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Working Paper

Political Budget Cycles: Evidence from Swiss Cantons

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Abstract

Models of political budget cycles assume that politicians use fiscal policy to increase their chances of re-election. However, empirical results for advanced economies provide ambiguous support for the existence of such electoral cycles. Also, studies focusing on the regional or local level of advanced economies have found a variety of different results. In this paper, we use data at the sub-federal level of Switzerland from 1978 through 2015 to test for the presence of political budget cycles. Swiss regions called cantons are highly autonomous with regard to budgetary policy and have established direct democratic systems with frequent referendums that often affect budgetary issues. In most cantons, there are fiscal policy rules that restrict the budgetary leeway of governments. Overall, the system of government is designed to foster consensus seeking and gradual adjustment. These features should make the short-run opportunistic or partisan use of fiscal policy less likely in Swiss cantons. Rather surprisingly, however, we find at least some evidence for an electoral cycle in government spending. For government revenue or the overall budget, our empirical results do not point to an electoral cycle.

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KEYWORDS Political budget cycle, fiscal policy, direct democracy:

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1 Introduction

Standard political economy models usually find that politicians try to use expansionary fiscal or monetary policy before elections to increase their popularity and to enhance their re-election prospects. However, past empirical research has found ambiguous support for such political budget cycles (PBCs). They are hard to find in advanced economies and well-established democracies, especially if voters have good access to political information. In contrast, they are most likely to be observed in developing countries, young democracies, or intransparent governmental systems. Because of cross-country heterogeneity in electoral and political procedures, a growing body of literature analyses political budget cycles at the subnational level. The results based on these analyses also remain ambiguous, although several studies have found evidence for electoral cycles. Our paper adds to this literature by investigating a panel of Swiss regions, called cantons, from 1978 to 2015.

Several institutional features may affect the occurrence and the size of political budget cycles in Switzerland. There is a long history in Switzerland of federalism and direct democracy (for an overview, see, e.g., Kraan and Ruffner (2005), Vatter (2014), Kirchgässner (2013), Blöchliger and Kantorowicz (2015)). The decentralized structure implies that cantons have a lot of autonomy in the process of budget planning and budget implementation, while sharing many other institutional features. The direct democratic institutions affecting fiscal policy are the budget referendum and the voter initiative. Several cantons have a mandatory budget referendum in place, which requires citizens to vote on all projects that exceed a certain monetary threshold. In other cantons, there are optional budget referendums. In addition, the voter initiative allows citizens to propose entirely new constitutional provisions that may affect government spending and revenue. Both instruments of direct democracy can be expected to dampen electoral budget cycles, because they tend to delay processes, restrict the leeway of governments, and reduce political confrontations at the executive and legislative levels of government.

In addition, there is a Swiss tradition of consensus seeking (or at least of seeking a broad majority) between different linguistic and social groups. Embedded in the systems of direct democracy and federalism, consensus seeking supports a system of gradual adjustment because lack of consensus may easily trigger vetoes by crucial stakeholders. There are neither single party nor coalition governments in the usual sense. Members of the governments in Swiss cantons are directly elected by the electorate and may represent various parties from the Left, Center, and Right. This feature also tends to dampen

confrontative political competition and makes the budget process more gradual. Finally, there are fiscal policy rules in many cantons (see, e.g., Stalder and Röhrs (2005), Kirchgässner (2013), or Luechinger and Schaltegger (2013)). In theory, such restrictions should limit the scope for political budget cycles (see, e.g., Rose (2006)).

The rest of this paper is organized as follows. Section 2 discusses the existing literature on political budget cycles. Section 3 presents the data and the empirical methodology is discussed in Section 4. In Section 5, empirical analyses test the existence of political cycles in government spending, revenue, and the overall budget using cantonal data from Switzerland from 1978 through 2015. Finally, section 6 contains the conclusions.

2 Literature Review

Early theoretical models of political budget cycles can be traced back to Nordhaus (1975) and focus on opportunistic politicians and adaptive expectations by voters (for an overview, see, e.g., Alesina, Roubini and Cohen (1997), Drazen (2000), or Dubois (2016)). In these models, an incumbent tries to use fiscal or monetary policy to affect economic output and unemployment, which leads to political budget or business cycles. In another strand of the literature, it has been argued that electoral cycles emerge because parties of the Right and Left differ in their fiscal policy priorities (see Hibbs (1977) and Franzese (2000)).[1] In the 1980s, rational expectation models of opportunistic and partisan cycles were developed that took the Lucas critique into account. Asymmetric information plays an important role in most of these models. Incumbents have an incentive to manipulate the economy in attempting to signal their competence before an election (see, e.g., Rogoff and Sibert (1988), Persson and Tabellini (2003), or Shi and Svensson (2006)). In addition, they are prone to changing the composition of spending from less visible to more visible items.

