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Fiscal conservatism and autonomy
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The Swiss cantons: Fiscal conservatism and autonomy without much coordination

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Abstract

This paper presents the way the Swiss cantons were impacted by the 2008 financial crisis and its aftermaths, and the way they reacted. The Federal Constitution of the Swiss Confederation provides that “the Confederation [central government], the Cantons [sub-central governments] and the Communes [local governments] shall take account of the economic situation in their revenue and expenditure policies (Art.100, al.4)”. Simultaneously, it stipulates that “Cantons are sovereign except to the extent that “their sovereignty is limited by the Federal Constitution” (Art.3). Thus the cantons benefit from far-reaching political, financial and fiscal autonomy. In the past and despite the provision of Art.100, most of them have made use of this autonomy to engage in pro-cyclical fiscal policies. The pro-cyclical behaviour stems from a culture of rather conservative fiscal policy. This culture has indeed been transposed by individual cantons into their own legislation governing their public finance. Most have chosen to legally cap the deficit or even ban that possibility—often referred to as budget constraints—regardless the macroeconomic conditions. This particular institutional setting points towards the difficulty to conduct a consistent macroeconomic policy not only between the different tiers of government, but also between the fiscal and the monetary policies.

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The financial crisis hit Switzerland in a rather indirect way. The negative performance of the banking sector somehow affected the corporate tax paid by the banks. However, the economic crisis that followed was limited to a downturn in 2009 caused by a fall in the aggregate demand originated from the EU and also by a fall in investments. With a low level of unemployment, Switzerland was in a relatively favourable position. Further, during the years prior to the crisis and thanks to the noticeable economic expansion, the cantons (and the central government) massively improved their financial position compared to the situation that had prevailed in the 1990's. The level of debt was strongly reduced.

Despite the rather satisfactory internal macroeconomic circumstances, the alarming European and international situation elicited lively reactions and concerns among journalists, politicians, firms and the population. This added to the prevailing uncertainty regarding future development and prompted the federal (central) government to take discretionary fiscal measures. The effort was, however, rather moderate. Like in other small and opened economies, the internal benefit of the measures (i.e. the stimulus that does not dissipate in imports) was considered to be rather small compared to the fiscal cost of the measures (debt increase). Thus, most small countries, including Switzerland, relied instead on the economic recovery plans of their trading partners.

Given the poor historical records of the cantons regarding vertical (with the Confederation) and horizontal (with other cantons) coordination, one could doubt that the cantons would contribute to the central government's effort. To avoid this situation, the federal government relied on financial stimulus channelled through cantonal budgets. These federal transfers helped the cantons to finance mainly infrastructure maintenance and building works. The additional public expenditure of the three layers of government are estimated to total 0.7% of 2009 and 2010 GDP, among which more than 50% came from subnational and local budgets. In this sense the effort was modest. The vertical coordination somehow worked and prevented cantons from excessive free riding. However, the horizontal coordination was less successful. The cantons failed to deploy such a collaborative solution. Only the French and Italian speaking cantons engaged in a dialogue; the German speaking cantons did not really. Additionally, no true vertical coordination took place within individual cantons between the canton and the municipalities.

The favourable fiscal position situation allowed the cantons to participate in the countercyclical stance without breaking their own budget constraint. Actually some cantons even strengthened the constraint in the meantime. Simultaneously, the tax competition spread between cantons fuelled by the previous cyclical fiscal surpluses. This competition has weakened the fiscal structural balance of the cantons.

A weakened fiscal structural balance, together with more stringent budget constraint, will increase the difficulties of coordinating the fiscal policy during any future recession. Unlike the central government's budget constraint, none of the cantonal budget constraint includes a mechanism that mechanically allows some deficit in case of a negative output gap while requiring a surplus in case of a positive output gap. Given the cantonal autonomy provided by the Swiss Constitution and the lack of coordination, some degree of conditionality of the budget constraint with regards to macroeconomic conditions would be a necessary condition if cantons want to avoid appearing as free riders during the next economic downturn.

1 Introduction

During the crises that preceded the one that began in 2007-8, the Swiss cantons tended to adopt pro-cyclical fiscal policies, favouring balanced budgets over economic stimulus. This work takes a look at the particular behaviour adopted by the cantons in reaction to the 2007-8 crisis. The goal of this work is to offer a critical description of the role played by the cantons in the macroeconomic management of the crisis in Switzerland. A second goal is to provide suggestions to improve coordination of fiscal policies in countries which, like Switzerland, have a highly developed federalist organisation with sub-national governments having very high budgetary autonomy.

In actual fact, from an institutional perspective, Switzerland offers some distinctive features. Its strong federalist organisation gives the sub-federal states (the “cantons”), together with the sub-cantonal level, (the municipalities) a considerable autonomy. All levels of government (federal, cantonal, municipal) possess their own authorities and institutions. This paper focuses on the cantonal tier. Cantons vary significantly, not only in size but also in terms of culture, values, economic structure and political leaning. The subsidiary principle has always been anchored in the federal constitution, thus guaranteeing the cantons a far-reaching political, financial and fiscal autonomy. From a public finance perspective, the cantonal tier is the major player with a share of almost 40% in the total expenditure of the general government sector (based on the sectoring criteria of Eurostat). They finance these expenditures mostly (more than 50%) using their own tax power.

To meet its goals, this work presents a consideration of the results of several existing studies. It also conducts a new analysis specific to the impulses brought to bear on the economy by the budgets of the 26 Swiss cantons over the critical period between 2007 to 2010. To do this, this work compares the evolution of several elements with the evolution of the output gap. The elements at play are: operating expenditures, capital expenditures, operating receipts and, finally, borrowing requirements (financing deficits or surpluses).

Beyond this introduction, this paper is organised into nine sections. Sections 2 and 3 present a description of the Swiss institutional setting. Section 2 presents the role played by the cantons within the institutional structure, their budgetary autonomy in terms of both expenditure policy and tax policy. This section highlights the tension that exists between the desire for tax competition on one hand and the desire for coordination, harmonisation and fiscal equalisation on the other. Section 3 presents current legal provisions in terms of fiscal policy. This section shows that the provisions laid out by the Federal Constitution target a counter-cyclical policy by all fiscal tiers, including the cantons. But it also shows that the hard budget constraints which most cantons individually make use of strongly limit the possibility of running a deficit regardless the economic situation. Section 4 is about the particular behaviour adopted by the Swiss cantons when, in the past, they were confronted with significant fluctuations in the business cycle. History tells us that the cantons have adopted, more often than not, a procyclical fiscal policy during economic downturns. The cantons have thus hardly respected their constitutional obligation. Beginning in Section 5, this work becomes more specifically interested in the recent crisis that began in 2007-8. This section goes over how the crisis developed in Switzerland. It indicates that the impact of the crisis was relatively limited, spurring a decrease of gross domestic product, but overall limited in

its amplitude and duration. This decrease was accompanied by an increase in unemployment, also modest and limited in terms of duration. This section also shows that the crisis impacted the cantons symmetrically, as the evolution of their respective GDP presented a similar profile. Section 6 shows how climate and attitudes have evolved in Switzerland, in particular with respect to events that occurred abroad. Media outlets evoked the measures adopted by foreign governments and then question Swiss politicians on the measures they plan to take to support the economy and Swiss jobs. In this way, policymakers found themselves “under pressure to do something”. Following upon this, Section 7 is dedicated to the measures taken by the different levels of Swiss government, and in particular the cantonal governments. It presents the figures given by the cantons regarding new spending and the loss of tax revenues to which they agreed in order to combat the economic downturn. Beyond the figures given by the cantons, Section 8 analyses how spending and tax revenues evolved during the critical period of 2007-2010. This section shows that, this time, the cantons engaged mostly in a countercyclical policy, increasing their operating expenditures and reducing their tax receipts. However, in terms of capital expenditure, the policy was neutral or even procyclical. Section 9 shows the impact on financial performance. Financial performance deteriorates during the crisis and under the effect of the measures taken. Nevertheless, it was particularly good before this period. Which is why it remained satisfactory. Regardless, the reduction of financial performance induced by intercantonal fiscal competition rendered fragile the financial equilibrium of the cantons. Their ability to confront a new crisis and to lead a consistent fiscal policy while respecting their hard budget constraints has become more limited. In 2012, the cantons even recorded a slight deficit overall. Section 10 concludes this work and offers several recommendations founded upon the Swiss experience.

