Tax Competition and Direct Democracy in Local Public Finance – Empirical Work on Switzerland

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Introduction[2]

The subprime crisis and the current European Union debt crisis have massively increased the fiscal pressure on national governments. Although less noticeable, the crises have also had a significant impact on local public authorities. The reduction in the debt of national and state governments is very likely to imply less transfers to local authorities, or a shift in public expenditure duties to lower level jurisdictions. The challenge that lies ahead for local government is huge, especially since the latter is often the "residual claimant" in public service delivery, and often has limited access to revenue generation, relying heavily on fiscal transfers.

This paper offers an overview of work in two areas of great importance in local public finance: tax competition and direct democracy. Tax competition at the lowest tiers of government might have increased relevance since tax bases are likely to be the most mobile across smaller-scale regions. Both individuals and firms present a higher relocation elasticity if one talks about moving from one municipality to another, rather than, say, from one country to another. Similarly, direct democratic institutions are likely to be most widespread at the local level, quite simply, because they are easier to organize with a smaller number of voters.

The paper concentrates on empirical work using data on Switzerland. The country is often praised as a natural laboratory for exploring the effects of tax competition and direct democracy for a number of reasons. The country is small and fairly homogenous, it consists of three levels of government (federal, cantonal and municipal) all with noteworthy autonomy in tax setting and expenditure decisions. Similarly, direct democratic institutions are widespread and present at all levels of government. The main instruments are the citizen assembly (not present at the federal level), the initiative and the referendum. Furthermore, specific characteristics of these institutions vary widely across and within regions.

The article is not an exhaustive summary of the vast empirical work on Switzerland, but is influenced by my own research. The overarching objective is to discuss how tax competition and direct democracy influence policy decisions at the local level, and more specifically, whether they can be a force for good, making local governments more efficient and bringing policy decisions closer to citizen preferences. Overall, I would say that tax competition is alive and well, and direct democracy works!

The reminder of the article is structured as follows. The next section (*The Local Public Sector in Switzerland: Taxes, Expenditure and Institutions*) gives a short overview of the Swiss institutional context. The following section concentrates on *Tax Competition,* which is followed by a section focusing on *Direct Democracy.* In each section a short overview of the main theoretical elements is presented, followed by a discussion of empirical work. The last section offers some conclusions.

The local public sector in Switzerland: taxes, expenditure and institutions

The local public sector

Switzerland is organized as a federation with three levels of government: federal, cantonal (state) and municipal. There are 26 cantons, and roughly 2,500 municipalities that make up its 41,000 km[2] that are inhabited by just over eight million people. Thus, jurisdictions in Switzerland are small on average, both at the second and

Table 1

Share of expenditure across levels of government (%), 2009			
Expenditure Item	Federal	Cantons	Municipalities
Administration	57	23	20
Defense	91	4	5
Security	10	64	26
Economy	41	38	21
Environment	17	22	61
Social housing	1	17	82
Health	3	84	13
Culture and recreation	8	32	60
Education	9	60	31
Welfare	42	38	20

Source: Swiss Federal Department of Finance (2011).

third tier of government. The country is also characterized by the fact that it leaves a great deal of autonomy to all jurisdictions, both in terms of expenditure and revenues. The shares (for expenditure and revenues) are approximately: 30 percent federal, 40 percent cantons and 30 percent municipalities. These shares have remained remarkably stable over time.

Table 1 presents the share of spending across all levels of government for an array of expenditure items. The largest spending areas (in terms of share of the budget) at the federal level are defense and welfare. Cantons, by contrast, bear the largest shares of spending on health, security and education, while municipalities concentrate spending on the environment, social housing and culture. However, as can also be seen in the table, most areas are spread over all three levels of government.

