required to obtain a seat in the median-sized district. The effective median electoral threshold is thus more demanding than the standard effective electoral threshold, because it captures the vote shares insurgent parties need to gain a sizable representation in parliament (rather than just one seat).[13] The effective median electoral threshold is calculated as follows:

$$DisThres_i = \frac{75}{(M_i + 1)} \quad (1)$$

$$EffMed_i = max(Quorum_i, DisThres_i) \quad (2)$$

In equation (1), M_i denotes the median district size in canton i. The formula calculates the electoral threshold based on the median district magnitude (see also Gallagher and Mitchell, 2005, 608–610). Equation (2) then shows that to calculate the effective median electoral threshold, we use the higher value (i.e. maximum) of the following two values: the legal quorum[14] and the district threshold (see equation (1)) to obtain the effective median electoral threshold.

In addition, to demonstrate that effective median electoral thresholds may be used to limit the dominant parties' seat losses in cantonal parliaments after the introduction of PR, we have calculated their seat share differences between the last election under MR and the first election under PR. We have collected data on the electorally strongest party's seat share by consulting a wide range of publications of cantonal statistical offices, cantonal history textbooks and local newspapers.[15]

4. Empirical analysis

We now turn to our empirical analysis. In section 4.1, we examine whether a party's level of political dominance is negatively associated

[12] The standard effective threshold measures the vote share necessary to win *one* seat on a level above the electoral district (e.g., nation or state level) by using either the largest electoral district (Taagepera, 1998, 403) or using equation (1) below but multiplying the denominator with square root of the number of districts (Gallagher and Mitchell, 2005, 610).

[13] However, our results hold when using the standard effective electoral thresholds as we show in Table 7 in the appendix.

[14] In the cases of St. Gall and Zurich, the legal threshold applies only to the individual district and is not expressed in terms of percentage of votes. In St. Gall, the legal quorum is defined as follows: a list must receive at least 75% of all votes divided by the seats in a district plus one. To obtain the legal quorum, we have used the median district magnitude in St. Gall (13 seats). The resulting quorum is 5.4% using the formula $Quorum_i = \frac{1}{(S+1)} * .75$ where S is the number of seats. In Zurich, the district wide quorum was 200 votes per candidate. Therefore, the legal quorum depends on the number of voters in a district as well as the turnout. Using a district in Zurich with the median magnitude (Töss), the number of voters in the first PR election was 5′442 with a turnout of about 91%. Only if turnout would decline below 57%, the legal quorum would be larger than the district threshold.

[15] We were able to collect seat share data for all cantons except Glarus. For Glarus, we obtained seat share data for the first election under PR. However, with regard to the last election under MR rules, we know only that the Radical Party held the absolute majority of seats. Using the available qualitative and quantitative evidence, we account for the problem by conducting a number of robustness tests, which are reported in Figs. 3 and 4 in the appendix. We show that our results hold for all plausible seat shares of the Radicals before the introduction of PR.

Table 3
Regression results: Dominant party support, electoral thresholds and seat losses.

	Seat Loss	Threshold	Seat Loss
Intercept	0.16***	8.84***	0.22***
	(0.03)	(1.60)	(0.05)
Dominant Party Support	−0.11*	5.69*	
	(0.05)	(2.50)	
Eff. Median Threshold			−0.01*
			(0.00)
R^2	0.21	0.21	0.30
Num. obs.	21	22	21

Note: Standard Errors in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

with the timing of the introduction of PR. As argued above, we expect that the more dominant the strongest party is, the longer it takes a canton to adopt PR. This analysis is important because it shows that politically dominant parties facing no serious electoral challenge are not associated with the adoption of PR. It thus demonstrates that the behaviour of dominant parties is driven by seat-maximizing concerns. We use an event history setup with cluster robust standard errors on the cantonal level to account for the non-independence of observations within cantons. Following Lutz and Zila (2009), our period of investigation starts for all cantons in 1875 except for a few cantons for which data on the composition of government is available only for later periods.[16] However, we go beyond existing quantitative investigations by employing a fixed effects logit estimator that accounts for unobserved constant effects. Therefore, only within-variance of our measures is used to explain the adoption of PR, thus providing a conservative test of our hypotheses.

Section 4.2 contains the main part of our empirical analysis. In this section, we analyze whether the seat share loss of the politically strongest party in the first election under PR is a function of whether it supported or opposed the adoption of PR. As explained above, we expect that strong parties supporting the adoption of PR try to shape the specific rules to their advantage (e.g., by manipulating district sizes or employing electoral thresholds). We have coded the position of every relevant party on the adoption of PR in all cantons and provide brief descriptions for every canton in the appendix. In addition, we examine whether the position of the strongest parties on PR is a robust predictor of the effective median electoral thresholds and the strongest parties' seat share losses in the first election under PR (using OLS regressions). We expect that when the electorally strongest party supports the adoption of PR, the new electoral system features a higher effective median electoral threshold and the party suffers from lower seat share losses than when the electorally strongest party opposes the adoption of PR.

4.1. Party dominance and timing of PR introduction

Table 1 displays our results on party dominance and the timing of PR adoption.[17] In Model 1, we include only the seat share of the strongest party in government as a predictor. As expected, the coefficient is highly significant with a negative sign. Hence, the more dominant the strongest party was, the less likely the canton was to adopt PR. In Model 2, we add the vote share of the left. Although the effect of the left is positive and significant, our main variable is barely affected. In addition, the effect of the left on the introduction of PR is not robust as the subsequent models show.[18] In Model 3, we test the socialist electoral threat thesis. Following Boix (1999), we employ an interaction between the vote share of the left and the effective number of parties. However, the interaction term fails to reach conventional levels of statistical significance. Model 4 shows that the same is true for the alternative specification of the socialist electoral threat thesis by interacting the vote share of the left and the vote margin between the two strongest non-socialist parties (as suggested by Cusack et al., 2007). In addition, Model 5 shows that the interaction between the seat share of the dominant party in government and the vote share of the left is not significant either. Therefore, the data provide no evidence that the introduction of PR was driven by the rise of the left and/or coordination problems of the political right.

