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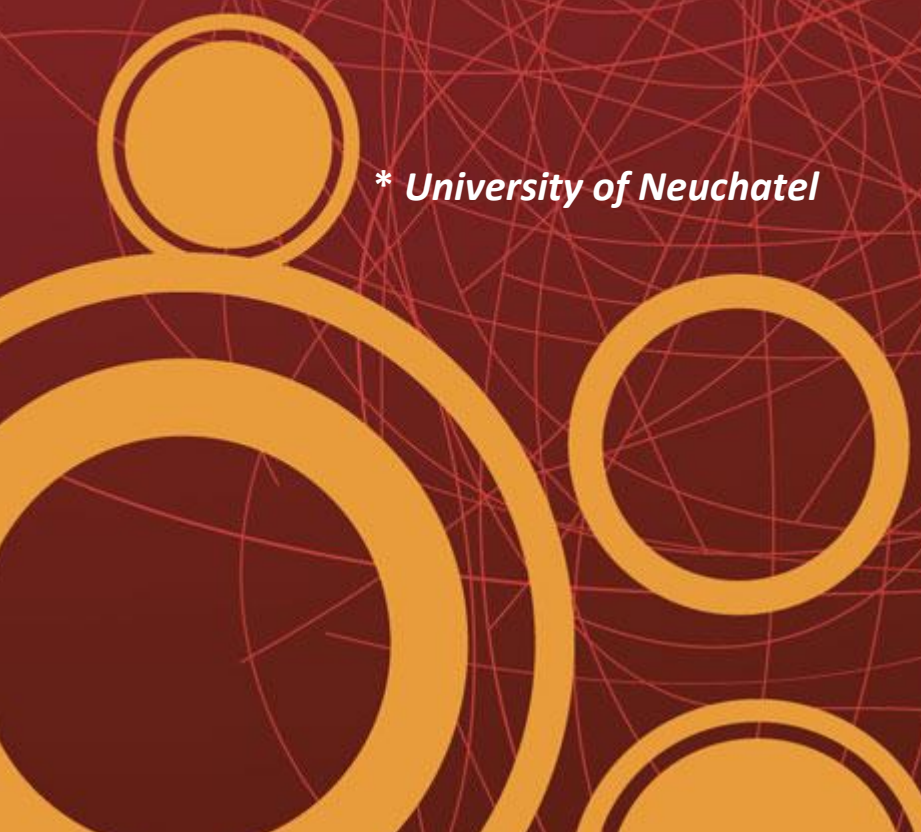
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# Links of interest of Swiss MPs: a comprehensive dataset

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# Links of interest of Swiss MPs: a comprehensive dataset\*

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## Abstract

This study provides a comprehensive, accurate and ready-to-use dataset on the relationships between the members of the Swiss Parliament and groups of interests. We capture politicians' linkages exploiting (1) their mandates in legal entities; (2) the enterprises, associations or other organizations related to the people they invite for attending parliamentary sessions; and (3) their occupations. Using NOGA 2008 and SSCO 2000 codes, legal entities and professions are classified into 28 categories. We approximate politicians' *ties* intensity by the number of occurrences in a particular category. The results show that there are substantial differences between the two chambers, and across the main parliamentary groups. The three types of information employed provide complementary information.

**Keywords** Groups of pressure, lobbies, special interests, Swiss Parliament, voting behaviour.

**JEL Classification** D7, H7

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\*This study should not be reported as representing the views of the University of Neuchâtel. The views expressed are those of the authors and do not necessarily reflect those of the University of Neuchâtel. The dataset is available upon request (stefano.puddu@unine.ch).

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# 1 Introduction

Members of Parliaments' (MPs) links with groups of interest have always been an important issue in the voting behavior analysis. Recently, it has become a topic of large relevance also in other disciplines, such as in economics and finance.<sup>1</sup> From a general point of view, the main concern is that due to lobbies pressure MPs' votes reflect private instead of public interests.

In Switzerland, each four years, when approaching to the Federal elections, newspapers and media become more and more interested in Swiss political ties and in particular in potential scandals or striking examples. The Swiss political context is quite rare due to the militia character of Swiss politics (Pilotti et al., 2010). A large fraction of MPs shows strong links with private economy, and the majority of the elected representatives has mandates in private companies.<sup>2</sup> The Swiss political system is often described as opaque, a place where the lobbies act with a great care for discretion. In response to the growing criticisms about the lack of transparency, Swiss institutions put in place several measures.<sup>3</sup> They are already a step-ahead with respect to a fully unintelligible situation, even if several weaknesses still need to be corrected.

In the last years some attempts assessed lobbies influences on political votes and shedding light on politicians' mandates.<sup>4</sup> Despite several sources available, these studies rely only on a limited amount of information, due to the difficulty in comparing the data coming from different sources. These difficulties are due to a non-homogeneous classification of the political linkages with the private companies captured by the alternative sources. Moreover, several initiatives aiming at harmonizing the alternative sources of information about MPs economic

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<sup>1</sup>For the voting behavior contributions, see Austen-Smith (1993), Smith (1995), while for the studies in economics and finance Duchin and Sosyura (2012).

<sup>2</sup>According to the *Official register of interests*, 38 out of 46 members of the Council of States (83%) are affiliated to at least one commercial company. Similarly, 123 members (62%) of the National Councilors have one or more commercial mandates.

<sup>3</sup>For instance, the Parliament publishes the list of accredited lobbyists by MPs and the register of interests based on MPs disclosures.

<sup>4</sup>See Schwarz and Linder (2007), Blanchard et al. (2009) and (Pilotti et al., 2010) respectively.

and associative interests have been put in place.<sup>5</sup> Despite all these efforts, the data sources are still heterogeneous, not integrated and not harmonized. Another weakness of existing contributions refers to the quality of the information employed. For instance, Schwarz and Linder (2007) employ the *Official register of interests* publicly available in the Parliament website. However, as noticed by Zaugg (2011) this source is imprecise due to the fact that politicians “forget” to mention some of their mandates in legal entities at the moment of reporting them in the *Official register of interests*.

Using data on the MPs of the 49th Swiss legislature (2011 to 2015), we aim at creating a unique and comprehensive dataset including information about MPs interests collected from alternative available sources. More precisely, we employ three perspectives to capture politicians’ *ties*. First, we focus on MPs’ mandates in legal entities (private companies, business and private interests associations, foundations and trade unions). Our source is *monetas.ch*, which borrows information from the Federal commercial registry office and Swiss official gazette of commerce (SOGC) among other sources.<sup>6</sup> This choice makes our dataset innovative and original compared to the existing ones based on the *Official register of interests* available on the Parliament webpage. In addition, we believe that the commercial register is a more reliable source because it is based on information required by the law on commercial activities and not on simple declarations. The result is an improvement of the quality of the data about MPs’ mandates in legal entities.

Second, we also focus on access rights provided by the MPs. In particular, in which companies the recipients of the access rights work.<sup>7</sup>

Finally, we approximate MPs’ economic interests by their occupations.<sup>8</sup>

The three sources employed need to be homogenized. We classify MPs’ legal entities as

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<sup>5</sup>See for instance the attempt by Nicolussi (2014a) and Nicolussi (2014b), as well as the contribution of *lobbywatch.ch*

<sup>6</sup>*Monetas.ch* ([www.monetas.ch](http://www.monetas.ch)) is an Internet portal that provides access to the Swiss commercial register.

<sup>7</sup>Our source is the *Official list of the persons with access rights*, available from the Parliament webpage.

<sup>8</sup>The information about MPs’ professions is available in the Parliament website.

well as the company for which the recipient of MPs' passes work for, according to the NOGA 2008 codes. At the same time, we arrange MPs' occupations in 20 categories employing the SSCO 2000 codes.<sup>9</sup> In our knowledge, such a categorization has never been done in the literature. The outcome is a complete, homogeneous and broad dataset containing Swiss MPs' *ties*, all of them being classified in the same categories, regardless the type of information (mandates, authorizations, professions).

The dataset is particularly suitable for assessing the influence of the affiliations on the MPs votes, for quantifying the influence of MPs on borrowing conditions offered by banks to legal entities in which they have an influence (see for instance Infante and Piazza (2014)), or for measuring the quality of the information in the *Official register of interests*, provided by the Swiss Parliament.

We find that the three perspectives provide complementary information on politicians' *ties*. Depending on the perspective (mandates, access rights or professions) chosen, the category with the highest and lowest occurrences changes. Moreover, when focusing on specific information sources (mandates, access rights or professions) the results show substantial differences between the two chambers as well as across the main parliamentary groups. These findings confirm the worries about the partial information contained in the sources employed in previous studies.