In terms of revenue generation, cantons and municipalities rely largely on four (shared) tax bases: personal income and wealth, and corporate income and capital, with the first being the largest contributor.[3] It should be noted that municipalities, unlike most local authorities, do not rely much on property taxes, but rather on the (potentially mobile) income and wealth tax bases. Each canton has its own tax laws, defining the sets of tax schedules on these bases. Based on the legally defined basic tax rates, cantonal and municipal authorities autonomously set multipliers that define effectively applied tax rates. Hence, municipalities cannot determine the progressivity of a specific tax, which is defined by

the cantonal tax law; but they can influence the level of taxes via the multiplier.[4]

Political institutions

Direct democracy is a cornerstone political institution in Switzerland. It has a century-old tradition. Probably the purest form of direct democracy is the citizen assembly ("*Landsgemeinde*"). This has been widely used for decision-making at the cantonal level for hundreds of years.[5] Besides the assembly, two main instruments of direct democracy are present at all levels of government: the initiative and the referendum. However, areas of application, conditions and use of these instruments vary widely across and within levels of government.

The citizen initiative allows citizens to bring an issue of interest to a ballot. It is worth noting that only constitutional initiatives are allowed at the federal level, while at lower-level jurisdictions initiatives can also be brought forward on other types of legislation. Whether an initiative is voted upon, generally depends on whether a sufficiently large number of signatures is obtained, or the signature requirement is reached. These thresholds vary between cantons and municipalities and they can be expressed as the number of signatures or percentage of citizens. There is even more variation in terms of referenda. First of all, referenda can be mandatory or optional. If optional, they are again linked to a signature requirement. If mandatory, a referendum can be triggered by an expenditure threshold.

At the sub-federal level the agenda setter for the direct democratic instruments is the canton. Cantonal constitutions define the availability and conditions for all jurisdictions in their constituency. Thus, besides characterizing the direct democratic instruments available for cantonal decisions, they also describe what municipalities can or cannot do. Again there is a

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[3] A video of the evolution of tax rates for all municipalities in Switzerland since 1984 can be found on the website of our research network (http://www.fiscalfederalism.ch/data/video.html, accessed 03 March 2014).

[4] It should be noted that municipalities, with some exceptions, apply the same multiplier across all four tax bases, which is sometimes mandated by the cantonal tax law. In a sense, municipalities can only use one degree of freedom for all four tax bases. This feature is important in some of the empirical research discussed below.

[5] Only two cantons (Appenzell Innerhoden and Glarus) still avail of the "*Landsgemeinde*". The other cantons have abolished them over the last 150 years. However, a citizen assembly is still the highest political institution in many municipalities.

significant degree of variation across and within cantons. For the local authorities, the constitution and subsequent laws can define exactly what instruments are available, which are then applied to all municipalities in the canton. Alternatively, the constitution can establish the rules for the set of instruments available,[6] or it may leave the choice of institutions entirely up to the municipality.

To illustrate the wide variation across jurisdictions of direct democratic instruments, Figure 1 displays, at the cantonal level, the existence of mandatory fiscal referenda both at the canton and municipality (Galletta and Jametti 2012).[7]

Finally, direct democratic institutions not only exist, but they are also frequently used. Table 2 presents statistics on the use of direct democratic instruments across the three levels of government. It is worth noting that the mandatory referendum is the most widely used instrument.

Figure 1

Institutional variation in Switzerland, mandatory fiscal referendum

Ref Can - Ref Mun
Ref Can - Ref Mun / No Ref Mun
Ref Can - No Ref Mun
No Ref Can - Ref Mun
No Ref Can - Ref Mun /No Ref Mun
No Ref Can - No Ref Mun
No Info
Ref = Referendum
Can = Cantonal
Mun = Municipal

Source: Micotti and Bützer (2003).

