

# Initiatives, referendums, and the tax state

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**ABSTRACT** This article examines the impact of different forms of direct democracy on the tax state in the Swiss cantons in economically difficult times, i.e. between 1990 and 2000. The analysis distinguishes between the fiscal referendum and the popular initiative, since theoretical arguments suggest that these two instruments of direct citizen participation have contrary effects on the tax state. Specifically, the fiscal referendum is expected to act as a brake on tax interventionism, the popular initiative rather as an accelerator. However, pooled time-series analyses show that the initiative has no bearing on the tax state. What counts is the extent to which citizens are granted the right of fiscal referendum. More precisely, of all the different features of direct citizen participation in fiscal matters, the mandatory referendum turns out to be the most essential.

**KEY WORDS** Comparative public policy; direct democracy; political institutions; public sector; state revenue; Swiss cantons.

## INTRODUCTION

Direct democracy appeals to more and more countries in the world.<sup>1</sup> Of the thirty European states that adopted a new constitution after the fall of the Berlin Wall in 1989, only three provide no rights of direct democracy at all (namely, the Republic of Bosnia and Herzegovina, Serbia and Montenegro, and the Czech Republic). Additionally, several German federal states (*Länder*) established some elements of direct citizen involvement in decision-making at the local level during the 1990s.

The advocates of direct democracy refer in the first place to its integrative strength and its stabilizing influence on the political system (Butler and Ranney 1994; Cronin 1989; Suksi 1993). Furthermore, political research has shown that direct political involvement has a positive impact on citizens' socialization, their level of information and of general satisfaction with life (Stutzer and Frey 2000). Other scientific findings suggest that direct democracy is good for the economy since, for instance, it increases growth (Freitag and Vatter 2000, 2004; Frey 1994; Kirchgässner *et al.* 1999). The benefits of direct democracy

arise from the fact that it engages the government, the administration and the people in an ongoing dialogue. In the absence of direct democracy, elected representatives often deviate from the popular opinion in order to privilege themselves or their wider clientele. In representative systems, the only corrective against a long-term divergence between the interests of governors and governed are periodically recurring elections. Direct democracy, then, provides additional instruments of control and ways to sanction the will of the people.

Nevertheless, others argue that direct democracy is no panacea for economic and social problems (Borner *et al.* 1990, 1994; Olson 1982). On the contrary, they object that direct democracy causes elections to lose importance, makes wealthy organizations likely to constantly win through against underprivileged interests, serves demagogues, and leads to a tyranny of the majority. Direct citizen involvement is also deemed detrimental in economic terms since it slows down the political process, when in fact our fast-moving times demand swift changes. Switzerland is often cited as an illustration of this: it is the unchallenged frontrunner in the use of direct democracy at a national level, but remains in the last third of the Organization of Economic Co-operation and Development (OECD) of states as far as economic performance is concerned.

As to the level of state intervention, the effect of direct democracy is contentious. On the one hand, it has been argued that the more the citizens are directly involved in politics, the lower will be state revenue and expenditure (Feld 1997; Kirchgässner *et al.* 1999; Matsusaka 1995; Pommerehne and Weck-Hannemann 1996; Rueben 1995). Others, however, claim to observe a so-called Robin Hood effect (cf. Downs 1968: 197, 291).<sup>2</sup> This effect arises from the fact that the electorate is assumed to have a stronger preference for redistributive policies than the government. As a consequence, the more the citizens become directly involved in decision-making, the higher taxes and contributions will be (cf. Wagschal 1997: 224). In their investigations, Farnham (1990) and Zax (1989), for instance, find corroboration of this effect of direct democracy in the area of fiscal policy.<sup>3</sup>

This controversy surrounding the effect of direct democracy on the tax state is this article's point of departure. The leading question is: Does direct citizen participation in politics act as a *brake* or rather as an *accelerator* on a state's revenue? The units of our quantitative comparison are the federal states of Switzerland, the so-called cantons. Given their right to levy taxes, it seems justified to treat the cantons as sovereign units. Furthermore, with our quantification and comparison of direct democracy in the Swiss case, we close a research gap in comparative politics (Schmidt 2000a: 350). The large majority of modern industrial states are representative democracies (Butler and Ranney 1994). As a consequence, international comparisons of the effect of direct democracy on public policy are hardly possible. But the Swiss cantons represent a suitable alternative: they are sufficiently large in number, and vary considerably with respect to elements of direct democracy.<sup>4</sup> In particular, the twenty-six Swiss cantons provide an excellent opportunity to test the impact of direct democracy, which represents one of Switzerland's unique institutional arrangements. Against this background, the present analysis of the politico-economic effects

of direct democracy is capable, in addition, of enriching the worldwide discussion on the introduction of direct democratic procedures.

The case of Switzerland is, to a certain extent, exceptional, since it is the country not only with the most active use of direct democracy at national and sub-national levels, but also possesses one of the most decentralized federal systems. Furthermore, Switzerland has been ruled by grand coalition governments since 1959. The country has been said to have 'the most special set of political institutions among European democracies' (Lane 2001: 2). Thus, while specifically in the European context the country represents a special case, there are some interesting patterns of similarities and differences at the sub-national level between Switzerland and the United States (US). On the one hand, the differences concern the government and party system. On the other hand, the Swiss cantons and the states of the US show important parallels, such as strong federalism and direct democracy, and a relatively low degree of state intervention. Against this background, the analysis of the research question on the basis of the Swiss case seems particularly worthwhile.