Empirical research for advanced economies provides ambiguous support for PBCs. While early research on such cycles often analyzed political business cycles, that is, political cycles in macroeconomic aggregates, the discipline later shifted its emphasis to the study of political budget cycles. Except for the case of developing countries, hardly any proof of political business cycles has been discovered. It is likely that policy-makers have limited

[1] While the main focus of our model lies on detecting political budget cycles (a term that is mainly used to describe cycles due to opportunistic behavior), we also occasionally use the broader term "electoral cycle" that encompasses both opportunistic and partisan behavior as causes for political budget cycles.

ability to affect macroeconomic variables in the very short term. Fluctuations in budget variables - driven by either opportunistic or ideological incentives - have been found to be more likely to occur than political business cycles. There is, indeed, some evidence for political budget cycles. Shi and Svensson (2006) show that budgetary cycles can be observed in a panel of 91 developed and developing countries from 1975 to 1995. Also, Tujula and Wolswijk (2007) find support for political cycles using a sample of OECD countries for the period 1975–2002. However, Persson and Tabellini (2003) only detect a political revenue cycle (government revenues as a percentage of GDP decrease before elections), but no political cycle in either expenditures, transfers, or the overall budget balance for a group of 60 democracies from 1960 to 1998. Similarly, Katsimi and Sarantides (2012) only find an electoral cycle in revenues, but not for government deficits and expenditures for a sample of 19 old democracies.

For member countries of the European Union (EU), political budget cycles have been found for the 1990s and early 2000s (see, for example, Buti and van den Noord (2003)). Similarly, Mink and de Haan (2006) and Efthyvoulou (2012) provide evidence that incumbent governments tend to use fiscal policy in order to maximize their chances of being re-elected. However, other studies do not find political cycles in samples of European economies (see, e.g., De Haan and Sturm (1994) or Andrikopoulos, Loizides and Prodromidis (2004)).

Against the backdrop of the heterogenous findings for cross-country studies investigating PBCs, several authors argue that the existence and the size of such electoral cycles depends on country or context specific characteristics (see, e.g., Kouvavas (2013) and Klomp and De Haan (2013)). In several studies, differences between established and new democracies are found implying that electoral cycles mainly emerge in new democracies (see Brender and Drazen (2005), Streb, Lema and Torrens (2009), and Canes-Wrone and de Leon (2015)). While evidence for PBCs in established democracies is, therefore, rather weak, several studies report an electoral cycle in the composition of government spending (Katsimi and Sarantides (2012), Brender and Drazen (2013)). Governments seem to have increased expenditures on certain visible spending components for opportunistic or ideological reasons, while offsetting through reductions in less visible components of the budget. For instance, Thies and Porche (2007) report a positive and significant effect of upcoming elections on government support for the agricultural sector. Potrafke (2012) finds an increase in the growth of public health expenditure in election years.

In the literature, several additional factors driving electoral cycles are mentioned. These mainly include electoral rules (Persson and Tabellini (2003)), the system of government (Persson and Tabellini (2004)), transparency of fiscal policy (Alt and Lassen (2006*a*) Alt and Lassen (2006*b*)), or fiscal policy rules (Alt, Lassen and Rose (2006), Mink and de Haan (2006), or Rose (2010)). Because of these factors resulting in cross-country heterogeneity, there is a growing literature considering electoral cycles at either the regional or the local level where one can expect more homogeneity in both government structure and electoral rules. However, focusing on the sub-national level also implies that several important aspects are not considered in these studies; these aspects include the level of development, the quality of institutions, and the age of democracy. An early study by Blais and Nadeau (1992) that uses sub-national or local data documents that, in Canada, provincial governments' spending on social services and infrastructure construction increases during election years. Similarly, Galli and Rossi (2002) show election year increases in total expenditures and various spending categories in Germany's federal states. Likewise, Boix, Stokes, Alt and Rose (2009) find electoral cycles for U.S. states. In addition, various studies based on sub-national or local data do not analyze political cycles in aggregate spending or revenue, but they identify election-motivated increases in visible and easily targeted spending categories, such as construction of roads and physical structures and employment increases (see, e.g., Gonzales 2002, Kneebone and McKenzie (2001), Binet and Pentecote (2004), Drazen and Eslava (2010), Aidt and Giovannoni (2011), Dahlberg and Mörk (2011), Sakurai and Menezes-Filho (2011), or Klein and Sakurai (2015)). Aside from expenditure variables, taxes may also be subject to electoral cycles. Studies by Veiga and Veiga (2007), and Foremny and Riedel (2014), among others, have found that local governments reduce taxes before elections.