In Model 6, we introduce a number of control variables. The spread of PR as an indicator of public pressure to adopt PR as well as population growth are positively and significantly associated with the introduction of PR. Yet, our party dominance measure remains negative and significant. In contrast, the vote share of the left is no longer a significant predictor of PR adoption. In a similar vein, the average level of religious and linguistic fractionalization in a canton is not significantly related to PR adoption. Lastly, we show in Model 7 that Lutz und Zila's (2009) alternative measure of party dominance, the vote share of the strongest non-socialist party in national elections, is not linked to PR adoption.

Our results thus provide clear evidence that cantons in which a party had a tight grip on power delayed the adoption of PR, which is in line with our first hypothesis. In contrast, the structure of competition between the political left and the non-socialist parties had no discernible effect on electoral system reform. In a similar vein, we could not detect any effect of social heterogeneity on electoral system reform. However, we find that the spread of PR had a positive and significant effect on electoral system reform. Hence, the available evidence suggests that the dominant party's position on the adoption of PR is influenced by seat-maximizing concerns. PR is adopted only when a certain minimum level of political competition is reached.

4.2. Distorted PR as majority protection

Even though the introduction of PR was delayed if a party enjoyed a dominant position, almost all cantons reformed their electoral systems at some point. However, the effective proportionality of these new electoral systems differs considerably. In this section, we forward evidence that if the electorally strongest party supported the adoption of PR, the newly created electoral system was designed to protect its strong electoral position. More concretely, we show that, first, the proportionality of PR systems is linked to whether the strongest parties had supported the adoption of PR and, second, that the seat share losses of the strongest parties in the first PR election are correlated with the proportionality of PR systems.

Table 2 displays the year PR was adopted, the positions of the relevant parties with the strongest party in a given canton in bold and, finally, whether PR was introduced by means of a popular initiative.[19] As the table shows, strongest parties opposed the introduction of PR in twelve cantons while supporting it in another ten cantons. Among the twelve cases in which the strongest party opposed the adoption of PR,

[16] These cantons are: Appenzell Inner-Rhodes (1928), Appenzell Outer-Rhodes (1894), Argovia (1885), Glarus (1887) and Schaffhouse (1876). However, Appenzell Inner-Rhodes and Appenzell Outer-Rhodes are both excluded from the analysis due to our estimation strategy, as they both still have not adopted PR.

[17] Our sample covers 22 cantons since both Appenzells as well as Grisons have not introduced PR to date. In addition, we do not consider Jura, because the canton has used PR since its creation in 1978.

[18] For the Swiss cantons, Table 4 in the appendix shows that the average vote share of the left was only 7.4%.

[19] Several, but not all Swiss cantons introduced the instrument of popular initiatives, which require the support of a specific number of citizens and allow suggesting policy measures that need to be implemented by law if approved in a popular vote (cantonal parliaments cannot adapt the proposals).

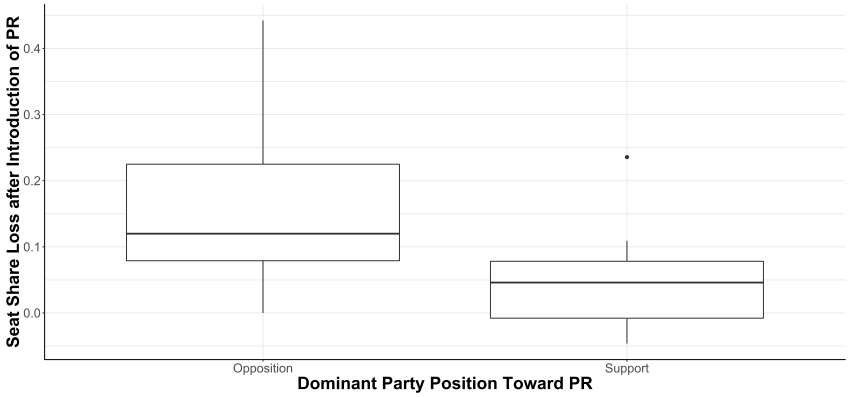

Fig. 1. Seat share of dominant party in government before the introduction of PR and seat share loss of the dominant party in parliament after the introduction of PR

Fig. 2. Linear fit between median electoral threshold and seat share loss of the dominant party in parliament after introduction of PR

eight times the proponents of PR relied on a popular initiative, while four times they relied on parliamentary means.[20] In addition, the support for PR among the main political parties in a given canton is unequally distributed across political camps. The Catholic Conservatives opposed PR in three out of nine cases while the Radical Party opposed PR in nine out of twelve cases.[21] This unequal distribution should not come as a surprise. As one of the major advocates of PR at the national level (Natsch 1967, 1972; Gruner, 1978), the Catholic Conservatives probably found it more difficult to explain why they opposed PR at the cantonal level. In any case, Table 2 shows that the adoption of PR in Swiss cantons was often conflictual, although there are several cases of apparent consensus.

The relationship between the strongest party's support for PR and its seat share loss in the first election under PR is displayed in Fig. 1. The boxplots show that, on average, the strongest party in a canton lost a higher percentage of seats if it opposed the adoption of PR. The corresponding *t*-test is significant at the 5% level (t-value: 2.39, N = 22). The figure further shows that the electorally strongest parties sometimes even benefited from the adoption of PR (see right hand side of Fig. 1). Hence, the adoption of PR was not necessarily disadvantageous for the electorally strongest parties – especially when they participated in the drafting of the new electoral system.[22]

We argue that the mechanisms through which the strongest parties protected their positions include district manipulation and electoral thresholds. To examine our claim, Fig. 2 plots the effective median electoral thresholds against the strongest parties' seat share losses in the first election under PR compared to the last election under MR. The figure shows that the relationship between the effective median electoral thresholds and the seat share losses is clearly negative, suggesting that a higher threshold is associated with a smaller (or even no) electoral loss of the strongest party.[23]

To get more precise estimates, we present the regression results for our arguments in Table 3. We use a dummy variable to capture the position of the strongest party (see Table 2). Model 1 in Table 3 shows that the seat share loss in the first election under PR rules is eleven percentage points lower for the strongest parties that supported PR than for similar parties that opposed PR. We interpret this finding as evidence for our argument that the strongest parties support PR only if they are able to manipulate electoral laws.