The rest of the paper is organized as follows: Section 2 documents a general overview of previous international and specific to the Swiss case studies in the field. In Section 3 we discuss in details the sources of our dataset, the codes to classify legal entities and professions (subsection 3.1) and the structure of the final dataset (subsection 3.2). Section 4 reports the main results based on the three approaches. Finally, in Section 5 the conclusion is reported.

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<sup>9</sup>As explained more in details in subsection 3.1, NOGA 2008 and SSCO 2000 codes refer to the *General Classification of Economic Activities* and the *Swiss Standard Classification of Occupations 2000* respectively. They are available in the Swiss Statistical Office website.

## 2 Literature review

A noticeable part of the literature on the relationship between political decisions and lobby activity focuses on the United States, and especially on the House of Representatives (Congress). The availability of data explains this pattern of the literature. Indeed, the 1974 Federal Election Campaign Act (FECA) imposes to report all financial campaigns contributions to the Political Action Committees(PACs) and to make the record publicly available.

In the literature, political activity is usually approximated by the roll-call votes in Parliament or, less commonly, by policy outcomes such as the total federal government expenditures among others. At the same time, political lobbies' connections are captured by private financial campaigns contributions to politicians.

Silberman and Durden (1976) are one of the first in testing the impact of campaign contributions on politics votes. Using an econometric approach in which the dependent variable is the politics vote and the main explanatory covariate is the financial campaigns contributions, they find a significant influence of PACs (labor, trade unions, etc) donations on the support of the 1973 amendment for an increase of the minimum wage. Using simultaneous equations and votes on financial services legislation, Stratmann (2002) finds evidence for vote-buying by special interests groups. In the several contributions in the field scholars have failed to clearly establish the links between lobby activities and MPs' votes as documented in all main meta-analysis done on the subject.<sup>10</sup> As claimed by Roscoe and Jenkins (2005) “[financial] contributions seem to impact the way legislators vote in a surprisingly large minority of instances that have been tested”. Indeed, they find that only in 35.9 % of the cases tested (357) show a statistically significant impact of the interest groups pressure on roll-call voting.

For the Swiss case, due to the lack of data on campaign contributions alternative proxies

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<sup>10</sup>See for instance Smith (1995) for the studies on the US, and Dür (2008) for the EU. For the whole literature, see Potters and Sloof (1996) Roscoe and Jenkins (2005) and Ansolabehere et al. (2003).



for lobbies groups have been founded. Schneider and Naumann (1982), using the approach employed by Silberman and Durden (1976), show that small and medium sized businesses are successful in dampening the spending increase, while the agricultural lobby and the trade unions are able to further government spending in other issues. Recent contributions assess the relationship between lobby activities and Swiss MPs' votes by comparing vote agreement indexes of the political parties to the agreement indexes of informal groups of MPs based on the fact of sharing similar interests.<sup>11</sup> Lüthi et al. (1991) highlight the effects of economic groups of interest on the voting behaviour of Swiss MPs. Between 1985 and 2002, the MPs had to disclose only their "important" mandates. However, the information was not public available. Therefore, due the lack of data Lüthi et al. (1991) rely on individual interviews to classify the MPs among only eight categories of binding interests.<sup>12</sup> These categories are broad and imprecise. Moreover, the classification is not clearly at sector level but rather depends on the type of mandate. Based on this information, they pooled politician sharing similar interests, and they calculated a voting cohesion index for each group, as well as for the traditional political parties. All existing roll-call votes during the period 1981-1989 (155 nominative votes in total) were used to compute the cohesion indexes.<sup>13</sup> They find that some economical associations obtained equivalent or even higher levels of voting cohesion than the political parties, revealing the existence of "genuine hidden economic parties" (Lüthi et al., 1991) deserving private interests in the Swiss Parliament.

Since 2002, Parliament asks MPs to report their interests. The *Official register of interests* based on MPs' declarations is available on the Parliament website. The disclosures are far from being complete because the MPs "omit" to reveal some of their mandates. Nevertheless, no sanctions or controls have been put in place.

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<sup>11</sup>These indexes are based on Rice (1925)

<sup>12</sup>These categories refer to economic organizations, employers associations, agricultural organizations, trade unions and cultural associations.

<sup>13</sup>Electronic voting was introduced in 1996. As documented by Hug (2010), before this date, the nominative votes were recorded only at the request of at least 30 MPs.



Schwarz and Linder (2007) are the first, in our knowledge, to exploit the information contained in the *Official register of interests*. More precisely, they show that the “informal parties of interest” (Lüthi et al., 1991) have lost in intensity and that the party cohesion is again dominant. Despite a downward trend of the impact of lobby activity on political votes, they detect that the homogeneity of the votes according to the affiliation to an association was still unusually high for some specific economic and social questions. A weakness of both contributions is that the classification of MPs interests is not at sector level. This lack in precision does not allow a careful assessment of the impact of specific sector’s pressures on political votes.

Finally, Blanchard et al. (2009) rely on another original source to define the occupations and mandates of the MPs. Their database has been developed by the university of Lausanne within the framework of a research of the Swiss national science foundation. It contains information on the positions of the most influential Swiss personalities in the economic, political and administrative spheres. Blanchard et al. (2009) investigate the determinants of the Swiss MPs’ votes on economic, financial and social policy issues. Despite the availability of the data, they voluntarily limited the scope of their study to only 30 nominative votes of the 46th legislature. Using the same methodology of the agreement index employed in previous studies, they find that the link of interests have globally a lower impact on MPs’ decisions than that of the party membership. This result is in line with Schwarz and Linder (2007), confirming the downward trend of the impact of lobby activity on political decisions.

### **3 Data sources**

We download the information about mandates and the corresponding NOGA 2008 codes of MPs in charge at the 31.12.2014 from the Internet portal *monetas.ch*. The commercial registers of Switzerland (at least one per canton) and the Swiss Official Gazette of Com-

merce (SOGC) are the sources of *monetas.ch* database. In Switzerland a registration in the commercial register is an obligation for every entity willing to acquire the legal personality. It follows that private companies, limited liability companies, foundations, cooperatives and some legal-based associations in which the MPs have a mandate necessarily appear in a commercial register.<sup>14</sup> This information is then merged with that coming from the commercial register with the official and judicial announces published in the Swiss Official Gazette of Commerce (SOGC).

Since the 49<sup>th</sup> legislature (2011-2015) the list of the access rights is published by the Swiss Parliament in the *Official list of people with access rights*.<sup>15</sup> Each MP, at the beginning of the legislature, may invite to the parliamentary session up to two persons, as auditors. The access rights provide a permanent access to the non-public area of the house of the Parliament. Besides the name of the persons receiving the access, the list contains the company or organization being represented by the recipient. It is worth to notice that this information could not be exhaustive. In fact, the recipient has to reveal at least one affiliation to a legal entity if any. Therefore, if the recipient has more than one affiliation he/she is not forced to reveal this additional information. In our knowledge, we are the first to use this information to capture lobbies' influences at political decision level.

MPs' personal information is available in the Parliament website,<sup>16</sup> while the details about their professions are obtained from the MPs' official biographies.<sup>17</sup>

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<sup>14</sup>As explained before, since 2002 the Parliament provides information about MPs' mandates. However, the register of interest could contain partial information, due to the fact the register is created on MPs' declarations. This is the main reason that motivated our choice to employ the information coming from *monetas.ch*.

