

# Playing the Vertical Power Game: The Impact of Local Authorities in Cantonal Parliaments on the Financing of Special Schools

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**Abstract:** *This study analyses the effect of local authorities in the Swiss cantonal parliaments on the allocation of special school costs. The empirical findings show that a higher share of local authorities in the cantonal legislature leads to a higher share of special school costs borne by the cantonal authorities. The effect is stronger for mayors compared to all members of local governments. Hence, mayors have a strong connection with their home municipality and use the political power of the accumulation of mandates for shifting undesirable costs from the local up to the cantonal level. This specific finding does not depend on the overall national constitutional framework, as the introduction of the NFA (Neuer Finanzausgleich) – in the course of which the federal state fully withdrew from financing special schools – has not changed the magnitude of this effect.*

**KEYWORDS:** Local government, Local politics, Cantons, Decentralisation, Federalism

## 1. Introduction

How can local governments influence political outcomes at the higher state level? In the absence of second chambers, lobbying activities such as face-to-face contacts or the exchange of information are one strategy to influence the centre (Borck and Owings 2003; Sørensen 2003). However, in Switzerland we also observe a more formal and direct form of influence when considering mayors and other local councillors<sup>1</sup> who sit in the cantonal parliaments. Known as “cumul des mandats” in France – where it is an inherent part of the political culture (Grémion 1976; Tarrow 1977; Dewoghélaëre et al. 2006; François and Navarro 2013b) – the phenomenon of multiple-mandate holders is also present in Switzerland. Members of local governments are present both in the federal parliament as well as in the parliamentary chambers in the cantons (Rühli 2012; Lüthi 2014: 185; Mueller 2015; Pilotti 2017).

So far, the impact of these members of local governments has been analysed only superficially. To date, there is no systematic comparison of the “cumul des mandats” across all 26 cantons and their impact on political outcomes. This paper closes this research gap.

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<sup>1</sup> Local councillors comprise all members of local governments, including mayors. Hence, I will use the term “local councillors” when referring to all members of the local government with the mayors being a subgroup of them.

More specifically, I focus on a particular case where power relations between the canton and the municipalities are at the core of the political debate. In the course of the reform of the fiscal equalisation and task allocation between the Confederation and the cantons (in the following referred to as *NFA*, short for “*Neugestaltung des Finanzausgleichs und der Aufgabenteilung zwischen Bund und Kantonen*”), the federal state fully withdrew from the financing of special schools (*Sonderschulen*). Before, the national disability insurance (*Invalidenversicherung IV*) had paid individual contributions per child and day at school. Given this complex governance structure as well as the new paradigm of integrating special needs pupils into regular schools rather than segregating them, this federal contribution was not considered adequate anymore. As a result, the old system had to be replaced by a new one (Federal Finance Administration 2013: 38; Mueller and Vatter 2016: 68). Two questions arise in this context: How do the cantons react when a policy field suddenly becomes their exclusive responsibility? And, more interesting in the context of this paper, how are the costs connected with these new competences then distributed between the cantonal and the local level?

Compared to other policy fields, the “return on investment” of special school expenditures is rather low. While investments in the school qualification of pupils with physical and/or cognitive deficits can promote the successful integration of these pupils into the labour market, recent statistics show that a high proportion of around 40 percent of pupils with a special curriculum still does not find vocational training after school (Federal Statistical Office 2016: 6). What is more, per-capita spending is significantly higher compared to other investments in the educational sector, such as for example stipends.<sup>2</sup> Given such high costs with uncertain benefits, it can be assumed that the costs related to special school pupils are unpopular among local governments.

Looking at the data of the Federal Finance Administration (*Eidgenössische Finanzverwaltung*), cantonal authorities come up for the majority of special school costs in most cantons. While the *NFA* has led to a further cost centralisation in almost all cantons, differences between the cantons are huge – both before and after the federal reform of 2008.

Can these differences be explained by the representation of mayors and other local councillors in the cantonal parliaments? Do they derive power from their mandate accumulation for shifting the costs for special schools up to the higher state level (Horber-Papazian and Soguel 1996; Mueller et al. 2015)? In the literature, the accumulation of multiple mandates is discussed as one possible means for local governments to exert influence on political outcomes at the higher level (Meylan et al. 1972: 279ff.; Bogdanor 1988; Page 1991: 60). By holding a seat in the cantonal parliament, members of local governments do not only benefit from their legislative power in the plenary session or in the parliamentary committees, they also have a privileged status regarding informal contacts with civil servants and members of the cantonal government as well as public appearance in the media (Cappelletti 2014).

In this paper, I use new data on the representation of members of local governments in cantonal parliaments from 2007 to 2014. While data on Swiss mayors in cantonal

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<sup>2</sup> In 2014, cantons and municipalities spent almost 2 billion Swiss Francs for a total of 34'000 special school pupils. This equals to almost 60'000 Swiss Francs spent in one year for one pupil (own calculation based on Swiss Federal Finance Administration and Federal Statistical Office).

parliaments has already been gathered in previous studies (Rühli 2012; Mueller 2013; Mueller 2015), this paper will, for the first time, also consider the representation of other local councillors (i.e. members of local government in addition to the president of the local council/the mayor). In doing so, it contributes to both national and international literature on federalism, multi-level governance and local government studies. Firstly, the paper provides a systematic analysis of the effects of the “cumul des mandats” in Swiss federalism. So far, studies focusing on multiple mandate holders have relied mainly on anecdotal evidence lacking a systematic and analytical approach. Secondly, the focus on one specific policy field reformed by the NFA allows for generating original empirical findings on the impact of the reform on the cantonal level. Thirdly, by focusing on the presence of local authorities in the cantonal legislature as an explanatory factor, the paper goes beyond the Swiss case and provides valuable insights into the impact of local governments on the arrangement of policies at the upper level of a decentralised polity.

The paper is structured as follows: The next section outlines the main features of the cantonalisation of special schools in the course of the NFA. The third section then addresses the theoretical background of mayors and other local councillors sitting in the cantonal parliament and discusses the possible effect of such multiple-mandate holders on political outcomes. In section 4, the research design is described, while section 5 presents the empirical findings. The findings are discussed in section 6 before the paper ends with a conclusion and an outlook for further research.

## 2. The Cantonalisation of Special Schools in the Course of the NFA Reform

The NFA was approved by a majority of 64 percent of the Swiss electorate on 28 November 2004. On 1 January 2008, it entered into force with totally 27 constitutional amendments and more than 30 amendments to law (Braun 2008: 87f.). The rearrangement was twofold: On the one hand, the NFA completely overhauled the fiscal equalisation system (*Neuer Finanzausgleich*) between the federal level and the cantons (vertical dimension) as well as among the cantons (horizontal dimension). On the other hand, the reform provided for an extensive re-allocation of powers in numerous policy fields (*Neue Aufgabenteilung*) (Broschek 2014). Amongst others, ten policy fields with formerly shared responsibilities were fully transferred to the cantons (Hänni 2011: 95f.).

The regulation and financing of special schools is one of these ten policy fields. The term “special schools” refers to pupils with physical and/or mental disabilities with special educational needs who have a special curriculum either in segregated or in regular schools.<sup>3</sup> Until 2008, both the cantons and the federal state were responsible for financing these pupils (Federal Finance Administration 2013: 33). The Swiss disability insurance paid individual contributions per child and day at school, the rest was borne by the cantons on the one hand, and (with the exception of a few cantons) by the municipalities on the other hand (Federal Finance Administration 2013: 33). With the NFA in effect from 1 January 2008 onwards, the federal state fully withdrew from financing this policy

<sup>3</sup> <http://www.szh.ch/themen/schule-und-integration/sonderschulen-oder-sonderklassen> [accessed: 22.12.2016]. The foundation Swiss Centre for Curative and Special Education (*Stiftung Schweizer Zentrum für Heil- und Sonderpädagogik*) further differentiates between special classes (integration of pupils with special educational needs in regular classes) and special schools (segregate classes). For reasons of simplicity, I will refrain from making this distinction and refer to the term special schools only.

field. Special schools became a fully cantonalised policy with the need to find a new regulatory framework in all 26 cantons.<sup>4</sup> This transfer of the policy into the cantonal educational system also has to be viewed in the context of a paradigm shift to integrate special needs pupils into regular classes whenever possible instead of segregating them (Hutterli and Kronenberg 2013).

