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Growth Effects of Public Expenditure on the State and Local Level: Evidence from a Sample of Rich Governments

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Growth Effects of Public Expenditure on the State and Local Level: Evidence from a Sample of Rich Governments

by

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Abstract

There is a vast empirical literature investigating the relationship between government size and economic growth. But the empirical evidence of growth effects of public expenditure using cross-country regressions is still inconclusive. According to a number of authors this is not surprising since the negative relationship only applies for rich countries with a large public sector. Restricting their analysis on rich countries only they can show the predicted negative impact. Naturally, a selection of a sub-sample of rich countries is always somewhat arbitrary. Another possibility is to concentrate on governments *within* a rich country. However, only few studies investigate the effect of state and local spending on economic growth. This paper concentrates on the relationship between public expenditure and economic growth within a rich country using the full sample of state and local governments from Switzerland over the 1981-2001 period. The general finding is a fairly robust negative relationship between government size and economic growth. However, in contrast to public spending from operating budgets there is no significant impact on economic growth by expenditure from capital budgets.

JEL-Classification: E62;H20;O23

Keywords: Economic Growth; Government expenditure; Public Sector

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1. Introduction

A common feature of all industrialized countries concerns an enormous expansion of the public sector. As measured by the share of GDP going to government expenditures the average OECD country has expanded its size of government for about 21 percentage points between 1960 and 1996. Today, average government outlays in the OECD countries account for about nearly 50 percent of GDP. Such an enormous government involvement has attracted various critics including the argument of endangering economic prosperity. In particular, the influential empirical work by Barro (1991) covering a large cross-section of countries supported the view that a large public sector impedes economic growth. Others provided further empirical evidence confirming the negative impact of the size of government on economic growth (Engen and Skinner, 1992; Grier, 1997; Hansson and Henrekson, 1994; Fölster and Henrekson, 1999; Fölster and Henrekson, 2001; Romero de Ávila and Strauch, 2003; Bernholz, 2004). However, some authors are very skeptical about the robustness of the provided result. Atkinson (1995), Slemrod (1995, 1998) or Agell et al. (1997, 1999) find no stable negative correlation between the size of government and economic growth.

The inconclusiveness of the empirical literature is not surprising from a theoretical point of view. The relationship between government size and economic growth is expected not to be monotonic. While public spending can crowd-out private investments, it may also stimulate private sector productivity by the externality of the provided public good. Furthermore, government activities to secure property rights, to enforce contracts and to guarantee a stable monetary regime provide the foundation for a smooth operation of a market economy.[1] Thus, the net impact on aggregate output is the sum of both of these effects. According to Slemrod (1995), Tanzi and Schuknecht

[1] In fact, Keefer and Knack (1997) provide evidence that a legal system protecting property rights and enforcing contracts enhances economic growth.

(2000) or Tanzi and Zee (1997), we should only expect a negative impact of the size of government on economic growth if the size of government exceeds a certain threshold. In the US-literature, the n-shaped relation between government size and economic growth is often called the "Armey-curve", according to Richard Armey, a Member of the House of Representatives (Vedder and Gallaway, 1998). The rationale behind this argument is that in countries with big governments, the share of public expenditures designed to promote private sector productivity is typically smaller than in countries with small governments (Fölster and Henrekson, 2001). For less developed countries, government spending may act as a signal that property rights will be enforced.[2] In this case, an increase of the size of government is likely not to hamper economic growth. Thus, small government by itself is not an asset. When a small government fails to protect property rights and to enforce contracts, there is no reason to believe that it will promote economic growth (Gwartney, Lawson and Holcombe, 1998). However, it is a narrow path to the point where a growing size of government reflects excessive engagements in transfer programs and regulations that are growth impeding. As stated by Weingast (1995, p. 1): "The fundamental political dilemma of an economic system is this: A government strong enough to protect property rights and enforce contracts is also strong enough to confiscate the wealth of its citizens".

There is a vast empirical literature investigating the relationship between government size and economic growth for OECD countries. However, according to Fölster and Henrekson (2001), analyzing the impact of the size of government on economic growth for a sub-sample of rich countries separately may give us a more detailed picture on the issue due to the non-monotonic relationship. A common approach is to use a sub-sample of rich countries. Naturally, a selection

[2] However, according to de Soto (2002) even though many developing countries face small governments measured by public spending per GDP they do not necessarily direct the spending in productive government activities. Thus typical problems involved with big governments can be observed in developing countries, too, like over-regulation, interventionism, corruption or bureaucratic slack.

of a sub-sample of rich countries is always somewhat arbitrary.[3] But according to our knowledge only few authors have been concerned with growth effects on the sub-federal level. Exceptions are Holcombe and Lacombe (2004), Vedder and Gallaway (1998) or Helms (1985) with evidence from the US state level.