3 Data and Estimation Strategy

The following structural model is used to empirically investigate the effect of parliamentary and government elections on cantonal budgets, expenditures, and revenues:

$$b_{it} = \beta_0 + \beta_1 elec_{it} + \beta_2 jobseek_{it} + \beta_3 incgr_{it} + \beta_4 herf_{it} + \beta_5 b_{it-1} + a_i + u_t + e_{it} \quad (1)$$

The dependent variable b_{it} is either the change of the budget surplus (or deficit) per income $budinc_{it}$ in canton i at time t, spending per income $spinc_{it}$, revenue per income $revinc_{it}$, the growth rate of real government spending $spgr_{it}$, or the growth rate of real government revenue $revgr_{it}$. b_{it-1} is the lagged dependent variable. Using a lagged dependent variable in an OLS regression may lead to biased estimates of order $1/T$ (see

Nickell (1981) or Cameron and Trivedi (2005)). Since the sample ranges from 1978 to 2015 in most of our regressions (with data gaps in 2006 and 2007), the potential bias in our estimates is likely to be rather small. Also, in the cases where we consider a shorter time period, we still have at least 30 years in our regressions.

The key independent variable we are interested in, the dummy $elec_{it}$, indicates election years. $jobseek_{it}$ is the job seekers-to-population ratio. The growth rates of real income per capita $incgr_{it}$ enter the equation as the third explanatory variable. In addition, we add the Herfindahl index at either the executive or the legislative level of government ($herfgov_{it}$ or $herfparl_{it}$). In all regressions, cantonal and time fixed effects are included. Eventually, the last term on the right-hand side of the two equations, is the idiosyncratic error term e_{it}.

We use annual data for a panel from 1978 to 2015 of 25 Swiss cantons.[2] In our regressions, a total of ten variables are used in various specifications. As discussed above, there are five different dependent variables: the budget surplus-to-income ratio $budinc_{it}$ (which becomes negative in the case of a budget deficit) that expresses the budget as a share of cantonal income, the spending-to-income ratio $spinc_{it}$, the revenue-to-income ratio $revinc_{it}$, the growth rate of real government expenditure $spdgr_{it}$, and the growth rate of real government revenue $revgr_{it}$. The subscripts i and t designate the canton and the year. Our main explanatory variable of interest is $elec_{it}$, a dummy variable that indicates if an election takes place in a given year.

Table 1 (Appendix) depicts the mean and standard deviation of the dependent variables. The average budget deficit is slightly higher in election years than in non-election years. In addition, the two spending variables indicate that spending tends to be higher or increase faster in election years. These descriptive statistics indicate that regression analyses might yield an electoral cycle in these variables. Interestingly, the average revenue-to-income ratio and revenue growth are slightly higher in election years, which does not point to an electoral cycle in revenue.

In addition, we use several control variables as discussed above: the growth rate of real

[2]We drop the very small canton Appenzell Inner-Rhodes because it has a special political system. In particular, the term of office in the executive is only confined to a year and there are officially no party fractions in the cantonal parliament. The canton of Jura did not exist before 1979, but was part of the canton of Berne.

income per capita ($incgr_{it}$), the number of persons seeking jobs as a share of the total cantonal population ($jobseek_{it}$), and the Herfindahl index for the government ($herfgov_{it}$) and the parliament ($herfparl_{it}$). Annual fiscal data on cantonal government spending and cantonal government revenue stem from the Federal Finance Administration (2017). The actual budget surplus or deficit is then calculated as the difference between revenue and spending. Hence, negative values indicate government budget deficits. Revenue, spending, and the budget surplus are then divided by nominal cantonal income to derive ratios in terms of income. Real growth rates in spending and revenue are derived by deflating the nominal values using the Swiss Consumer Price Index because no consumer price index at the cantonal level is published (Federal Statistical Office (2017*d*)).