Our investigation goes beyond the existing literature in three ways. First, by considering a variety of politico-institutional factors, this study adopts a political-scientific approach to a problem that has so far mainly been examined from an economic perspective (Feld and Matsusaka 2003; Kirchgässner *et al.* 1999; Pommerehne and Weck-Hannemann 1996). Methodically speaking, the consideration of these institutional variables (state structure, strength of organized interests) as well as of conditions that are specific to the Swiss context (e.g. urbanization, public debt) reduces the risk of potential misspecifications and produces more robust results. Second, in line with the distinction between 'rules in form' and 'rules in use' made by new concepts of the comparative study of democracy (Rothstein 1996: 146), we differentiate between the formal institutional design of the instruments of direct democracy and the frequency of their actual use in practice. In this vein, the existence of formal rights of direct citizen participation (rules in form) does not necessarily mean that these rights will actually be exercised (rules in use) (Vatter 2002). For example, the number of fiscal referendums, for instance, is highest in the cantons of Basel-Town, Bern, Neuchâtel, and Zurich, even though the formal conditions to launch referendums are more favourable in other cantons. Our findings indicate that the use of direct democracy, measured as the annual number of fiscal referendums, popular initiatives, and popular votes, turns out to be of little significance to fiscal policy, whereas the formal right to launch fiscal referendums has a restrictive influence on all types of taxation, even if other important determinants are taken into account. Third, beyond the combination of several institutional features into an overall index of direct democracy, we enter the components of the index into the regression individually. While the former strategy makes it easy to answer general questions about the consequences of direct democracy, the latter one is of particular policy relevance since policy-makers need to know precisely what institutional features are important. We add to the literature by documenting that direct democracy does

in fact reduce the extent of the tax state, by tracing the cause to the mandatory referendum, and by quantifying the impact of this institution.

The effect of direct democracy on the tax state will be analysed in four steps. The following section provides an overview of the theories and hypotheses that guide the analysis. We then discuss the research design and data, before reporting the results. The central insights will be summarized in the conclusion.

## THEORIES AND HYPOTHESES

There are two dominant lines of thought in the discussion about the influence of direct citizen participation on the degree of state intervention. According to the first position, direct democracy puts the *brakes* on state intervention; according to the second, it acts as an *accelerator*, leading to state expansion (cf. Linder 1999: 251ff.). The crucial factor to solve this puzzle is, to our mind, the *specific form* of direct democracy. Therefore, it becomes necessary to distinguish between the different basic instruments of direct democracy (Hug and Tsebelis 2002; Vatter 2000): Whereas the *referendum* is defined as a vote on a measure adopted by parliament, the *popular initiative* allows citizens to propose a ballot measure, which may be adopted in a popular vote. Popular initiatives are instruments which enable parts of the population to enforce popular votes which can go against the will of parliamentary majorities.

The claim that direct democracy – in particular the referendum – acts as a brake on fiscal policy has been substantiated in various economic studies that are based on the comparison of sub-national units – usually of the US or of Switzerland (Kirchgässner *et al.* 1999; Noam 1980; Rueben 1995). These studies show that, where citizens can participate directly in the process of legislation, government revenue and expenditure as well as budget deficits tend to grow more slowly, and per capita public debt and the tax burden are likely to be lower. Moreover, tax compliance is usually better. These results have been confirmed in the literature regarding the politico-institutional effects of direct democracy on taxes and expenditure (Abromeit and Pommerehne 1992; Matsusaka 1995; Wagschal 1997). Generally, it has been found that direct citizen participation in decision-making by means of the referendum reduces government expenditure or tax levels.

The hypothesis that direct democracy acts as a brake on state intervention is founded on the veto player theorem, which basically states that autonomous institutions are, in effect, constitutional veto players which stand in the way of the government's attempt to apply the principle of majority rule (cf. Tsebelis 2002). Accordingly, the possibility of a *referendum* introduces an additional veto player: the population (Hug and Tsebelis 2002: 466; Tsebelis 2002: 116). As a result it makes significant policy changes more difficult. In particular, for policies that are the object of required referendums, the status quo can only be changed if the change is preferred by the new veto player, namely the people. Thus, any new policy has to belong to the win-set of the status quo as defined by the voters' preferences. In most cases this win-set corresponds to the set of policies preferred by a

simple majority of the voters to the status quo (Hug and Tsebelis 2002). Also, the veto player theorem was originally meant to explain differences in the rate of policy change; it can be applied to the extent of public intervention in general: if the central government and the parliamentary majority have to take account of many veto players, policy reforms are more likely to be blocked or delayed and, as a consequence, the level of state intervention will be lower.

From a theoretical point of view, the thesis that extensive use of referendums curbs state intervention is backed up by a number of arguments (cf. Vatter and Freitag 2002; Wagschal 1997). First, the institutionalized possibility of launching a referendum is a powerful veto instrument against political decision-makers who try to apply fiscal stimuli for re-election purposes. In this way, direct democracy helps to solve the principal–agent problem (Freitag and Vatter 2000: 584f.; Noam 1980). In representative democracies, this problem is mitigated by periodically recurring elections which prevent a long-term interest divergence. In direct democracies, referendums constitute additional instruments of popular control; the principal is better able to sanction the agent than in a representative system. Referendum votes thus reduce the discretion of political decision-makers in the period between elections, and help to break up self-interest orientated political cartels (cf. Frey 1994: 340ff.).

Second, the social discount rate of political decision-makers is usually higher than that of the electorate. This is to say that politicians have a limited time horizon and a strong preference for short-term objectives, whereas the electorate focuses on the long run and tends to reject expensive short-term policy options (Vatter and Freitag 2002).

Third, direct democracy entails that, in general, voters have a good knowledge of the costs and benefits of a project (Kirchgässner *et al.* 1999). If the costs correspond to the benefits, proposals have a reasonable chance of passing the vote. Conversely, projects involving uneven redistribution and high expenses are likely to be voted down.

Fourth, research has shown that the right to launch a referendum creates a status quo bias (cf. Kirchgässner *et al.* 1999; Steunenberg 1992; Vatter and Freitag 2002). This is due to the fact that voters are familiar with the current state of affairs, whereas the decision for a new, little known alternative entails insecurity. Therefore, risk-averse citizens vote for the status quo, thereby avoiding potential future losses.