The transfer of tasks from the federal level to the cantons is accompanied by an intercantonal concordat on the cooperation in the field of special needs education (*Interkantonale Vereinbarung über die Zusammenarbeit im Bereich der Sonderpädagogik*). The concordat aims at enhancing the cooperation between cantons by setting up common quality standards, a common terminology as well as a common evaluation procedure for the determination of individual needs (Hutterli and Kronenberg 2013: 5). To date, 16 cantons have joined the concordat.<sup>5</sup>

A look at the financial statistics provides a first insight into how special school costs within a canton (i.e. excluding federal contributions in the pre-NFA phase) have been shared between the cantonal and local level so far. As Figure 1 shows, in 2006 and 2007 the cantonal authorities bore only slightly more than half of all subnational (i.e. the sum of cantonal and local) costs concerning special schools.<sup>6</sup> This changed significantly from 2008 onwards. In 2008, the cantons on average accounted for 70 percent of cantonal and local costs; in 2011, the average share reached its peak with 77 percent. The last available data for 2014 report an average share of 72 percent. Hence, we can draw a first conclusion from the financial data: While expenditures for special schools within a canton have always been rather centralised than decentralised, the NFA – and with it the withdrawal of the disability insurance from financing – has further increased the centralisation of the inner-cantonal cost structure. Today, almost three out of four Swiss Francs spent for special schools are spent on the cantonal level.

Can these overall findings be corroborated throughout all cantons? Figure 2 ranks the cantons by their centralisation of special school expenditures in 2014. It becomes apparent that the differences between the cantons are huge. In six cantons, the cantonal authorities come up for all the costs. In a further 14 cantons, the canton bears more than 50 percent of the costs. In 6 cantons, the share of expenditures on the cantonal level is lower than 50 percent, thus indicating a decentralisation of most costs.

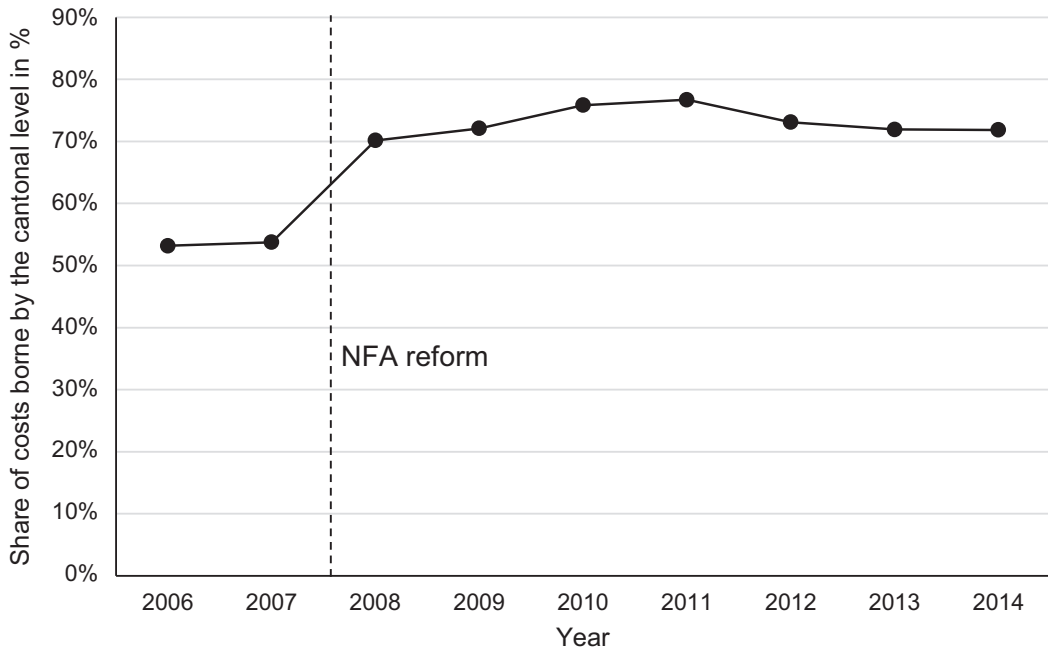
What accounts for these huge differences between the cantons? This paper comes up with one possible explanation, namely the representation of mayors and other local councillors in cantonal parliaments. The following section presents the theoretical background behind this explanatory factor.

<sup>4</sup> According to § 197 Ziff. 2 of the federal constitution, the previous services of the disability insurance had to be ensured by the cantons at least until 1 January 2011 (Federal Finance Administration 2013: 33). After this transition phase, the cantons could establish own regulations on the condition that they elaborate a concept which informs about the guidelines, procedures, resource management and the institutional structure needed for the cantonal regulation of special schools (Federal Department of Finance and Conference of Cantonal Governments 2007: 21). So far, 20 cantons have presented their concepts. For an overview of all the concepts and the legal basis connected to special schools, see <http://www.edk.ch/dyn/12917.php> [accessed: 27.03.2017].

<sup>5</sup> See for updates: <http://www.edk.ch/dyn/19096.php> [accessed: 27.03.2017].

<sup>6</sup> The figures in this paragraph correspond to the mean cantonal cost share across all 26 cantons. Hence, the degree of centralisation in every canton contributes equally to the average value, which assures that the value is not affected by the bigger cantons.

Figure 1: Average share of the total of cantonal and local special school costs borne by the cantonal level from 2006 to 2014 (mean of all 26 cantons)



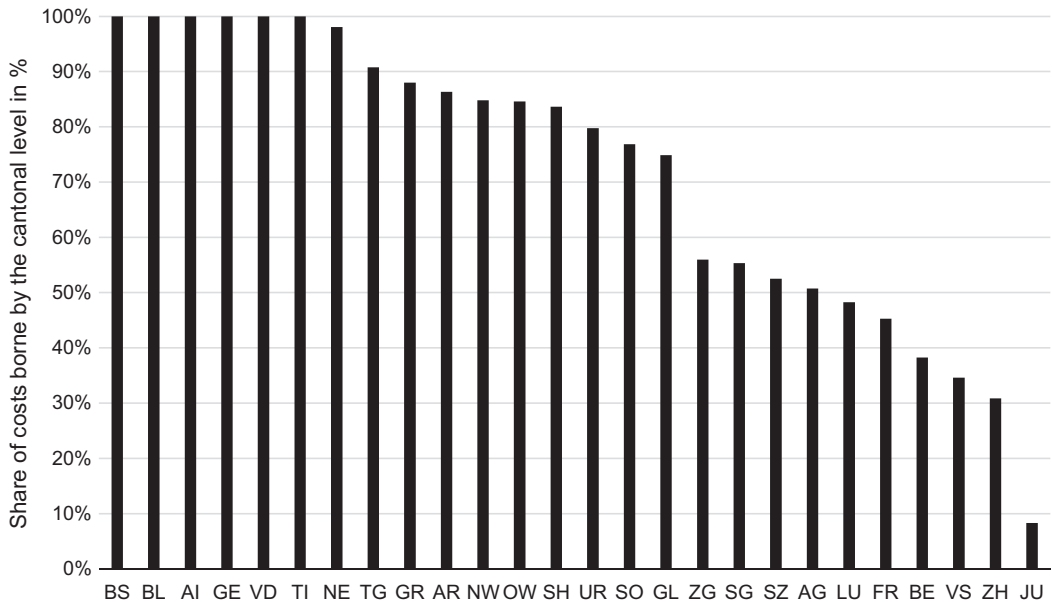
Source: Own calculations based on data of Federal Finance Administration.