Data related to election years and party seats in the executive and the legislative are publicly available from the Federal Statistical Office (Federal Statistical Office (2017*b*), Federal Statistical Office (2017*c*), and Federal Statistical Office (2017*a*)). We compute the Herfindahl index to try to gauge political competition or disperson both for the executive and for the parliament. Usually, the Herfindahl index is computed as $\sum_{i=1}^{N} a_{it}^2$, where a_{it} is the share of the votes of party i at date t. We use the expression $H_{it} = 1 - \sum_{i=1}^{N} a_{it}^2$ to simplify the interpretation. Thus, an increase in H_{it} implies more competition or, in other words, disperson. The Herfindahl index values were calculated with respect to the allocation of seats for election years and were held constant in the years leading to the subsequent election.

Official data for the gross domestic product at the cantonal level are not available for the years preceding 2008 (Federal Statistical Office (2016)). As a substitute for GDP levels in previous years, data on total cantonal income ("Volkseinkommen") between 1978 and 2005 were obtained from the Federal Statistical Office (these data are not publicly available, but they were provided to the authors upon requrest.). For the years 2006 and 2007, data gaps exist because neither data on income nor data on GDP are available. For reasons of simplicity, the whole time series ranging from 1978 to 2015 (with data gaps in 2006 and 2007) will be referred to as income in the following. One can derive the growth rate of real income after deflating nominal income by the Swiss Consumer Price Index.

In addition, we use the ratio of job seeking people to a canton's entire population as a control variable (Historical Statistics of Switzerland (2017) and State Secretariat for Economic Affairs (2017)). The choice in favor of the entire permanent resident population as the denominator was made due to the circumstance that yearly cantonal data on the

working population does only exist from 2010 on. When using the number of job seeking persons, one should consider that before the early 1990s, the persons who were usually affected the most from layoffs were immigrant workers without permanent residency in Switzerland. Once they were dismissed, they usually returned to their country of origin and dropped out of the labor market. As a consequence, before the early 1990s, fluctuations in economic activity were not considerably reflected in changes in the amount of job seeking people.

4 Empirical Results

The results of our empirical estimations are depicted in Tables 2-6. We show one table for each of the five dependent variables. In the first two columns of a table, we show results for the whole sample period and for a shorter period ranging from 1978 to 2007 to check whether the financial crisis affects the results. Columns 3 and 4 present results for regressions where we drop $incgr_{it}$ and the ratio of job seekers to population $jobseek_{it}$. In columns 5 and 6, the Herfindahl index either for the government ($herfgov_{it}$) or the parliament ($herfparl_{it}$) is added to the list of control variables.

For the regressions with the budget-to-income ratio as the dependent variable, the results of our dynamic panel models yield negative coefficients for the dummy variable $elec_{it}$ (Table 2). Thus, the results indicate that election years are associated with either lower budget surpluses or higher deficits. However, the values are small with the highest values indicating that the budget-to-income ratio deteriorates by roughly 0.1% percentage points. In addition, the standard deviations are large. As a result, the coefficients are not statistically different from zero. The job seekers-to-population ratio enters with a negative coefficient, thereby capturing the negative effects of adverse economic developments on the cantonal budgets. The coefficient for income growth has a positive, but very small, sign in almost all specifications. Interestingly, political dispersion in the executive - captured by the Herfindahl index - has a negative effect on the budget-to-income ratio. Political dispersion deteriorates the budget-to-income ratio by more than 1 percentage point. Also, political dispersion in the legislative tends to exhibit negative effects on public budgets. However, this effect is smaller and not significantly different from zero in our results.

As to the regressions with the government spending-to-income ratio as the dependent variable, the coefficients for election years are positive in all cases (Table 3). In most

cases, the coefficients are statistically different from zero in our dynamic panel models. The highest estimate indicates that elections increase the spending-to-income ratio by 0.192 percentage points. The lowest estimate (which is not significantly different from zero) implies an increae of 0.115. According to our estimates, income growth affects the spending-to-income ratio in a negative way. Thus, favorable economic developments do not seem to result in an increase in the spending-to-income ratio. A higher job seeker-to-population ratio is associated with a higher spending-to-income ratio in the dynamic panel models. Interestingly, the results indicate that political dispersion at the government level results in higher spending growth while political dispersion at the parliament level leads to lower spending growth. However, these coefficients are not precisely estimated and remain insignificant.

We then replace the spending-to-income ratio with spending growth (Table 4). The dynamic versions of our regressions indicate that elections are strongly and mostly significantly associated with spending increases. The highest estimate in these specifications implies that elections raise spending growth rates by 1.095 percentage points. The lowest estimate (that is insignificant) indicates a value of 0.477. An increase in the job seeker-to-population ratio seems to dampen spending growth according to our estimates. Thus, cantonal spending shows a procyclical behavior with respect to developments on the labor market. For income growth, however, our results point to a mild countercyclical behavior of cantonal spending. Based on our results, political dispersion at elections does not seem to affect the spending-to-income ratio in a statistically significant way.