Table 2

Use of direct democratic instruments			
Instrument	Federal	Cantons	Municipalities*
Initiative	76	354	187
Optional referendum	67	362	337
Mandatory referendum	45	1374	2918
*Based on 91 municipalities for the period 1990-2000			

Source: Micotti and Bützer (2003).
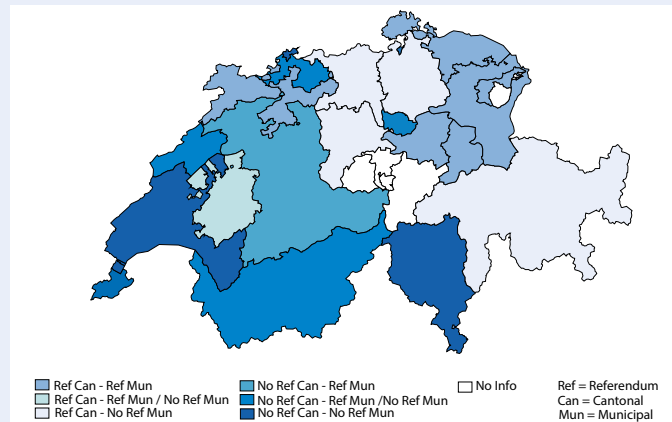
Tax competition

Theory

The standard result of tax competition for mobile tax bases among same-level governments is well established and goes back at least to the seminal formal statements of Wilson (1986) and Zodrow and Mieszkowski (1986): uncoordinated tax setting among governments leads to inefficiently low tax rates and an inequitable shift to immobile tax bases. Each government, despite being benevolent within its own jurisdiction, does not take into account the negative "horizontal" externality that a reduction in taxes implies for other jurisdictions. The result is the frequently cited "race to the bottom" in the taxation of mobile factors. As a result, insufficient

tax revenue implies that public expenditure is suboptimally low, that is, tax competition is welfare reducing. Keen and Kotsogiannis (2002) extend the basic model within a federal context. Besides the well-known horizontal externality, pushing tax rates *below* the social optimum, the authors show that if two levels of government tax the same base, another, "vertical", externality arises. When setting their taxes local (subfederal) authorities do not fully take into account the effect on the (shared) federal tax base, giving them an incentive to set tax rates that are suboptimally *high*. Indeed, if vertical externalities are strong enough, a "race to the top" can be observed in local tax rates. Keen and Kotsogiannis (2004) show that tax competition also reduces welfare in this setting, while Brülhart and Jametti (2006) show that the effect of whichever externality dominates gets stronger as the number of jurisdictions increases. In other words, if the horizontal externality dominates, tax rates decrease with a larger number of jurisdictions (more tax competition); while the inverse is true if the vertical externality dominates. More generally, the existence of vertical externalities might explain why the race to the bottom is not complete. Finally, in a federal context, benevolent upper level government can correct for the externalities if it fully controls vertical transfers and is a

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6 For example, in the canton of Vaud (with capital Lausanne) municipalities with less than 1,000 citizens have an assembly, while larger ones must have a municipal council.
7 The map is based on a sample of around 130 municipalities. Cantons in white are not part of this sample.

Stackelberg-leader (Boadway, Marchand and Vigneault 1998) or if multiple tax bases exist (Hoyt 2001).

As a side note, the theoretical models discussed above imply that taxes are strategic complements, both if there is a race to the bottom or the top. This need not necessarily be the case and is specific to model assumptions. Indeed, de Mooij and Vrijburg (2012) show that taxes can act as strategic substitutes if the public and private goods are sufficiently close complements. We will return to this point later.

Can tax competition be a force for good? The answer is yes, if we depart from the assumption of benevolent governments. Without entering the realm of political economy, Brennan and Buchanan (1980) show that tax competition can be welfare improving if it acts as a restraint on the unfettered appetite of local jurisdictions. In other words, tax competition can tame the Leviathan. Brülhart and Jametti (2007) build a model to characterize precisely these conditions. In their model of a federation, they assume that local jurisdictions present varying objective functions, ranging from more benevolent to more revenue-maximizing functions.[8] If, for more benevolent governments, the above-mentioned vertical externalities dominate, then competition induced reductions in equilibrium tax rates of less-benevolent governments are welfare improving.