2 A federation of 26 sovereign cantons

Switzerland is a federation of 26 cantons. Cantons are thus the first subnational level of government. Since 1848 and the creation of the federal state, the cantons have always been opposed to any increased centralisation of public tasks and have always put forward the principle of subsidiarity. This principle was enshrined in the Federal Constitution of the Swiss Confederation upon its latest revision in 1999. Article 5a reads: “The principle of subsidiarity must be observed in the allocation and performance of state tasks.” Furthermore, the Federal Constitution guarantees cantonal sovereignty. Article 3 provides that “The Cantons are sovereign except to the extent that their sovereignty is limited by the Federal Constitution. They exercise all rights that are not vested in the Confederation”. Concretely, the cantons benefit from far-reaching political, financial and fiscal autonomy. They all possess a complete state structure with three powers (legislative, executive, judicial) whose members are elected either through direct or indirect ballot. The tools of direct democracy—referendum and initiative—are also available to the citizens of each canton in order to propose or combat the legal provisions of their canton. By doing this, citizens can directly express their preferences with regard to public policies within the scope of the cantonal governments.

As far as budgetary policy is concerned¹, the possibility for cantonal preferences to be taken into consideration is large in terms of tax policy as well as expenditure policy.

Indeed, the federal constitution reserves indirect taxation (TVA) and other consumption taxes exclusively for the central government and forbids any recourse to taxes that might generate tariff barriers. Nevertheless, beyond these limitations, the cantons have great liberty in deciding their tax regime and tax burden. All cantons did independently decide, however, to implement income, wealth and corporate income (and sometimes equity) taxes. In each canton, these taxes represent on average nearly half of all revenue (in the 2012 statement of financial performance)². In order to compare, note that the intergovernmental transfer revenue represents on average a third of all cantonal revenue. However this latter share varies considerably from one canton to the next. Each canton has the autonomy to decide upon the tax burden it intends to apply to each member of its tax base.

In terms of expenditure policy and of allocation of functions between the different levels of government, a cantonal autonomy exists although it is not as large as it is for taxation. Numerous articles of the federal constitution specify the competencies of the central government. For each function, they specify whether it is an exclusively federal competence or also cantonal. For functions in which the competence is shared, they limit the possibilities of central government interference in cantonal functioning. Despite these provisions and despite the affirmation of the principle of subsidiarity, a kind of centralisation operates furtively in the way in which the cantonal governments execute their functions and this occurs even if statistical data show that the percentages related to each level of government have not changed much over 30 years (Dafflon 1999). The central government takes recourse more and more to the agency organisation model, adopting framework laws and delegating the implementation of functions that are national in scope to the cantons.

¹ In this paper we distinguish between budgetary policy and fiscal policy. Budgetary policy covers all the decisions taken as far as revenue (including tax) and expenditure are concerned regardless of the aim of these decisions. Following Musgrave & Musgrave (1989) classification, the policy objectives of these decisions may include the allocation function, the distributive function or the stabilisation function of the government. Fiscal policy relates to the budgetary policy decisions—or absence of decisions—that are specifically linked to the stabilisation function and impact the *macro performance of the economy* (p.11).

² Federal Finance Administration (FFA) (2014), Switzerland's financial statistics for 2012. Annual Report, Berne. FS Model SF: Cantons/Regular Table/Revenue/Cantons. Items 400 and 401. The statement of financial performance—also called income statement or net operating balance—shows the value erosion—i.e. the operating expenses or costs—and the value increase—i.e. operating revenue—during a given accounting period. Not all operating expenses and revenue corresponds to outflows and inflows of cash. Some pure accounting expenses and revenue also exist, like depreciation charges, accruals, allocation and withdrawal to reserves. The balance of the statement of financial performance shows the change in net assets—i.e. equity. It differs from the balance of the financing statement. The financing statement shows all payment transactions during an accounting period, i.e. expenditure and receipts. Expenditure and receipts include all operating expenses and revenue corresponding to out- or inflow of cash and all capital expenditure and receipts. The balance—i.e. the difference between (operating and capital) expenditure and (operating and capital) receipts—shows the entire financing (or borrowing) requirement.

The cantons thus enjoy a significant budgetary autonomy. Each canton is sovereign. It has its own constitution and its own laws. Its sovereignty manifests itself in how it exercises its tax power, how it handles its budget and financial resources. This much autonomy is in contrast with the constraining budgetary and tax rules to which member states of other federations are subject. In each canton, it is the task of the legislature to decide upon a beginning-of-the-year budget (operating and capital expenditure) and to maintain accounting for their tax revenues and spending. Having said that, it is not the annual budget plan that gives a legal foundation to spending and taxes. Each expenditure or receipt item must rest on a specific law, debated and adopted individually by the parliament and entered into force before the budgetary debate.

In the context of this kind of well-developed budgetary autonomy, it isn't surprising that a permanent tension exists between the desires for tax competition on the one hand and the desires for coordination and harmonisation on the other. Fiscal competition between the cantons is an institutional paradigm that is both desired and assumed. A tax harmonisation exists in the area of direct taxation, but it is only formal. When it comes to tax burden, as stated before, cantons benefit from a large autonomy.

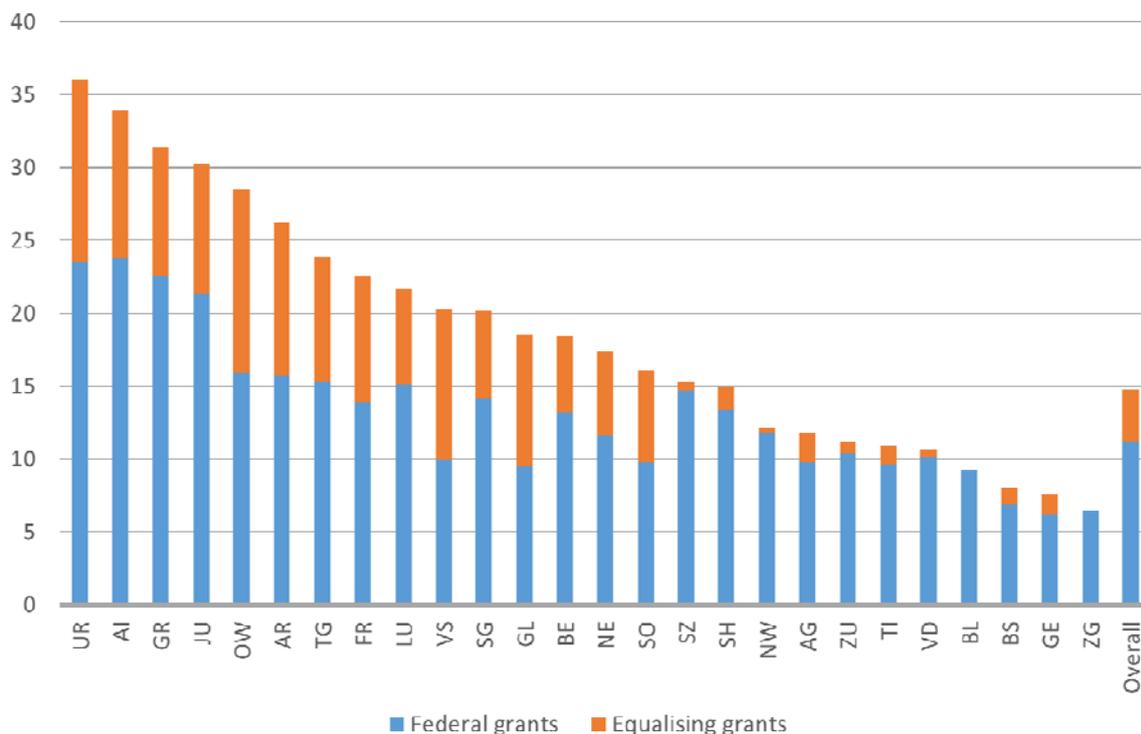
To somehow mitigate the possible effects of tax competition on an individual canton's tax base, an equalisation scheme exists within the system of grants allocated to the cantons. However, as stated by Dafflon (2013, p. 678), the amounts involved in equalising grants are rather symbolic. They represent, on average, only 4% of the cantons' tax revenues. Other grants from the central (federal) government—those that do not have an equalisation character—represent 11%. This 15% overall degree of dependency is quite weak when compared internationally. This shows again the strength of the cantons' budgetary responsibility: they must, on average, assume through taxes up to 85% of the fiscal consequences of their spending decisions. Nevertheless, as Figure 1 shows, the degree of dependency varies significantly among the cantons: only four cantons receive less than 10%³ and only four more than 30%⁴.

As a result, the tension between tax competition and budgetary coordination is equally reflected in how fiscal policy is used as an instrument of the macroeconomic policy.

³ Zug (ZG: 6%), Geneva (GE: 8%), Basel-City (BS: 8%) and Basel-Landschaft (BL: 9%).

⁴ Uri (UR :36%), Appenzell Inner-Rhoden (AI : 34%), Graubünden (GR : 31%) and Jura (JU: 30%).

Figure 1: Cantons' degree of dependency on grants from the central government and on the equalisation scheme, as a percentage of the cantons' tax revenue (2009)



Source : Dafflon (2013, p. 678) based on Switzerland's financial statistics (FFA).