<sup>15</sup>[www.parlament.ch/d/organe-mitglieder/nationalrat/Documents/zutrittsberechtigete-nr.pdf](http://www.parlament.ch/d/organe-mitglieder/nationalrat/Documents/zutrittsberechtigete-nr.pdf) (last visit on 07.01.2015) and [www.parlament.ch/d/organe-mitglieder/staenderat/Documents/zutrittsberechtigete-sr.pdf](http://www.parlament.ch/d/organe-mitglieder/staenderat/Documents/zutrittsberechtigete-sr.pdf) (last visit on 12.01.2015)

<sup>16</sup>[www.parlament.ch/f/suche/pages/ratsmitglieder.aspx](http://www.parlament.ch/f/suche/pages/ratsmitglieder.aspx) (last visit on 02.03.2015)

<sup>17</sup>[www.parlament.ch/f/organe-mitglieder/nationalrat/mitglieder-nr-a-z/pages/default.aspx](http://www.parlament.ch/f/organe-mitglieder/nationalrat/mitglieder-nr-a-z/pages/default.aspx) (last visit on 02.03.2015) and [www.parlament.ch/f/organe-mitglieder/staenderat/mitglieder-sr-a-z/pages/default.aspx](http://www.parlament.ch/f/organe-mitglieder/staenderat/mitglieder-sr-a-z/pages/default.aspx) (last visit on 02.03.2015)

### 3.1 Legal entities and professions classification

Each MP's affiliation, each access rights recipient affiliation to legal entities as well as each MP's profession is classified in a specific category. We create the categories are based on the *General Classification of Economic Activities* (NOGA 2008) and the *Swiss Standard Classification of Occupations 2000* (SSCO 2000) compiled by the Swiss Federal Office of Statistics.<sup>18</sup>

The NOGA 2008 allows to classify legal entities according to their sector of activity. We have used the NOGA 2008 codes in the context of MPs' mandates and accreditation. Based on the NOGA 2008 codes, we identify 28 categories and subcategories in which we classify legal entities. We expanded from 21 to 28 the number of categories based on NOGA 2008 codes, in order to disentangle categories otherwise pooled together.<sup>19</sup> A potential problem is that a legal entity can have more than one NOGA category, in case it has multiple activities in distinct sectors. Consequently, the legal entity could be classified in different categories. In these cases, for each legal entity, we select its most frequent category. In this way, we implicitly assume that the most frequent category reflects the legal entity main activity. In the eventuality of two or more equally frequent categories of activity, we arbitrarily selected the one numbered the smallest in the 28 categories.

The SSCO 2000 codes, usually employed in the classification of the occupations of the Swiss population, help us in sorting MPs' professions. We identify 20 categories in which we classify MPs' professions. A first issue related to the classification of the professions refers to the fact that professions linked to different categories can be exercised in the same company. For instance, two MPs can work for the same company (i.e. insurance company) with the

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<sup>18</sup>Table 3 reports in detail a brief description, the content and construction of the 28 and 20 categories, respectively, which we have defined based on the NOGA 2008 and SSCO 2000 codes.

[www.bfs.admin.ch/bfs/portal/fr/index/infothek/nomenklaturen/blank/blank/noga0/revision\\_noga.2007.html](http://www.bfs.admin.ch/bfs/portal/fr/index/infothek/nomenklaturen/blank/blank/noga0/revision_noga.2007.html) and [www.bfs.admin.ch/bfs/portal/en/index/infothek/nomenklaturen/blank/blank/sbn.2000/01.html](http://www.bfs.admin.ch/bfs/portal/en/index/infothek/nomenklaturen/blank/blank/sbn.2000/01.html)

<sup>19</sup>For instance, according to the original NOGA 2008 classification, banking and insurance sectors are usually classified in the same category. Expanding the categories, we can distinguish between them.

role of CEO and secretary. If the two MPs report the firm for which they work, instead of the profession, the categorization could be misleading. In fact, both of them would be classified in the insurance sector, even if it is unlikely that the *ties* of the two workers with the insurance industry are similar. A second issue arises when the MP reports his/her profession without specifying in which company he/she works. This issue is particularly true in case of “entrepreneurs”. Many MPs define themselves entrepreneurs, even when they work in private companies. Therefore, if no additional information is available the MP is classified in the category 15. In order to mitigate the drawbacks related to these two problems we exploit additional information contained in the official biographies of the MPs.

Comparing the two classification schemes, based on NOGA 2008 and SSCO 2000 codes, it follows that there is not a perfect match between the categories. More precisely, for eight categories obtained using the NOGA 2008 codes, there is no correspondent category based on SSCO 2000 codes.<sup>20</sup>

The classification proposed in this study may suffer from a degree of arbitrariness. However, we believe that it represents an important contribution, which improves the quality of the information on the current debate.

## 3.2 Dataset structure

The final dataset contains 246 MPs (200 National Council members, and 46 members of the Council of States), in charge at the 31.12.2014. All MPs having resigned after this date, or having become elected representatives after it, do not appear in our dataset. Each member is identified by the variable *NAME*, which contains the last and first names of the MPs. In addition, for each MP, we create an identification number (*ID NUMBER*) to facilitate the utilization on the data. As shown in Table 4, we also include seven additional variables about

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<sup>20</sup>Mining and quarrying, Energy supply, Recycling, Activities of business and employers, Activities of professional, Activities of trade unions and Activities of religious organizations are the sectors for which there is not a SSCO 2000 correspondent category.

MPs personal features such as the gender (*GENDER*), the birth date (*BIRTHDATE*), the origin (*ORIGIN*), the canton where the MP has been elected (*CANTON*), the MP's party (*PARTY*) and the corresponding parliamentary group (*GROUP*) and finally, the belonging chamber (*COUNCIL*). Moreover, for each type of information about MPs' *ties*, we create 28 variables corresponding to the 28 categories of activity based on NOGA 2008 and SSCO 2000 codes. The variables are headed by A\_, B\_ or C\_ depending on the source ((mandates, access rights and professions, respectively) and followed by the category number (1-28). Each entrance in one of the 84 variables represents the number of relationships that a given MP has in the corresponding category related to a specific source. If an MP has three mandates in the banking sector, the number 3 appears in the category 12 of the first source (variable A\_12). Moreover, if the politician gave both of his/her passes to lobbyists working for a bank, the number 2 appears in the category 12 of the second source (variable B\_12). Finally, if the MP works in the banking sector, the number 1 appears in the category 12 of the third source (variable C\_12). No entrances are registered by the number 0.

The shape of the dataset allows us to compare the intensity of the link of the MPs with respect to all the 28 categories. For instance, if *MP1* has 10 mandates in the banking sector, while *MP2* has no mandates in this sector, we could say that *MP1* is likely to be more related to the banking sector than *MP2*.

## 4 Descriptive statistics

The 200 National Councilors and the 46 States Councilors in function at 31.12.2014 have a total of 1188 mandates in legal entities, as shown in Table 1. When considering the entire Federal Assembly, the mandates per MP are 4.83. Distinguishing between chambers, the Councilors of the Council of States display on average 8.11 mandates, while their fellows elected in the National Council have only 4.08 mandates on average. Finally, looking at the

four most important political groups (Radical-Liberal, the Christian Democrat, the Social Democratic and the Swiss People's groups), on average the Radical-Liberal elected are those with the highest number of mandates (7.63) while the Social Democratic MPs have the lowest amount of mandates (3.46).

MPs provide on average 1.26 access rights, which are equivalent to 310 access rights overall. The National Council members provide, on average, more access rights than their colleagues of the Council of States (1.34 vs .94). The statistics at political group level reveal that the Christian Democrat and Social Democratic MPs provide more access rights than their fellows in the other two political groups.

Finally, when focusing on the professions, we have information on the occupation of 231 out of 246 MPs (94%). We do not have information about their occupation for 5% of National Council members, and for 11% of the Council of States representatives. Observing the information revealed at political group level, we notice that the missing information is, on average, spread across the groups, with only the Radical-Liberal group MPs, all reporting their occupation.

## 4.1 Mandates of the MPs

Two MPs with 24 affiliations are those with the largest occurrences. At the same time, 26 MPs do have no mandates in legal entities. Significant differences exist between the two chambers. According to Table 1, the MPs of the National Council have on average 4.08 mandates. This number doubles (8.11) when we focus on the MPs belonging to the Council of States. This difference can be observed also across the parliamentary groups: the Radical Liberal MPs have more than twice the number of Social democratic MPs' affiliations.

In Figure 1 (left) we report the number of MPs with a given occurrences of mandates. MPs with the largest networks seat in the Council of States. The maximum number of mandates is 24 in the Council of States and 17 in the National Council. The differences in

occurrences across chambers may be due to the different number of MPs elected in the two chambers. In Figure 1 (right) we replicate previous results by taking into account the size of each chamber. We find that 17% of the MPs in the National Council have 3 mandates. At the same time, about 12% of the MPs in this chamber have no mandates. When looking at the Council of States, MPs with 2 to 6 mandates represent, in aggregate, nearly 40% of the elected in this chamber.

Distinguishing between the two chambers, Figure 2 (left) shows the mandates distribution across all 28 sectors of activity. We can observe the predominance of category 28, which mostly includes activities of foundations or associations defending particular interests. Indeed, the mandates of this category can be of diverse types and even representing conflicting interests. Unfortunately, the NOGA 2008 codes do not allow to go deeper in defining the interests related to these mandates. Hence, in Figure 2 (right) we report the mandates distribution across sectors of activity excluding category 28. Politicians have mandates in all possible types of activity but category 27 (non classifiable). Disregarding mandates classified in category 28, with 107 mandates in total, the human health and social work category (19) is that with the largest occurrences in the Federal Assembly. Banking (category 12) and insurance (category 13) are the categories that follow.