### 3. The Political Power of Local Authorities in the Cantonal Parliaments

It is an elementary feature of Swiss federalism that decentralised entities are involved in decision-making processes with the possibility to influence higher-level political decisions (Horber-Papazian 2004; Linder 2012: 161ff.). This is not only true for the representation of the cantons in national politics but also for the political power of municipalities within the cantons (Horber-Papazian and Jacot-Descombes 2014: 285ff.). While, according to Ladner (2009), Swiss municipalities have difficulties “to place their concerns directly on the agenda of national politics” (Ladner 2009: 330), their influence on the cantonal agenda is considered to be stronger as municipalities enjoy a “traditionally strong position [...] within the cantons” (Ladner 2009: 339). However, the access of municipalities to central decision-making differs between the cantons: Firstly, we find differences regarding institutional factors, e.g. the direct-democratic means available to municipalities or their territorial overlap with electoral districts (Ladner 2009: 350; Mueller 2015: 84ff.). Secondly, the political power of municipalities also differs when looking at political actors and processes, where we find variance regarding the decentralisation of the party structure or the existence and strength of Local Government Associations (Mueller 2015: 81ff.).

Moreover, we can add a further strategy of interest representation at the central level, namely mayors and other local councillors who simultaneously hold a seat in the cantonal parliament (Mackenzie 1954). The accumulation of local and central mandates is a widespread phenomenon in western democracies, with the French parliament as its

Figure 2: Share of special school costs borne by the cantonal level in 2014



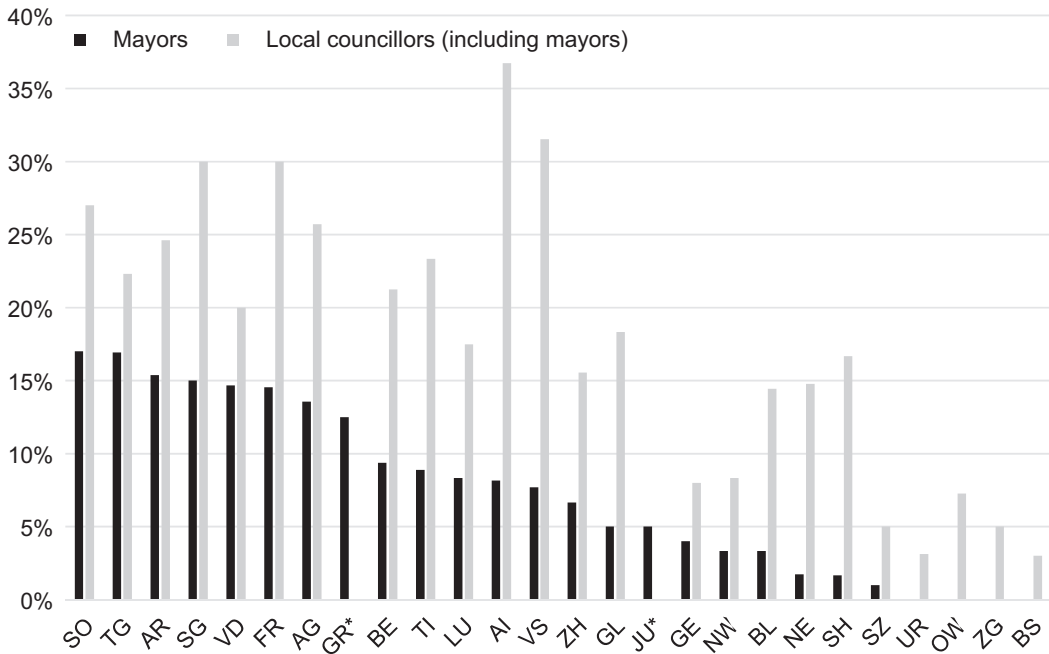
Source: Own calculations based on data of Federal Finance Administration.

archetype (Knapp 1991; Page 1991: 61f.; Dewoghélaëre et al. 2006; Navarro 2009; François and Navarro 2013b). Ever since the Third Republic in 1870, holding a local office was an important resource to become a representative in the national parliament (Dogan 1967: 480f.; Best and Gaxie 2000: 110; François and Navarro 2013a: 19). Recent statistics for 2012 show that more than 80 percent of the deputies in the national legislature in France simultaneously held a mandate in their municipality (Bach 2012: 24). The so-called “cumul des mandats” therefore is a vital part of French political culture (Grémion 1976; Tarrow 1977; Smyrl 2004: 207); and as such it is very relevant: On the individual level of the politician, it has a positive impact on electoral success, the influence on parliamentary decisions and the money received from one’s own party for election campaigns (Mény 1992; François and Navarro 2013a; François and Foucault 2013; Ragouet and Phélippeau 2013). Considering the whole political system, the “cumul des mandats” is said to impede the reform of local institutions and thus to favour the status quo in France (Le Lidec 2008).

Even though research on the “cumul des mandats” is most advanced in France, the phenomenon is also present in other European countries. According to the comparative analysis of 29 European countries by Navarro (2013), the accumulation of national and local mandates is present in all countries apart from 10 – mainly ex-Soviet – states where it is prohibited by law. Next to France, the “cumul des mandats” is especially prominent in Belgium, Finland and Luxembourg, where the share of local mandate holders exceeds 50 percent in all the three national parliaments (Navarro 2013: 126).

Turning to Switzerland, a study recently conducted by Pilotti (2017, see also Pilotti et al. 2010) shows that, in the year 2016, almost 13 percent of the members of the two parliamentary chambers simultaneously held a seat in a municipal executive. From a

Figure 3: Share of mayors/local councillors in cantonal parliaments in 2014 (as % of total MPs)



Notes: \*= no data available for local councillors. For data sources see Table A2 in the Appendix.

longitudinal perspective, this share has constantly been above ten percent throughout the whole 20<sup>th</sup> century, while the accumulation of national and cantonal mandates (member of the cantonal government or parliament) has decreased considerably in the last decades (Pilotti 2017: 267).

When looking at cantonal parliaments, we find even higher shares in most cantons. In 2014, in six cantonal parliaments at least every fourth person was a member of government of a municipality.<sup>7</sup> In Solothurn, Thurgovia, Appenzell Outer-Rhodes and St. Gall, the mayors are especially dominant with a share of more than 15 percent of all the cantonal parliamentarians. There are only four parliaments with no mayors, while other local councillors are present in all the cantonal legislatures (see Figure 3). These multiple mandate-holders are all democratically legitimised. In Switzerland, both members of the cantonal parliaments and of the local governments (including mayors) are elected by the citizens, either by ballot box votes or – in a small proportion of the municipalities – by the municipal assembly; Neuchâtel is the only canton where municipalities elect their executive either by popular vote or by the parliament (Ladner 2011: 8).

<sup>7</sup> This paper only considers the representation of members of local governments in the cantonal parliament. The inclusion of further local authorities, such as the local parliament or members of school councils, is not possible, since in many cantons data on these other forms of the “cumul des mandats” either do not exist or are incomplete. Moreover, mayors and other local councillors are most involved and thus most sensitive for local politics (François and Navarro 2013b). Finally, the inclusion of members of municipal parliaments would distort the analysis, since in many municipalities the legislative body is the citizen assembly, i.e. there is no local parliament.

So far, little attention has been paid to the “cumul des mandats” of mayors and other local councillors in cantonal legislatures. Empirical contributions can be found for the Canton of Vaud in 1950 (Meylan et al. 1972: 281) as well as for the Cantons of Fribourg, Valais, Neuchâtel, Jura and Geneva (Horber-Papazian 2004: 54). Recently, Rühli (2012) and Mueller (2015) have collected data for 2011 and provide a systematic overview over all cantons; while the former relies on expert interviews, the latter has analysed the declaration of interests published by the parliamentary services.

Apart from these descriptive analyses, empirical studies about the consequences of the “cumul des mandats” in Swiss cantons are even rarer. Cappelletti (2014) finds evidence that local governments which are represented in the cantonal parliament receive larger per capita amounts of equalisation grants. The study, however, only includes 16 cantons and does not consider the effect of multiple-mandate holders on overall cantonal political outcomes.

From a theoretical point of view, different scholars argue that, the stronger local authorities are represented in the central parliament, the better they can assert their interests at the higher state level. For Page (1991: 60), the accumulation of mandates is a suitable indicator to measure the influence of local authorities at the centre. Similarly, in the view of Meylan et al. (1972), the accumulation of mandates at the local and the cantonal level can be seen as an indicator of “representation and defence of municipal interests”. Bogdanor (1988: 84) even argues that the unification between two political levels is better assured by multiple mandate holders than by the pure existence of a second chamber.