The above arguments contradict Downs (1968: 197, 291) who maintains that the majority of the electorate has strong redistributive preferences and that, as a consequence, democratic governments are inclined to redistribute income from rich to poor. In the presence of this so-called Robin Hood effect, more direct democracy would lead to higher taxes and contributions (Wagschal 1997: 224). This expansive character of direct citizen participation is attributed mainly to *popular initiatives*, which demand a change of the status quo. First, the initiatives cause change directly: their demands need to be met by the government if they are accepted. On the other hand, they cause change indirectly: often, initiatives are a form of political pressure, triggering

the submission of a counter-proposal from the government or the parliament. The counter-proposals usually address the concern raised by the popular initiative, while meeting the demands only to a certain degree. Still, the government has to become active (Linder 1999: 260). With regard to the tax state, the direct effect of popular initiatives implies a tax rise because – according to Downs (1968) – voters tend to approve initiatives demanding such tax increases. The indirect effects on the tax state arise from the fact that initiatives are often used to commit the state to assume new responsibilities, implying higher taxes in order to fund the policy expansion. Thus, the initiative is an instrument of political innovation. In contrast, referendums – no matter whether mandatory or optional – are basically about preventing the adoption of a new policy.

The Robin Hood effect is backed up by the fact that the income distribution is typically skewed to the right, meaning that the median voter's income is below the average. This is why redistribution of income through popular votes, in which the majority decides, is to be expected (Wagschal and Obinger 2000: 469). Accordingly, there exist several empirical studies which highlight the expansive effect of direct democracy – mostly of the popular initiative – on fiscal policy (Farnham 1990; Zax 1989).

All in all, it becomes clear that statements about how direct citizen involvement affects the degree of state intervention depend on the instruments of direct democracy considered; while under the terms of the veto player theory, referendums introduce an additional veto player into the political game and thus diminish the potential for policy change. On the other hand, the specific qualities of the popular initiative make a policy change more likely in the latter case. In the veto player logic this comes about because the power to set the agenda in popular initiatives is vested in an actor who is not a veto player in the normal legislative game, namely the voter (Hug and Tsebelis 2002). If citizens can submit their own policy proposals and trigger a popular vote, they cancel out the powers of existing veto players, and thus increase the potential for policy change. As a result, it moves policy outcomes closer to the preferences of the median voter. Given that the median voter has redistributive fiscal preferences (Farnham 1990; Zax 1989), the use of popular initiative results in a higher degree of state intervention. Thus, the leading hypothesis of our empirical analysis is that these instruments have contrary effects on a state's revenue: direct citizen participation by means of the referendum contains the tax state, whereas the use of the popular initiative has an expansive effect. The direction of the overall impact of direct democracy on fiscal policy is, thus, an empirical question, which is to be addressed in the remainder of this article.

## RESEARCH DESIGN AND DATA

The influence of direct democracy on the tax state will be analysed for the period from 1990 to 2000. The reason for the choice of this period is that, at the beginning of the 1990s, Switzerland fell into a deep recession (Freitag 2000). Average annual growth was only half as much in the 1990s as that between 1983 and

1990. In this time left-wing as well as right-wing parties and interest groups started using the instruments of direct democracy to impel the state to adopt policies which were in the interest of their clientele (Vatter 2002: 284).

Our investigation is based on an analysis of the influence of direct democracy on the tax state in twenty-five Swiss cantons.<sup>5</sup> By comparing different political systems on a sub-national level, we avoid a central problem of international comparative research. Comparisons of nation states are obliged to take account of specific political forms and regulations, as well as of particular institutional contexts. In contrast, it is potentially less difficult to create *ceteris paribus* conditions for a systematic comparison of cantonal systems. Since the Swiss cantons are units within the same national political framework, they have many characteristics in common that can be treated as constants. Furthermore, the cantons are ideally suited for a systematic empirical comparison because they meet the requirements of the most-similar cases design (Przeworski and Teune 1970): on the one hand, they show a substantial degree of similarity with respect to consolidated structural elements; on the other hand, they reveal a significant degree of variation with respect to the institutions of direct democracy, the use of these institutions, and the characteristics of the tax state.

We use pooled cross-section time-series analyses. In recent years, considerable attention has been paid to mitigating the statistical problems of ordinary least squares (OLS) regressions on the basis of panel data. We apply panel-corrected standard errors and perform Prais-Winsten transformations to deal with heteroscedasticity and autocorrelation (Beck and Katz 1995; Kittel 1999).<sup>6</sup>

The estimated influence of direct democracy on the tax state depends largely on the indicators used to measure these two variables. We take a comprehensive approach and define a range of indicators for each.<sup>7</sup> The *dependent variable* is the tax state. It will first be measured by the index of total taxation, which represents the tax burden imposed on natural persons, legal entities, and objects – such as motor vehicles – by the canton and the municipalities. We will use two sub-indexes that refer, respectively, to certain objects (wealth) and certain subjects of taxation (natural persons). Furthermore, the state's revenue is usually characterized by per capita tax yields.

The *independent variable* of interest is direct democracy.<sup>8</sup> This will likewise be measured by a number of indicators, as presented in Table 1.

First, the formal institutions of direct democracy will be measured with the index of fiscal referendums developed by Stutzer (1999) and Stutzer and Frey (2000: 25). This index measures the barriers which citizens face in influencing fiscal matters. The height of the barriers is analysed in terms of the legal standards concerning the collection of signatures and the minimum amount of expenditure, which can be challenged by a fiscal referendum. The index consists of the non-weighted average of the restriction ratings, which were evaluated on a six-point scale where '1' represents a high and '6' a low barrier. The index measures the right to direct citizen participation in fiscal matters in the Swiss cantons in the 1990s. The main advantage of this multiple-item measure is the high degree of comparability it enables between the Swiss cantons (cf. Stutzer and Frey 2000). Moreover, to capture the effect of the popular initiative, our analyses include a variable measuring

Table 1 Direct democracy in the Swiss cantons

<i>Canton</i>	<i>Index of fiscal referendum 1990–2000</i>	<i>Type of referendum 1996</i>	<i>Spending threshold for mandatory referendums 1996 (in CHF)</i>	<i>Time span for signature collection for optional fiscal referendum 1996 (in days)</i>	<i>No. of signatures required for legislative initiative 1996</i>	<i>Annual no. of fiscal referendums 1990–2000</i>	<i>Annual no. of popular initiatives 1990–2000</i>	<i>Initiative signature requirement (% of population)</i>	<i>Annual no. of popular votes 1990–2000</i>
Zurich (ZH)	4.00	M, O	20,000,000	45	10,000	1.45	2.91	1.31	13.82
Berne (BE)	4.43	O	–	90	15,000	1.73	1.09	2.19	4.18
Lucerne (LU)	4.14	M, O	25,000,000	60	4,000	0.73	0.82	1.80	3.73
Uri (UR)	4.77	M, O	1,000,000	90	300	1.27	0.45	1.20	5.64
Schwyz (SZ)	4.49	M	250,000	30	2,000	0.27	0.09	2.62	4.00
Obwald (OW)	5.00	M	1,000,000	30	1	0.27	0.09	0.00	3.18
Nidwald (NW)	5.00	M, O	250,000	60	1	1.45	0.18	0.00	7.27
Glarus (GL)	4.00	M	500,000	90	1	0.91	–	0.00	6.18
Zug (ZG)	4.00	O	–	60	2,000	0.36	0.18	3.48	3.00
Fribourg (FR)	2.34	M	1% of budget	90	6,000	0.73	0.36	4.15	2.00