However, critical readers might be inclined to argue that the

[20] For instance, in Geneva, the Radical Party lost its parliamentary majority in 1890 for the first time since 1848. The Liberal-Conservative group and the "Radical-National List" used this unprecedented opportunity to introduce PR against the opposition of the Radicals.

[21] In Table 2, there is a fourth case, in which the Conservatives opposed PR (Schaffhouse), but in this case, the Conservatives were the Farmers Party and not the Catholic Conservatives (see the note to Table 2).

[22] Basle-County is the only case of high seat share loss despite support for PR. In Basle-County, the main political cleavage divided two factions within the

(*footnote continued*)
radical movement (the *Bewegungspartei* and the *Fortschrittspartei*). The Radical Party was founded only in 1919, the same year the canton adopted PR. Hence, the Radical Party in Basle-County was probably not in the best possible position to design a new electoral law tailored to its needs. For the analysis, we use the sum of the seats of the two factions of the radical movement in 1917 (the last election under MR) and the seats of the Radical Party in 1920 (the first election under PR rules). Hence, the exceptional case of Basle-County works against the expected association, which makes our test a conservative one.

[23] Argovia is an extreme case, because the Radical Party's seat share dropped dramatically after the adoption of PR (which the Radical Party had opposed). Yet, as we demonstrate in Table 6 in the appendix, our results hold when the case of Argovia is excluded from the sample.

strongest parties also support PR if they (correctly) anticipate that electoral outcomes do not change after adopting PR (even in the absence of such manipulation). To address this potential criticism, we show in Model 2 in Table 3 that the strongest parties' support is also positively associated with the effective median electoral threshold. If the strongest parties supported the adoption of PR, the effective median electoral threshold is about 5.7 percentage points higher compared to cases without their support. In addition, we demonstrate in Model 3 that the effective median electoral threshold is negatively and significantly related to the seat share loss in the first election under PR. More precisely, a one percentage point increase in the effective median electoral threshold is associated with a one percentage point decrease in seat share loss. As a result, the evidence at hand supports our argument that if the strongest parties supported the adoption of PR, they typically devised rules to limit their electoral losses via district manipulation and electoral thresholds. Our empirical findings are thus in line with our second hypothesis.

5. Conclusion

There is a longstanding interest of political scientists in electoral system choice. Although most analyses have taken Rokkan's (2009) two roads to PR as their main point of reference, many issues are still unresolved. In particular, there is a disagreement between researchers emphasizing conflict between parties about PR adoption and other researchers observing (more or less) widespread consensus (Emmenegger and Petersen, 2017). In this article, we have argued that an apparent consensus sometimes disguises fundamental conflicts of interest. Put differently, powerful parties' publicly stated support for PR should not be confused with an interest in a truly proportional electoral system.

We contribute in two ways to the literature on electoral system choice. First, we have provided a systematic analysis of Rokkan's second road to PR, which concerns the protection of minorities through the electoral system. While others have looked at these arguments before us (most notably Calvo, 2009), we have done so for one of the cases from which Rokkan's minority protection argument originates, the Swiss cantons. In contrast to Rokkan, we have found no evidence that dominant parties introduced PR to grant minority groups political representation and to secure political stability.[24] Instead, we have argued that parties are primarily self-interested and aim at maximizing their seats. Sacrificing their electoral advantage to achieve rather abstract goals such as political stability is not plausible from this perspective. Rather, we argue that the dominant parties' main concern was the protection of their majorities.

Second, we have provided an explanation for the origins of 'distorted' PR systems. More precisely, we have demonstrated that politically powerful parties can manipulate electoral laws in a number of ways to limit their losses in case of electoral system change. District manipulation and statutory electoral thresholds are two powerful instruments parties can use to maintain their tight grip on power. Empirically, we have shown that when PR was adopted with the support of the most powerful party, reforms typically resulted in distorted PR (i.e., high effective electoral thresholds) and small seat losses for the most powerful political party following electoral system change. In contrast, when PR was forced upon the most powerful party, the electoral system was more proportional and the most powerful parties' seat share losses larger.

Given that the degree of proportionality among PR systems differs considerably between countries, scholars have increasingly begun to focus on how this variation affects a number of issues such as representational inequality and electoral accountability (Carey and Hix, 2011; Bol et al., 2015; Kedar et al., 2016). How this variation among PR system has come about is, however, a largely unexplored research area. We have provided an explanation for this puzzling phenomenon. As we have demonstrated, the question might not only be whether parties support or oppose PR but also whether they can manipulate the electoral laws introducing PR system during the legislative process to their advantage, thus creating distorted PR systems. Our results clearly show that such strategic manipulations can have considerable implications for electoral competition under PR.

Appendix

This appendix contains four sets of information. The first section contains the summary statistics. The second section briefly documents our coding of party positions in the different cantons (see Table 2). The third section provides some preliminary evidence on a possible interaction effect between party dominance and public pressure for reform. Finally, the fourth section contains a series of robustness tests.

Summary statistics

Table 4
Summary Statistics

	mean	sd	min	max
Introduction of PR	.0156695	.1242376	0	1
% Seat Share Dominant Party	.7482265	.1817047	.4	1
% Vote Share Left	7.396604	12.65046	0	53.73
Number of Parties	2.044872	.8958099	1	6.1
Right Margin	49.86071	33.82144	0	100
Spread of PR (Public Pressure)	.3132172	.3093215	0	1
Mean Fractionalization	1.28553	.2248288	1.01165	1.8334
% Industrial Sector	.4206781	.1341473	.1	.743
ln Population Size	4.809466	.4572392	4.07	5.83
Largest Vote Share Non-Socialist	.756683	.2113397	.325	1
Observations	1404			

[24] In fact, Szekendy (2018) shows that arguments about (unpopular) minorities were used to stir opposition against PR, portraying the inclusive features of PR systems as special privileges for (undeserving) minority groups.