3 Contradictory legal provisions in terms of fiscal policy

The Federal Constitution of the Swiss Confederation provides that “the Confederation [central government], the Cantons [sub-central governments] and the Communes [local governments] shall take account of the economic situation in their revenue and expenditure policies (Art.100, al.4)”. This kind of provision is a welcome idea, in light of the significant budgetary autonomy with which the cantons are endowed. It is equally welcome because the cantons' financial standing represents a large part of the spending of the Swiss governments (43 % compared to 34 % for the Confederation, 23 % for the communes⁵). Finally, this is a welcome policy because of the small geographic size of each canton⁶, of their economic interdependence and the increasing diversification of their economic fabric, all of which are elements that subject the cantons to symmetrical shocks

⁵ Federal Finance Administration (FFA) (2013), *Les finances publiques 2013. Mémento statistique*, Berne. Values for 2011. Table “Closure of public administrations”. Without corrections of double imputations engendered by the financial transfers between institutional levels.

⁶ The surface area of the largest canton (Grisons-GR, 7105 km²) represents 1.1% of equivalent French land. That of the smallest canton (Basel-Stadt-BS, 37 km²) is 200 times smaller. The canton with the most people (Zurich-ZU, 1.425 million inhabitants in 2013) represents 2.2% of the population of France. This is 90 times more than the least populated canton (Appenzell Inner-Rhoden-AI, 0.016 million inhabitants).

in the event of an economic crisis⁷. The federal constitution thus implicitly urges the various governments in Switzerland to collaborate vertically and horizontally when deciding on their respective fiscal policy. This policy should, if it is not going to be active, to be at least passive and allow automatic stabilisers to work.

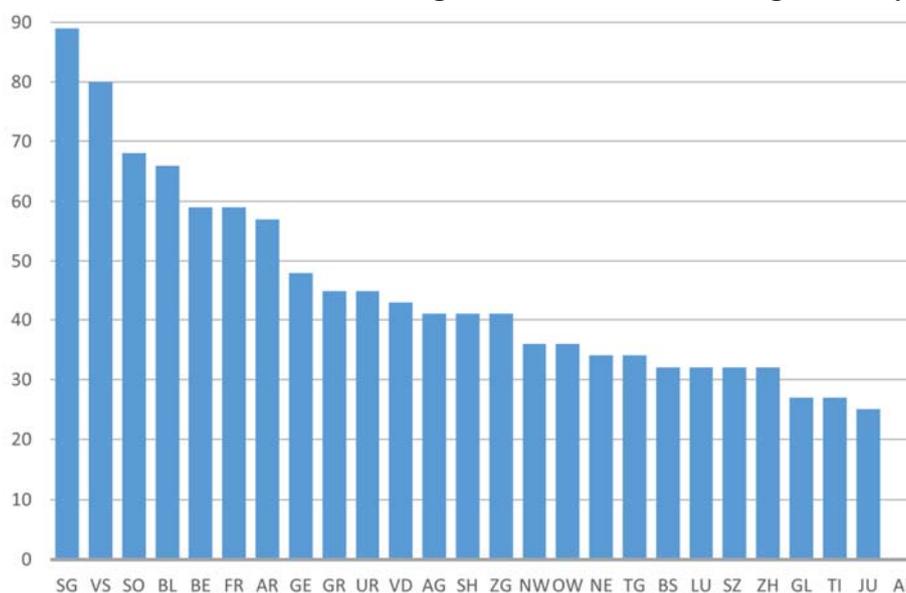
This being the case, the federal constitution does not impose any budget constraints on the cantons. It remains silent in terms of the level of tolerable deficit at the cantonal level. Here, too, cantonal sovereignty is respected. Certainly nearly every cantonal constitution or the corresponding budget law provides (since the 1980s) that the statement of financial performance must be balanced at least in the medium term (i.e. revenue must cover costs). This did not preclude some cantons from becoming considerably indebted during the period of 1990 to the early 2000s. The existence of a fiscal referendum, which requires outlays for a project exceeding a predetermined limit to be put to the ballot, has been ineffective at preventing public debt from increasing (Feld & Kirchgässner, 2008). Therefore, cantons have gradually introduced new statutory provisions to cap deficits. These instruments are often referred to as balanced budget rules, fiscal rules, debt brakes, budget constraints or budgetary restraints. According to Yerly (2013), by 2011, all cantons but one had statutory provisions requiring some form of budgetary restraint. As stated by the author, the degree of stringency varies a lot among cantons according to the way the constraints are designed: institutional level of requirement (constitution or law); constraint on the beginning-of-the-year and/or the end-of-the-year budget (i.e. account or financial reports); requirement to balance the statement of financial performance and/or the financing statement; time horizon required to balance the budget; stringency of the sanctions in case the constraint is broken, etc. Based on these criteria, Yerly (2013) constructed an index of budget constraint stringency which varies between 100 (no canton achieves this) and 0 (achieved by one canton only). Figure 2 shows the value of the index for the year 2009⁸. It shows a large variability in the constraint stringency. It demonstrates the extent to which cantons made use of their autonomy to reinvent the wheel. In some cantons, provisions are extremely constraining, requiring both the beginning and end of the year budget to be scrupulously balanced, not only at the level of the statement of financial performance (also called the income statement, either in the budget plan or in the account) but also at the level of the financing statement (also called financing (borrowing) requirement, either in the budget plan or in the account), with tough sanctions (e.g. canton Wallis – VS). By doing so, these provisions

⁷ In these conditions, it has been shown that only a concerted response is optimal (Sterdyniak & Villa, 1993). This makes it possible to avoid free rider behaviors. Essentially, the canton/country which takes the initiative of a stimulus policy in case of an economic slowdown or a recession would then support the costs (increased debt reducing any future margin of maneuver) while beneficial effects would spill over cantonal/national borders. These external effects reduce the budgetary multiplier and increase with the integration of economies. Each canton/country is thus incited to do nothing and to wait that commercial partner cantons/countries take the initiative to stimulate their economy. If all cantons/countries behave in the same way, games theory predicts an underreaction in the Eurozone (solution Nash – Cournot). Oppositely, if each canton/country anticipates that the others will not react and undertakes an even stronger stimulus, there exists a risk of overreaction.

⁸ Values for 2009 were retained for the figure since it was the year during which Swiss cantons were expected to take discretionary fiscal policy measures. However the values are almost constant over the period 2007-2010, whatever the canton.

ban any borrowing possibility. In other cantons, provisions are looser, for instance allowing a “small” deficit of the statement of financial performance, but capping it to a few percentage points of the expenditure (usually 2-3%) and/or allowing partial financing of capital expenditure through borrowing (usually to a maximum of 20-40% of the capital expenditure).

Figure 2: 2009 Global Index of Budget Constraint according to Yerly (2013)



Source : Yerly (2013, p.231).

Interestingly enough, macroeconomic concerns are not addressed by the Swiss cantons budget constraints. None of them provide for an adaptation of the budgetary objective according to the economic situation. When the constraint tolerates rather than bans some level of deficit, it does not explicitly foresee that this leeway must be used with respect to the economic situation or that it must be laid out in order to allow automatic stabilisers to function in case of a slowdown or recession. When the constraint bans any deficit, it offers no safeguards against a pro-cyclical budgetary policy, notably because they do not require the securing of a surplus of tax revenue in case of recovery or economic boom (Soguel, 2006). As a result, these provisions do not make it possible to satisfy the federal constitution’s obligation for the cantons to take the economic situation into account in their budgetary policy decision. This particular institutional setting points towards the difficulty of conducting a consistent macroeconomic policy not only between the different tiers of government (Ammann, 2011), but also between the fiscal and the monetary policies (Duisenberg, 2003). This being the case, the cantonal legislatures generally provide safeguard clauses and exceptions in case of particularly unfavourable economic situations or in case of natural disasters.

The Confederation has its own debt brake tool, anchored in the Federal Constitution (art. 126). Accepted via popular vote in 2001, the mechanism was used for the first time when preparing the 2003 budget plan. Similar to the tools used in various cantons, its goal is to stabilise the debt. But contrary to what is found in the cantons, its explicit goal is also to lead a countercyclical budgetary policy. The tool establishes an (operating and capital) expenditure ceiling. But the height of the ceiling is a function of the economic situation and predicted tax revenues at the time the budget

plan is established and upon the closing of the accounts. The ceiling can be lowered when the business cycle booms; it rises when the business cycle is depressed. Concretely, the state of the business cycle is measured using a coefficient—called the factor c —. The coefficient is higher than one in the event of a negative output gap⁹. It is inferior to one in the event of positive deviations¹⁰. Factor c multiplies the predicted tax revenues to determine the ceiling. The budget must then secure a surplus when the output gap is positive and a deficit occurs when the output gap is negative. An advantage of this rule is that it explicitly fixes annual budget objectives. Furthermore, it is compatible with the business cycle, in the sense that it gives automatic stabilisers the necessary budgetary freedom and therefore avoids pro-cyclicality of budgetary policies.