Solothurn (SO)	5.45	M, O	2,000,000	90	3,000	0.82	0.36	1.87	8.64
Basel City (BS)	4.25	O	–	42	4,000	1.64	1.64	3.05	5.36
Basel Land (BL)	4.75	O	–	56	1,500	1.55	1.09	0.93	9.91
Schaffhausen (SH)	4.73	M, O	1,000,000	60	1,000	1.64	0.82	2.06	8.55
Appenzell OR (AR)	4.00	M	5% of budget	90	1	0.55	0.00	0.18	5.45
Appenzell IR (AI)	3.00	M, O	500,000	30	1	1.55	0.00	0.01	7.45
St Gall (SG)	3.59	M, O	10,000,000	30	4,000	0.73	0.45	1.45	4.27
Grisons (GR)	4.00	M, O	5,000,000	90	3,000	0.91	0.18	2.47	8.27
Aargau (AG)	4.50	O	–	90	3,000	0.27	0.91	0.90	5.73
Thurgau (TG)	4.73	M, O	3,000,000	90	4,000	1.27	0.36	3.01	3.09
Ticino (TI)	2.75	O	–	30	7,000	0.27	0.91	3.81	2.00
Vaud (VD)	3.00	–	–	40	12,000	0.45	0.91	3.37	2.45
Valais (VS)	1.00	O	–	90	4,000	0.18	0.00	4.67	3.09
Neuchâtel (NE)	1.61	M, O	1.5% of budget	40	6,000	0.82	0.18	5.84	2.45
Geneva (GE)	1.00	O	–	40	10,000	0.55	1.73	4.99	5.27
Jura (JU)	2.61	M, O	5% of budget	60	2,000	0.27	0.18	4.28	1.09

Notes: 'M' and 'O' denote availability of mandatory and optional referendum, respectively. Where decisions are taken by people's assemblies (*Landsgemeinden*), an initiative is defined as a people's vote on a proposal. This table is derived from data by Trechsel and Serdült (1999).

the signature requirement to launch legislative initiatives. The smaller the number of signatures needed relative to the size of the population, the larger ought to be the tax state. Furthermore, the measures of direct democracy refer not only to the formal institutions, but also to their use. The corresponding indicators are the annual number of fiscal referendums, popular initiatives, and popular votes in general.

Beside these indicators of direct democracy, a number of control variables are incorporated in the multiple regressions. The control variables include the ones used in economic approaches or in international comparative politics (cf. Schmidt 2000b). According to institutionalism, the structure of the state is important. Therefore, the degree of decentralization of the decision-making structures in a canton is taken into account. It is measured by an indicator of local autonomy based on a survey by Ladner (1994), in which senior local officials in a total of 1,856 municipalities said how they perceived their local autonomy on a ten-point scale, with '1' indicating 'no autonomy at all' and '10' meaning 'very large degree of autonomy'. Furthermore, in line with the theory of power resources of organized interests, the organizational strength of the trade unions in the cantons is included in the analysis. The partisan approach stresses the importance of the party composition of the government. This is why executive representation of left-wing parties (Social Democrats and Greens) and right-wing parties (Free Democrats and Swiss People's Party), respectively, is added to the analysis. According to the hypothesis of socio-economic determination, the following variables are central and are, therefore, included in the estimations: the degree of urbanization (share of inhabitants living in urban areas), the unemployment rate, economic wealth per capita, the proportion of the population aged over 64, and the intensity of tax competition. Moreover, in line with the theory of policy heritage, path dependency of fiscal policy is taken into account by incorporating public debt per capita. Finally, as is common practice in studies concerning Switzerland, we control for the language group.<sup>9</sup>

## EMPIRICAL RESULTS

This section presents the results of the empirical test of the hypotheses regarding the fiscal manifestations of direct democracy, namely of the fiscal referendum and the popular initiative. The inclusion of various control variables serves to determine the robustness of the influence of the relevant variables of direct citizen participation. This is crucial because, from a theoretical perspective, the number of independent variables that potentially explain public policy is large, and estimated results critically depend on the choice of the predictors. Furthermore, including a large number of variables allows us to identify additional conditions for state intervention in the cantons. Table 2 shows the impact of the predictor variables on the extent of the tax state, measured in five different ways. All the models are based on pooled cross-sectional time-series for the period from 1990 to 2000.<sup>10</sup>

First and foremost, the multiple regression analysis clarifies the strength and direction of the impact of the different instruments of direct democracy.<sup>11</sup> As far as the fiscal referendum is concerned, the expected effects can actually be observed

Table 2 Pooled cross-sectional time-series analysis of the tax state in the Swiss cantons (1990–2000)