These general considerations of the political power of the “cumul des mandats” help to theorise the influence of mayors and other local councillors on the allocation of special school costs. Members of local governments have an interest to keep local expenditures for special schools as low as possible for several reasons. Given the high costs for one special school pupil without a guaranteed payoff (in terms of successful integration in the labour market), expenditures in the field of special schools have a comparably low “return on investment”, unlike other expenditures such as scholarships for students or regional development programs. Furthermore, the benefits generated by special school expenditures (e.g. reducing social costs due to labour market integration) are not necessarily limited to the entity where the investments originate from. Finally, the strategies for special needs education are outlined in the cantonal concepts elaborated in the aftermath of the NFA (Federal Finance Administration 2013: 36). Hence, an increase in financial participation is only weakly linked to an increase in local competences in the policy field.

Given these considerations, it is reasonable to assume that mayors and other local councillors act as “revenue maximizers” for their municipality by using their legislative power to “shift” special school costs up to the cantonal level (Greve 2012: 189). Or, in the words of Horber-Papazian and Soguel (1996: 2, own translation): “every state level tries to transfer costs to another entity whilst trying to keep as many decision-making rights as possible”.

Influence can be exerted at different stages in the decision-making process. Firstly, multiple-mandate holders can use their privileged position in the pre-parliamentary phase. As members of the cantonal parliament, they regularly travel to the capital of the canton and move in spheres where they have direct contact with cantonal stakeholders (Kübler and Michel 2006). Their direct access to civil servants and



members of the cantonal government provides them with good lobbying opportunities. Without being a member of the cantonal legislature, this lobbying would be much more difficult.

Secondly, parliamentarians can benefit most from their position if they are members of the committee responsible for proposals that particularly affect their interests (Cappelletti 2014). In Switzerland, committee decisions predetermine political outcomes to a great deal, providing good opportunities for single parliamentarians to influence a bill (Vatter 2016: 278). This also applies to local authorities: The higher the share of members of local governments in a cantonal parliament, the higher the probability that at least one of them also belongs to the committee responsible for the special school-financing proposition (Mueller 2015: 79).

Thirdly, local authorities without direct access to the committee can influence the corresponding bill in the parliamentary assembly by proposing an amendment of the committee's proposition. At this stage, they can also form a coalition in order to coordinate collective action and consolidate political power across party boundaries (Cappelletti 2014). In doing so, members of the coalition can advocate for their local interests in their own party fraction. As the phenomenon of multiple mandate holding is not restricted to particular parties, it can be expected that a "local coalition" increases local influence at the expense of partisan interests (Tavits 2009).

Finally, a legislative mandate also involves privileges outside the boundaries of the political-administrative system. Parliamentarians have better access to the media and can influence public opinion on specific issues more easily (Cappelletti 2014). These privileges become even more important in case of a referendum. In this case, easy access to public opinion is of utmost importance as the decision making process has left the parliamentary borders and has entered the direct democratic arena.

In sum, being a member of the cantonal parliament entails a variety of advantages throughout different stages of the decision-making process. Thus, the following hypothesis can be formulated regarding the influence of mayors and all local councillors respectively on the inner-cantonal allocation of special school costs: *The better the municipalities are represented through mayors/local councillors in the cantonal parliament, the better they can shift the special school costs up to the cantonal level.*

I will now explain the research design to test the hypothesis before I present the empirical findings in Section 5.

#### 4. Research Design

The research design chosen for this study is a subnational comparison of the 26 Swiss cantons before and after the NFA became applicable. In doing so, the study takes profit of the federal system in Switzerland which provides an ideal "laboratory" for comparative research (Vatter 2002; Braun 2003). While the common constitutional framework of Swiss federalism keeps a variety of possible intervening variables constant, the different institutional organisations of the cantons provide for an interesting variance of variables, which helps to explain differences regarding the allocation of special school costs. I will first explain the operationalisation of my dependent and independent variables and then present my method.

#### 4.1 Operationalisation

My dependent variable is the centralisation of special school expenditures in the 26 Swiss cantons.<sup>8</sup> The data are provided by the Federal Finance Administration, which lists annual expenditure figures for both the cantonal and the local level. For the measurement, I divide the total expenditures on the cantonal level by the total expenditures on the cantonal and local level. I multiply the results by 100 to arrive at the share of costs that is paid by the cantonal level. For the calculation, I consider inner-cantonal transfer payments within the policy field of special schools which are provided by the Federal Finance Administration as well.<sup>9</sup> The variable ranges from 0 to 100, 0 indicating full decentralisation and 100 full centralisation of the cost structure.

My two key independent variables relate to the share of mayors and all local councillors (including mayors) respectively in the cantonal parliament. To calculate this variable, I divide the number of mayors as well as the number of all local councillors sitting in a cantonal parliament by the total number of seats in that parliament. Again, by multiplying the result by 100, I arrive at the percentage values. Mueller (2015) proposes a second operationalisation by dividing the number of local government members by the total number of local governments in a canton. However, what matters for the empirical analysis in this paper is not the outside representativeness of the multiple-mandate holders for all the local governments in a canton, but their political power inside the parliament. I thus refrain from including this second approach. The data corresponds to my own collection of local political mandates of the parliamentarians in the 26 cantons.<sup>10</sup> For the models in the analytical part of this paper, I will calculate two variables, with the first one including only the mayors and the second taking all the members of local governments (i.e. local councillors) into account. In order to model the causal influence of the variable in the best way, I will use the previous year's figures.

To assess the net influence of the NFA on the centralisation of expenditures, I will include a dummy variable for the presence/non-presence of the federal reform, respectively. The multiplication of this dummy with the key independent variables allows distinguishing between the influence of mayors/local councillors before and after the NFA.

In order to prevent spurious findings, further control variables will be included into the models. A first group of variables entails further institutional and political factors that facilitate the exertion of local influence over cantonal political outcomes.<sup>11</sup> A first index focuses on the strength of Local Government Associations. It will be measured by assessing the existence of an official name, a functioning website, publicly available association statutes and the institutionalisation of meetings of Local Government Associations. In order to account for the influence of the electoral system, a second index

<sup>8</sup> Due to missing data, not all 26 cantons can be included in the empirical analysis (see variable description in Table A1 in the Appendix for more details).

<sup>9</sup> For the databases and the calculation of the dependent variable, see Table A1 in the Appendix.

<sup>10</sup> For the collection of local mandates, I have relied on three groups of data sources: Lists of interest ties (based on self-declaration of parliamentarians), lists of elected local authorities in the municipalities ("Staatskalender", municipal election results and lists directly provided by the cantonal administration) and own surveys among the municipalities. Lists of interest ties were only consulted when the quality of the lists (i.e. the completeness) was high. When comparing the cantons for which I had to rely on lists of interest ties with the rest of the cantons, I do not find indication for a systematic underestimation of the "cumul des mandats" in the former group of the cantons. For a detailed table with the figures and the data sources for all cantons, see Table A2 in the Appendix.

<sup>11</sup> All three indices have been elaborated by Mueller (2015). For a detailed description of measurement, see Table A1 in the Appendix.

captures the territoriality of the electoral system. Municipalities are most favoured by the electoral system if constituencies correspond to the municipalities. At the other extreme, the electoral system is most centralised when the whole canton is a single constituency (as in Geneva and Ticino). Finally, a third index focuses on direct democratic means available for local governments. While in some cantons local governments can use both the initiative and the referendum to voice their concerns on the cantonal level, neither instrument is available to local authorities in other cantons. The variable included in the analysis accounts for the existence of such instruments as well as the institutional barriers to utilize them.

It can be further expected that the inner-cantonal allocation of special school costs is – in the sense of a path-dependent effect – related to the overall decentralisation of resources within a canton. I will thus include a further variable measuring the overall decentralisation of resources in a canton relying on Mueller’s (2015) index of “policy decentralisation”. The index is based on the cantons’ fiscal decentralisation, but also takes the share of local administrative resources into account. The latter is especially important for the case at hand, considering the need for organising a new policy field within the existing administrative structure of a canton. In order to capture the hypothesized “path-dependent” effect, I use the figures’ mean value from 1990 to 2006 for all 26 cantons.