4 The Swiss cantons poor historic record concerning fiscal policy

Following upon existing work abroad (Alessina & Perotti, 1995; Poterba, 1997), some empirical studies show that harder budget constraints lower cantons' overall financial deficits (Feld & Kirchgässner, 2008; Luechinger & Schaltegger, 2013; Yerly, 2013). Neither Krishnakumar et al. (2010) nor Chatagny & Soguel (2012) introduce a variable reflecting the stringency of the budget constraint in their econometrical models, but they do show that, in general, receipts and expenditure strongly and simultaneously influence each other. Still Krishnakumar et al. (2010) state that the attitude regarding the role of the State clearly differs between Switzerland's linguistic regions. Inhabitants of the German-speaking cantons are assumed to be more distrustful of State intervention than their French- and Italian-speaking counterparts (e.g. especially the Canton of Geneva-GE). The latter areas are said to hold the doctrine of a balanced budget in lesser esteem (Pujol & Weber, 2003).

These findings tend to explain those shown in other existing studies, namely that, in the past, in case of a negative output gap, the cantons have, just like all public administrations in Switzerland, more often adopted recessionary fiscal policies (Soguel 2006, Martin 2013). Indeed their fiscal policies have tended to take discretionary pro-cyclical measures to avoid deficits (or excessive deficits) when the output gap was negative¹¹. In essence, in the absence of discretionary measures, automatic stabilisers have threatened cantonal budget equilibriums. These stabilisers exist, even if quantitatively they do not have much power. Soguel & Seppey (2010) showed that the influence of the economy on cantonal budgets is only significant through the variation of direct tax revenues. This can be explained by the fact that the portion of direct taxes in total tax revenues is relatively high and that the rates of these taxes are progressive (Ammann, 2009, p. 14). For the canton of Neuchâtel (NE), the authors calculate an elasticity of 1.28% compared to the cantonal GDP for the tax on income and wealth and of 1.39% for the tax on corporate income and equity. For the

⁹ Forecasted GDP lower than trend GDP, indicating a recession situation, even recovery.

¹⁰ Forecasted GDP higher than trend GDP, indicating a growth and boom situation, even the beginning of a recession. $c = \text{trend GDP} / \text{annual GDP}$.

¹¹ Evidently, the aim of the fiscal policy was not to be pro-cyclical. The pro-cyclical tendency must rather be seen as a consequence of budgetary measures that were taken to avoid deficits.

canton of Tessin, Soguel & Clémenceau (2013) estimate these elasticities to be at 1.05% and 1.27% respectively. On the spending side, cantonal budgets do not include the same automatic mechanism. Essentially, spending for unemployment insurance remains at the federal level. Changes in other types of social spending arise from changes in social needs and regulatory frameworks (illness and accidents, disability, old age pension and surviving dependents, family and youth, building of welfare housing, social assistance, refugee situations). Indeed, this is about structural changes in spending and not business-cycle-driven changes.

During the periods in which the output gap was positive, the cantons also took more procyclical discretionary measures (increased salaries in the public domain, increased transfer spending, decreased tax burden). As a result, they did not look to calm the aggregate demand and sustain a surplus.

In this sense, historically, the cantons have poorly respected, if not completely disrespected, their constitutional obligation outlined in Art. 100.

5 The financial and economic crisis mostly spares Switzerland

The crisis that hit the international economy beginning in the summer of 2007 was of a rare magnitude. It began with the burst of the real estate bubble, first in the United States. The financial establishments suffered heavy losses. The bankruptcy of Lehman Brothers, in September 2008, amplified the financial crisis, and with it, stock prices plummeted. To avoid a systemic crisis, the governments bailed out numerous banking establishments. They also intervened to support the aggregate demand at the origin of the global economic crisis, an event which had not been seen since that of the 1930s. The governments' expansive budget policy coupled with the decline in gross domestic product increased the government debt to GDP ratio in many countries. From late 2009, fear mounted that governments around the world would not be able to repay or refinance their debt. The sovereign debt crisis especially affected the most heavily indebted countries in the Eurozone, with creditors requiring ever higher interest rates to lend to these countries. The incomplete institutional structure of the Eurozone, with a currency union and without a fiscal union, did not allow for the necessary adjustment and prevented European country leaders from responding swiftly. The beginning of 2010 led to what is often referred to as the Eurozone or the Euro crisis, fuelled by speculation of contamination to all areas and a possible break-up of the Eurozone. Confronted with this maelstrom, as soon as the first signs of the crisis appeared, the central banks began injecting large amounts of cash into the financial system. Many among them turned to their customary tools to arrive at their goals.

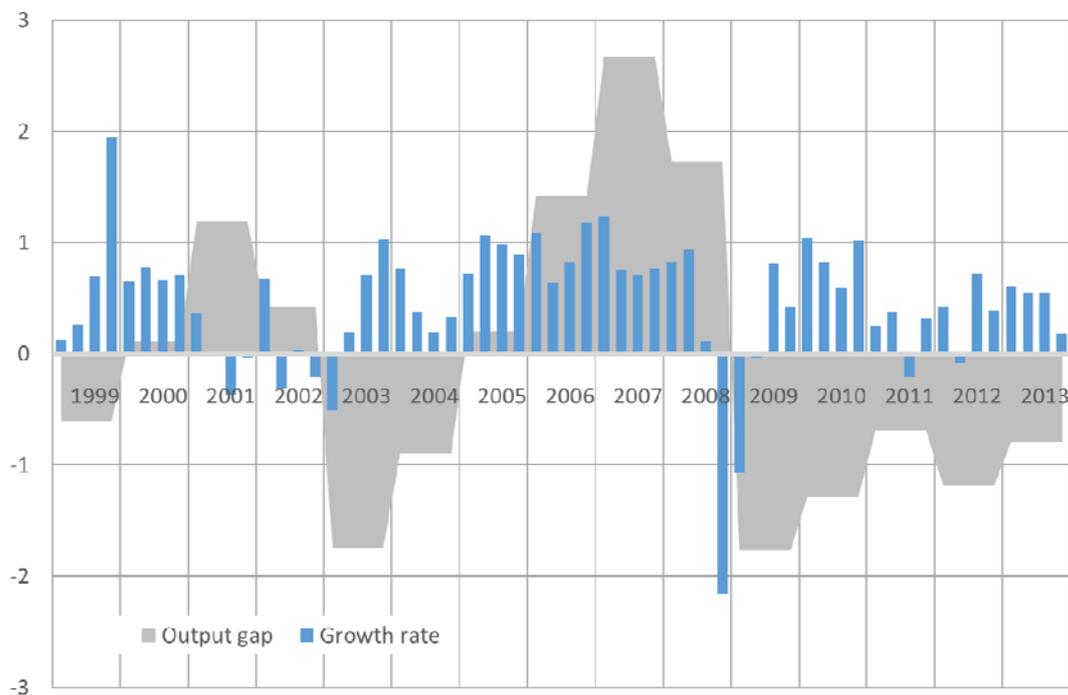
Switzerland—with its both open and small-sized economy—was obviously not spared. This began in the summer of 2007 with the freezing of interbank lending that affected Switzerland's financial industry. Then, the solvability of one of its main banking establishments, UBS, was threatened by its substantial losses linked to the American real estate market. Decreases in worldwide commerce beginning at the end of 2008 provoked an historic decline of merchandise exports. In parallel to

the financial sector, industry and investments negatively impacted growth. Employment growth slowed and unemployment increased. As shown in Figure 3, this situation prevailed throughout the last quarter of 2008 and the first two quarters of 2009. At this time, the quarterly variation of real GDB became negative (vertical bars), as did output gap measured on a yearly basis (shadowed zone). Evidently, any evaluation of the output gap must be considered with caution considering the numerous hypotheses that it requires. Having said that, it seems that the output gap changed radically between 2007 and 2009¹². In 2009, the GDP became between 1 and 2% lower than potential GDP. Since then, the output gap has remained negative. The decline, however, has remained less marked compared to numerous other countries. Beginning with the 2nd quarter of 2009, the outlook brightened. And beginning with the 3rd quarter of 2009, exports returned with growth, benefitting in particular from the budgetary stimulus efforts of Switzerland's main trading partners. The Euro crisis, however, engendered a significant value increase of the Swiss franc and as a result a loss of price competitiveness at the outset of 2010. Combined with the lowered worldwide demand for European Union goods, this situation put the export and tourism sector under pressure again, but with important sector-based differences. Faced with this threat and at the risk of deflation, the Swiss National Bank announced on 6 September 2011 that they would use all means to fight to prevent the Euro from falling below 1.2 francs¹³. The success of this measure and the good results coming from structurally strong areas like pharmaceuticals and watch-making thwarted the effects of the crisis. The arrival of new immigrants made it possible to increase manual labour offers and in turn the potential for economic growth. Seven years after the beginning of the crisis, Switzerland exists in an enviable economic situation. The country does not have to resorb any significant internal imbalances, from either the financial sector or the public sector. The expected growth in total economy potential output is slightly higher than what it was before the crisis, according to OCDE estimations (2014, Table 4.1) (2.1% for the period of 2014-2030, against 1.9% for 2008-2013).