Variable	Model I Index of total taxation	Model II Index of personal taxation	Model III Index of taxation of wealth	Model IV Tax revenue per capita (log)	Model V Tax revenue per capita
Index of Fiscal Referendum <sub>t-1</sub>	-2.63 (0.80)**	-3.19 (0.87)**	-12.90 (5.37)*	-0.11 (0.06)	-132.54 (50.51)**
Annual Number of Fiscal Referendums <sub>t-1</sub>	-0.02 (0.27)	0.04 (0.33)	0.58 (0.96)	-0.01 (0.03)	-7.83 (15.04)
Initiative Signature Requirement (% of population)	-1.34 (0.77)	-1.47 (0.87)	1.38 (2.17)	-0.01 (0.10)	29.54 (58.51)
Annual Number of Popular Initiatives <sub>t-1</sub>	0.38 (0.26)	0.46 (0.30)	0.53 (0.85)	0.03 (0.03)	20.52 (21.05)
Annual Number of Popular Votes <sub>t-1</sub>	-0.21 (0.10)*	-0.28 (0.12)*	-0.76 (0.49)	0.01 (0.01)	7.09 (6.76)
Strength of Left-wing Parties in Government <sub>t-1</sub>	-0.13 (0.07)*	0.17 (0.08)*	0.04 (0.24)	-0.07 (0.50)	-5.74 (3.65)
Strength of Right-wing Parties in Government <sub>t-1</sub>	0.07 (0.04)	0.05 (0.05)	-0.41 (0.14)**	0.14 (0.04)**	8.92 (2.76)**
Strength of Trade Unions <sub>t-1</sub>	0.79 (0.25)*	0.85 (0.30)**	-0.68 (0.75)	-0.01 (0.02)	-6.44 (11.31)
Decentralization	-3.67 (1.31)**	-4.31 (1.59)**	7.75 (6.88)	-0.06 (0.01)**	-470.88 (78.41)**
Intensity of Tax Competition <sub>t-1</sub> <sup>a</sup>	0.14 (0.07)*	0.11 (0.08)*	0.40 (0.33)	-0.26 (0.08)**	-18.07 (5.06)**
Unemployment Rate <sub>t-1</sub>	-0.71 (1.03)	-0.52 (1.26)	0.84 (4.15)	0.01 (0.02)	-70.27 (88.42)
Share of Population Aged over 64 (log) <sub>t-1</sub>	0.76 (7.11)	-4.98 (8.46)	-5.86 (29.32)	0.17 (0.09)	1108.97 (529.09)*
Economic Wealth (log) <sub>t-1</sub>	-34.49 (5.72)**	-38.08 (6.83)**	-85.50 (23.42)**	0.49 (0.07)**	3202.12 (388.25)**
Public Debt per Capita (log) <sub>t-1</sub>	10.51 (2.25)**	11.52 (2.78)**	18.30 (10.21)	0.12 (0.02)**	858.00 (106.14)**
Urbanization	-0.21 (0.04)**	-0.24 (0.05)**	-0.01 (0.15)	0.17 (0.05)**	8.01 (2.97)**
Language region	0.01 (0.05)	0.04 (0.06)	-0.07 (0.21)	-0.22 (0.05)**	-11.83 (3.08)**
Constant	396.14**	420.81**	845.46**	3.23**	28772.32**
$\rho(e_{t-1})$	0.61	0.63	0.68	0.66	0.70
R <sup>2</sup>	0.88	0.84	0.46	0.99	0.84
N	275	275	275	275	275

Notes: Non-standardized regression coefficients with panel-corrected standard errors in parentheses; \* = significant on the 5 per cent level (two-tailed test); \*\* = significant on the 1 per cent level (two-tailed test). <sup>a</sup> Models II and III refer, respectively, to average taxation of income and wealth.

in most of the regression analyses: the index of fiscal referendums reveals a strong negative influence on the tax state, although the annual number of fiscal referendums lacks any significant relationship to it. Nor are the attributes of the popular initiatives significantly associated with the extent of the tax state. Overall, it can be said that the formal right to referendum actually acts as a brake on the tax state, but that the popular initiative fails to function as an accelerator.

Second, the use of direct democracy, measured by the annual number of fiscal referendums, popular initiatives, and popular votes, turns out to be of little significance to fiscal policy. The annual number of popular votes has a slightly negative influence on the tax state, but only as far as the index of total taxation and the index of personal taxation are concerned. Rather, it is the formal right to launch fiscal referendums that has a restrictive influence on all types of taxation, even if other important determinants are taken into account. In other words: the more difficult it is to launch a fiscal referendum, the larger will be the extent of state intervention in fiscal policy.

Third, of the other institutional variables, only the degree of organizational decentralization has an impact on the state's revenue. Taxation is significantly lower in cantons with autonomous municipalities than in highly centralized ones. The share of left-wing parties in the government does not substantially influence the tax state, while a higher share of right-wing parties tends to reduce taxation of wealth, as expected. Results concerning the trade unions are mixed. The strength of the trade unions lacks any significant influence on the taxation of wealth or on tax revenue, but it seems that in cantons where the trade unions are strong, the personal and total tax load is higher.

Fourth, certain socio-economic factors have a considerable impact on the tax state. Economic wealth in particular increases tax revenue and reduces the tax burden substantially, as does urbanization.<sup>12</sup> Strong tax competition between the cantons also has these effects.<sup>13</sup> Furthermore, policy heritage seems also to matter: cantons with large public debt are characterized by a heavy tax load, but also by above-average tax revenue. Moreover, the hypothesized language effect can actually be confirmed in two regression models. Compared to the German-speaking cantons, the French- and Italian-speaking cantons have been shown to hold different opinions regarding the degree of state intervention (Kriesi *et al.* 1996). Whereas people in the French-speaking cantons and in Ticino, for example, tend to believe that the state has a responsibility to guarantee the welfare of individual citizens, people in German-speaking cantons typically think, in a more liberal vein, that this is more a matter for individuals, their families and relatives. These values are reflected, for example, in the broader acceptance of referendum issues regarding the extension of the welfare state in the French-speaking cantons (Knüsel 1994). Finally, the unemployment rate does not affect the tax state in any systematic or robust way.<sup>14</sup>

While Table 2, as a first step, provides a general overview of the empirical results regarding the tax state based on a large number of measurement variables, the analyses in Table 3 are intended to provide concrete indications, in terms of institutional engineering, of the policy effects of the individual direct democratic

Table 3 Pooled cross-sectional time-series analysis of tax revenue per capita in the Swiss cantons (1990–2000)