A further group of control variables takes into account possible policy-specific differences between the cantons. The number of pupils in special schools accounts for possible effects of the magnitude of the demand for this public service. Membership in the concordat for special needs education controls for the possible effect that inter-cantonal coordination obliges cantons to keep as many resources as possible at the centre.

Finally, the political, structural and socio-cultural context of a canton will be included. Firstly, the share of parliamentary seats held by left-wing parties controls for possible effects of the party system in a canton. Secondly, the number of municipalities accounts for the fragmentation in a canton, which has proven to correlate negatively with centralisation of overall expenditures in Swiss context (Schaltegger and Feld 2003). Thirdly, a dummy for German-speaking cantons will be included in order to control for possible effects of the political culture. Finally, the urbanisation of a canton, measured by the share of residents living in urban areas, will be included.<sup>12</sup>

## 4.2 Method

In order to test the formulated hypothesis, I will compare the centralisation of special school expenditures in the cantons at two points in time. Data for 2007 allow for assessing the level of centralisation shortly before the NFA entered into effect in 2008. The corresponding data for 2014 are the last available data. The time span of seven years assures that the effects of the NFA can be assessed in the long run, instead of considering only short-term effects which might not have been consolidated yet.

Given the hierarchical data structure with 26 cantons each containing two points in time (2007 and 2014), multilevel models with random intercepts for each canton are applied

<sup>12</sup> A further possible structural control variable would be the population size of a canton. This variable, however, highly correlates with the number of special school pupils. Hence, for the purpose of this paper, the number of special school pupils will be included in the analysis instead of the total number of residents.

(Steenbergen and Bradford 2002).<sup>13</sup> For the estimation of the parameters, I use a Bayesian approach which, given the data structure at hand, is preferable for two reasons. Firstly, the Bayesian approach does not assume data to be randomly sampled. Instead it treats data as a complete survey with the goal to find the model that best matches the given data structure (Jackman 2009: XXXIf.). This corresponds perfectly to the data used in this paper, which are exhaustive non-repeatable data for all the 26 cantons. Secondly, given the need to apply a hierarchical model, Monte Carlo experiments have shown that Bayesian multilevel models perform better than equivalent frequentist models, especially when the number of level-2 units is small (Browne and Draper 2006; Stegmueller 2013).

Bayesian estimation results yield the mean and standard deviation of the posterior distribution, which can be interpreted as in a standard frequentist regression. The mean is the average effect of a parameter (i.e. independent variable) on the outcome (i.e. dependent variable); the standard deviation helps to assess the statistical reliability of the estimation results.<sup>14</sup>

## 5 Empirical Findings

In order to test the effect of the independent variables on the outcome variable I proceed as follows. Firstly, I estimate a baseline model, which only includes the share of mayors and all local councillors respectively, the NFA-dummy, as well as the respective interaction term. A second model examines whether the estimates of the baseline model are confirmed even if all the predictors are included. Finally, a third final model is estimated by only including those predictors of model 2 whose credible intervals indicate a clear direction of influence (i.e. did not include zero).

Figure 4 presents the means of the parameters for the Bayesian estimations with the corresponding 90% and 95% credible intervals for the two final models. The results of the baseline and the full models are listed in Tables A3 and A4 in the Appendix.

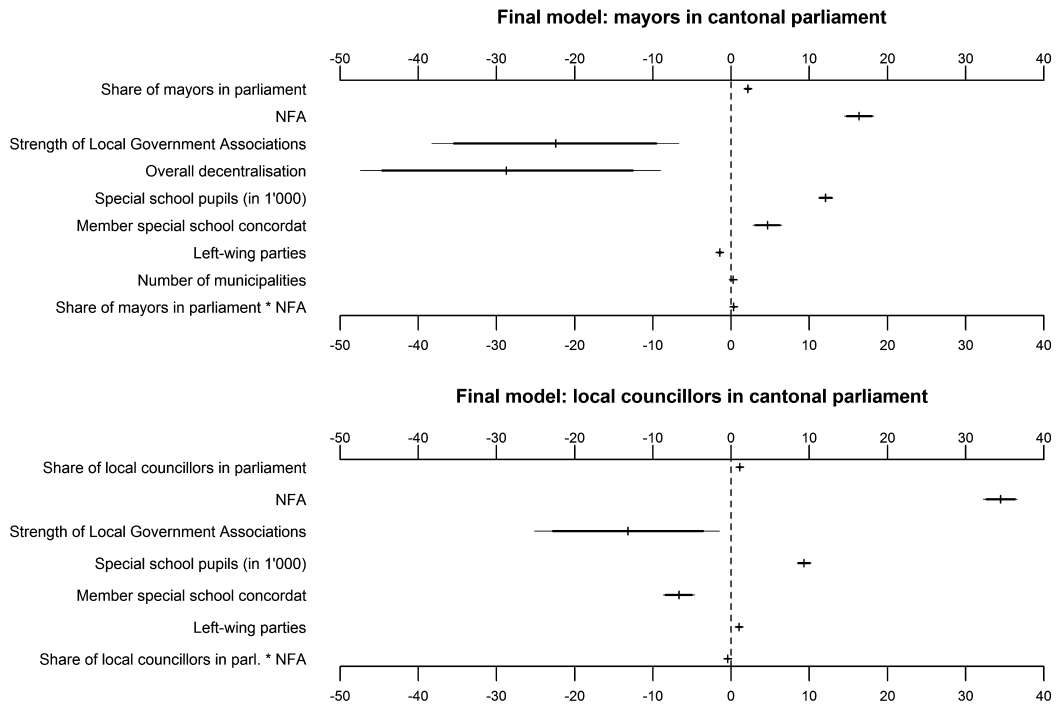
Regarding the influence of mayors, the model estimations clearly show that a higher share of mayors in the cantonal parliaments leads to a higher centralisation of special school costs in a canton. For all the three models, the posterior mean is above zero with a 95% credible interval not containing zero. While in the baseline model the mean is 1.05, this value even increases when control variables are included. The final model yields a posterior mean of 2.1, indicating more than a 2 percentage point increase of the cost centralisation with a 1 percentage point increase of the share of mayors in the cantonal legislature.

Looking at the NFA-dummy it becomes clear that the federal reform – even while controlling for further control variables – has clearly increased the share of special school

<sup>13</sup> Actually, the data structure at hand is hierarchical in two ways: The years 2007 and 2014 are clustered within cantons and cantons are clustered within the two years. While the year-level is already captured by the NFA-dummy itself (0 for 2007 and 1 for 2014), random intercepts for the cantons are used to capture the canton-level.

<sup>14</sup> The Bayesian models have been estimated in *R* using the package MCMCglmm (Hadfield 2010). For the specification of priors I have used non-informative normal priors for the fixed effect parameters and inverse Wishart priors for the variance component. The convergence of the chains has been checked by extensive graphical inspections of the trajectories and the autocorrelations as well as by Geweke and Heidelberg diagnostics. The chains of all the models presented in this paper have mixed well and converged. The models were run for 400'000 iterations, with a burn-in of 200'000 and a thinning of 50. The change of the number of iterations and a slight change of the priors have not changed the results. More detailed information on the model specifications and the different sensitivity tests can be obtained upon request.