Our estimates do not indicate an electoral revenue cycle, both for the revenue-to-income ratio and for revenue growth as the dependent variable (Tables 5 and 6). No estimate is significantly different from zero. Our estimates even point to a revenue increase in election years, while a decrease is expected. A higher number of job seekers leads to lower revenue growth as expected. For the revenue-to-income ratio, however, the estimated coefficients show a positive sign, although most of them are not statistically different from zero. In most dynamic panel specifications for the two revenue variables, a higher number of job seekers is associated with lower revenue growth. Political dispersion does not seem to affect cantonal revenues in a statistically significant way.

5 Conclusion

While models of political budget cycles assume that policy-makers manipulate fiscal policy to increase their chances of re-election, empirical results for developed economies provide ambiguous support for the existence of such behavior. In this paper, we use data at the sub-federal level of Switzerland from 1978 through 2015 to test for the presence of electoral budget cycles. Swiss regions called cantons are highly autonomous with regard to budgetary policy. Another important element is the established direct democratic system with a large number of popular votes that may often affect budgetary issues. Overall, the system of government is designed for consensus seeking. In addition, there are fiscal policy rules in most cantons that restrict the budgetary leeway of governments. We expect these features to reduce the short-run opportunistic or ideological use of fiscal policy. We can only confirm this hypothesis for the overall budget and government revenue. Interestingly, there is at least some evidence for an electoral cycle in government spending. According to our findings, the special institutional features of Swiss democracy seem to limit, but not entirely eliminate electoral cycles in fiscal variables.

References

Aidt, T. S. and Giovannoni, F. (2011), 'Critical Decisions and Constitutional Rules', **37**, 219–268.

Alesina, A., Roubini, N. and Cohen, G. D. (1997), *Political Cycles and the Macroeconomy*, MIT Press.

Alt, J. E. and Lassen, D. D. (2006*a*), 'Fiscal Transparency, Political Parties, and Debt in OECD Countries', *European Economic Review* **50**(6), 1403–1439.

Alt, J. E. and Lassen, D. D. (2006*b*), 'Transparency, Political Polarization, and Political Budget Cycles in OECD Countries', *American Journal of Political Science* **50**(3), 530–550.

Alt, J. E., Lassen, D. D. and Rose, S. (2006), 'The Causes of Fiscal Transparency: Evidence from the US States', *IMF Staff papers* **53**(1), 30–57.

Andrikopoulos, A., Loizides, I. and Prodromidis, K. (2004), 'Fiscal Policy and Political Business Cycles in the EU', *European Journal of Political Economy* **20**(1), 125–152.

Binet, M.-E. and Pentecote, J.-S. (2004), 'Tax Degression and the Political Budget Cycle in French Municipalities', *Applied Economics Letters* **11**(14), 905–908.

Blais, A. and Nadeau, R. (1992), 'The Electoral Budget Cycle', *Public Choice* **74**(4), 389–403.

Blöchliger, H. and Kantorowicz, J. (2015), 'Fiscal Constitutions: An Empirical Assessment', *OECD Economics Department Working Papers, No. 1248* .

Boix, C., Stokes, S. C., Alt, J. E. and Rose, S. S. (2009), Context Conditional Political Budget Cycles, *in* C. Boix and S. C. Stokes, eds, 'The Oxford Handbook of Comparative Politics', Oxford University Press.

Brender, A. and Drazen, A. (2005), 'Political Budget Cycles in New versus Established Democracies', *Journal of Monetary Economics* **52**(7), 1271–1295.

Brender, A. and Drazen, A. (2013), 'Elections, Leaders, and the Composition of Government Spending', *Journal of Public Economics* **97**, 18–31.

Buti, M. and van den Noord, P. (2003), 'Discretionary Fiscal Policy and Elections: The Experience of the Early Years of EMU', *OECD Economics Department Working Papers, No. 351* .

Cameron, A. and Trivedi, P. (2005), *Microeconometrics*, Cambridge University Press.

Canes-Wrone, B. and de Leon, C. P. (2015), 'Electoral Cycles and Democratic Development', *Unpublished Manuscript, Princeton University* .

Dahlberg, M. and Mörk, E. (2011), 'Is there an Election Cycle in Public Employment? Separating Time Effects from Election Year Effects', *CESifo Economic Studies* **57**(3), 480–498.