¹² The output gap presented here is based on the one calculated each year by the Federal Finance Administration to define the expenditure ceiling for the federal debt brake (factor c).

¹³ The Swiss National Bank took other measures. Beginning in October 2008, it lowered, five times in succession, the three-month LIBOR rate, which passed from 2.25-3.25% to 0.75%.

Figure 3: Quarterly growth rate of Swiss real gross domestic product and output gap as a percentage of the potential GDP

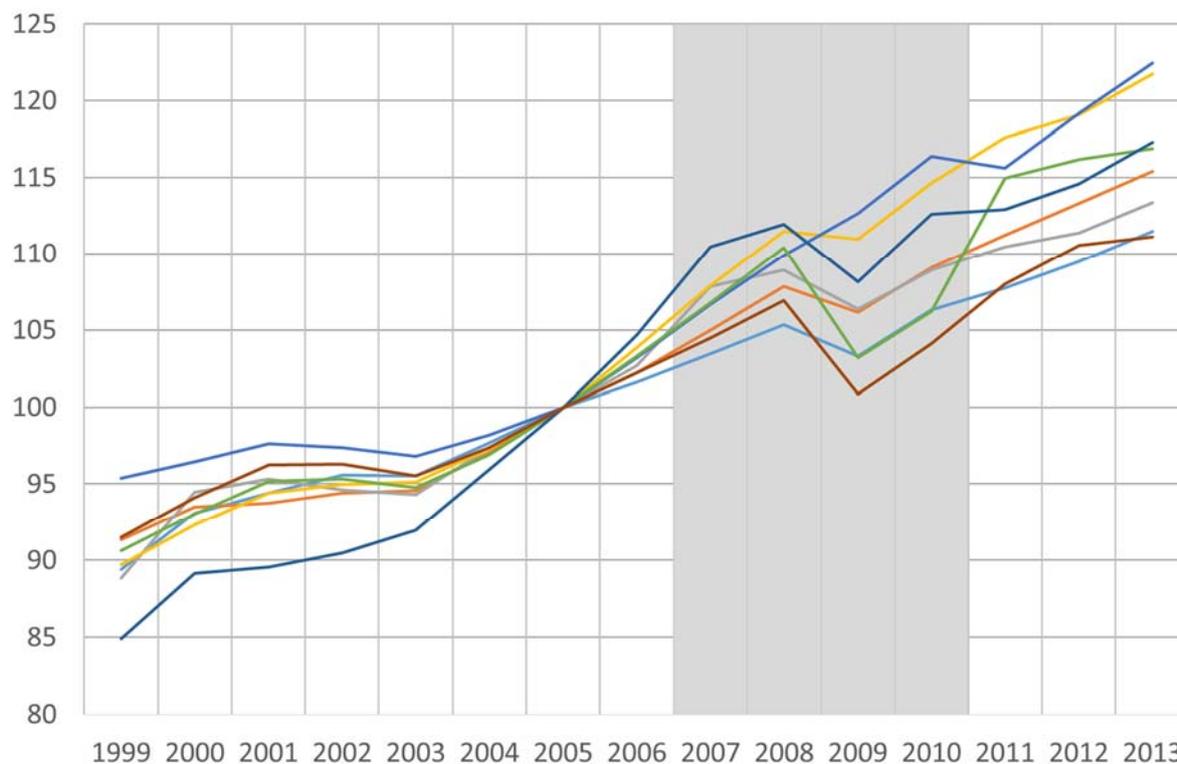


Source : Federal Finance Administration (output gap) and Swiss national bank (growth rate).

Figure 4 shows how the real GDP of the French-speaking Swiss cantons grew over the considered period¹⁴. The goal of this illustration is to give an overall picture instead of describe the evolution of each canton. In this way, it shows that the cantons were subject to a symmetrical disturbance in 2008-2009 characterised by a drop in GDP. Only one canton proved to be an exception with continued GDP growth (Valais-VS). Overall, this confirms the idea that the cantons, logically even more so than the whole of Switzerland, are small open economies. The cantons have thus little chance to avoid being affected by external disturbances. The corollary to this is that they also have little control over the evolution of external demand and little capacity to influence the business-cycle situation using their fiscal policy.

¹⁴ Official GDP statistics for all Swiss cantons are only available from 2008. As a result, we must look at semi-official statistics created by only the French-speaking cantons. The equivalent does not exist for the other cantons (German- and Italian-speaking cantons).

Figure 4: Real gross domestic product of the French-speaking cantons, 2005=100



Source : Créa, University of Lausanne.

6 Fear mongers call for measures

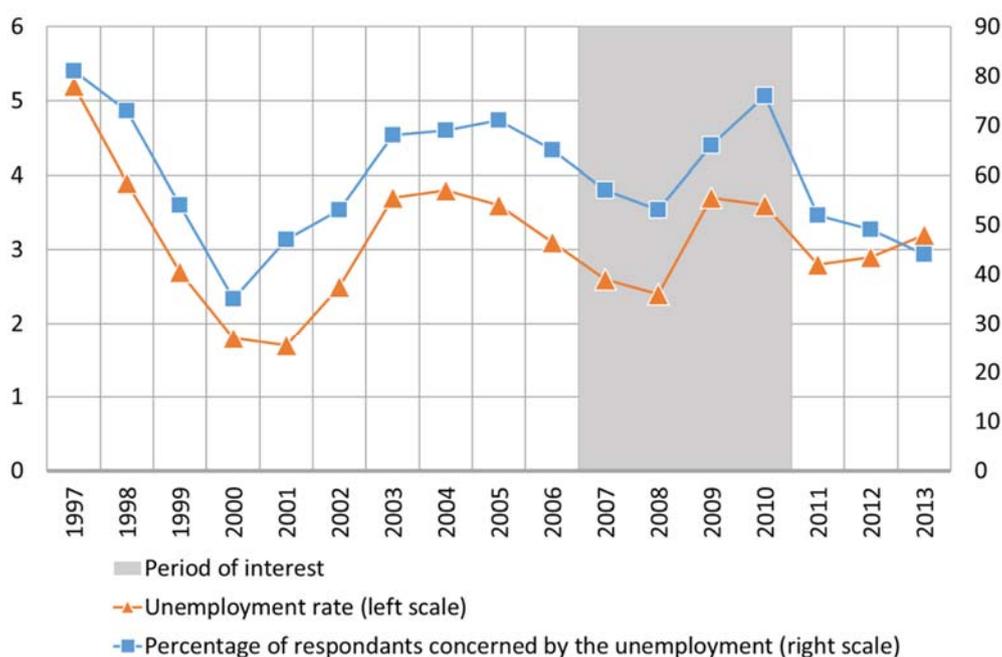
With some distance, it is much easier to see that Switzerland was largely spared from the global crisis. In the heat of the moment, however, there was great uncertainty. Lits (2010) described the way in which the European media covered the developments of the crisis and relayed information to policymakers and the general public. At first, the media took their time projecting repercussions onto Europe from the crisis underway in the United States. It took them several months to show “the calming discourse coming from large bank directors and economics experts” (p.82). But when the crisis hit, at the end of 2008, the media covered the events “with an approach that becomes classic with respect to any large magnitude phenomena: dramatisation, serialisation, proximity. The vocabulary employed will lean toward dramatic terms (crisis, banking tsunami, tornado, anguish) and subjects that generate forms of anxiety, even panic.” (p.83).

Things unravelled in much the same way in Switzerland. The media started to talk about the bankruptcy of UBS before the Confederation and the Swiss National Bank came forward to bail out the institution. In the measure in which a majority of the Swiss population had some business relationship with this bank (either as an investor/creditor/shareholder or a debtor/borrower), beginning in 2008 the event gave a very tangible turning point to the financial crisis. Next, the media widely reported on the swift economic degradation occurring in European countries,

countries who are Switzerland's main trading partners (60% of all Swiss exports are destined for European Union markets). International events take on a larger importance in Switzerland because of its small size, compared to larger countries for which domestic events tend to overshadow international ones. Media tended to highlight the consequences in those countries, in particular on employment. They also focused on the different government policies undertaken.

Interviews with politicians, policymakers and other leaders gave nearly systematically an occasion for the media to ask questions about which policies should be taken to “support the economy and safeguard employment.” Despite the reality of the Swiss statistics, uncertainty and worry infiltrated people's thinking. Even if one should consider it with caution, the Swiss Worry Barometer does illustrate to what level the situation abroad influences Swiss thinking (Credit Suisse, 1997-2013)¹⁵. As shown in Figure 5, the percentage of those who considered themselves preoccupied by unemployment decreased in 2007 (57%) and 2008 (53%) while the unemployment rate also decreased (2.6% and 2.4%). The percentage climbs back up and surpasses its 2006 level in 2009 (76%) with increased unemployment (3.7%). But it continues to rise further in 2010 (76%) when the unemployment rate had already begun its descent (3.6%): Over a longer period, we can note that the correlation between the two series is lost in 2001 and in 2005. Nevertheless, the disconnect between the two was never larger than in 2010. This bears witness to the climate reigning at that time.