Empirical work

The large degree of autonomy enjoyed by sub-federal jurisdictions in taxation (and expenditure) decisions in Switzerland has led to a longstanding tradition of empirical studies. Switzerland is often presented as an "ideal" natural laboratory for analyzing tax competition empirically. Many studies use cantonal data, the first sub-federal layer of jurisdictions,[9] while fewer focus on the effects of tax competition at the municipal level, on which I will concentrate. Feld and Kirchgässner (2001c, 181) find that "tax competition… is relatively strong in Switzerland". Using a cross-section of the 137 largest municipalities in 1990, they analyze the effect of taxes on residence decisions by different classes of taxpayers. They find that taxes have a significant, and expected, impact on residence choices by different income groups. For example, an increase in the tax rate for high-income individuals reduces the share of this income group in the locality, *ceteris paribus*.

Thus, tax competition among local jurisdictions exists in Switzerland, but is this good or bad? A first step in this direction was undertaken by Brülhart and Jametti (2006) using their empirical test to distinguish between horizontal and vertical tax externalities among "benevolent" jurisdictions. As mentioned previously, in the model of Keen and Kotsogiannis (2002), the effect of whichever externality dominates gets stronger as the number of (symmetric) jurisdictions increases. An empirical counterpart of this theoretical measure of tax competition is the relative smallness of municipalities. Brülhart and Jametti (2006) use a pooled cross-section of up to 103 municipalities to explain the level of taxes.[10] They restrict their sample to municipalities with direct democratic participation in the tax setting process, using the assumption that direct democracy brings policy decisions closer to the preferences of citizens (to which we return below). They find that a higher degree of tax competition (a higher degree of smallness) has a positive and significant impact on the level of taxes. Thus taxes increase with more competing jurisdictions, that is, the vertical externality seems to dominate in their dataset, and taxes may be suboptimally *high*.

This is the starting point for their follow-up paper (Brülhart and Jametti 2007) to assess the welfare effects of tax competition. If vertical externalities dominate for relatively benevolent authorities, then the tax reducing effect of competition among less benevolent governments (proxied by municipalities without direct democratic participation in tax setting) is welfare improving. Brülhart and Jametti (2007) find exactly this in a panel dataset of 130 Swiss municipalities.

Finally, Parchet (2014) analyzes whether municipal taxes are strategic substitutes or complements in Switzerland. He proposes a novel identification strategy based on state-level fiscal reforms and focusing on municipalities along cantonal borders. In his sample, tax reaction functions have a negative slope, hence taxes are strategic substitutes.

Direct democracy

Theory

What are the channels through which direct democracy can shape public policy? At the outset, there is little role

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[8] More specifically, local jurisdictions present objective functions with differing linear combinations of utility and revenue maximization.
[9] For example, Feld and Kirchgässner (2003).

[10] More specifically, Brülhart and Jametti (2006) use a "tax-index", i.e. a revenue-weighted average of tax rates from the four tax bases municipalities mainly access. This precisely takes into account the feature mentioned above that many municipalities choose one single multiplier to shift all four tax schedules.

for citizen participation if government is benevolent. In fiscal federalism this is nicely illustrated by the seminal contribution of Tiebout (1956). If citizens are mobile, they can "vote with their feet" and choose the jurisdiction that offers the best bundle of taxes and public services for them. Citizens then sort into communities together with individuals with similar preferences. It should be noted that differences in the level of public expenditure (and corresponding taxes) across jurisdictions are not a subject of concern, since citizens choose what they like best. Similarly, there is a limited role for direct democracy in another cornerstone of the fiscal federalism literature, namely the "Decentralization Theorem" (Oates 1972). This theorem describes the allocation of public goods and services through a trade-off between internalizing inter-jurisdictional spillovers and scale economies and catering to local preferences.

Direct democracy comes into play in situations where politicians are not necessarily benevolent, but pursue their own goals. Politicians' decisions can deviate from citizens' preferences either because politicians seek to maximize their own utility function (Tullock 1980), or because, despite being welfare maximizers, they are not able to fully apprehend constituents' preferences (Matsusaka 1992).