De Haan, J. and Sturm, J.-E. (1994), 'Political and Institutional Determinants of Fiscal Policy in the European Community', *Public Choice* **80**(1-2), 157–172.

Drazen, A. (2000), *Political Economy in Macroeconomics*, Princeton University Press.

Drazen, A. and Eslava, M. (2010), 'Electoral Manipulation via Voter-friendly Spending: Theory and Evidence', *Journal of Development Economics* **92**(1), 39–52.

Dubois, E. (2016), 'Political Business Cycles 40 Years after Nordhaus', *Public Choice* **166**(1), 235–259.

Efthyvoulou, G. (2012), 'Political Budget Cycles in the European Union and the Impact of Political Pressures', **153**, 295–327.

Federal Finance Administration (2017), 'Statements of Financial Performance'.
URL: `https://www.efv.admin.ch/efv/en/home/themen/finanzstatistik/berichterstattung.html.4/24/2017`

Federal Statistical Office (2016), 'Bruttoinlandsprodukt (BIP) nach Grossregion und Kanton'.
URL: `https://www.bfs.admin.ch/bfs/en/home/statistics/national-economy/national-accounts/gross-domestic-product-canton`

Federal Statistical Office (2017*a*), 'Kantonale Parlamentswahlen: Mandatsverteilung nach Parteien und Kanton'.
URL: `https://www.bfs.admin.ch/bfs/de/home/statistiken/politik/wahlen`

Federal Statistical Office (2017*b*), 'Kantonale Regierungswahlen'.
URL: `https://www.bfs.admin.ch/bfs/de/home/statistiken/politik/wahlen`

Federal Statistical Office (2017*c*), 'Kantonale Regierungswahlen: Mandatsverteilung nach Parteien'.
URL: `https://www.bfs.admin.ch/bfs/de/home/statistiken/politik/wahlen`

Federal Statistical Office (2017*d*), 'LIK, Totalindex auf allen Indexbasen '.
URL: https://www.bfs.admin.ch/bfs/de/home/statistiken/preise

Foremny, D. and Riedel, N. (2014), 'Business Taxes and the Electoral Cycle', *Journal of Public Economics* **115**(C), 48–61.

Franzese, R. J. (2000), Electoral and Partisan Manipulation of Public Debt in Developed Democracies, 1956-90, *in* 'Institutions, Politics and Fiscal Policy', Springer, pp. 61–83.

Galli, E. and Rossi, S. P. (2002), 'Political Budget Cycles: the Case of the Western German Länder', *Public Choice* **110**(3-4), 283–303.

Hibbs, D. A. (1977), 'Political Parties and Macroeconomic Policy', **71**, 1467–1487.

Historical Statistics of Switzerland (2017), 'Stellensuchende nach Kantonen 1931-1954 und 1975-2009'.
URL: http://www.fsw.uzh.ch/hstat/nls_rev/ls_files.php?chapter_var=./f

Katsimi, M. and Sarantides, V. (2012), 'The Impact of Fiscal Policy on Profits', **50**, 1050–1068.

Kirchgässner, G. (2013), 'Fiscal Institutions at the Cantonal Level in Switzerland', *Swiss Journal of Economics and Statistics* **149**(2), 139–166.

Klein, F. A. and Sakurai, S. (2015), 'Term Limits and Political Budget Cycles at the Local Level: Evidence from a Young Democracy', *European Journal of Political Economy* **37**(C), 21–36.

Klomp, J. and De Haan, J. (2013), 'Political Budget Cycles and Election Outcomes', *Public Choice* **157**(1-2), 245–267.

Kneebone, R. and McKenzie, K. (2001), 'Electoral and Partisan Cycles in Fiscal Policy: An Examination of Canadian Provinces', *International Tax and Public Finance* **8**(5), 753–774.

Kouvavas, O. (2013), 'Political Budget Cycles Revisited: the Case for Social Capital'.

Kraan, D.-J. and Ruffner, M. (2005), 'Budgeting in Switzerland', *OECD Journal on Budgeting* **5**(1), 37?78.

Luechinger, S. and Schaltegger, C. A. (2013), 'Fiscal Rules, Budget Deficits and Budget Projections', *International Tax and Public Finance* **20**(5), 785–807.

Mink, M. and de Haan, J. (2006), 'Are there Political Budget Cycles in the Euro Area?', *European Union Politics* **7**(2), 191–211.