Figure 5: Unemployment rate (left axis) compared to the percentage of respondents concerned about the unemployment (right axis), 1997-2013



Source : Seco (unemployment rate) and
Crédit Suisse (percentage of respondents concerned about the unemployment).

¹⁵ The barometer is based on a representative survey of about 1000 eligible voters in Switzerland carried out every year (the exact number of respondents may vary from year to year, it was 1009 in 2013) The survey usually takes place in early August (in 2013: July 30 to August 25).

7 Measures are taken, not always new ones

Faced with the magnitude of the crisis, the deterioration of perspectives, the aggravation of the economic downturn, but also in response to the worries mentioned above, the authorities had to react. First and foremost, and at the federal level, the Parliament followed the government's proposition and decided, at the end of 2008, to increase by 427 million francs the spending laid out in the 2009 budget plan. This amount was primarily to finance investments in construction. At the same time, the government announced that it would offer a new increase of 700 million, again in 2009, if the situation continued to deteriorate. Which is what it did in February (Swiss Federal Council, 2009a). This amount was targeted to finance projects in the following areas: road and rail infrastructures, projects related to the new regional policy, applied research, environment and energy, maintenance of EPF (Federal Polytechnic Schools) and Armasuisse buildings, tourism-related marketing. Note that, despite this, the spending ceiling for 2009 was nevertheless respected, a sign that the debt brake left sufficient flexibility for discretionary fiscal measures. In September 2009, the Parliament adopted a third series of measures for an amount of 944 million francs to add to the 2010 budget plan. This amount was destined to combat unemployment for young people and long-term unemployment, to promote exports and to maintain household purchasing power.

As required by executive federalism, the budgetary amounts freed by the Confederation are often conveyed through the cantonal budgets. In essence, it is the cantons which identified the projects that could benefit from federal aid. Through it all, the cantons participated financially in these measures at an amount of 256 million francs in 2009 and did this by subsidizing investments, in particular in the areas of regional development, protection against flood or railway infrastructures (Swiss Federal Council, 2009b). In essence, in several areas, but not in all, the legal base enabling the Confederation to award a grant stipulated that, in order to benefit from it or have it benefit the region, the cantons were held to provide an equivalent amount. All in all, in these areas, what we had was a system of conditional matching grants¹⁶.

In parallel to the measures initiated by the Confederation, numerous cantons but also some communes, took measures to stabilise the business cycle. In response to surveys conducted at the time, several cantons declared that they had taken measures in 2008 to combat the effects of the crisis. Others added investments to their 2009 budget plan that exceeded, in some cases by a lot, the amounts of previous years. Most of the cantons did this by accelerating the completion of certain investment projects which were ready to be put into action¹⁷. Furthermore, several cantons had shortly before revised their tax legislation to reduce the tax pressure exercised on businesses and households. These revisions were meant to come into force in 2009. Several cantonal governments also decided, when writing their budget plan for 2009, to increase salaries for state

¹⁶ According to a definition commonly-accepted and provided by Boadway & Shah (2009), « conditional matching grants, or cost-sharing programs, require that funds be spend for specific purposes and that the recipient match the funds to some degree. [...] The subsidy has two effects, an income effect and a substitution effect. [...] Both effects stimulate higher spending [...]» (p. 311).

¹⁷ Infrastructure projects require a construction permit. There are numerous possibilities for legal actions. The legal bases are maze-like (land-use issues, environment, concessions, construction, etc.) Because of this, it is complicated and above all takes a long time to manage to launch any new investment project.

workers (in real terms) or even to increase subsidies allocated to low-income households in order to reduce their health insurance premiums. Other tax relief measures were also decided upon, but did not come into effect for households until 2010 or 2011. Table 1 shows the amount of additional spending and tax revenue losses of the Swiss administrations. As already mentioned, these figures are based on information provided by the federal, cantonal and municipal governments. They give an overall idea of the discretionary measures taken according to these governments. However, they cannot be considered a truly reliable estimation of these measures. In each case, they do not take the volume of automatic stabilisers into consideration. The amounts are, in total, modest—8.2 billions CHF for both years considered. That only represents 1.5% of the cumulative spending for two years of three institutional levels (561 billion CHF) or, only 0.7 % of the cumulative Swiss GDP for the two years. The source consulted does not make it possible to distinguish the measures taken by the cantons from those taken by the communes. Nevertheless, according to other figures looking only at 2009, it is possible to put forward, without too much risk of error, that the amount mentioned in the "Cantons and Cities" column are largely the result of the cantons policy (Unsel, 2009, p.33). In this way we can see that the effort made by the cantons was at least as important as that made by the Confederation.

According to Seco's estimation (2012), the impact of this additional spending (5.1 billion) and of the tax revenue losses (3.1 billion) on annual GDP is within the range of 0.23 to 0.98% with an average value of 0.61%. This effort, all in all a modest one, supports the argument that, like in other small and open economies, the internal benefit of the measures (i.e. the stimulus that does not dissipate in imports) was considered to be rather small compared to the fiscal cost of the measures (debt increase). Thus, most small countries, including Switzerland, relied instead on the economic recovery plans of their trading partners (Tille & Wyplosz, 2010, p. 63).

Table 1: Additional spending and tax revenue losses in 2009 and 2010 coming from the measures taken by the Swiss administrations, in billions of Swiss Francs.

2009 and 2010	Confederation	Cantons and cities	Total
Additionnal expenditure	1.7	3.4	5.1
Loss of receipts	1.2	1.9	3.1
Total	2.9	5.3	8.2
as a percentage of 2009 and 2010 ...			
... expenditure (CHF 561 billion)	0.5%	0.9%	1.5%
... GDP (CHF 1127 billion)	0.3%	0.5%	0.7%

Source : Seco (2012, p. 23) on the basis of information provided by cantons and municipalities, own calculations.

8 Counter-cyclicity of the cantons' fiscal policies

Beyond the information given by the governments for the surveys mentioned above, it is important to look into how much the amounts declared by the cantons, and which are listed in Table 1, had a real impact on their finances. The financial statements reported by the cantonal governments allow us to analyse how expenditure and receipts evolved through the critical period from 2007 to

2010. Looking closely at this evolution makes it possible to be sure that these elements effectively provided stabilizing impulses. The impulses exercised were countercyclical if they were stimulating during the economic downturn. In other words, on the one hand, either operating or capital expenditure must increase. On the other hand, receipts, and especially tax receipts, must shrink. As a result, the financing (or borrowing) requirement must increase (larger financing deficit or lower financing surplus). Oppositely, fiscal policy is procyclical if the impulses are restrictive during the downturn, with reduced expenditure or increased receipts and a smaller financing (or borrowing) requirement (lower financing deficit or larger financing surplus).

Any increase in public expenditure or any decrease in tax receipts, either discretionary, random or coming from automatic stabilisers, can be considered as providing an expansionary impulse. In essence, this increases the contribution of governments to aggregate demand. In the same way, any decrease in public expenditure or any increase in tax receipts can be considered as having a restrictive impulse¹⁸.

The method we will use to analyze the fiscal stance of the cantons is based on this idea. It entails a first analysis of the variations in amounts from the different budget categories in each canton: operating expenditure, capital expenditure, tax receipts, financing (borrowing) requirement. Next, the method entails determining if the direction of these variations is consistent with respect to the economic situation, which, in this case, deteriorates over the critical period.

Evidently, only the variations of a non-marginal intensity are able to significantly influence the business cycle. Which is why, for our analysis, we have to fix a threshold beyond which we consider that the impulses are liable to effect a noticeable impact. Martin (2011, p.31) suggests using a threshold of $|1\%|$ ¹⁹. In other words, an increase in spending over 1% compared to 2007 ($>1.0\%$) will be considered as bringing a truly countercyclical stimulus to aggregate demand. In the same way, a decrease in spending over 1% ($< -1\%$) will be considered as bringing a truly negative impulse. Table 2 shows the results.

To somehow check the robustness of our findings, we analyze how our results are sensitive to a variation of the threshold. To do this, we take the long-term evolution of spending and revenue as a reference. Over the last 15 years (1997 – 2011) the operating expenditure increased on average 3.1% per year, in real terms. We consider then that if the expenditure experienced an increase superior to that in 2007, then the fiscal stance was countercyclical. On the contrary, if operating expenditure were reduced, then the fiscal stance was procyclical. We also consider capital expenditure. They stay flat over the last 15 years, again in real terms. Consequently, any increase in capital expenditure provides a stimulus, whereas any decrease is detrimental. As for tax receipts, they increased on average 2,9% over the last 15 years. Thus any increase above this threshold compared to 2007 is regarded as procyclical, whereas any decrease is countercyclical. The change

¹⁸ This is obviously a simple method. Other, more sophisticated, methods do exist—like the one based on the cyclically adjusted (primary) balance (CAB). However, the CAB isn't available for each canton, in particular because—as indicated earlier—we do not have cantonal GDP statistics for all cantons. Furthermore, estimating CAB, even for a single canton, involves a lot of efforts to only arrive at a not very robust result.