In this paper, we investigate growth effects of government spending *within* a rich country on the state level. The sample consists of all state governments in Switzerland, the cantons, over the 1981-2001 period.[4] Analyzing growth effects within Switzerland is reasonable for several reasons. First, the state level in Switzerland enjoys considerable fiscal autonomy (Feld, Kirchgässner and Schaltegger, 2003). This is especially true for the tax and expenditure policy. Cantons are free to set tax rates, tax tariffs, tax exemptions, tax deductions, to borrow and to spend to a far extent. Second, state governments in Switzerland have the legal instruments to conduct their own economic policy. The federal government has only very limited possibility to interfere with policy decisions of cantons. Compared to other countries' sub-federal governments, all state governments within Switzerland can be considered as rich in terms of their GDP per capita. Third, accounting standards for governments are harmonized in Switzerland. This augments the comparability of our data on public spending of the cantons. In contrast, different accounting standards between countries might be very difficult to isolate in a cross-country analysis. Lastly, all Swiss cantons separate public spending for current purposes from spending for investments. Thus, a distinguishing feature of this paper is that we can separate the effect of public expenditure from operating budgets to those of capital budgets.

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[3] Agell et al. (2003, p. 363) argue that the results of cross-country regressions have to be interpreted with caution due to methodological reasons: "A policy-maker who wants to promote growth is well-advised to look for other evidence than cross-country regressions".

[4] There exists a time series analysis for Switzerland by Singh and Weber (1997) concluding that there is no clear empirical evidence on growth effects by government spending.

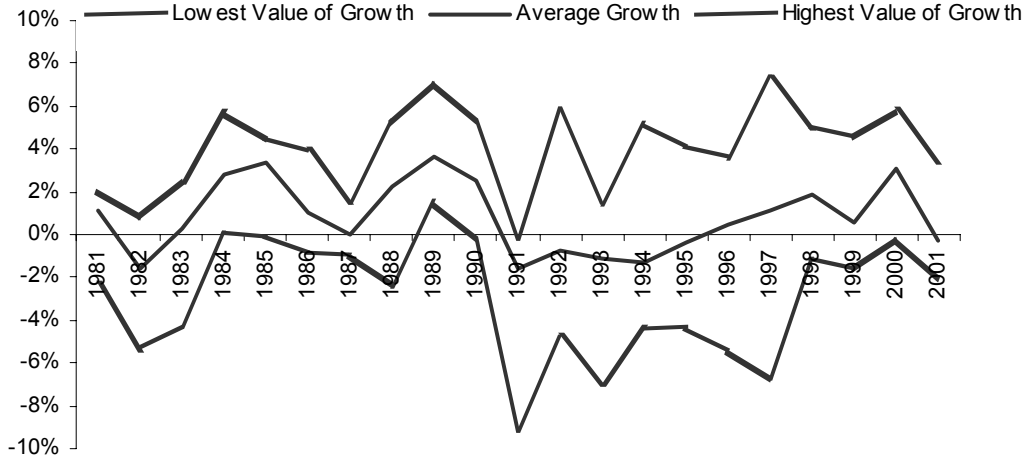
Our results indicate that the government size significantly retards economic growth when spending is used for payments in the operating budgets, while payments in the capital budget have no significant effect on economic growth rates. These findings underscore the importance of different incentives provided by different spending policies on economic growth.

The paper is organized as follows. In section 2 we present some stylized facts on our database and conduct the empirical analysis while section 3 discusses the obtained results from the regressions. Finally, section 4 concludes.

2. The size of Swiss state and local governments and economic growth

In the past years a number of Swiss cantons have implemented budget rules in response to the revenue shortfall of the early 1990s (Schaltegger, 2002). Although much of the public debate since then is circling around preferences of tax and expenditure combinations, the questions of how state and local spending decisions affect economic growth is a central issue to the discussion (Borner and Bodmer, 2004).