Party positions on PR

Ticino

The Conservatives had dominated the parliament since 1875 after the Federal Government decided that electoral districts had to be adjusted for population growth. Among others, the Conservatives' dominance was secured by the widespread manipulation of electoral register data. In 1890, an initiative with 10′009 signatures demanded a revision of the constitution and the electoral law. However, the cantonal government delayed the discussion of the initiative, which led to an armed insurgency of supporters of the Radical Party. The supporters took over, while one member of the cantonal government was killed. In response to the insurgency, the Federal Government intervened by sending military troops and demanded a reform of the electoral law. In the parliamentary discussion, the Conservatives favoured the system of limited voting and explicitly rejected PR, while the Radicals wanted to reinstall the pre-1876 system. Given the political dominance of the Conservatives, the new law introduced the limited voting system, while the Radicals boycotted the final debate. Again, the Federal Government intervened and proposed the introduction of PR to which both camps ultimately agreed (Klöti, 1901, 35–41).

Geneva

The Radical Party had lost its parliamentary majority in the 1890 election for the first time since 1848. Before the election in 1890, a part of the Radicals split and ran with an independent list ("radical-national"). The Liberals and the "Radical-National" Party used their majority to push for PR. The Radicals tried to prevent the introduction of PR by proposing alternative electoral systems such as limited voting but failed eventually. As a consequence, PR was introduced in 1892 (Klöti, 1901, 31–33).

Zug

The Conservatives had held the majority of seats in parliament since 1848. In 1881, the constitution was changed in order to elect 15 cantonal MPs directly, irregardless of the electoral district. In the subsequent election, the Radicals refused to run. In addition, the Radicals defected from electoral agreements in the late 1880s. Finally, the Conservatives initiated the adoption of PR because they began to suffer themselves from disproportionalities (Zuger Nachrichten, 17.02.1892). The Radicals were initially indifferent towards PR but successfully demanded Zug's only set in the national parliament (without being contested by the Conservatives) in return for their support for PR at the cantonal level (Blumenstein, 2001).

Neuchâtel

In the election of 1889, three parties (Radicals, Liberals and Grütlianer) were approximately equally strong in the district La Chaux-de-Fonds. Given that the electoral law demanded the absolute majority for every candidate in order to be elected, only about 50% of the seats were won by a party in the third round. In order to solve the problem, a large majority legislated a temporary electoral law with a PR formula in 1891, which became permanent in 1894 (Klöti, 1901, 54–55).

Solothurn

In Solothurn, the dominant Radical Party opposed the introduction of PR, while the Conservatives launched a number of popular initiatives to introduce PR, which all failed. In addition, the newly founded Workers Party (1890) also supported PR. The turning point was the repeated failure of the Radicals to introduce direct taxation. The law was challenged in popular referendums and it became apparent that the introduction of new taxes was not possible without support of the minority parties. In return, the Conservatives and the Workers Party demanded the introduction of PR. Both proposals were supported by all parties and ultimately accepted in a popular vote in 1895 (Klöti, 1901; Angst, 1987).

Schwyz

The conservative majority supported PR, while the radical minority opposed PR. The main reason was that the proposal defined that PR should be applied only in electoral districts with more than two seats, while smaller districts would continue to rely on MR. The Radicals rejected this proposal because the law eliminated their overrepresentation in larger districts, while maintaining the disproportionality in favour of the Conservatives in smaller districts. Despite the opposition of the Radicals, the law was enacted in 1900 (Klöti, 1901, 80–84).

Basle-City

The dominant Radicals opposed the introduction of PR multiple times (Lüthi, 1983). PR was finally forced upon the Radicals by a successful popular initiative, launched by the Social Democrats and the Conservatives (Gruner, 1978, 546).

Lucerne

PR was initiated by the dominant Conservative Party. The Radicals and the Social Democrats supported PR but all parties disagreed over the specific design. The first point of contention was the size of electoral districts. The proposal was drafted by the Conservatives and assigned a number of small districts to the rural areas. Hoping to achieve electoral gains under PR, the Radicals displayed considerable dissatisfaction. The second point of contention was that the proposal for PR elections of the cantonal parliament was tied to PR elections in the city of Lucerne. The Social Democrats, supported by the Conservatives, pushed for PR on this level in order to weaken the Radicals (who were dominant in the city of Lucerne). Unsurprisingly, the Conservatives and Social Democrats supported the law, while the Radicals opposed it fiercely in parliament and the subsequent popular vote (Bossard-Borner, 2017, 46–47).

St. Gall

The Radical Party had been dominant since 1848. The Conservatives and, later on, the Democrats and Social Democrats tried to force PR upon the Radicals by launching popular initiatives. Only with the fourth popular initiative, PR was finally accepted against the fierce opposition of the Radicals (Gruner, 1978, 546).

Zurich

The minority parties, the Democrats and the Social Democrats, launched several proposals to introduce PR. In 1909, a PR law passed the parliament against the opposition of the Radical Party but was rejected in the popular vote. In 1913, another popular initiative to introduce PR was

launched by the Social Democrats but rejected in parliament. However, this time, the initiative was accepted in the subsequent popular vote in 1916 (Padrun, 2017).

Basle-County

Prior to 1919, the main political cleavage within the canton divided the radical movement into two factions. Together, the two factions held 76 out of 94 seats before the first election under PR. The Radical Party was finally created in 1919. In the same year, the newly created Radical Party proposed to introduce PR. According to Epple (2001), the opponents of PR were a minority within the Radical Party. In a rally of the Radicals, 179 out of 250 members voted in favour of supporting the PR proposal in the upcoming popular vote. The main proponents expected that PR would lead to a deradicalization of the Social Democrats, while the opponents argued that PR would only strengthen the left.

Glarus

PR was pursued by the two minority parties, the Social Democrats and the Democrats. Both parties launched a popular initiative in 1919. The cantonal parliament, which was dominated by the Radical Party, rejected the proposal. However, the initiative passed the subsequent popular vote (Winteler, 1969, 619–620).

Thurgau

The dominant Radical Party fought the introduction of PR for the national council in 1917 (Schoop, 1987, 242–244). Similar to the canton of Solothurn, the Radical Party only accepted to support PR for cantonal elections in an upcoming popular vote in 1919 if the minority parties (Conservatives, Democrats and Social Democrats) would support another proposal in return (parliamentary protocol 16.01.1919).

Argovia

The Social Democrats, supported by the Conservatives, pushed for the adoption of PR by means of popular initiatives. The dominant Radical Party opposed PR. The first initiative failed in a popular vote in 1909, the second initiative passed in 1920 (Gautschi, 1978, 52–55).