¹⁹ More exactly Martin (2011, p. 31) indicates a threshold of 0.9%.

in financing (borrowing) requirement is considered as countercyclical if the balance worsens by more than 1% compared to 2007 ($< -1\%$). It is procyclical if the balance improves ($< 0.0\%$). Table 3 shows these additional results.

Both Table 2 and Table 3 are structured in the same way. The four aforementioned budget categories are considered. The various thresholds are indicated with the fiscal stance to which they correspond. Three alternative time spans are considered. The first investigates how the budget categories evolved between 2007—the year in which the output gap was the greatest—and 2008—the year the economy tipped. Next we compare the 2007 amounts with the average amounts from 2008 and 2009—the two years which featured at least one quarter in which the GDP suffered a decline. To this we add a comparison of 2007 figures with the average figures from 2008, 2009 and 2010, since the unemployment level was still higher in 2010 with respect to the situation that reigned before the crisis. The tables indicate first, on an individual basis, the number of cantons concerned by the type of fiscal stance. They then indicate, overall and for all cantons, the fiscal stance (using an X in front of the fiscal stance concerned). In essence, the value overall is influenced by the position of the largest cantons.

As for operating expenditure, the tables show that the cantons implemented a countercyclical stance, either in the very short term (2007-2008) or following a slightly longer time horizon. Depending on the threshold and the period, between 13 and 23 cantons were individually in this situation. Overall, the cantons implemented a countercyclical policy. Nevertheless, between 3 and 7 cantons adopted a detrimental fiscal stance.

If we consider capital expenditures, we can note that generally the cantons reduced their spending. Certainly, the number of cantons who increased spending is a little more than the number of cantons who reduced it. But overall, we can see a rather procyclical stance. This is due to the fact that several large cantons, in the Swiss-German speaking part of Switzerland (Zurich-ZH, Bern-BE, Luzern-LU, Basel-Landschaft-BL) reduced spending. This did not occur in the French-speaking part of Switzerland in which the cantons increased their spending. This raises the question as to what would have happened if the Confederation had not created the impulse toward investment through its system of matching grants (see previous section). Without this impulse, we can reasonably assume that the cantons would have reduced their investment efforts to counterbalance the increases in operating expenditure and loss of tax receipts.

In essence, the tax receipts were mostly decreased as is shown in Table 3 (in 14 or 15 cantons over the period considered). But some cantons did record an increase in receipts, sometimes above and beyond the long-term growth rate. Even if the finding is less decisive than for operating expenditure, we can still conclude that the cantonal tax policy did contribute to creating a stimulating fiscal stance.

In all, the borrowing requirement increased considering the number of cantons concerned (between 11 and 19), as well as all cantons together. This shows that the cantons, overall, contributed to stabilizing the economic situation.

In addition, comparing the periods shows that the reaction was fairly rapid. As early as 2008, the fiscal stance was relatively coherent with changing economic situation. Which was then further reinforced by what happened next.

Table 2: Fiscal stance practiced by the cantons throughout the critical period of 2007-2010, based on a $|1\%|$ threshold

Budget categories	Threshold	Fiscal stance	Time span					
			2007 - 2008		2007 - 2008 09		2007 - 2008 09 10	
			Individual	Overall	Individual	Overall	Individual	Overall
Operating expenditure	> 1.0%	Countercyclical	19	X	23	X	23	X
		Neutral	3		0		0	
	< -1.0%	Procyclical	4		3		3	
Capital expenditure	> 1.0%	Countercyclical	13		14		14	
		Neutral	1		0		1	
	< -1.0%	Procyclical	12	X	12	X	11	X
Tax receipts	< -1.0%	Countercyclical	11		12		12	
		Neutral	4	X	4	X	3	X
	> 1.0%	Procyclical	11		10		11	
Financing (borrowing) requirement	< -1.0%	Countercyclical	11	X	17	X	19	X
		Neutral	0		0		1	
	> 1.0%	Procyclical	15		9		6	

Source : Own calculations based on the financial reports published by the cantons.

Table 3: Fiscal stance practiced by the cantons throughout the critical period of 2007-2010, based on long-term trends

Budget categories	Threshold	Fiscal stance	Time span					
			2007 - 2008		2007 - 2008 09		2007 - 2008 09 10	
			Individual	Overall	Individual	Overall	Individual	Overall
Operating expenditure	> 3.1%	Countercyclical	13	X	19	X	21	X
		Neutral	6		4		2	
	< 0.0%	Procyclical	7		3		3	
Capital expenditure	> 0.0%	Countercyclical	13		14		14	
		Neutral	0		0		0	
	< 0.0%	Procyclical	13	X	12	X	12	X
Tax receipts	< 0.0%	Countercyclical	14	X	15	X	14	
		Neutral	9		2		4	X
	> 2.9%	Procyclical	3		9		8	
Financing (borrowing) requirement	< -1.0%	Countercyclical	11	X	17	X	19	X
		Neutral	0		0		1	
	> 0.0%	Procyclical	15		9		6	

Source: Own calculations based on the financial reports published by the cantons.

This finding, which is ultimately positive, still needs a bit of nuancing. We note that, in essence, certain cantons chose to play at budgetary austerity rather than a stimulating fiscal stance. We've already noted this in terms of capital expenditure. This problem was also brought up in the evaluation report that the federal government established after the crisis (Swiss Federal Council, 2009b, p. 15), that horizontal coordination was less successful. The cantons failed to deploy this

kind of collaborative solution. Only the French and Italian speaking cantons engaged in a dialogue; the German speaking cantons did not really. Additionally, no true vertical coordination took place within individual cantons between the canton and the municipalities.

9 Cantons' financial situation before, during and after the crisis

The vertical bars in Figure 6 show the evolution of financial performance in the Swiss cantons between 1999 and 2012²⁰. This evolution indicates that just before the crisis hit, operating revenue were largely superior to operating cost. In 2007, the “profit” is equivalent to 5% of the cost; which is substantial. Note that this refers here to the median value. As a result, half of the cantons reported a higher value while the other half reported a lower value. Average value was 7.5%

Over the following years, this surplus diminishes until it becomes slightly negative in 2012. The cause of this decline is obviously plural.

One of the reasons was clearly the effects of the fiscal stance as explained in the previous section. But underlying this, other reasons need to be mentioned. In terms of tax revenue, it is important to note the fiscal competition to which the Swiss-German cantons in particular undertook by using tax revenues provided by the previous years economic boom. This competition structurally reduced the tax revenue of the cantons. Certainly, this reduction came about at the right time just as we have shown in the previous section. But this situation has persistent effects.

Next, several Swiss cantons suffered a difficult financial situation throughout the 1990s. To re-balance their finances, various measures were taken and in particular those that would slow down cost increases. With the return of surpluses at the beginning of 2000, it became politically difficult to maintain pressure on costs. This led to the governments accepting a greater increase than usual, in particular in terms of personnel spending, after the accounts reported particularly good results. This “catch-up” effect also occurred at the right time. But this also has persistent effects.