Figure 1: Differencials of Economic Growth in Swiss Cantons, 1981-2001



During the last 20 years the Swiss cantons have faced rather different developments. Zoug with 36,1 % represents the canton with the highest rate of real economic growth per capita over the 1981-2001 period. With an economic growth per capita of –14 % the development in Nidwalden is on the other extreme of the 26 cantons. On average, economic growth per capita accounted for 17 % over the last 20 years on the state and local level of Switzerland.

Figure 2: Correlation Between Government Size and Economic Growth for 26 Swiss Cantons, 5-Year Averages, 1981-2001

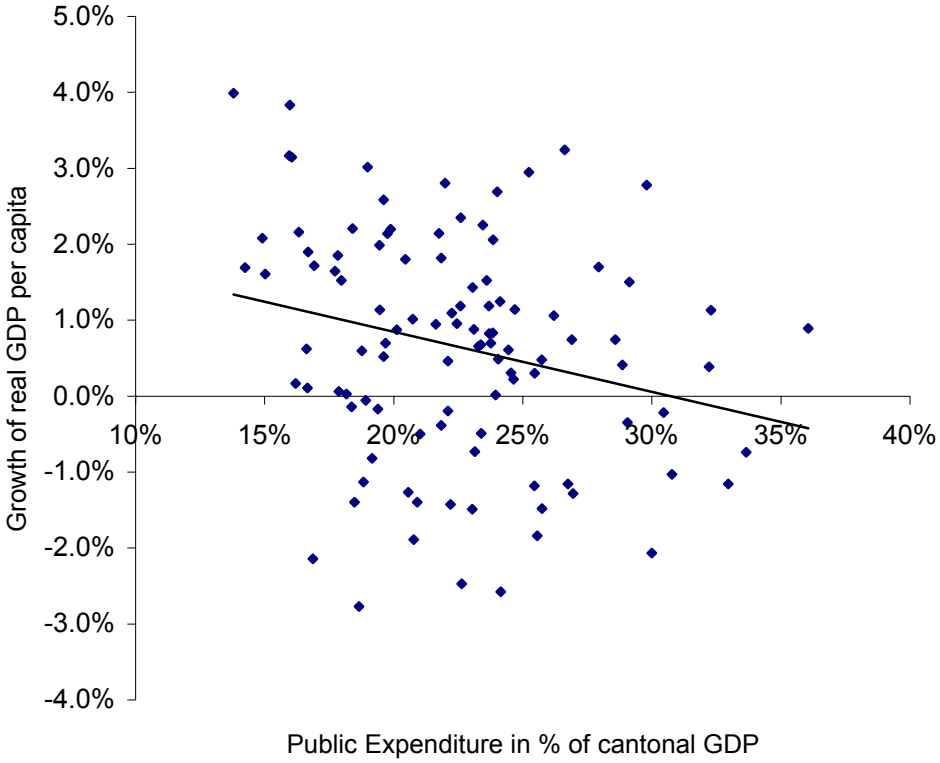


Figure 1 displays the maximum, minimum and average values of annual growth rates in Swiss cantons. A first look at the data on Figure 2 reveals a slight negative correlation between the size of government and economic growth (R2 = 0.06). Thus, the question occurs whether and how public expenditures of Swiss cantons systematically affect the steady-state rate of economic

growth as predicted by endogenous growth models (Romer, 1986; Barro, 1990; Barro and Sala-i-Martin, 1995; Mendoza et al. 1997).

In order to test the impact of the size of government on economic growth for rich jurisdictions, we follow the methodology that has been applied. (For example by Fölster and Henrekson, 2001 or Kneller et al., 1999). The empirical analysis is based on annual data for the 1981-2001 period for all 26 Swiss cantons. The dependent variable is cantonal GDP growth per capita and calendar year as calculated by BAK Basel Economics Ltd.. The explanatory variables fall into three categories: (1) government expenditure per GDP as a proxy for government size and government expenditure per GDP split into public spending in the operating budget and public spending in the capital budget. Current and consumption spending appear in the former budget while the latter budget consists of investment spending. (2) Initial GDP in order to incorporate the process of convergence as well as components of the production function: investment, labor force and human capital, and (3) a set of socio-demographic indicators of the cantons as control variables. Our regression equations have basically the following simplified form in logarithms:

$$y_{it} - y_{it-1} = \beta_0 + \beta_1 g_{it} + \beta_2 y_{it-1} + \beta_3 X_{it} + \omega_i + \delta_t + \varepsilon_{it}, \quad (1)$$

where, y_{it} is the log of GDP per capita in canton i of period t so that economic growth is described by $y_{it} - y_{it-1}$ The government size is specified by g_{it} which consists of the log of public expenditure per GDP. y_{it-1} on the right hand side of the equation incorporates the convergence process of economic growth between cantons. X_{it} is a vector of the different control variables of category (3) and the production function of category (2). Finally, there are three error components depicted by $\omega_{i,}$, δ_t and ε_{it} which represent state specific effects, year specific effects and the remaining error, respectively.