<i>Variable</i>	<i>Model I</i>	<i>Model II</i>	<i>Model III</i>	<i>Model IV</i>
Mandatory Fiscal Referendum	−805.70 (201.13)**	−1209.19 (122.42)**	−857.99 (131.78)**	−366.02 (124.64)**
Spending Threshold	−4.72 (0.70)**	−3.64 (0.36)**	−2.95 (0.69)**	−2.28 (0.58)**
Time Span for Signature Collection	−16.81 (4.54)**	−15.89 (2.78)**	−11.65 (2.98)**	−3.14 (2.17)
Initiative Signature Requirement (% of population)	560.50 (69.45)**	515.19 (33.71)**	365.01 (47.71)**	100.66 (65.14)
Annual Number of Fiscal Referendums <sub>t−1</sub>	−	−21.11 (23.60)	−19.31 (19.88)	−9.11 (14.21)
Annual Number of Popular Initiatives <sub>t−1</sub>	−	31.90 (37.94)	16.23 (34.24)	20.63 (20.73)
Annual Number of Popular Votes <sub>t−1</sub>	−	20.24 (9.98)*	16.29 (8.68)	8.23 (6.64)
Strength of Left-wing Parties in Government <sub>t−1</sub>	−	−	3.00 (4.72)	−7.87 (3.76)*
Strength of Right-wing Parties in Government <sub>t−1</sub>	−	−	16.86 (3.49)**	8.42 (2.33)**
Strength of Trade Unions <sub>t−1</sub>	−	−	−39.75 (14.21)**	2.65 (11.71)
Decentralization	−	−	−766.24 (93.46)**	−462.86 (78.81)**
Intensity of Tax Competition <sub>t−1</sub> <sup>a</sup>	−	−	−	−21.49 (5.47)**
Unemployment Rate <sub>t−1</sub>	−	−	−	−80.26 (88.44)
Share of Population Aged over 64 <sub>t−1</sub>	−	−	−	1062.74 (513.39)*
Economic Wealth <sub>t−1</sub>	−	−	−	3053.29 (377.58)**
Public Debt per Capita (log) <sub>t−1</sub>	−	−	−	856.20 (104.15)**
Urbanization	−	−	−	1.76 (2.74)
Language region	−	−	−	−14.62 (3.34)**
Constant	5948.43**	6117.46**	9930.92**	26568.08**
$\rho$ ( $e_{t-1}$ )	0.88	0.70	0.74	0.68
R <sup>2</sup>	0.62	0.61	0.69	0.86
N	275	275	275	275

Notes: see Table 2.

institutions and instruments. Therefore, in the second step of the empirical analysis, the impact of the different instruments of direct democracy is analysed in greater detail. For this purpose, the different barriers that had been subsumed under the index are evaluated individually. This allows us to test whether the tax state is actually smaller in the cantons where mandatory fiscal referendums are held, where people are given more time to collect the signatures to launch an optional fiscal referendum, and where the spending threshold, which triggers a mandatory referendum, is relatively low.<sup>15</sup> Because policy-makers do not work with indexes, the empirical analysis concentrates on tax revenue as the dependent variable. We estimated four different models (see Table 3). The first model is confined to the four individual components of direct citizen participation in fiscal matters, as mentioned above. The second equation adds the indicators for the use of direct democracy. The third model inserts the politico-institutional control variables, while the fourth estimation also includes the socio-economic variables.

The results in Table 3 clearly demonstrate that the mandatory referendum is the most essential feature of direct citizen participation in fiscal matters. The impact of this instrument is significant in all the models and holds up well to the inclusion of control variables. Stated clearly: in cantons with mandatory fiscal referendums, the tax state is definitely more confined than in other member states.<sup>16</sup> According to the estimations, and everything else being equal, per capita tax revenue in cantons with mandatory referendums is between 366 and 1,209 Swiss francs lower than in cantons which lack such an instrument. Furthermore, as the spending threshold declines, the tax state expands. This result reflects the effect of the existence of the mandatory referendum, since the value for the spending threshold was set to zero for the cantons that only have optional referendums. On the other hand, the impact of the legally permitted time span to collect the signatures to launch an optional fiscal referendum vanishes when other factors are controlled. The same is true for the influence of legislative initiatives; there is no systematic relationship between the signature requirement to launch these and the size of the tax state when other factors are taken into account. In other words: the results fail to support the Robin Hood effect. On the contrary, as the signature requirement declines and, consequently, as it becomes easier to make use of initiatives, tax revenue diminishes instead of increasing. Overall, it can, thus, generally be said that the institutions of direct democracy tend to restrain the tax state. However, the results attained apply specifically to the chosen period (1990–2000), which was characterized by an economic recession, and therefore the results should not be generalized for other phases of economic development.<sup>17</sup>

## CONCLUSION

This analysis started off with the hypothesis that different instruments of direct democracy have contrary effects on the tax state. What evidence is there to support this with respect to the Swiss cantons in the 1990s?

First, our empirical findings confirm for a phase of economic recession that direct democracy acts as a brake on the revenue side of a government's budget. The mandatory fiscal referendum, in particular, turned out to be an effective

barrier. The curbing fiscal effect of referendums is mainly produced by the direct or indirect threat they represent. This is to say that costly proposals to the benefit of narrow social groups are either not put to the vote in anticipation of their defeat or, if they are, tend to fall through in referendums because of the fiscally conservative preferences of the majority of the electorate (Peltzman 1992).

Second, our results fail to provide corroboration of the Robin Hood effect. There seems to be no systematic relationship between the signature requirement for initiatives or their use and the tax state in the Swiss cantons. The reason for this lies in the high degree of polarization between left- and right-wing parties within the Swiss party system, which leads to the fact that initiatives which are launched go in opposite directions. In line with social democratic views, left-wing parties try to impose a heavier fiscal burden on high-income taxpayers by means of tax increase initiatives; bourgeois parties, on the other hand, launch tax cut initiatives to reduce state intervention, given that low tax rates entail low public expenditure.<sup>18</sup> In the end, the effects of the opposing requests neutralize one another.

Third, the estimations show that the vertical division of power constitutes an additional institutional veto player, besides the fiscal referendum, which seems to contain the tax state. The degree of fiscal intervention is significantly higher in cantons with comparatively more centralized state structures than in member states where the municipalities are largely autonomous. In the latter case, the municipalities are better able to make use of their considerable fiscal powers, thereby restricting cantonal fiscal intervention. Furthermore, the relationship between municipal autonomy and the extent of the tax state could be related to intra-cantonal tax competition or indicate that the decentralized provision of public services is more effective.