When comparing the two chambers some similarities arise. In particular, category 28 aside, the most relevant categories are the human health and social work (category 19), the banking and insurance (categories 12 and 13 respectively) as well as the real estate activities (category 14), and some specialized activities in the tertiary sector (mainly law, accounting and consultancy, category 15). Contrary to the common belief of a powerful agricultural lobby, only 8 mandates in the agriculture, forestry and fishing category have been counted. None of these mandates are from MPs of the Council of States. Two arguments may help in explaining the above mentioned evidence. On the one hand, the farming lobby is probably well represented in the category 28 (mainly associations defending particular interests). On



the other hand, farming is often an activity done by small and family owned corporations, making unlikely a mandate in an agricultural firm.

When looking at the distribution of mandates at political group level specific patterns arise. More precisely, there is a clear relationship between the political membership and the MPs mandates types. In Figure 3 we report the occurrences of the mandates by chamber for the four largest and traditional groups in Switzerland: (in a clockwise order starting from upper-left figure) the Christian Democrat group, the Radical-Liberal group the Social Democratic group and the Swiss People’s group. These groups cover the entire political spectrum of Swiss parliament.<sup>21</sup> First of all, the most frequent categories are not the same across groups. While the activities related to human health and social work (category 19) are dominant among the Social Democratic group, it is the specialized activities (category 15) that prevail among the Swiss People’s group. The banking sector (category 12) overshadows the other types of mandates in the Liberal-Radicals groups, and the Christian Democrat MPs seem to have many ties with the insurance sector. Finally, the real estate industry (category 14) and construction (category 3) seem particularly important in the affiliations of the Swiss People’s MPs.

As documented in Figure 4 category 28 (associations and foundations defending very diverse interests) is on average equally important among the four largest parliamentary groups. The only difference with respect to the other groups refers to the nearly absence of mandates among the Swiss People’s States Councilors. This finding may reflect the under-representation of this group in this chamber.

Finally, in Figure 5 (left) for each category we document the fraction of mandates referred to each political group. The same information, but in absolute value, is reported in Figure 5 (right). This analysis shows that, for instance, the public administration (category 17) is

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<sup>21</sup>We use the parliamentary groups and not the political parties for two main reasons. Not all MPs are affiliated to a party represented at the national level. Furthermore, the parliamentary groups represent a more institutionalized entity, which better informs about the exiting forces in the political context.

mostly represented by Social Democratic MPs while the banking, insurance and specialized activities (categories 12, 13 and 15) are closely related to the Swiss People's, the Radical-Liberal and the Christian Democrat groups.

## 4.2 Access rights

MPs provide only 310 access rights of the potential 492 available. The average number of access rights provided by each MP is slightly different across the four largest parliamentary groups, as documented in Table 1. On average, the Liberal-Radical MPs distributed the lowest number of access rights (1.02). On the other extreme, there are the MPs of the Social Democratic group with 1.32 access-rights provided on average. Differences across chamber exist as well: the Councilors of States gave on average less access rights than the National Councilors (0.93 and 1.34, respectively).

Each recipient is associated to a NOGA 2008 code, based on the legal entity in which he/she works. In Figure 6 (upper-left) we document the distribution of the occurrences by categories. The category 28 displays the largest number of occurrences, and in the majority of the cases they refer to the National Council. In Figure 6 (upper-right) the distribution of the occurrences by categories excluding category 28 is reported. Due to the fact that MPs can distribute only two passes, the recipients accredited by the 46 States Councilors are a minority compared to those invited by the 200 National Councilors. For this reason, Figure 6 (lower-left and lower-right) shows the distribution of the occurrences by categories, taking into account the number of MPs of each chamber. Excluding category 28, the graphs show that categories 15, 21 and 22 (Professional activities, Activities of business and employers organization, and Activities of professional organization, respectively) are the most important in both chambers. The agricultural lobby is still nearly non-existent but probably included in the category 28.

The parliamentary group membership influences the categories of the accredited lobbyists.

Figure 7 reports the distribution of the occurrences by the categories, and shows the differences across the four largest parliamentary groups. Category 28 has been excluded from the analysis. The Radical-Liberal, the Christian Democrat and the Swiss People's MPs invite in majority people representing the interests of specialized activities in the tertiary sector (category 15), while the Social Democratic MPs provide the passes to representatives of professional organization (category 22) and trade unions (category 23). The under-representation of the Swiss People's group in the Council of States explains the fact that only 2 people, belonging to category 15 are invited by MPs of this group.

When analyzing more in details the occurrences in category 28, as documented in Figure 8, we notice that the Social Democratic MPs invite approximately 4 times more people in this category than the Radical-Liberal MPs. Moreover, only National Councilors of Radical-Liberal group distributed access rights. The statistics referring to the Swiss People's MPs follow a similar trend with the majority of the access rights distributed by MPs of the National Council.

Figure 9 reports for each categories, in percentage (left) and in absolute value (right), how many passes have been provided by each parliamentary group. 100% of the representatives of trade unions (category 23) as well as the recipients of category 10 (Accommodation and food service activities) have received their passes from Social democratic MPs. Social Democratic representatives are also the majority in categories 9, 18 and 19 (Transportation and storage, Education and Human health and social work activities respectively). The passes provided by the Swiss People's MPs are mostly concentrated in 3, 4, 11, 12 and 24 (Manufacturing, Pharmaceutical and Chemical Industry, Information and communications, Banking activities and Activities of religious organizations respectively).

### 4.3 MPs' professions

Figure 10 shows that the majority of the MPs (147, equivalent to 63% of the 231 MPs who reported this information) have an occupation in the sector of the specialized activities (category 15). The agricultural sector (category 1) is well represented with 16 farmers and one wine-grower, all representative of the National Council. In this chamber, we also find an important proportion of professional politicians (category 25). Surprisingly, only a minor number of MPs work in the banking or insurance sectors.

Figure 11 shows that the type of occupations is clearly related to the MP's political group. For example, none of the Social Democratic representatives works in the agricultural sector (category 1), while none of the Swiss People's group has a teaching profession (category 18). The Social Democratic politicians are more likely to work in the public administration (category 17) while the representatives of the other groups are more likely to be entrepreneurs or attorneys (category 15).

Figure 12 shows how the occupations occurrences of each categories are distributed across the main groups in percentage (left) and in absolute value (right). Most of the professional politicians come from the Social Democratic group. All four groups have MPs in the sector 15, even if the Swiss People's group represents the largest part. They are also over-represented in the agricultural occupations.

### 4.4 Sources comparison

As documented in Table 2 the different sources bring complementary information about the links of interest of the Swiss MPs. When comparing the distribution in categories of the mandates, passes and occupations, we observe that the importance of each sector differs across the sources. Some categories are important in all three sources (such as category 15), and some other are equally meaningless (categories 2, 6 and 16 in particular). However,

the banking and insurance, as well as human health and social work activities categories are significantly less represented in the access rights than in the mandates. At the same time, the activities of business and employers memberships (category 21) and the activities of professional membership organizations (category 22) are marginal in the mandates but they are well represented in the accredited lobbyists. We can also notice the weak representation of the real estate activities (category 14) in the access right compared to the mandates.

The occupations of the MPs are characterized by an overwhelming share of category 15, much more than in the mandates and passes. However, this appears less impressive if we keep in mind that all MPs having declared to be entrepreneurs fall in this category (we cannot identify more precisely their sector of activity). Another interesting feature of the occupations is the nearly absence of bankers or insurers, while these sectors represent an important part of the MPs' mandates.

## 5 Conclusion

We have built a comprehensive and ready-to-use dataset about the links of interests of Swiss MPs. We achieve this goal by merging three different type of information. More precisely, we approximate politicians' *ties* by their mandates in enterprises, associations or other organizations; by legal entities in which the recipients of access rights, provided by the MPs, to parliamentary sessions work; and MPs' occupations. We collect this information from *monetas.ch*, and from the website of the Swiss Parliament respectively. We make the data of the different sources comparable thanks to the sectors classification based on NOGA 2008 and SSCO 2000 codes.