Figure 4: Explaining cantonal cost centralisation: posterior distribution of final random intercept models with mayors/local councillors in cantonal parliaments



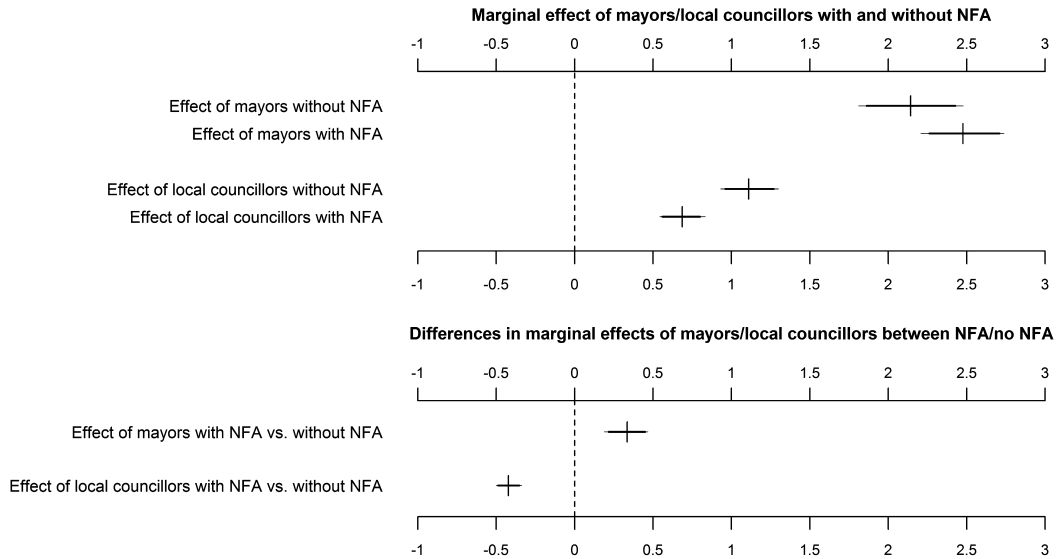
Notes: Mean as well as the 90% and 95% credible interval of posterior distribution. Bayesian estimation using MCMCgmm package in R (Hadfield 2010). For the baseline model and the full model (with all parameters, including those without a systematic effect), see Tables A3 and A4 in the Appendix.

costs borne by the cantonal level. According to the final model, the NFA has led to a 16.4 percentage point increase in the cost centralisation.

When the share of mayors in cantonal parliaments is interacted with the presence/non-presence of the NFA-reform, the magnitude of the effect for mayors increases slightly. The effect of 1 percent of mayors sitting in the parliament is 0.3 percentage points higher for the time when the NFA is in force compared to the situation before the federal reform. However, considering Figure 5, it becomes clear that the two credible intervals overlap largely. Hence, the positive effect of mayors on the cantonal cost centralisation is mainly an effect of its own and hardly depends on the federal reform.

Within the group of control variables, several systematic effects can be found. Accordingly, the more a canton decentralises all of its resources to the municipalities (expenditures, revenues, administrative resources), the less special school costs are centralised at the cantonal level. In addition, the number of pupils in special schools positively correlates with the centralisation of special school costs. The same applies for the membership in the inter-cantonal concordat: the horizontal coordination of a canton within the scope of the concordat for special needs education leads to an additional

Figure 5: Marginal effect of mayors/local councillors in cantonal parliaments with and without the NFA



Notes: Mean as well as the 90% and 95% credible interval of posterior distribution. Bayesian estimation using MCMCglmm package in R (Hadfield 2010).

increase of the cost structure by 4.7 percentage points. Furthermore, the number of municipalities positively correlates with the centralisation of the cost structure, which stands somewhat in contradiction to previous empirical findings about the influence of the inner-cantonal fragmentation on overall expenditure (de)centralisation. Finally, the strength of left-wing parties seems to be linked to decentralisation instead of centralisation of the cost structure. This finding might be surprising at first, but could be explained by the left-wing support for a more integrative approach regarding special school pupils. A decentralisation of policy resources may be crucial in order to foster the integration of these pupils into decentralised regular classes instead of segregating them in centralised special schools.

No “centralising” effects can be found for the further political variables which are expected to facilitate local influence on cantonal policies. Neither the territoriality of the electoral system nor the availability of direct democratic instruments for local governments helps to explain the level of cost centralisation in a canton. Although we find a positive posterior mean for both parameters, none of them can be considered systematically positive when credible intervals are taken into account. Interestingly enough, a strong Local Government Association leads to a higher share of costs borne by the municipalities. Hence, when looking at the different possible channels of influence for local authorities, the share of mayors in the parliament appears to be the only variable that is systematically positively linked with the centralisation of special school costs in a canton.

Turning to the models for local councillors, the findings do not differ greatly from those for the mayors. All three models indicate a positive effect of the share of local councillors in the cantonal parliament on the centralisation of special school costs in a canton. However, the magnitude of the effect is lower when compared to the one for mayors. The

baseline model reveals a 0.9 percentage point increase of the centralisation with a 1 percentage point increase of the share of local councillors. The effect slightly increases with the inclusion of control variables. According to the final model, centralisation increases by 1.1 percentage points for every additional percent of local councillors in the parliament.

The NFA effect is also strong when local councillors are included. This time, the interaction term with the share of local councillors is even negative, with a credible interval not including zero. Hence, the positive influence of local councillors on cost centralisation is mainly restricted to the period before the NFA. However, when looking at the magnitude of the effect, one has to put the relevance of this finding into perspective. The effect only decreases by 0.3 percentage points after the NFA compared to before. Hence, even though the credible interval of the interaction term indicates a high reliability of this effect, the relevance of this effect is highly restricted.

## 6. Discussion

How can we interpret these empirical results in the light of the formulated hypothesis? Generally, the findings confirm the expectation that a higher share of members of local governments in the cantonal legislature leads to a stronger centralisation of special school costs. Hence, local authorities use the political power of the “cumul des mandats” for shifting unwanted costs from the local up to the cantonal level. This effect is stronger for mayors than for other members of local governments. Therefore, it is especially the president of the local council who seems to have a strong connection with his home municipality and who takes a “brokering role” by transferring local interests to the centre (Tarrow 1977; John 2001: 136).

Interestingly, this effect is the only positive one that could be found within the group of political factors that are expected to facilitate the exertion of local influence on higher level political outcomes. A favourable institutional condition for local actors – such as constituencies that (almost) match the boundaries of municipalities and low barriers for local governments to use direct democratic instruments – did not prove to have an effect on cost allocation. Hence, a purely institutional perspective is not expedient when assessing the power relations between the centre and the municipalities. Institutions only provide a framework within which actors are needed for a policy change to occur. The existence and strength of Local Government Associations is even negatively connected to cost centralisation. It follows that the direct representation in the cantonal political-administrative system proves to be much more efficient than any other efforts of lobbying and coordination outside these boundaries.

Despite this general boosting effect of the “cumul des mandats” on cost centralisation, the NFA – in the course of which the federal state fully withdrew from financing special schools – did not lay out a new “battlefield” for local authorities to exert influence on cost reallocation. Even though the overall cost centralisation has markedly increased in most cantons, the presence of local government members in the legislature cannot explain the variance of this increase between the cantons. Rather, the influence of local authorities has already existed before the federal reform. This is entirely plausible, as quite possibly the centralisation rates had already been disputed before 2008. In many cantons, they fluctuated around the “magical” value of 50 percent, that is the threshold above which the cantonal level starts to come up for the majority of the costs.

In sum, the empirical results of this study confirm the expectation in the literature that local interests are best represented with local representatives directly holding a seat in the higher-level parliament (Meylan et al. 1972: 279ff.; Bogdanor 1988: 84; Page 1991: 60). The hypothesis is thus confirmed. The results indicate a clear pattern of exertion of influence regarding the issue of cost allocation in a policy field. Local governments have no interests in coming up for costs in a policy field where expenditures are not directly linked to revenues. In the recent past, we have found several episodes that stand in line with this finding: In 2015, the cities of Zurich, Winterthur and Dietikon urged their canton to increase its contribution for social assistance<sup>15</sup>; one year later, there was a dispute in the same canton between the two state levels regarding the responsibilities for the costs of placing children in homes<sup>16</sup>; and in the course of current austerity measures in the canton of Lucerne, the municipalities threatened to make use of the municipal referendum for the first time ever.<sup>17</sup> Hence, the findings are in line with previous experience stating that local governments want to maintain as many decisional capacities as possible whilst trying to get rid of the provision of unattractive and/or costly public services (Horber-Papazian and Soguel 1996; Mueller et al. 2015).

## 7. Conclusion

The aim of this study has been to analyse the impact of mayors and other local councillors elected to the cantonal parliament on the cost allocation within the policy field of special schools. In order to do so, the study has benefited from new data on the presence of local authorities in all 26 cantonal parliaments.

The findings suggest that a higher presence of local government members in the cantonal parliament leads to a higher share of special school costs that is borne by the cantonal level. While the influence of all the members of local governments is rather limited in scope, mayors in cantonal parliaments have proven to be key actors when it comes to defending local interests in central decision-making. This finding has important implications both for Swiss federalism and beyond.