Nickell, S. (1981), 'Biases in Dynamic Models with Fixed Effects', *Econometrica* **49**(6), 1417–26.

Nordhaus, W. D. (1975), 'The Political Business Cycle', *The Review of Economic Studies* **42**(2), 169–190.

Persson, T. and Tabellini, G. (2003), Do Electoral Cycles Differ Across Political Systems?, Working Papers 232, IGIER (Innocenzo Gasparini Institute for Economic Research), Bocconi University.

Persson, T. and Tabellini, G. (2004), 'Constitutional Rules and Fiscal Policy Outcomes', *American Economic Review* **94**(1), 25–45.

Potrafke, N. (2012), 'Political Cycles and Economic Performance in OECD Countries: Empirical Evidence from 1951–2006', *Public Choice* **150**(1-2), 155–179.

Rogoff, K. and Sibert, A. (1988), 'Elections and Macroeconomic Policy Cycles', *The Review of Economic Studies* **55**(1), 1–16.

Rose, S. (2006), 'Do Fiscal Rules Dampen the Political Business Cycle?', *Public Choice* **128**(3-4), 407–431.

Rose, S. (2010), 'Institutions and Fiscal Sustainability', *National Tax Journal* **63**(4), 807.

Sakurai, S. N. and Menezes-Filho, N. (2011), 'Opportunistic and Partisan Election Cycles in Brazil: new Evidence at the Municipal Level', *Public Choice* **148**(1-2), 233–247.

Shi, M. and Svensson, J. (2006), 'Political Budget Cycles: Do they Differ across Countries and why?', *Journal of Public Economics* **90**(8-9), 1367–1389.

Stalder, K. and Röhrs, S. (2005), 'Answers to OECD Questionnaire: Fiscal Rules for Cantons and Communes', *Institut für Finanzwissenschaft und Finanzrecht* .

State Secretariat for Economic Affairs (2017), 'Registrierte Stellensuchende'.
URL: `https://www.amstat.ch/v2`

Streb, J. M., Lema, D. and Torrens, G. (2009), 'Checks and Balances on Political Budget Cycles: Cross-Country Evidence', *Kyklos* **62**(3), 426–447.

Thies, C. G. and Porche, S. (2007), 'The Political Economy of Agricultural Protection', *The Journal of Politics* **69**(1), 116–127.

Tujula, M. and Wolswijk, G. (2007), 'Budget Balances in OECD Countries: What Makes them Change?', **34**, 1–14.

Vatter, A. (2014), *Das politische System der Schweiz*, Nomos: Baden-Baden.

Veiga, L. G. and Veiga, F. J. (2007), 'Does Opportunism Pay off?', *Economics Letters* **96**(2), 177–182.

Appendix

Table 1: Summary descriptive statistics

	budinc	spinc	spgr	revinc	revgr
Election years					
Mean	-0.219	16.871	2.681	16.652	2.524
Standard Deviation	1.142	5.570	6.991	5.322	5.433
N	221	221	227	221	227
Non-election years					
Mean	-0.152	16.789	2.166	16.638	2.221
Standard Deviation	1.051	5.497	6.033	5.329	5.657
N	703	703	773	703	773

The variables budinc, spending, and revinc are expressed as a share of cantonal income. spendgr and revgr are percentage growth rates.

Table 2: Electoral Cycles in the Budget-to-Income Ratio

	1978-2015	1978-2008	only jobseek	only incgr	herfgov	herfparl
	(1)	(2)	(3)	(4)	(5)	(6)
elec	-0.080	-0.109	-0.065	-0.080	-0.097	-0.043
	(0.063)	(0.070)	(0.062)	(0.063)	(0.067)	(0.062)
jobseek	-0.061	-0.112	-0.057		-0.075	-0.027
	(0.075)	(0.082)	(0.075)		(0.081)	(0.065)
incgr	0.009	0.010		0.009	0.009	-0.001
	(0.010)	(0.011)		(0.010)	(0.010)	(0.009)
$herfgov(t-1)$					-1.169**	
					(0.564)	
$herfparl(t-1)$						-0.585
						(0.803)
$budinc(t-1)$	0.444***	0.426***	0.439***	0.448***	0.436***	0.499***
	(0.055)	(0.062)	(0.053)	(0.054)	(0.058)	(0.049)
N	874	724	899	874	808	796
R^2	0.424	0.451	0.425	0.423	0.440	0.496

budinc is the dependent variable. Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Electoral Cycles in the Spending-to-Income Ratio