A first strand of the theoretical literature discusses the channel through which direct democratic institutions result in political decisions closer to citizens' preferences. Examples are Romer and Rosenthal (1979) and Gerber (1996). Essentially, direct democracy makes it possible to hold politicians accountable.[11]

The central finding is that government expenditure is usually higher than that wished for by the median voter and is never lower. The gap between median voters' preferences and policy outcome is reduced, but policy makers still have the main role in policy formation. Feld and Kirchgässner (2000) argue how the referendum can positively affect citizens' information and political action. Instead, Kessler (2005) comes to a somewhat different conclusion. She argues that in direct democratic legislation, citizens do not invest in information acquisition because their votes are unlikely to be determinant. Elected representatives thus allow the promotion of more efficient policies.

In essence, most of the theoretical results point to the fact that direct democratic participation of the citizen in the decision-making process brings adopted policies closer to the preferences of voters. Furthermore, since politicians have a tendency to increase public expenditure beyond socially optimal levels, this implies that direct democracy should have a reduced expenditure.

Empirical work

Like in the field of tax competition, Switzerland has also been used extensively to study the effects of direct democratic institutions. Again, I will focus mainly on studies of municipalities. Pommerehne (1978) was one of the first academics to highlight the negative effect of direct democracy on public expenditure. He used data on Swiss municipalities from the year 1970 to show that the availability of a referendum in a municipality reduces (excess) public service provision.

Feld and Kirchgässner (2001a,b) study in detail the outcome of several forms of direct democracy on public policy. Using data on 131 Swiss municipalities in the year 1990 they show that mandatory referendum on budget deficits entails a reduction in public debt, expenditure and revenue. Moreover, using data on 26 Swiss cantons for the period 1986–97, they find that expenditure and revenue are lower in cantons with a mandatory referendum on new spending projects.

Feld et al. (2008) test the hypothesis that decentralization is more likely under direct, rather than representative democracy. They confirm, in line with theory, the hypothesis that direct democracy fosters decentralization, both for expenditure and revenues. Funk and Gathmann (2011) revisit these previous empirical findings, using information on cantonal institutions for the period 1890–2000. In their sample, a mandatory budget referendum (their proxy of direct democracy) does not affect municipal expenditure and decentralization.

One aspect that the abovementioned studies do not consider is the full spectrum of institutions at all levels of governments. Indeed, the large institutional variation in Switzerland implies a potential vertical interaction between direct democratic instruments at the cantonal and municipal levels. Galletta and Jametti (2012), explore this avenue. They test whether the impact of direct democracy at the upper level of government depends on the degree of citizen participation at the local level. They find that cantonal fiscal referenda increase munic-

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[11] For a model of political accountability in a federation (but without the presence of direct democratic institutions) see Joanis (2014) and for an empirical application thereof, see Jametti and Joanis (2011).

ipal public expenditure for localities that do not avail of a referendum, while this expansionary effect is much reduced and statistically significantly different for municipalities that also have a fiscal referendum.

Conclusions

Tax competition and direct democracy play an important role in local public finances in Switzerland. But this is not only relevant for national policy decisions. Indeed, given the small scale of the country and the large institutional variation, Switzerland can help us to understand how tax competition and direct democracy can and should be used to make local governments more efficient in choosing policies that are closer to citizen preferences, for a much wider audience.

This article offers an overview of research in tax competition and direct democracy using data on Switzerland. Both issues have one important aspect in common. They hold local politicians in check. Tax competition might be harmful in that it does not make it possible to provide the optimal level of public services to citizens, but it might also be a force for good if it tames the Leviathan.

Similarly, direct democracy might lead to unwanted outcomes if voters are able to shift the burden of public good provision to minorities,[12] but it does help to hold politicians accountable for their actions.

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[12] On the "common pool" problem of direct democracy, see for example Asatryan et al. (2013).