Fribourg

The proposal to introduce PR was initiated by the Conservatives as the majority party, which also dominated the commission that drafted the proposal. The 15% electoral threshold was harshly criticized by the Radicals and the Social Democrats but the law was nonetheless accepted by the cantonal parliament in 1921 (Ruffieux, 1981).

Valais

The introduction of PR in 1920 was supported by the dominant Conservatives as well as the Radicals (Locher, 1996, 169).

Berne

PR was introduced based on a proposal by the Social Democrats. The dominant Radicals opposed PR. However, 70 out of 110 radical MPs joined the Farmers Party during the legislative period 1918–1922. The Farmers Party and the Social Democrats supported PR in parliament, which led to its adoption in 1921 after a successful popular vote (Junker, 1996, 183–187).

Vaud

The politically dominant Radicals consistently opposed the adoption of PR. Yet facing considerably pressure from the other parties (including popular initiatives), the Radicals eventually suggested to adopt a PR system in small districts. According to Ruffieux (1974, 41), the new PR system protected the radical majority where it was at risk, while it remained largely majoritarian where the radical majority was safe. The other parties accepted the radical proposal, although representatives of other parties publicly highlighted that the new electoral system was particularly beneficial to the Radicals (Ruffieux, 1974, 40).

Schaffhouse

The Social Democrats pushed for PR with a popular initiative in 1944. The main opponent was the dominant Farmers Party but the initiative passed the popular vote in 1952 (Joos, 1975, 330–331).

Nidwalden

According to Lutz and Zila (2009), PR was introduced by means of a popular initiative. The initiative was supported by the Radicals and the Social Democrats but opposed by the dominant Conservatives (Vaterland, 22.04.1981). Eventually, the initiative was accepted in the popular vote.

Obwalden

The minority parties (Radicals and the Christian Workers Party) pushed repeatedly for PR by launching popular initiatives. However, the initiatives in 1957 and 1974 were rejected in popular votes. In 1984, another initiative was launched by the same parties but opposed by the Conservative Party. Yet, the initiative passed the subsequent popular vote in 1984 (parliamentary protocol 07.07.1983).

Uri

A number of popular initiatives to introduce PR had been launched throughout the 20th century. In 1984, a leftist interest group launched an additional initiative that was opposed by the Radicals, while the dominant Conservatives took no position. After the rejection of PR in the popular vote, the left launched another initiative in 1988 that limited PR to electoral districts with more than two seats. All parties supported the proposal in the subsequent popular vote in which the PR reform was accepted by the voters (Lutz and Zila, 2009).

On the Relationship between Party Dominance and Public Pressure

In Table 1, we have demonstrated that the seat share of the strongest party in government and the geographical spread of PR are robust predictors

of PR adoption. Theoretically, it could be argued that both predictors are not independent of each other. The relationship is, however, rather complex. On the one hand, we would expect that the weaker the strongest party is, the more likely it will (proactively) introduce PR when other geographically proximate cantons adopt PR. On the other hand, in case of comparatively weak "dominant" parties, the minority parties are in the position to force PR upon the electorally strongest party - independent of the spread of PR in neighbouring cantons. Hence, we expect public pressure to matter at intermediate levels of party dominance.

To translate our prediction into a statistical model, we interact our measure for the geographical spread of PR with a second-order polynomial of our measure on the seat share of the strongest party in government. According to our prediction, the effect of the geographical spread of PR should be strongest if the dominant party has only a slight majority but decrease the higher the seat share of the dominant party becomes.

The results of our statistical model are presented in Table 5. As expected, the interaction of our diffusion measure and the second-order polynomial of the seat share of the dominant party as well as their constitutive terms are significant across specifications, which indicates that the two factors are indeed not independent of each other.

Unfortunately, however, the interpretation of the results is less straightforward. First, the conditional logit estimator allows only for the interpretation of the individual coefficients as odds ratios instead of predicted probabilities. The reason is that the conditional logit estimator does not estimate the unit-specific intercept that is necessary to calculate the predicted probabilities (Pforr, 2014, 851). Second and more importantly, the calculation of effects of interaction effects based on odds ratios leads to uninterpretable results (Norton et al., 2014, 159–160). Therefore, a more detailed presentation of our results in Table 5 is not possible. Nevertheless, Table 5 lends some initial support to the argument that public pressure and party dominance are not independent of each other and that public pressure matters most at intermediate levels of party dominance.

Table 5
The Timing of PR Introduction - Interaction

	Introduction PR					
	(1)	(2)	(3)	(4)	(5)	(6)
% Seat Share Dominant Party	1106.4**	1085.2**	1075.5**	1113.8***	1015.2*	8783.0**
	(375.9)	(347.0)	(355.9)	(326.7)	(396.7)	(3059.9)
Dominant Party sq	−870.6**	−849.1**	−842.7**	−869.6***	−805.7*	−7033.4*
	(297.8)	(274.4)	(281.6)	(256.8)	(316.5)	(2984.0)
Spread of PR (Public Pressure)	739.9***	755.8***	736.9***	763.2***	659.9**	4713.8***
	(215.4)	(197.2)	(203.5)	(187.4)	(217.6)	(255.7)
Dominant Party*Spread of PR	−1468.9**	−1466.3**	−1443.7**	−1509.2***	−1281.0*	−11439.6***
	(498.0)	(450.8)	(468.5)	(424.1)	(504.3)	(3228.1)
Dominant Party sq.*Spread of PR	1129.0**	1122.2**	1106.5**	1153.4***	974.9*	8937.9**
	(384.4)	(347.8)	(361.6)	(326.0)	(389.9)	(3116.9)
% Vote Share Left		0.105+	0.223+	0.128	−0.418	−0.0276
		(0.0586)	(0.126)	(0.127)	(0.267)	(0.0676)
Number of Parties			1.342			
			(0.868)			
Numb. Part.*Vote Left			−0.0567			
			(0.0453)			
Right Margin				−0.0150		
				(0.0180)		
Right Margin*Vote Left				−0.000538		
				(0.00236)		
Dominant Party*Vote Left					0.813+	
					(0.493)	
Mean Fractionalization						−40.10
						(31.47)
% Industrial Sector						13.51
						(41.92)
ln Population Size						224.6
						(142.1)
Cantons	22	22	22	22	22	22
Observations	1095	1095	1095	1095	1095	1095

Note: Cluster-Robust Standard Errors in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Robustness test: With Glarus

We were able to collect the relevant data for all cantons except Glarus. However, even in the case of Glarus, some limited amount of information is available. Most importantly, we know that the Radical Party held the absolute majority of seats in parliament after the last election under MR.[25] However, it was not possible to identify the exact number of MPs affiliated with the Radical Party. In contrast, we were able to identify the exact number of radical MPs after the first election using PR. In the following, we conduct a number of robustness using the available data. Our goal is to demonstrate that our findings hold for all plausible seat shares of the Radical Party before the adoption of PR in Glarus.