We find that the three perspectives provide complementary information: depending on the sources, the category with the largest occurrences change. We find that for the Federal Assembly as a whole, the Human health and social work activities category is that with

the highest number of mandates. This is true also for the National Council, while Banking activities is the most frequent category in the Council of States. When we look at the access rights, the largest occurrences refer to the Professional activities category. This result does not depend on the chamber. Finally, Professional activities category is also the most frequent among the professions of the parliamentarians. At the same time once focusing on one source differences arise depending on the Council, and on the parliamentary group. The elected in the Swiss Parliament have 1188 (4.82 on average) mandates, have provided 310 access rights out of the 492 available, and for 231 of them we have information about their profession.

Several studies focus on groups of pressure impact on political decisions. However, they are based on an incomplete information. In our knowledge, this is the first time that the three type of information are merged together in a unique and comparable dataset. Our dataset is particular suitable for assessing the influence of the affiliations on the MPs votes, for quantifying the influence of MPs on borrowing conditions offered by banks to legal entities in which they have an influence, or for measuring the quality of the information in the *Official register of interests*, provided by the Swiss Parliament.

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# A Tables

Table 1: Descriptive statistics

	av.	s.d.	min	max	obs.
MANDATES					
Federal Assembly	4.83	4.66	0	24	1188
National Council	4.08	3.75	0	17	816
Council of States	8.11	6.52	0	24	373
Christian Democrat	6.27	5.25	0	24	276
Radical-Liberal	7.63	6.32	0	24	313
Social Democratic	3.46	2.87	0	12	197
Swiss People's	4.11	3.75	0	19	259
ACCESS RIGHTS					
Federal Assembly	1.26	0.79	0	2	310
National Council	1.34	0.77	0	2	268
Council of States	0.93	0.80	0	2	43
Christian Democrat	1.32	0.74	0	2	58
Radical-Liberal	1.02	0.88	0	2	42
Social Democratic	1.33	0.64	0	2	76
Swiss People's	1.08	0.90	0	2	68
OCCUPATIONS					
Federal Assembly	0.94	0.23	0	1	231
National Council	0.95	0.21	0	1	190
Council of States	0.89	0.31	0	1	41
Christian Democrat	0.93	0.25	0	1	41
Radical-Liberal	1.00	0.00	1	1	41
Social Democratic	0.93	0.26	0	1	53
Swiss People's	0.95	0.21	0	1	60

*Notes:* For each type of information (mandates, access rights and occupations), we report the average value standard error, minimum and maximum as well as number of occurrences of the corresponding sample (Swiss Federal Assembly, National Council, Council of States, and the four main political groups). Category 28 is included. Data refers to the 49<sup>th</sup> Swiss legislature. We take into account Councilors in function at the 31.12.2014.

Table 2: Comparing the sources

	max	max (%)	categories	min	min (%)	categories
MANDATES						
Federal Assembly	107	11.63	19	0	0.00	27
National Council	81	12.84	19	0	0.00	27
Council of States	44	15.22	12	0	0.00	1,27
Christian Democrat	39	17.65	13	0	0.00	4,25,27
Radical–Liberal	41	16.53	12	0	0.00	1,23,24,27
Social Democratic	29	22.14	19	0	0.00	1,2,4,6,21,27
Swiss People’s	25	11.47	15	0	0.00	23,24,27
ACCESS RIGHTS						
Federal Assembly	34	15.74	15	0	0.00	6,14,27
National Council	29	16.02	15	0	0.00	6,10,14,27
Council of States	5	14.29	15,17	0	0.00	1,2,3,4,5,6,7,8,12,14,18,24,27
Christian Democrat	9	21.43	15	0	0.00	2,4,5,6,7,8,10,11,12,14,23,24,26,27
Radical–Liberal	8	22.86	15	0	0.00	3,4,6,8,9,10,11,14,16,18,19,20,23,24,27
Social Democratic	11	22.92	23	0	0.00	2,3,4,6,7,8,12,13,14,16,20,24,25,27
Swiss People’s	8	16.33	15	0	0.00	2,5,6,8,9,10,14,17,18,23,27
OCCUPATIONS						
Federal Assembly	147	63.36	15	0	0.00	2,4,5,6,10,11,12,13,14,16,17,21,22,23,24,25
National Council	117	61.26	15	0	0.00	2,4,5,6,10,11,12,13,14,16,17,21,22,23,24,25
Council of States	30	73.17	15	0	0.00	1,2,3,4,5,6,7,9,10,11,12,13,14,16,17,21,22,23,24,25,26,27
Christian Democrat	25	60.98	15	0	0.00	2,4,5,6,7,9,10,11,12,13,14,16,17,21,22,23,24,25,27
Radical–Liberal	31	75.61	15	0	0.00	2,4,5,6,7,9,10,11,12,13,14,16,17,20,21,22,23,24,25,26,27
Social Democratic	32	60.38	15	0	0.00	1,2,4,5,6,7,9,10,11,12,13,14,16,17,21,22,23,24,25
Swiss People’s	39	65.00	15	0	0.00	2,4,5,6,10,11,12,13,14,16,17,18,21,22,23,24,25,26

*Notes:* For each source (mandates, access rights and occupations), we report the categories with the highest and lowest frequency in absolute as well as the correspondent percentage values by category (i.e. we do not take into account *ex-quo* cases). Furthermore, the percentage values are computed on the overall occurrences of the corresponding sample (Swiss Federal Assembly, National Council, Council of States, and the four main political groups). Category 28 is never taken into account. Data refers to the 49<sup>th</sup> Swiss legislature. We take into account Councilors in function at the 31.12.2014.

Table 3: Description of the categories and their corresponding NOGA and SSCO codes

A	B	C	D	E
1	Agriculture	Forestry and fishing activities are included	11100 - 032200	111.01 - 115.04, 311.08, 311.09
2	Mining and Quarrying		51000 - 099000	/
3	Manufacturing		101100 - 192000, 221100 - 332000	211.01 -273.02, 281.01 - 281.04
4	Pharma. and Chemical Industry	Rubber and plastic productions are included	201100 - 222900	291.01 - 291.04
5	Energy supply	Electricity, gas, steam and air-conditioning supply	351100 - 353000	/
6	Recycling	Water supply, sewerage, waste management and remediation activities are includes	360000 - 390000	/
7	Construction		411000 - 439905	411.01 - 423.01
8	Wholesale and retail trade	Repair of motor vehicles and motorcycles are included	451101- 479900	511.01 - 522.03, 523.03, 524.02
9	Transportation and storage	Postal and courier activities are included	491000 - 532000	531.01 - 541.06
10	Accommodations and food services activities	Hotels, holiday apartments, restaurants and bars	551001- 563002	611.01 - 623.04
11	Information and communications	Publishing activities, television program production, telecommunications, information activities and computer programming activities	581100 - 639900	361.01 - 361.05
12	Banking activities	All types of financial sector activities	641100 - 649903, 661100 - 661900	731.01
13	Insurance activities	All activities directly related to insurance sector	651100 - 653000, 662100 - 663002	731.02, 731.03
14	Real estate activities		681000 - 683200	721.04
15	Professional activities	Mostly specialized activity in tertiary sector: law, accounting, consultancy. The "entrepreneur" profession is classified in this category	691001 - 702200, 731100 - 732000	523.01-523.03, 524.01, 524.02, 711.01 - 751.04
16	Administrative and support service activities	Rental and leasing activities, employment and placement agencies, travel agencies.	771100 - 829900	721.01, 721.02
17	Public administration	Defense and compulsory social security are included	841100 - 843000	711.02, 911.07
18	Education		851000 - 856000	841.01 - 847.04
19	Human health and social work activities	Charitable institutions are included	861001- 889902	831.01 - 832.04, 861.01 - 871.02
20	Art, entertainment and recreation activities	Libraries, archives, museums, cultural and sports activities are included	900101 - 932900	811.01 - 824.10
21	Activities of business and employers org.		941100	/
22	Activities of professional org.		941200	/
23	Activities of trade unions	Syndicates	942000	/
24	Activities of religious organizations		949101	/
25	Activities of political organizations		949200	711.03, 721.01, 721.02
26	Scientific and technical activities	Scientific, architectural and engineering activities, technical testing and analysis	711101 - 722000, 741001 - 750000	311.01, 311.02, 851.01 - 853.07
27	Non-classifiable		951100 - 982000	911.06 - 931.03
28	Other services activities	Mostly activities of associations and foundations defending particular interests: cultural, health, youth and other organizations	949901- 949904	/

*Notes:* Columns *B* and *A* refer to the categories and the correspondent numbers employed in this paper to classify Councilors' mandates, the legal entities in which the access rights recipients work and Councilors' occupations. In columns *D* and *D* report the equivalent NOGA 2008 and SSCO 2000 codes. Finally, in the column *C* we report additional details on the categories, if any.