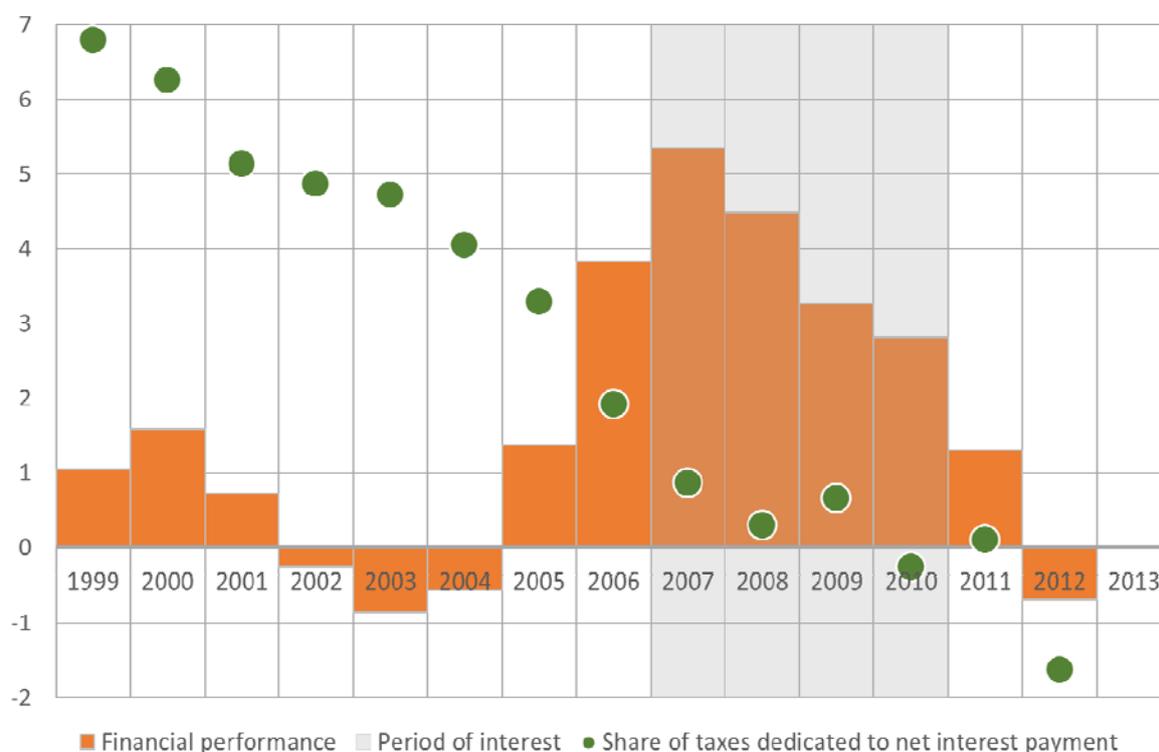
Several cantons thus moved from a situation of significant structural surplus to a situation in which their financial leeway was reduced. As underlined by Unseld (2009), if the cantons demonstrated countercyclical behaviour in 2009, one must not necessarily see here a reaction to the evolution of the business cycle. “A part of additional spending and the majority of tax revenue decreases had been decided as early as 2008”. Decided even though the crisis had not yet appeared, they were a result of the cantons' good financial health and of the sustained growth recorded as of 2004 and up to 2008. Furthermore, in 2005, the cantons were able to significantly reduce their debt thanks

²⁰ The financial performance (in the statement of the financial performance or income statement) is the difference between the revenues and the costs in an accrual accounting perspective according to the IPSAS (International public sector accounting standards). It is equivalent to what is called ‘profit’ or ‘loss’ in the private sector, even if admittedly such wording are not used in the public sector (See also Footnote 2).

to a windfall coming from their participation in revenues coming from the sale of surplus gold from the Swiss National Bank.

Figure 6 also illustrates the improvement of the cantons' situation in terms of indebtedness. The points indicate the net interest payment as a percentage of direct tax receipts. In 1999, all the cantons had to allocate nearly 7% of their tax receipts to interest payments. In 2012, net interest no longer represented a charge but a source of revenue. For all the cantons, net interest represented a revenue equivalent to nearly 2% of all revenue. This shows that the cantons came out of debt up to the point that they no longer had any net debt²¹, but instead net assets. Evidently, the decrease of interest rates also explains the decrease (or rather the disappearance) of the burden of interest.

Figure 6: Financial performance of the 26 cantons (operating deficit or surplus) as a percentage of operating costs and net interest payment as a percentage of direct tax receipts, median values



Source : Soguel & Munier (2014) based on the financial reports published by the cantons.

Overall, after the crisis, the financial situation of the cantons is more fragile than before. A large majority of the cantons took advantage of their cyclical budget surpluses to enter into significant tax competition. In this way they weakened their fiscal structural balance. They also structurally increased their charges, in particular for personnel. Furthermore, at the time of writing, Switzerland's financial industry is experiencing an important transformation of its framework

²¹ Net debt is defined as the difference between gross debt (recorded as a liability on the Balance Sheet) and the assets which are investments and which are not productive capital of public services (recorded as assets on the Balance Sheet).

conditions with the end of banking secrecy, the introduction of an automatic exchange of information with foreign fiscal authorities and the appearance of clean money policies as of 2012.²² Add to this that relations with the European Union have become uncertain since a popular initiative calls into question the free movement of persons. The future will tell what the repercussions will be on taxable profit and taxable income, and as follows on tax receipts.

10 Conclusion and recommendation

This research has shown that the cantons adopted, in reaction to the crisis of 2007-8, a much more countercyclical fiscal policy compared to that taken during previous crises. Certainly the stimulus efforts made were not particularly large. But our analysis shows that the operating expenditure increased during this critical period, while tax receipts generally decreased. This was a result, in large part, of the decisions taken before the beginning of the crisis. The decision to lower the tax burden, in particular, was taken within a context of fairly marked fiscal competition between the cantons. Following this crisis, fiscal competition widely disappeared from the political agenda. On the spending side, just before the crisis the cantonal governments also took remedial measures. Financial performance deteriorated during the crisis and under the effect of the measures taken. Nevertheless, the financial performance was particularly good before this period. Which is why it remained satisfactory after the crisis. Nevertheless, the measures taken before the crisis rendered the cantons' financial equilibrium structurally fragile. Their ability to confront a new crisis and to lead a consistent fiscal policy while respecting their hard budget constraints is now reduced.

Our presentation of the Swiss institutional context shows that the cantons' decentralisation and budgetary autonomy makes it difficult to conduct a coherent macroeconomic policy on the national scale. The solutions adopted to resolve this problem allow us to formulate some recommendations both for a sustainable budgetary policy and a consistent countercyclical fiscal policy to be carried out by sub-national governments in a federal system. Some recommendations stem from the strengths that have been described in this contribution regarding the Swiss institutional framework. Some stem from the potential for institutional improvement that has also been noted.

Automatic stabilisers to be maintained and developed

The cantonal governments should take into consideration the stabilizing or destabilizing effect of the reforms they are considering. Generally, they pay more attention to the allocative and/or redistributive effects. The recent discussions concerning the implementation of a flat rate tax in certain cantons or those concerning the reform of the direct federal tax have not really looked at the loss of stabilizing power. Yet, the cantonal budgets essentially offer a stabilisation in terms of tax receipts and we know that this effect is even stronger when the tax structure is progressive

²² The clean money policy is meant to prevent the protection of privacy offered by the Swiss financial industry from being used for dishonest purposes. It applies to all clients in the system (both Swiss and foreign). It also applies to all financial intermediaries. These latter figures must ensure that their client does not try to avoid his or her fiscal duties. Their behavior will be audited and, in the event of violation, penalised by the regulator.

(OCDE, 1999). Automatic stabilisers also make it possible to throw off the coordination difficulties inherent in a system that grants a huge budgetary autonomy to each institutional level. They alleviate the vertical and horizontal coordination difficulties of fiscal policy that this autonomy engenders. Opposite to discretionary impulses, automatic stabilisers are not subject to delays nor to the political and technical hazards of decision-making and subsequent implementation. This characteristic is evidently valuable in a system in which decisions may be delayed by the mechanisms of direct democracy (referendum) and legal constraints (diverse and varied legal constraints).

System of matching grants to be maintained

Matching grants enable the Confederation to align cantonal objectives with those of the central government. They make it possible to improve vertical and horizontal coordination in terms of expansionary stimulus. Having said that, matching grants must be paid in the form of a lump sum and not as a percentage of the granted expenditure in order to avoid inefficiencies as described in the literature (Boadway & Shah, 2009). Evidently, these grants betray a certain interweaving of responsibilities between the Confederation and the cantons. But in the absence of this kind of tool, the Confederation would not be able to impact the fiscal stance of the cantons.

Fiscal equalisation to be maintained as a way to reduce fiscal stress

Intercantonal fiscal equalisation helps to reduce the fiscal stress of cantons that suffer a comparatively weak financial position, with a comparatively higher tax burden and debt. Therefore, it increases the leeway of these cantons and prevent them from proceeding immediately to a fiscal adjustment in case of a downturn. Actually, in Switzerland, the fiscal equalisation payments and receipts in year t are statistically based on the average of the tax base in the years $t-6$, $t-5$ and $t-4$. Such a time lag is interesting since the flows of cash in the system are potentially countercyclical with the financially strong cantons having to pay more during the economic downturn because their tax base had increased during the preceding economic boom. Evidently, this effect is only potential in the sense that it depends on the fact that the time lag in the system be in phase with that of the business cycle.

Fiscal rules to be made more flexible

Many Swiss cantons are endowed with very strict budget constraints. These rules prohibit deficits no matter the economic situation. For fiscal policy, this much rigidity is problematic. In the cantons with just a structural equilibrium, it is necessary to take fiscal adjustment measures in case of an economic downturn, in order to remediate the loss of tax receipts triggered by automatic stabilisers. For the cantons which want to avoid an always politically painful structural adjustment in these circumstances, this implies maintaining a buffer, in the form of a structural surplus; in other words, to maintain a heavier fiscal burden or a lower level of expenditure than what would be structurally necessary. A way to avoid these adverse effects consists in making cantonal rules more flexible. The federal budget constraint is a good example, with its expenditure ceiling being an arithmetic function of the cyclical economic condition (output gap).

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