First, we predict the seat share loss of the Radicals in Glarus using the available data on the position of the Radicals with regard to the adoption of PR (*opposition*) as well as the effective median electoral threshold under the new PR system. We plug these values into regression equations (1) and (3) of Table 3. We then add the Radicals' seat share after the first election under PR rules to the predicted seat share loss to estimate the Radicals' seat share in the last election under MR rules. Based on these considerations, we find that the Radicals' seat share in the last election under MR rules was

[25] Bericht des Regierungsrates an den Landrat des Kantons Glarus betreffend die Einführung der Verhältniswahl des Landrates und der Gemeinderäte, 22.02.1919, p. 6; Glarner Nachrichten, 10.05.1919.

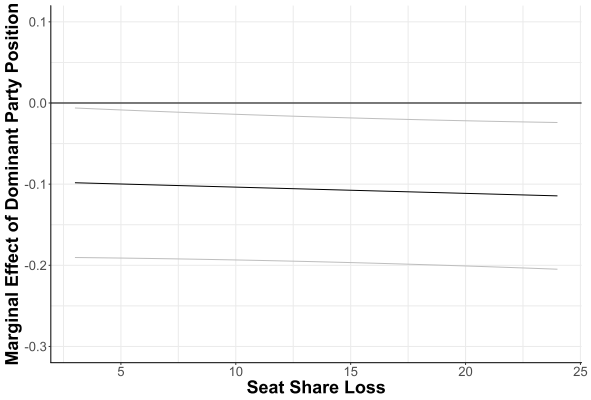

Fig. 3. Coefficient estimates with 95% Confidence Intervals for the Effect of the Dominant Party Position towards PR on the Seat Share Loss.

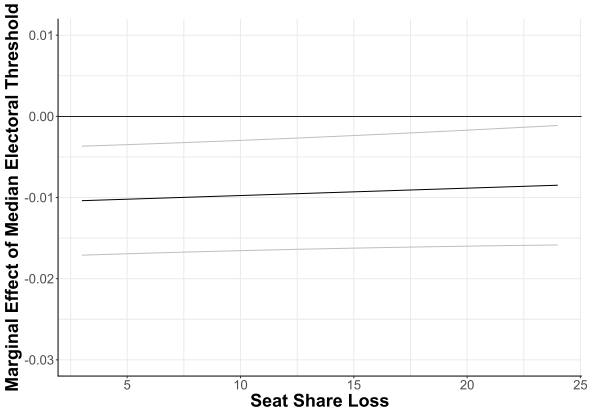

Fig. 4. Coefficient estimates with 95% Confidence Intervals for the Effect of the Median Electoral Threshold on the Seat Share Loss.

between 49% (based on equation (3) using the effective median electoral threshold) and 62% (based on equation (1) using dominant party position). Given that the Radicals' seat share in the first election under PR rules was 46%, their loss in seat share ranges from 3% to 16%. Since we know that the Radicals held the absolute majority in parliament before the introduction of PR and the large effective median electoral threshold is a product of the strategic behaviour of the minority parties (see the short summary on the politics surrounding the adoption of PR in Glarus above), the Radicals' seat loss is likely to be closer to 16% than to 3%.

Second, we re-estimate Models 1 and 3 of Table 3 for seat share losses of the Radical Party in Glarus, ranging from 4% (narrowest absolute majority possible with 50% of the seats in parliament) to 24% (absolute majority of 70% following the last election under MR rules) in 1% steps. More precisely, we repeatedly assign a value of the aforementioned range to the seat share loss of the dominant party in Glarus, estimate the models for all 22 cantons and store the point estimates as well as their corresponding 95% confidence intervals. In order to account for the uncertainty of our point estimates in the analysis above, we use a larger range of values than our predicted pre-PR seat shares suggest. We plot the point estimates and confidence intervals in Fig. 3 and Fig. 4.

Overall, our main results remain robust. Fig. 3 demonstrates that the higher values for seat share loss that we assume, the larger the magnitude of the coefficient estimate for the dominant party position effect. This result is unsurprising because the Radicals opposed the introduction of PR in Glarus. However, even in the case of smallest, empirically possible seat share loss (4%), our results still hold, as Fig. 3 shows.[26]

Fig. 4 demonstrates that higher seat share losses in Glarus are associated with a smaller decrease of the magnitude of the threshold coefficient. Again, this is unsurprising because Glarus has a comparatively high effective median electoral threshold that should result in smaller seat share losses for the dominant parties. However, in an interesting way, Glarus is in fact a somewhat deviant case. Minority parties (in particular the Democratic Party) were able to keep electoral districts small in their strongholds, thereby neutralizing the (possibly adverse) effect of the PR formula. At the same time, the PR formula had adverse consequences for the former dominant party, i.e. the Radical Party, which had its stronghold in districts, which were already comparatively large under majoritarian rules. Hence, in the case of Glarus, by using a plebiscite, the minority parties managed to distort PR to the detriment of the formerly dominant party (hence the Radical Party's opposition to PR). The case of Glarus thus once again demonstrates that the parties drafting the new electoral system may use such distortions to obtain benefits, but if the new system is forced upon the politically strongest party, the main beneficiaries might be the minority parties. However, be that as it may, Fig. 4 shows that our results remain robust over all plausible values for seat share losses of the Radicals.