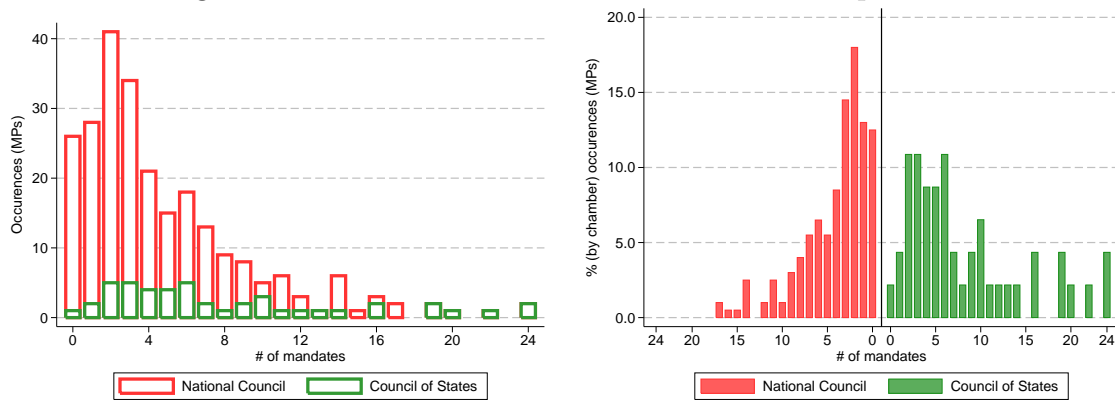
Table 4: Variables in the dataset

Variable name	variable label	Description
name	NAME	MPs' first and last names
mp_code	ID NUMBER	Identifications number, 1 to 246
gender	GENDER	Sex of the MP
birth	BIRTHDATE	Date of birth
origin	ORIGIN	Place of origin
canton	CANTON	Canton of election
party	PARTY	Political party
group	GROUP	Parliamentary group
council	PARLIAMENT CHAMBER	National Council or Council of States
A.1 to A.28	<i>titles of the categories</i>	Categories 1 - 28 of the source "MONETAS" (28 variables in total)
B.1 to B.28	<i>titles of the categories</i>	Categories 1 - 28 of the source "ACCREDITATIONS" (28 variables in total)
C.1 to C.28	<i>titles of the categories</i>	Categories 1 - 28 of the source "OCCUPATIONS" (28 variables in total)

Notes: The labels of the variables A., B. and C. are the titles of the categories as given in table 3.

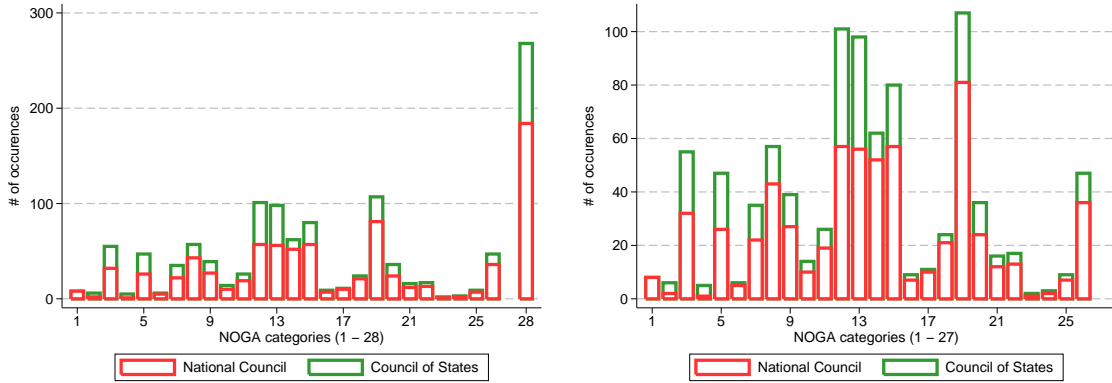
## B Figures

Figure 1: Distribution of the number of mandates per MP



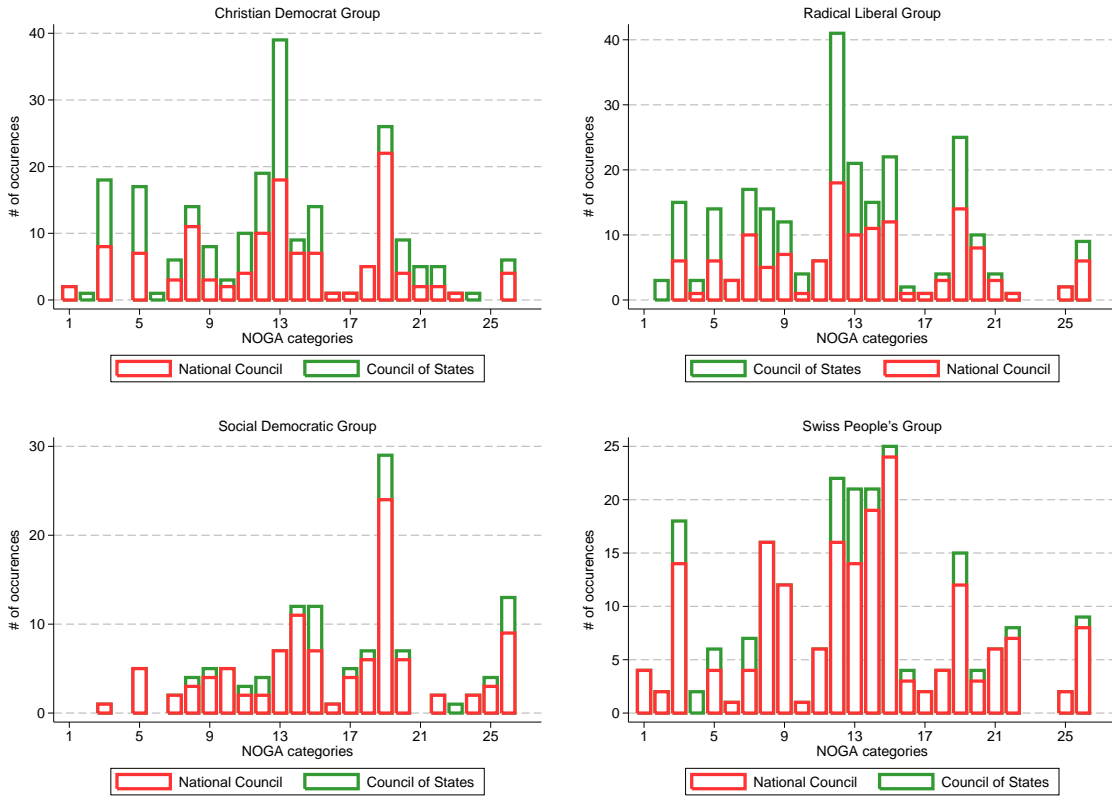
Notes: The left-hand side graph shows the occurrences in absolute terms. Each bar represents the whole Parliament, meaning the National Council and Council of States together. The comparison of the two Councils needs to take into account their different sizes (46 MPS for the Council of States and 200 for the National Council). Hence, the right-hand side graph uses relative terms (percentages).

Figure 2: Chambers mandates occurrences by categories



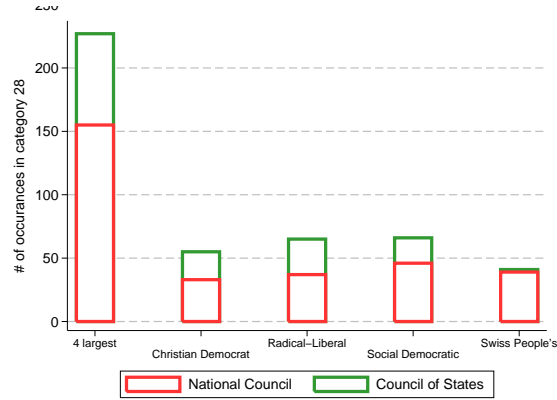
*Notes:* The figures refer to the occurrences per category for the National Council and the Council of States. Due to the fact that category 28 contains too much information that unfortunately cannot be classified more in details, we drop this category from graph 2 (right). The entire bars refer to the occurrences at the Swiss Parliament level.