Considering the Swiss federal system, the results suggest that one has to take into account the huge variance regarding the “cumul des mandats” in the cantons when assessing the power relations in a canton. The empirical findings of this study show that multiple mandates can be effectively used by local governments to maximize their revenue (Greve 2012). This is in line with previous empirical analyses by Cappelletti (2014) and calls for more attention to be given to the effects of the “cumul des mandats” phenomenon. The degree of mandate accumulation in cantonal parliaments is not necessarily linked to institutional differences regarding local autonomy. Hence, the accumulation of mandates can be of crucial importance for local politics, even in cantons where institutional centralisation is comparatively high (such as in the French speaking cantons).

The relevance of multiple-mandate holders is also high when taking into account the national level. Considering the involvement of the cantons in the national decision-making process, the literature has mainly focused on the vertical institutions of federalism, such as the cantonal majority in constitutional referendums or the cantonal legislative referendum (Linder 2012: 161ff.; Vatter 2016: 459ff.). This study suggests that the direct representation

<sup>15</sup> Schürer, A. (2015). “Jacqueline Fehr will die Gemeinden entlasten”. *Neue Zürcher Zeitung*, 17 November 2015.

<sup>16</sup> Hudec, J. (2016). “Kanton will Millionenkosten abwenden”. *Neue Zürcher Zeitung*, 17 September 2016.

<sup>17</sup> Aschwanden, E. (2016). “Gemeinden proben den Aufstand”. *Neue Zürcher Zeitung*, 19 October 2016.



of members of cantonal (and local) governments in the national parliament is a further – non-institutionalised – element of vertical influence in the Swiss federal system.

The findings are relevant beyond the Swiss case with regard to the necessity to take actors and processes into account more strongly when assessing power relations between the centre and the periphery. This study has also shown that institutional factors expected to facilitate local politics (namely the electoral system and direct democratic means for local governments) are less important than the direct representation of lower-level authorities in the higher-level parliament. Hence, the current debate about power relations between centre and periphery and local government systems in general needs to consider the accumulation of local and central mandates as one further element of local politics (Pratchett 2004; Wolman 2008; Ladner et al. 2016).

The “cumul des mandats” can be a promising means for local authorities to exert influence on political decisions at the centre also in less or even non-federalised countries, where local and regional authorities find themselves in less favourable institutional settings. Looking at the four European countries where the accumulation of local and central mandates is most present – Belgium, Finland, France and Luxembourg –, Belgium is the only state with a federalised state structure (Navarro 2013: 126). There is no a priori reason to assume that the representation of local interests via the accumulation of mandates is only restricted to federal states. So far international research on the consequences of the “cumul the mandats” has focused mainly on the effects for the individual politician such as regarding electoral success or activity in the parliament (e.g. Blais 2006; François 2006; Foucault 2006; Maddens et al. 2006; François and Navarro 2013b). The study at hand suggests that a more macro-oriented analysis of effects could yield interesting results beyond the case of Swiss federalism.

Finally, the study also yields interesting results from a normative point of view. It can be questioned whether the accumulation of multiple mandates is rather fruitful or detrimental for a political system. While multiple-mandate holders are closely connected to citizens which allows the latter to bring their concerns into the parliamentary system more easily, the “cumul des mandats” can also be criticized for harming the federal principle of “one region, one vote” as it puts some regions in a better position than others. Cappelletti (2014) has already shown that municipalities with one or more executives in the cantonal parliament are better off when it comes to the regulation of equalisation grants. The same effects could also be relevant for other policy issues: For example, when a canton needs to decide where to build asylum homes or which infrastructure decisions to take (e.g. roadbuilding, leisure facilities). The findings of this study suggest to take the phenomenon of multiple mandates more seriously and to discuss its implications for the functioning of a democratic system.

The study has taken a close look on the impact of the “cumul des mandats” in one specific policy field. While this approach benefits the internal validity of the findings, the empirical results are limited in several ways that call for further research. Firstly, the analysis needs to be expanded to other policy fields in order to get a more generalizable understanding of the consequences of the “cumul des mandats”. There might be other policy fields where the takeover of policy-related costs is attractive for local governments, especially when they are connected to an increase of competences or when long-term “returns on investment” are expected.

Secondly, the present study has looked at the “cumul des mandats” from a macro-perspective, which does not allow deriving conclusions about the causal mechanisms at the level of individual legislators. Given this well-known limitation in macro-quantitative comparative studies (e.g. when the influence of parties is assessed on political outcomes),

further research following a more micro-based and qualitative approach could help to get a more in-depth understanding of the action “behind” the macro-effect found in this study. In fact, even though the study at hand finds evidence that the “culture” of mandate-accumulation – as measurable on the macro-level – is positively linked to local influence over cantonal policies, the political outcomes at the macro-level are still the results of interactions of individuals (i.e. the parliamentarians) in a given decision-making process. It would therefore be of particular interest to take a closer look at the political interests of single legislators, their strategies and actions in the decision-making process (e.g. in the parliamentary committees) as well as their ability to build local coalitions across party lines.

Finally, the findings should encourage scholars to shed more light on multiple mandates from an international point of view as well. The accumulation of mandates is neither restricted to the local and regional level, nor to federal countries. Further studies could thus take an internationally comparative perspective by analysing the impact of local and regional authorities in the national parliaments. Such an analysis would then allow for assessing the impact of the “cumul des mandats” in different institutional settings. Is “the state capture from below” (Mueller et al. 2015) only limited to federalised and decentralised states? Or does it prove to be an important channel of influence also for local governments in centralised unitary states by compensating the otherwise rather limited local influence on higher-level political outcomes?

It will be up to further research to attain a more in-depth understanding of the consequences of the “cumul des mandats”. The present study provides strong arguments for considering multiple-mandate holders more seriously when addressing the capacity of lower-level authorities to influence higher-level policies in their own favour.

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## Appendix

Table A1: Variable Description

Variable	Operationalisation	Data source
Centralisation of special school costs	Own calculations based on four databases provided by the Federal Finance Administration: 1. Cantonal expenditures for special schools including transfer payments to the municipalities; 2. Local expenditures for special schools including transfer payments to the canton; 3. Transfer payments from the cantonal to the local level within the policy field of special schools; 4. Transfer payments from the local to the cantonal level within the policy field of special schools. For both the cantonal and local expenditures vertical transfer payments are considered: In order to get the effective amount of expenditures for both levels I subtract the transfer payments received from the other state level from the expenditures (which include the transfer payment to the other state level). For example, if the statistics in a canton reveal a) cantonal expenditures including transfer payments (to the local level) of 1.2 million Swiss Francs and b) local transfer payments to the cantonal level of 100'000 Swiss Francs, the effective amount of expenditures for the cantonal level is 1.1 million Swiss Francs. After having done the same calculation for the local level, the centralisation equals the share of the cantonal expenditures on the total expenditures (cantonal + local) in the canton. No data are available for the canton of Schaffhausen for the year 2007.	Federal Finance Administration
Share of mayors in the cantonal parliament	Total previous year's number of presidents of political municipalities in the cantonal parliament divided by the total number of seats in the parliament, multiplied by 100. Missing values for the cantons of Fribourg, Vaud, Valais and Jura for the year 2006: mean values for the years 2010-2014 used instead. For the cantonal data sources see Table A2 in the Appendix.	See Table A2

Table A1: Continued

Variable	Operationalisation	Data source
Share of local councillors in the cantonal parliament	Total previous year's number of members of governments of political municipalities in the cantonal parliament divided by the total number of seats in the parliament, multiplied by 100. Missing values for the cantons of Berne, Fribourg, Vaud and Valais for the year 2006: mean values for the years 2010-2014 used instead. No data available for the cantons of Grisons and Jura. For the cantonal data sources see Table A2 in the Appendix.	See Table A2
NFA	Dummy variable indicating whether the NFA reform is in force; 0 = NFA is not in force (year 2007), 1 = NFA is in force (year 2014).	Own coding
Strength of Local Government Associations	Index based on Mueller (2015) including the following indicators: 1) degree of institutionalisation, 2) a functioning website indicating a permanent and professional structure, 3) public availability of the Local Government Associations' statutes (legal personality), 4) existence of a special group in the cantonal parliament to represent and lobby for local interests. The scores for the four indexes are added to the total score for the strength of Local Government Associations. The maximal value is 4.	Mueller (2015)
Territorial electoral system	Index based on Mueller (2015) measuring the cantonal electoral decentralisation. 0 = the whole cantonal territory is just one constituency (no territorial representation of municipalities); 1 = use of special electoral districts (at least some territorial dimension to parliamentary elections); 2 = use of administrative districts (territorial distinctiveness with certain sense of regional identity); 3 = use of historic regions and fragmented administrative districts; 4 = constituencies perfectly correspond to the municipalities.	Mueller (2015)
Direct democratic instruments for local governments	Index based on Mueller (2015) measuring the existence of the communal initiative and referendum in a canton as well as the barriers to call them. Index ranges from 1 (low direct-democratic decentralisation) to 4 (high direct-democratic decentralisation)	Mueller (2015)