Robustness test: Without Argovia

In Fig. 2, we have presented the bivariate relationship between the effective median electoral threshold and the seat share loss of the electorally

[26] We also take the predicted seat share losses at face value and test the robustness of our findings for a seat share loss of only 3%, i.e. the Radical Party not having an absolute parliamentary majority under MR. Even in this case, our results remain robust as Figs. 3 and 4 show.

strongest party after the first election under PR. As Fig. 2 shows, the Radical Party experienced a loss in the Argovia that is considerably larger than in any other canton. In order to demonstrate that our results are robust to the exclusion of Argovia, we present our results without Argovia in Table 6. The effect of dominant party support on seat loss and the median electoral threshold as well as of the median electoral threshold on seat loss remain significant. The only exception is that the effect of dominant party support on the median electoral threshold drops slightly below the 5% significance level (p-value = 0.0526).

Table 6
Regression Results without Argovia

	Seat Loss	Threshold	Seat Loss
Intercept	0.13***	9.25***	0.18***
	(0.03)	(1.67)	(0.04)
Dominant Party Support	− 0.08*	5.28+	
	(0.04)	(2.55)	
Eff. Median Threshold			− 0.01*
			(0.00)
R^2	0.20	0.18	0.27
Num. obs.	20	21	20

Note: Standard Errors in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Robustness test: Effective electoral threshold

In Table 7, we demonstrate that our estimations produce the same results when employing the standard effective electoral threshold instead of the effective *median* electoral threshold. More precisely, we show in Table 7 that the position of the dominant party towards PR has a significant effect with the expected sign on the standard effective electoral threshold. In addition, the effect of the standard effective electoral threshold is also significantly and negatively associated with the seat share loss of the dominant party in the first election using PR.

Table 7
Regression Results - Effective Electoral Threshold

	Threshold	Seat Loss
Intercept	2.53*	0.17***
	(0.92)	(0.04)
Dominant Party Support	3.70*	
	(1.44)	
Eff. Median Threshold		− 0.01*
		(0.01)
R^2	0.25	0.19
Num. obs.	22	21

Note: Standard Errors in parentheses. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

References

Ahmed, Amel, 2013. Democracy and the Politics of Electoral System Choice. Engineering Electoral Dominance. Cambridge University Press, Cambridge.

Alesina, Alberto, Glaeser, Edward, 2004. Fighting Poverty in the US and Europe: A World of Difference. Oxford University Press, Oxford.

Andrews, Josephine T., Jackman, Robert W., 2005. Strategic fools: electoral rule choice under extreme uncertainty. Elect. Stud. 24 (1), 65–84.

Angst, Markus, 1987. Der Solothurner Bankkrach und die Verfassungsrevision von 1887. In: Jahrbuch für Solothurnische Geschichte, vol 60. pp. 7–232.

Bedock, Camille, 2017. Reforming Democracy. Institutional Engineering in Western Europe. Oxford University Press, Oxford.

Benoit, Kenneth, 2007. Electoral laws as political consequences: explaining the origins and change of electoral institutions. Annu. Rev. Pol. Sci. 10 (1), 363–390.

Blais, André, Dobrzynska, Agnieska, Indridason, Indridi H., 2004. To adopt or not to adopt proportional representation: the politics of institutional choice. Br. J. Polit. Sci. 35 (1), 182–190.

Blumenstein, Martin, 2001. Vom Majorz zum Proporz: Entwicklung des Zuger Wahlverfahrens zwischen 1848 und 1894. In: Der Geschichtsfreund: Mitteilungen des Historischen Vereins Zentralschweiz, vol 154. pp. 29–46.

Boix, Carles, 1999. Setting the rules of the game: the choice of electoral systems in advanced democracies. Am. Pol. Sci. Rev. 93 (3), 609–624.

Bol, Damien, Pilet, Jean-Benoit, Riera, Pedro, 2015. The international diffusion of electoral systems: the spread of mechanisms tempering proportional representation across Europe: the international diffusion of electoral systems. Eur. J. Pol. Res. 54 (2), 384–410.

Bossard-Borner, Heidi, 2017. Vom Kulturkampf zur Belle Epoque. Der Kanton Luzern 1875 bis 1914. Schwabe, Basel.

Calvo, Ernesto, 2009. The competitive road to proportional representation: partisan biases and electoral regime change under increasing party competition. World Pol. 61 (2), 254–295.

Carey, John M, Hix, Simon, 2011. The electoral sweet spot: low-magnitude proportional electoral systems. Am. J. Pol. Sci. 55 (2), 383–397.

Carstairs, Andrew McLaren, 1980. A Short History of Electoral Systems in Western Europe. George Allen & Unwin, London.

Colomer, Josep M., 2005. "It's parties that choose electoral systems (or, duverger's laws upside down)". Pol. Stud. 53 (1), 1–21.

Colomer, Josep M., 2007. On the origins of electoral systems and political parties: the role of elections in multi-member districts. Elec. Stud. 26 (2), 262–273.

Cox, Gary, Fiva, Jon H., Smith, Daniel M., 2019. Parties, legislators, and the origins of proportional representation. Comp. Pol. Stud. 52 (1), 102–132.

Cusack, Thomas, Iversen, Torben, David Soskice, 2007. Economic interests and the origins of electoral systems. Am. Pol. Sci. Rev. 101 (3), 373–391.

Emmenegger, Patrick, Petersen, Klaus, 2017. Taking history seriously in comparative research: the case of electoral system choice, 1890–1939. Comp. Eur. Pol. 15 (6), 897–918.

Emmenegger, Patrick, Walter, André, 2018a. A Disproportional Threat. Redistricting as an alternative to proportional representation. In: Working Paper.

Emmenegger, Patrick, Walter, André, 2018b. When dominant parties adopt PR. The mysterious case of Belgium. In: Working Paper.

Epple, Ruedi, 2001. Parteien-Landschaft". In: Nah Dran,Weit Weg. Geschichte des Kantons Basel-Landschaft. Wohlstand und Krisen. 19. Und 20. In: Jahrhundert (Ed.), Regierungsrat Basel-Landschaft. Liestal. Verlag des Kantons Basel-Landschaft.