	1978-2015	1978-2008	only jobseek	only incgr	herfgov	herfparl
	(1)	(2)	(3)	(4)	(5)	(6)
$elec$	0.160**	0.183**	0.188*	0.159**	0.192**	0.115
	(0.076)	(0.078)	(0.099)	(0.076)	(0.080)	(0.077)
$jobseek$	-0.130*	-0.103	-0.122		-0.099	-0.113
	(0.071)	(0.070)	(0.087)		(0.074)	(0.074)
$incgr$	-0.191***	-0.190***		-0.190***	-0.194***	-0.185***
	(0.016)	(0.018)		(0.016)	(0.016)	(0.016)
$herfgov(t-1)$					1.116	
					(0.742)	
$herfparl(t-1)$						-0.111
						(1.181)
$spinc(t-1)$	0.821***	0.785***	0.764***	0.818***	0.858***	0.856***
	(0.034)	(0.040)	(0.031)	(0.035)	(0.024)	(0.026)
N	874	524	899	874	808	796
R^2	0.889	0.883	0.806	0.889	0.885	0.879

spinc is the dependent variable. Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Electoral Cycles in Spending Growth

	1978-2015	1978-2008	only jobseek	only incgr	herfgov	herfparl
	(1)	(2)	(3)	(4)	(5)	(6)
elec	0.873**	0.803*	0.477	0.867**	1.095**	0.690
	(0.433)	(0.438)	(0.445)	(0.434)	(0.450)	(0.436)
jobseek	-1.107***	-1.200***	-1.084**		-0.629	-1.106***
	(0.409)	(0.406)	(0.409)		(0.419)	(0.406)
incgr	-0.069	-0.078		-0.070	-0.060	-0.034
	(0.055)	(0.056)		(0.054)	(0.054)	(0.056)
$herfgov(t-1)$					4.266	
					(4.187)	
$herfparl(t-1)$						-4.376
						(6.573)
$spgr(t-1)$	-0.187***	-0.128**	-0.223***	-0.182***	-0.190***	-0.195***
	(0.056)	(0.055)	(0.059)	(0.057)	(0.059)	(0.061)
N	874	724	925	874	808	796
R^2	0.191	0.229	0.185	0.185	0.196	0.197

spgr is the dependent variable. Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Electoral Cycles in the Revenue-to-Income Ratio

	1978-2015	1978-2008	only jobseek	only incgr	herfgov	herfparl
	(1)	(2)	(3)	(4)	(5)	(6)
elec	0.080	0.074	0.130	0.080	0.103	0.063
	(0.070)	(0.079)	(0.089)	(0.070)	(0.074)	(0.065)
jobseek	-0.071	-0.069	-0.084		-0.057	-0.054
	(0.106)	(0.110)	(0.113)		(0.113)	(0.080)
incgr	-0.174***	-0.171***		-0.174***	-0.176***	-0.182***
	(0.014)	(0.015)		(0.014)	(0.014)	(0.014)
$herfgov(t-1)$					0.548	
					(0.635)	
$herfparl(t-1)$						-0.684
						(1.053)
$revinc(t-1)$	0.804***	0.760***	0.759***	0.803***	0.832***	0.856***
	(0.036)	(0.040)	(0.032)	(0.036)	(0.032)	(0.026)
N	874	724	899	874	808	796
R^2	0.876	0.834	0.807	0.876	0.868	0.883

revinc is the dependent variable. Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Electoral Cycles in Revenue Growth

	1978-2015	1978-2008	only jobseek	only incgr	herfgov	herfparl
	(1)	(2)	(3)	(4)	(5)	(6)
$elec$	0.329	0.246	0.164	0.326	0.432	0.307
	(0.396)	(0.441)	(0.392)	(0.396)	(0.421)	(0.374)
$jobseek$	-0.808	-1.060**	-0.819		-0.497	-0.697*
	(0.518)	(0.537)	(0.518)		(0.560)	(0.399)
$incgr$	-0.028	-0.019		-0.028	-0.011	-0.028
	(0.060)	(0.062)		(0.059)	(0.059)	(0.061)
$herfgov(t-1)$					2.995	
					(3.618)	
$herfparl(t-1)$						-5.583
						(5.555)
$revgr(t-1)$	-0.130*	-0.165**	-0.132**	-0.125*	-0.148**	-0.107**
	(0.074)	(0.083)	(0.070)	(0.074)	(0.075)	(0.051)
N	874	724	925	874	808	796
R^2	0.152	0.157	0.182	0.148	0.155	0.167

$revgr$ is the dependent variable. Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$