Figure 3: Groups mandates occurrences (categories: 1 – 27)



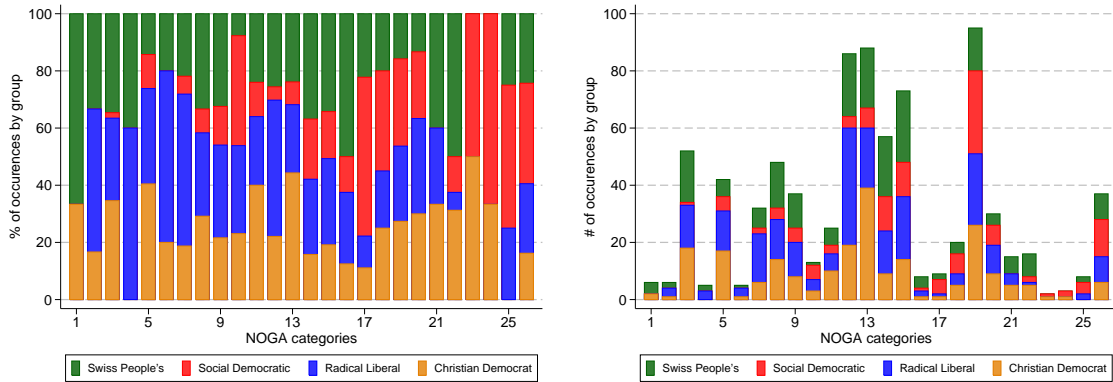
*Notes:* The figures refer to the occurrences per category for the National Council and the Council of States for the four main political groups. The entire bars refer to the occurrences per group at the Swiss Parliament level. Category 28 has not been included in the graphs.

Figure 4: Groups mandates occurrences (category: 28)



*Notes:* The first bar refers to the occurrence of the category 28 for the four main political groups in the Swiss Parliament distinguishing by the National Council and Council of States. The last four columns refer to the occurrences of mandates for each group, distinguishing by the chamber.

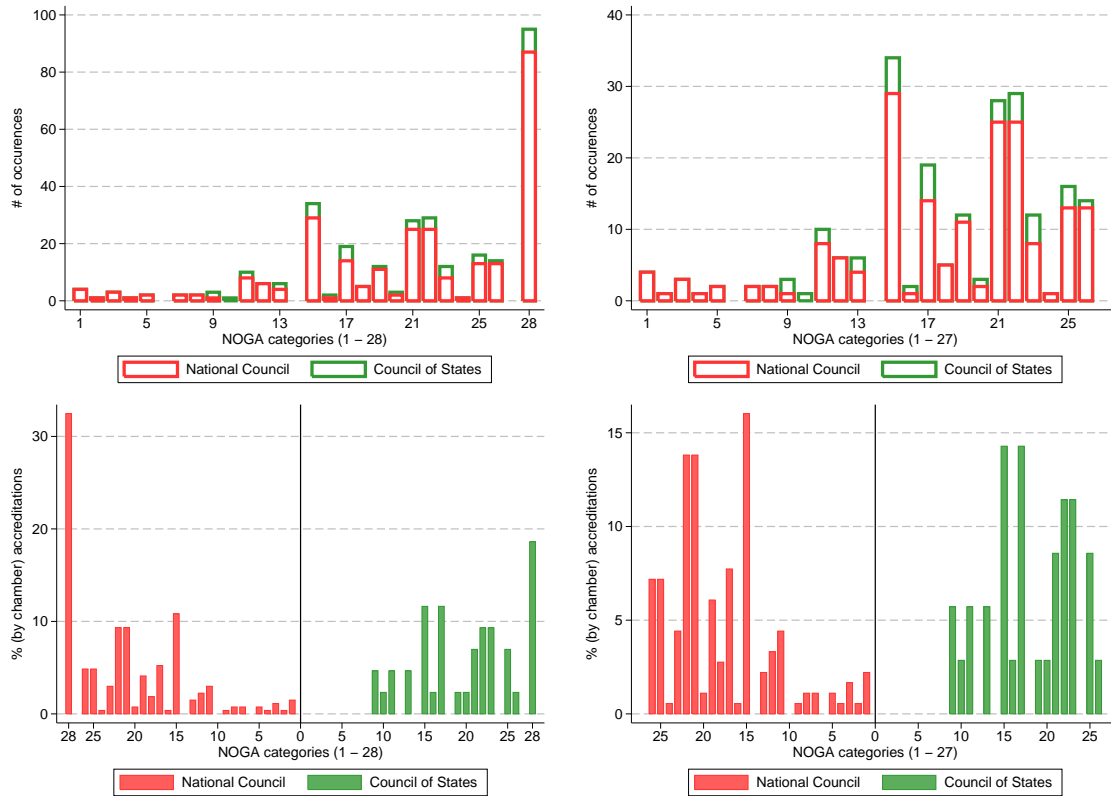
Figure 5: Groups mandates occurrences by categories, in % and in absolute terms.



*Notes:* Figure 5 (left) reports the proportions of each group by category. Figure 5 (right) displays the same information but in absolute terms. Only the mandates of the four largest groups are taken into account. Category 28 has been removed from the analysis.

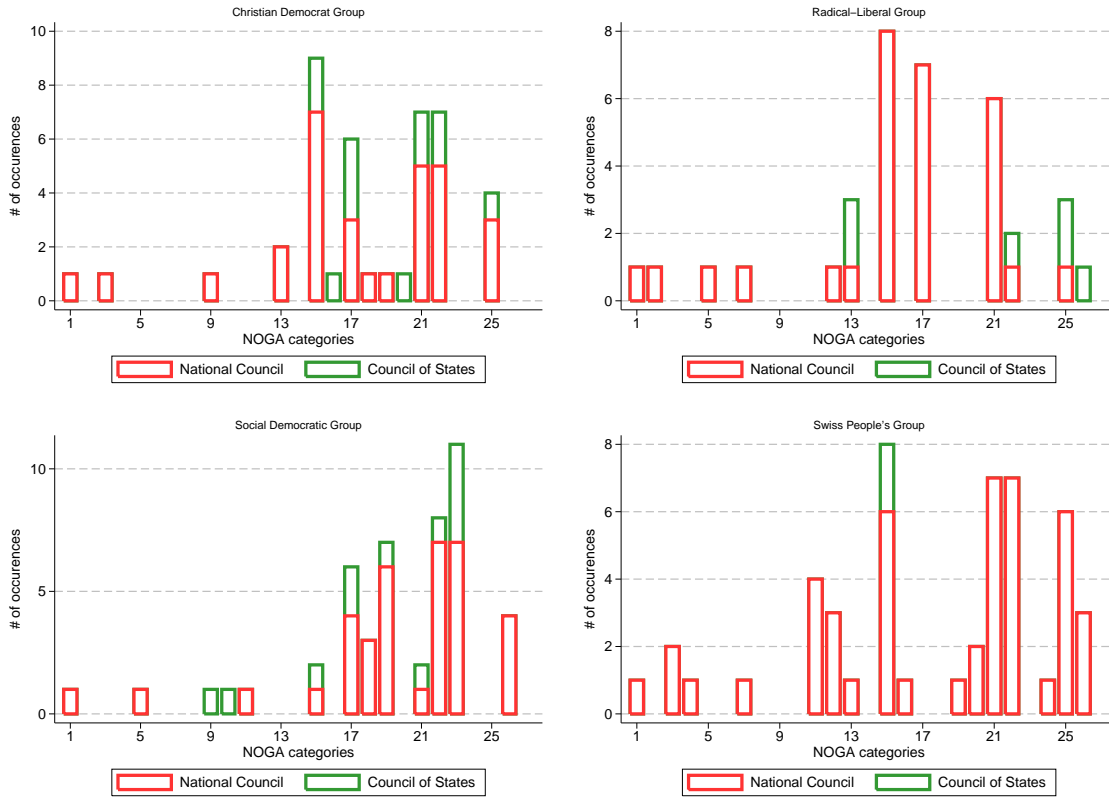


Figure 6: Chambers access rights occurrences by categories



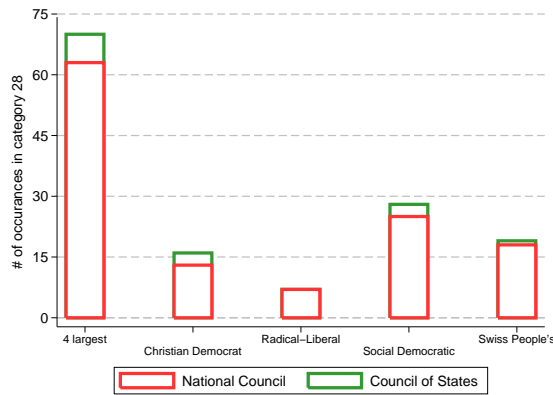
*Notes:* The graphs on the top part refer to the access rights occurrences per category for the National Council and the Council of States. Category 28 is not included in Figure 6 (top-right). The entire bars refer to the occurrences at the Swiss Parliament level. The graphs on the lower part report the same information documented in the upper part, in relative terms. The reason is that the different number of elected in the National Council (200) and in the Council of States (46) may generate some confusion when comparing the figures referring to the two chambers. Category 28 is not included in Figure 6 (bottom-right).