Fourth, the empirical test discloses the significance of socio-economic factors. The degree of urbanization, economic wealth, the intensity of tax competition, and cantonal public debt turn out to be of particular importance. It seems that the economic power of urban centres overcompensates their extra expenses for cultural and social infrastructure. In other words: in economically successful urban cantons, tax revenue is high and the fiscal burden low compared to highly indebted cantons with a less developed infrastructure.

In summary, institutional veto points, such as the right to referendum and local autonomy, fetter the tax state. The extent of the tax state is larger in more representative cantonal democracies with centralized decision-making structures than in cantons with strong instruments of direct democracy and a high degree of local autonomy. However, the effects of direct democracy need to be differentiated: the right of fiscal referendum has a strong curbing effect on the tax state which is rooted in the direct or indirect threat to make use of it. Conversely, the popular initiative fails to prove its postulated expansive effect. In other words: granting the right to referendum is enough to create an effective institutional brake to tame the leviathan, but there is just as little evidence for the Robin Hood effect as there is for the legendary hero of the robber of Sherwood Forest.

## APPENDIX: VARIABLES, OPERATIONALIZATION, AND DATA SOURCES

<i>Variable</i>	<i>Operationalization</i>	<i>Data source</i>	<i>Expected direction of effect</i>
<b>Variables of the Tax State (Dependent Variables)</b>			
Tax Revenue per Capita	Per capita revenue of cantons and municipalities from the taxation of income, wealth, and expenses (in CHF)	Swiss Federal Finance Administration (several volumes)	–
Index of Total Taxation	Burden of personal and corporate taxation in the cantons and their municipalities	Swiss Federal Tax Administration (several volumes)	–
Index of Personal Taxation	Burden of personal taxation (income and wealth) in the cantons and their municipalities	Swiss Federal Tax Administration (several volumes)	–
Index of Taxation of Wealth	Burden of taxation of wealth in the cantons and their municipalities	Swiss Federal Tax Administration (several volumes)	–
<b>Variables of Direct Democracy</b>			
Index of Fiscal Referendum	Composite index of the right of fiscal referendum (various years)	Stutzer (1999) and Stutzer and Frey (2000)	The easier it is to launch a fiscal referendum, the smaller will be the tax state (–)
Mandatory Fiscal Referendum	Dummy variable with ‘1’ denoting the existence of mandatory referendum	Stutzer (1999) and Stutzer and Frey (2000)	The existence of a mandatory referendum is expected to curb the tax state (–)



Time Span for Signature Collection	Legally permitted time span to collect signatures to launch an optional fiscal referendum	Stutzer (1999) and Stutzer and Frey (2000)	The more time is available to collect signatures to launch an optional referendum, the smaller will be the tax state (-)
Spending Threshold	Spending threshold for mandatory referendum in per capita terms (in CHF)	Stutzer (1999) and Stutzer and Frey (2000)	The higher the spending threshold, which triggers a mandatory referendum, the larger will be the tax state (+)
Annual Number of Fiscal Referendums	Annual number of fiscal referendums held in a canton	Année Politique Suisse (several volumes), Moser (1983 ff.)	The more often the instrument of fiscal referendum is used, the smaller will be the tax state (-)
Annual Number of Popular Votes	Annual number of popular votes (initiatives, mandatory and optional referendums) held in a canton	Année Politique Suisse (several volumes), Moser (1983 ff.)	The more often the instruments of direct democracy are used, the smaller will be the tax state (-)
Initiative Signature Requirement (% of population)	Number of signatures required to launch a legislative initiative relative to the population size	Stutzer (1999) and Stutzer and Frey (2000)	The smaller the number of signatures required to launch an initiative, the larger will be the tax state (-)
Annual Number of Popular Initiatives	Annual number of popular initiatives held in a canton (including initiatives with counter-proposals)	Année Politique Suisse (several volumes), Moser (1983 ff.)	The more often the instrument of popular initiative is used, the larger will be the tax state (+)

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(Table continued)

Continued

<i>Variable</i>	<i>Operationalization</i>	<i>Data source</i>	<i>Expected direction of effect</i>
<b>Control Variables</b>			
Decentralization	Degree of municipal autonomy in a canton	Ladner (1994) with the new value of 3.0 for the canton of Basel City (confirmed by the author)	The more a canton's organization is decentralized, the smaller will be the tax state (-)
Strength of Left-wing Parties in Government	Seat share of left-wing parties (Social Democrats, Green Party) in the cantonal government	Année Politique Suisse (various volumes)	The stronger the left-wing parties in a canton, the larger will be the tax state (+)
Strength of Right-wing Parties in Government	Seat share of right-wing parties (People's Party, Radicals) in the cantonal government	Année Politique Suisse (various volumes)	The stronger the right-wing and liberal parties in a canton, the smaller will be the tax state (+)
Share of Population Aged Over 64	Share of over-64-year-olds in the resident population of a canton	Swiss Federal Statistical Office	The larger the share of the elderly, the larger will be the tax state (+)
Strength of Trade Unions	Trade union members as a percentage of the economically active population	Our own computations on the basis of data from the Swiss federation of trade unions and the BAK Basel Economics	The stronger the trade unions, the larger will be the tax state (+)
Degree of Urbanization	Share of inhabitants in urban areas	Our own computations	Indeterminate, as contrary effects are possible: economic potential vs. extra expenses of urban areas (+/-)

Economic Wealth	Real per capita GDP of a canton	Swiss Federal Statistical Office	The wealthier a canton, the higher will be tax revenue per capita (+) and the lower will be the tax burden (-)
Unemployment Rate	Share of unemployed people in the economically active population	State Secretariat for Economic Affairs	The higher the unemployment rate, the higher will be the tax burden (+) (the influence on tax revenue per capita is indeterminate)
Public Debt per Capita	Cantonal public debt per capita (in CHF)	Federal Finance Administration (several volumes)	The higher a canton's public debt, the larger will be the tax state (+)
Intensity of Tax Competition	Average taxation in neighbouring cantons	Our own computations on the basis of data from the Swiss Federal Tax Administration	The stronger the tax competition between the cantons, the smaller will be the tax state (+)
Language Region	Percentage of German-speaking inhabitants	Swiss Federal Statistical Office	The higher the share of German speakers in a canton's population, the smaller will be the tax state (-)