Gallagher, Michael, Mitchell, Paul (Eds.), 2005. The Politics of Electoral Systems. Oxford University Press, Oxford.

Gautschi, Willi, 1978. Geschichte des Kantons Aargau 1885–1953. Baden Verlag, Baden.

Gruner, Erich, 1978. Die Wahlen in den schweizerischen Nationalrat, 1848-

1919.Wahlrecht, Wahlsystem, Wahlbeteiligung, Verhalten von Wählern und Parteien, Wahlthemen und Wahlkämpfe. Band 1, . 3 vols Francke, Bern.
Jacobs, Kristof, Leyenaar, Monique, 2011. A conceptual framework for major, minor, and technical electoral reform. W. Eur. Polit. 34 (3), 495–513.
Joos, Eduard, 1975. Parteien und Presse im Kanton Schaffhausen. Karl Augustin, Thayngen.
Junker, Beat, 1996. *Geschichte des Kantons Bern seit 1798. Band 3. Tradition und Aufbruch, 1881-1995*. Bern: Historischer Verein des Kantons Bern.
Kedar, Orit, Harsgor, Liran, Sheinerman, Raz A., 2016. Are voters equal under proportional representation? Am. J. Political Sci. 60 (3), 676–691.
Klöti, Emil, 1901. Die Proportionalwahl in der Schweiz. Geschichte, Darstellung, und Kritik. Stämpfli, Bern.
Leemann, Lucas, Mares, Isabela, 2014. The adoption of proportional representation. J. Pol. 76 (2), 461–478.
Locher, Beat, 1996. *Der Staatsproporz im Kanton Wallis 1848-1988*. Freiburg. Universitätsverlag Freiburg.
Lüthi, Walter, 1983. Der Basler Freisinn von den Anfängen bis 1914. Helbing & Lichtenhahn, Basel.
Lutz, Georg, Zila, Nico, 2009. Explaining the introduction of PR: non- strategic actors , unfair electoral competition and the need for political coordination. Working Paper.
Mackie, Thomas T., Rose, Richard, 1982. The International Almanac of Electoral History. MacMillan, London.
Martinez i Coma, Ferran, Lago, Ignacio, 2018. Gerrymandering in comparative perspective. Party Polit. 24 (2), 99–104.
Natsch, Rudolf, 1967. Die Auseinandersetzung um das gerechte Wahlverfahren im 19. Jahrhundert. In: Ernst, Walder (Ed.), Festgabe Hans von Greyerz: Zum Sechzigsten Geburtstag. Lang, Bern, pp. 535–558.
Natsch, Rudolf, 1972. Die Einführung des Proporzwahlrechts für die Wahl des schweizerischen Nationalrats (1900-1919)". In: In: Roland, Ruffieux (Ed.), La Démocratie Référendaire En Suisse Au XXe Siècle, vol. 1. Editions Universitaires, Freiburg, pp. 119–182.
Norris, Pippa, 1997. Choosing electoral systems: proportional, majoritarian and mixed systems. Int. Polit. Sci. Rev. 18 (3), 297–312.
Norton, Edward C., Wang, Hua, Ai, Chunrong, 2014. Computing interaction effects and standard errors in logit and probit models. Stata J. 4 (2), 154–167.
Padrun, Fabio, 2017. 100 Jahre Proporz – Geschichte der Einführung des Verhältniswahlrechts im Kanton Zürich. Staatsarchiv Zürich.
Pepinsky, Thomas B., 2019. The return of the single country study. Annu. Rev. Pol. Sci. 22, 1–17.
Pforr, Klaus, 2014. "Femlogit—implementation of the multinomial logit model with fixed effects". Stata J. 14 (4), 847–862.
Quintal, David P., 1970. The theory of electoral systems. West. Polit. Q. 23 (4), 752–761.
Reed, Steven, Thies, Michael, 2003. The causes of electoral reform in Japan. In: Shugart, Matthew Soberg, Wattenberg, Martin P. (Eds.), Mixed-Member Electoral Systems. Oxford University Press, Oxford, pp. 152–172.
Rodden, Jonathan, 2009. Why did western Europe adopt proportional representation? A political geography explanation. Working Paper.
Rokkan, Stein, 2009. Citizens, Elections, Parties. Approaches to the Comparative Study of the Processes of Development [1970]. ECPR Press, Colchester.
Ruffieux, Roland, 1974. Les Élections au Grand Conseil Vaudois de 1913 à 1966. Bibliothèque Historique Vaudoise, Lausanne.
Ruffieux, Roland, 1981. Die Zeit von 1914 bis 1939. In: Ruffieux, Roland (Ed.), Geschichte des Kantons Freiburg Band 2. Paulusdruckerei, Freiburg, pp. 1001–1041.
Schoop, Albert, 1987. Geschichte des Kantons Thurgau. Chronologischer Bericht Huber & Co, Frauenfeld.
Schröder, Valentin, Manow, Philip, 2014. Elektorale Koordination, legislative Kohäsion und der Aufstieg der modernen Massenpartei: Die Grenzen des Mehrheitswahlrechts im Deutschen Kaiserreich, 1890-1918. Polit. Vierteljahresschr. 55 (3), 518–554.
Szekendy, Peter, 2018. 100 Jahre nach der Einführung des Proporzwahlrechts: Blick auf fünf lange Jahrzehnte als dynamischer Prozess. Parlament 21 (3), 48–62.
Taagepera, Rein, 1998. Effective magnitude and effective threshold. Elec. Stud. 17 (4), 393–404.
Taagepera, Rein, Shugart, Matthew, 1989. Seats and Votes: the Effects and Determinants of Electoral Systems. Yale University Press, New Haven, CT.
Vatter, Adrian, 2002. *Kantonale Demokratien im Vergleich. Entstehungsgründe, Interaktionen und Wirkungen politischer Institutionen in den Schweizer Kantonen*. Opladen: Leske +Budrich.
Walter, André, Emmenegger, Patrick, 2019. The partisan composition of cantonal governments in Switzerland, 1848-2017. A new dataset. In: Swiss Political Science Review, Forthcoming.
Winteler, Jakob, 1969. Geschichte des Landes Glarus. Von 1638 bis Zur Gegenwart. Band II. Kommissionsverlag Baeschlin, Glarus.