Figure 7: Groups access rights occurrences (categories: 1 – 27)



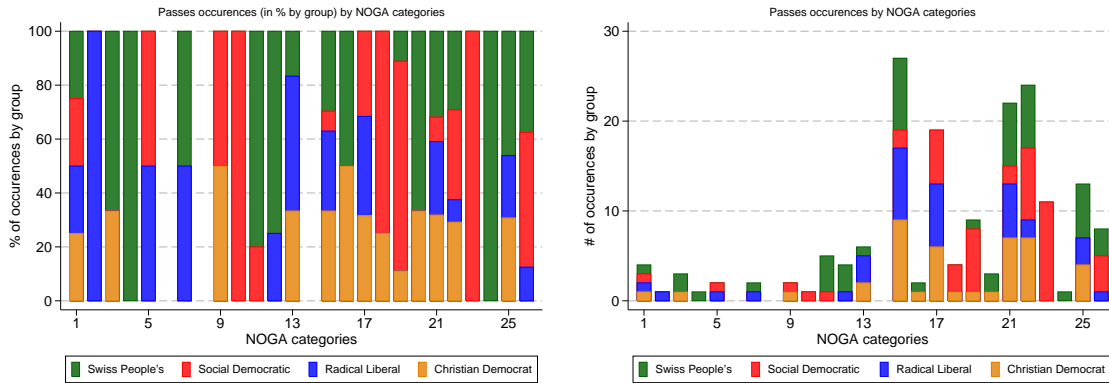
*Notes:* The figures refer to the access rights occurrences per category for the National Council and the Council of States for the four main political groups. The entire bars refer to the occurrences per group at the Swiss Parliament level. Category 28 has not been included in the graphs.

Figure 8: Groups access rights occurrences (category: 28)



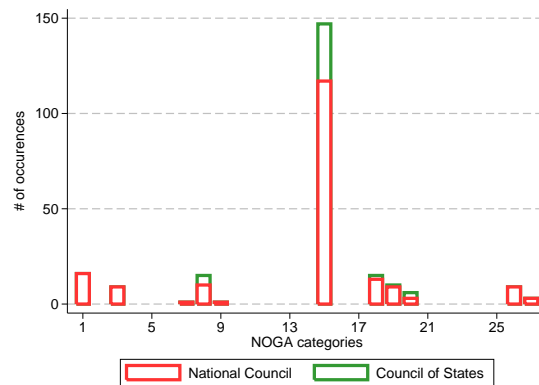
*Notes:* The first bar refers to the access rights occurrence of the category 28 for the four main political groups in the Swiss Parliament distinguishing by the National Council and Council of States. The last four columns refer to the access rights occurrences for each group, distinguishing by the chamber.

Figure 9: Groups access rights occurrences by categories, in % and in absolute terms.



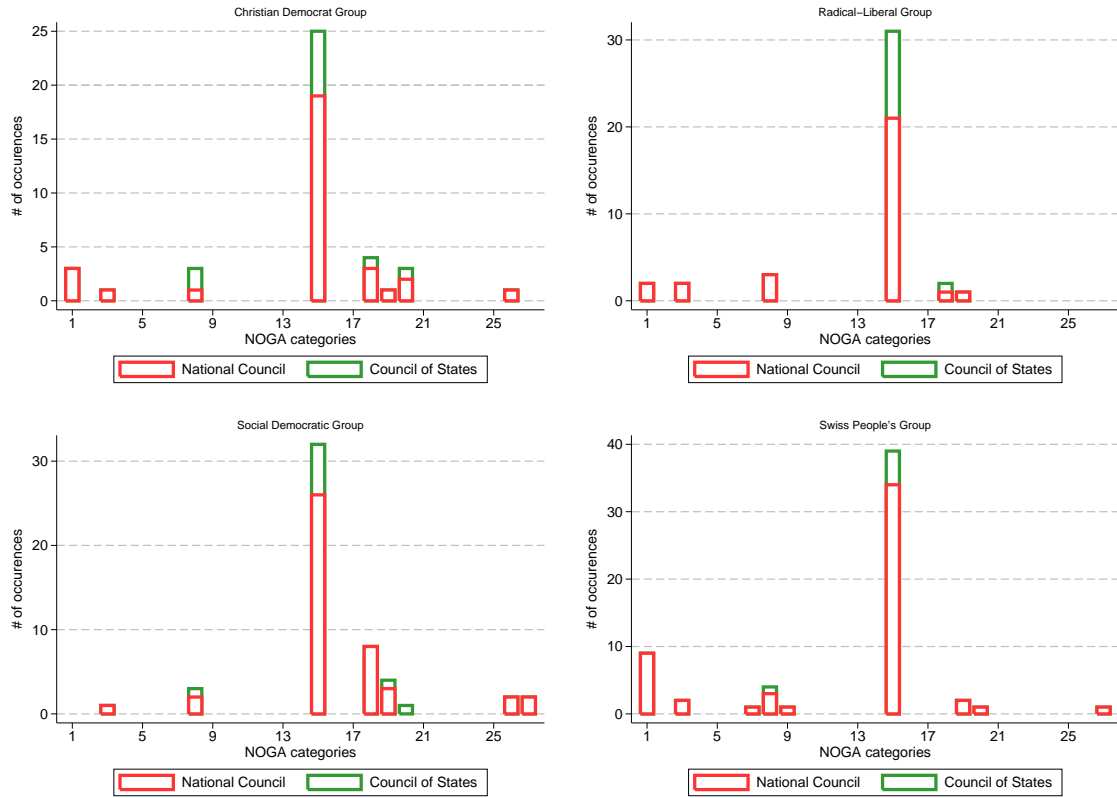
Notes: Figure 9 (left) reports the proportions of each group by category. Figure 9 (right) displays the same information but in absolute terms. Only the access rights of representatives of the four largest groups are taken into account. Category 28 has been removed from the analysis.

Figure 10: Chambers occupations occurrences by categories



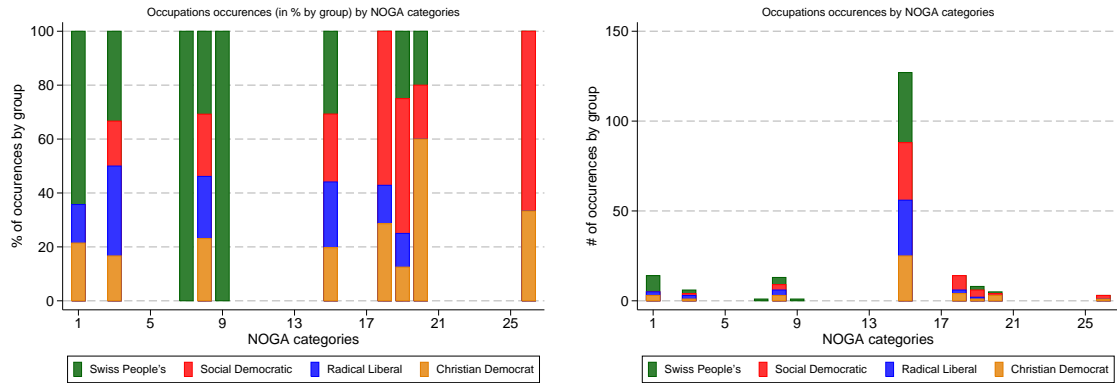
Notes: The figure refers to the occupations occurrences per category for the National Council and the Council of States. The categories 2, 5, 6, 21, 22, 23, 24 and 28 could not have any entries because there is not any specific job in these sectors. The entire bars refer to the occurrences at the Swiss Parliament level.

Figure 11: Groups occupations occurrences by categories



*Notes:* The figures refer to the occurrences per category for the National Council and the Council of States for the four main political groups. The categories 2, 5, 6, 21, 22, 23, 24 and 28 could not have any entries because there is not any specific job in these sectors. The entire bars refer to the occurrences per group at the Swiss Parliament level.

Figure 12: Groups occupations occurrences by categories, in % and in absolute terms.



Notes: Figure 12 (left) reports the proportions of each group by category. Figure 12 (right) displays the same information but in absolute terms. Only the occupations of representatives of the four largest groups are taken into account. The categories 2, 5, 6, 21, 22, 23, 24 and 28 could not have any entries because there is not any specific job in these sectors.