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## NOTES

- 1 This article was written as part of a research project of the authors on institutional determinants of public policy at the cantonal level, which was carried out within the framework of the priority programme 'Demain la Suisse' of the Swiss National Science Foundation (Project no. 50-58521.99). We would like to thank the anonymous reviewers for their critical remarks and suggestions and Heiko Giebler for his technical support.
- 2 In this regard, a widely used measure of income inequality is the Robin Hood Index, which equals the proportion of aggregate income that would have to be redistributed from households with disproportionate earnings to those earning less in order to achieve equality in the distribution of incomes (Kawachi *et al.* 1997).
- 3 Another study that needs to be mentioned is that by Matsusaka (2000), which reports that initiative states in the US spent more than non-initiative states in the first part of the twentieth century. This, however, does not apply to the second half of the century: for the period between 1960 and 1990, Matsusaka (1995) provides evidence to the contrary. So does Camobreco (1998), whose estimations show that direct democracy goes hand in hand with lower tax revenue and government expenditure.
- 4 Several eminent scholars of comparative politics have long demanded that the comparative perspective be extended to the sub-national level (cf. Schmidt 1988: 11f.). In the preface of Vatter's (2002: 3) study, Lijphart makes the following statement concerning the author's research design: 'Because the Swiss cantons are cantons within the same national political system, there are many characteristics which they have in common, and which therefore may be treated as constants. The justification of focusing on the Swiss cantons is especially strong because they are powerful political entities in an unusually decentralized federation. Another advantage is that there are 26 cantons – a sufficient number of cases for statistical analysis.'
- 5 The canton of Glarus was left out because of missing data.
- 6 To eliminate heteroscedasticity, we computed panel-corrected standard errors. The bias from serial correlation in the residuals is, however, actually more important (cf. Beck and Katz 1995). One way of modelling autocorrelation is to include lagged dependent variables among the explanatory variables. In this way, the actual significance of the institutional variables of interest will, however, be underestimated (Achen 2000). In line with Kittel (1999: 230–1), we therefore used the Prais-Winsten method to adjust the biased standard errors. Due to the small number of observations, only one  $\rho$  (rho) was calculated for the whole estimation.
- 7 A description of the variables, their operationalization, and of the data sources is presented in the appendix.
- 8 In Switzerland, the instruments of direct democracy exist at all levels of the state. In general, they are more elaborate on the cantonal and local levels than on the federal level (Linder 1999; Kriesi 1998). The four main instruments in the Swiss cantons are: (1) the initiative to change the constitution of the canton; (2) the legislative initiative to change a law of the canton; (3) the mandatory and optional referendum to prevent the adoption or the change of legislation; and (4) the mandatory and optional fiscal referendum to prevent certain items of state expenditure (cf. Stutzer and Frey 2000).

- 9 German is spoken by 64 per cent of the population, French by 19 per cent, and Italian by 8 per cent. Nine per cent of the population speak other languages. On account of the small case numbers of Italian and, in particular, Romansh-speaking minorities in Switzerland, it is not possible on the basis of aggregate data to make any further statistical analysis regarding non-German-speaking Switzerland. The Italian-speaking minority exists only in the cantons Ticino and Graubünden, and the Romansh-speaking minority nowadays only in a number of valleys in the canton Graubünden (i.e. in terms of our research design, in less than a single research unit). The latter linguistic group nowadays constitutes only a fraction of a percentage of the Swiss population.
- 10 Most of the variables have been compiled on an annual basis and lagged by one year. Exceptions are the degree of urbanization, decentralization, the percentage of German-speaking inhabitants of a canton, the mandatory referendum, the spending threshold, the time span for the signature collection, and the signature requirement for legislative initiatives.
- 11 In a sense, the empirical analyses allow for questions of causality via the temporal ordering of the dependent and independent variables. It should be noted, however, that within the present analytical framework it would be too ambitious to try to solve the causality problem regarding the relationship between the dependent and some of the independent variables. One would need to carry out historical or longitudinal in-depth analyses in order to solve this problem. In this regard, the reader should be aware that our results are only explorative and suggestive. In particular, this contribution is merely a first step in a direction still calling for a considerable amount of research.
- 12 Economic performance of urban areas is, for instance, outstanding thanks to the concentration of chemical industry in Basel City or of banks and insurance companies in the Zurich area.
- 13 The impact of tax competition on state revenue loses its significance when the canton of Berne is dropped from the analysis.
- 14 The values of the Variance Inflation Factor (VIF) obtained in the tests are tolerable, so that multicollinearity is not a cause for concern.
- 15 The mandatory referendum means that new spending items that exceed a predetermined amount (the spending threshold) not only require the approval of parliament, but also of the majority of the voters.
- 16 In addition, further estimations we carried out have shown that the existence of the mandatory referendum also determines the various indexes of taxation. It is, thus, a consistent predictor of the extent of the tax state. In this sense, we are fairly confident of the results presented here.
- 17 The empirical analysis additionally carried out for the years 1983–1991 is marked by generally weaker correlations between the extent of direct democracy and the scope of the tax state in the cantons than the subsequent period. Thus it is possible, on the one hand, to observe a significantly dampening effect of the right to financial referendum on the level of tax revenue, while, on the other hand, a more frequent use of popular initiatives leads to significantly higher tax contributions to the state. In comparison, the additional correlations discovered are insignificant. In our view, the main reason for the stronger correlations in the 1990s lies in the intensification of recession-induced distribution struggles via direct democratic instruments, in which both left-wing and middle-class parties and interest groups lobbied for redistributive measures in their respective clientele's interests.
- 18 In the 1980s and 1990s, left-wing parties launched several initiatives to tax the wealthy (e.g. Basel City 1985; Berne 1988; Zurich 1985, 1988). Right-wing parties, on the other hand, submitted initiatives to abolish or cut cantonal taxes on wealth and motor vehicles or entertainment taxes (e.g. Berne 1991; Geneva 1992).

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