Table A1: Continued

Variable	Operationalisation	Data source
Overall decentralisation	Index based on Mueller (2015) measuring the local share of public expenditures, public revenues, administrative expenditures, public staff and salaries for public staff. The index equals the mean of the z-standardised values of the five indicators. For all indicators, mean values for the time range from 1990 to 2006 have been used.	Mueller (2015)
Special school pupils (in 1'000)	Number of special school pupils divided by 1'000	Federal Statistical Office
Member special school concordat	Dummy variable indicating the membership in the concordat for special needs education ( <i>Sonderpädagogikkonkordat</i> ) in the previous year. 0 = no membership, 1 = membership.	Swiss Conference of Cantonal Ministers of Education
Left-wing parties	Own calculations based on the share of seats in the cantonal parliament of the following parties: Social-Democratic Party, Green Party, Labour Party [formerly Communist Party], other small left-wing parties. No data are available for the canton of Appenzell Inner-Rhodes.	Federal Statistical Office / <i>Année Politique Suisse</i> , several years.
Number of municipalities	Number of municipalities in a canton	Federal Statistical Office
German-speaking	Dummy variable indicating whether canton has 1 = majority that is German-speaking, 0 = otherwise	Federal Statistical Office
Urbanisation	Percentage of urban population	Federal Statistical Office



Table A2: Number of Mayors/Local Councillors in the Cantonal Parliaments in 2006 and 2013 and the Corresponding Data Sources

Canton	2006			2013			Data source
	Number of mayors in cantonal parliament	Number of local councillors (including mayors) in cantonal parliament	Number of seats in cantonal parliament	Number of mayors in cantonal parliament	Number of local councillors (including mayors) in cantonal parliament	Number of seats in cantonal parliament	
ZH	9	26	180	12	28	180	Staatskalender
BE	13	32*	160	15	34	160	List of interest ties
LU	8	20	120	10	21	120	List of interest ties
UR	1	7	64	0	3	64	Staatskalender
SZ	1	6	100	1	5	100	List of local auth.
OW	0	3	55	0	5	55	Own survey
NW	1	4	60	1	2	60	Staatskalender
GL	7	14	80	9	18	60	List of local auth.
ZG	0	3	80	1	3	80	Staatskalender
FR	16*	33*	110	16	34	110	List of interest ties
SO	8	16	100	17	27	100	List of interest ties
BS	1	5	130	0	3	100	Own survey
BL	2	12	90	3	13	90	Local elect. results.
SH	7	11	80	1	10	60	Staatskalender
AR	9	15	65	10	16	65	Staatskalender
AI	6	17	49	2	15	49	Staatskalender
SG	15	36	180	18	36	120	List of local auth.
GR	15	n.a.	120	17	n.a.	120	List of mayors
AG	11	26	140	19	36	140	List of interest ties
TG	20	25	130	22	29	130	List of interest ties
TI	8	18	90	8	21	90	Local elect. results.
VD	27*	36*	180	22	30	150	List of interest ties
VS	9*	41*	130	10	41	130	List of interest ties
NE	3	15	115	2	17	115	List of interest ties

Table A2: Continued

Canton	2006			2013			Data source
	Number of mayors in cantonal parliament	Number of local councillors (including mayors) in cantonal parliament	Number of seats in cantonal parliament	Number of mayors in cantonal parliament	Number of local councillors (including mayors) in cantonal parliament	Number of seats in cantonal parliament	
GE	4	5	100	4	8	100	List of local auth.
JU	3*	n.a.	60	3	n.a.	60	List of local auth.

*Notes:* \*no data available for 2006, mean values for the years 2010-2014 used instead.

Table A3: Explaining Cantonal Cost Centralisation: Posterior Distribution of Baseline, Full and Final Random Intercept Models with Mayors

	Mean	2.5% quantile	97.5% quantile
<b>Baseline model</b>			
Intercept	47.48	37.92	57.55
Share of mayors in parliament	1.05	0.77	1.33
NFA	15.20	14.23	16.17
Share of mayors in parliament * NFA	-0.03	-0.15	0.08
N = 49			
<b>Full model</b>			
Intercept	84.94	-15.73	187.32
Share of mayors in parliament	2.15	1.81	2.48
NFA	16.38	14.48	18.35
Strength of Local Government Associations	-22.25	-45.94	0.14
Territorial electoral system	2.50	-18.61	22.73
Direct democratic instruments for local governments	1.19	-12.24	14.18
Overall decentralisation	-24.97	-52.46	2.91
Special school pupils (in 1'000)	12.11	11.19	13.02
Member special school concordat	4.68	2.73	6.54
Left-wing parties	-1.45	-1.72	-1.17
Number of municipalities	0.26	0.23	0.29
German language	-13.72	-76.99	48.56
Urbanisation	0.00	-0.01	0.01
Share of mayors in parliament * NFA	0.33	0.20	0.47
N = 49			
<b>Final model</b>			
Intercept	84.21	41.10	127.42
Share of mayors in parliament	2.14	1.81	2.48
NFA	16.38	14.48	18.25
Strength of Local Government Associations	-22.42	-38.26	-6.70
Overall decentralisation	-28.75	-47.43	-9.03
Special school pupils (in 1'000)	12.09	11.18	12.99
Member special school concordat	4.68	2.79	6.54
Left-wing parties	-1.45	-1.73	-1.18
Number of municipalities	0.26	0.22	0.29
Share of mayors in parliament * NFA	0.33	0.20	0.48
N = 49			

Notes: Bayesian estimation using MCMCglmm package in R (Hadfield 2010).

Table A4: Explaining Cantonal Cost Centralisation: Posterior Distribution of Baseline, Full and Final Random Intercept Models with Local Councillors

	Mean	2.5% quantile	97.5% quantile
<b>Baseline model</b>			
Intercept	40.79	30.24	51.52
Share of local councillors in parliament	0.89	0.72	1.07
NFA	24.29	22.97	25.61
Share of local councillors in parliament * NFA	-0.45	-0.53	-0.38
N = 45			
<b>Full model</b>			
Intercept	-35.46	-135.66	63.55
Share of local councillors in parliament	1.49	1.31	1.67
NFA	36.59	34.88	38.37
Strength of Local Government Associations	-19.82	-43.01	3.18
Territorial electoral system	11.73	-9.06	32.99
Direct democratic instruments for local governments	-0.72	-15.45	14.53
Overall decentralisation	-15.64	-44.96	12.84
Special school pupils (in 1'000)	10.71	9.85	11.61
Member special school concordat	-9.95	-11.59	-8.37
Left-wing parties	2.91	2.68	3.15
Number of municipalities	0.03	-0.01	0.08
German language	-15.22	-81.67	49.14
Urbanisation	-0.01	-0.02	0.00
Share of local councillors in parliament * NFA	-0.30	-0.38	-0.21
N = 45			
<b>Final model</b>			
Intercept	21.71	-10.76	54.7
Share of local councillors in parliament	1.11	0.93	1.3
NFA	34.48	32.24	36.61
Strength of Local Government Associations	-13.19	-25.15	-1.5
Special school pupils (in 1'000)	9.33	8.43	10.22
Member special school concordat	-6.67	-8.69	-4.65
Left-wing parties	1.04	0.73	1.35
Share of local councillors in parliament * NFA	-0.42	-0.51	-0.34
N = 45			

Notes: Bayesian estimation using MCMCglmm package in R (Hadfield 2010).

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