3. Results

Table 1 displays the basic results. The first two columns use state fixed effects but do not control for time specific effect. The last two columns control for both effects. Unlike Easterly and Rebelo (1993) but in line with Fölster and Henrekson (1999, 2001), Agell, Lindh and Ohlsson (1997, 1999) or Barro and Sala-i-Martin (1992) initial GDP enters the regression with a highly significant negative coefficient. For the three conditioning variables, the investment ratio, labor force and higher schooling, there is no clear, empirically significant impact on economic growth for the Swiss cantons.

Table 1: Regression Results on the Impact of Government Size on Economic Growth,
26 Swiss Cantons, 1981-2001.
Dependent Variable: Per Capita Growth

Explanatory Variables	CD	CD	FE	FE
Initial GDP p.c.	-0.057***	-0.096***	-0.099***	-0.142***
	(-3.00)	(-4.86)	(-5.66)	(-7.27)
Government Size	-0.054***	-0.063***	-0.069***	-0.064***
	(-3.64)	(-3.82)	(-5.02)	(-4.53)
Investment	-0.004	-0.005	0.006	0.003
	(-0.69)	(-0.74)	(1.07)	(0.47)
Labor Force	-0.042*	-0.051**	0.023	0.046*
	(-1.71)	(-2.07)	(0.91)	(1.73)
Higher Schooling	0.135***	0.897***	-0.013	-0.021
	(5.51)	(3.41)	(-0.64)	(-0.97)
Unemployment Rate	-0.002***	-0.002***	-0.001**	-0.002***
	(-4.62)	(-4.37)	(-2.39)	(-3.56)
Agglomeration		-0.008		0.012
		(-0.38)		(0.76)
Population		0.045		-0.109***
		(1.20)		(-3.28)
Population > 65		0.335***		0.129*
		(4.15)		(1.92)
Population < 15		-0.099		0.102
		(-1.43)		(1.63)
German Language		0.040		-0.031
		(1.08)		(-0.96)
Canton Effects	Yes	Yes	Yes	Yes
Year Effects	No	No	Yes	Yes
R-Squared	0.176	0.226	0.622	0.638
# of Observations	546	546	546	546

Note: t-statistics in parantheses. *,** and *** denote significance at the 10%, 5% and 1% level. For definitions of variables see Appendix.
CD: one-way fixed effects estimates (canton dummies)
FE: two-way fixed effects estimates

The government size variable has statistically a significant negative coefficient, and the point estimate suggests that a decrease by one percentage point of GDP raises the growth rate by around 0.06 percentage points. Since the use of a short period of panel data may increase the risk that observed correlations are driven by business cycle effects, we include the unemployment rate in the regression as a control variable that varies with the business cycle. Later, we will use additionally five-year-averages to tackle problems caused by business cycle effects (see Table 2). A typical business cycle correlation would imply that when growth rates fall government spending has to increase as a result of unemployment costs. Actually, it is assumed that this cyclical covariation is already moderated by controlling for period effects using time dummies. However, the highly significant and negative coefficients support the view that business cycles play an important role in explaining economic growth fluctuations. The agglomeration variable does not play a significant role in explaining economic growth within Switzerland. This is somewhat surprising since it contradicts the notion that urban clusters play a prominent role in generating economic prosperity by spillover effects. However, it could be argued that there is not a perfect mapping of political borders with economic areas, which renders the agglomeration variables insignificant. The other socio-demographic factors represent control variables to capture further state specific characteristics. This includes a language variable to control for systematic cultural differences according to the four official languages used in the 26 cantons.

In the following, we apply some robustness tests of the above results. For example, Easterly and Rebelo (1993) argue in their article, that growth regression results are sensitive to the inclusion of the initial GDP. Therefore, in a variant of our basic regression, we exclude initial GDP. However, even though the coefficient of the initial GDP is highly significant in our basic regression, Table 2 shows that an exclusion of this variable hardly changes the significance of the government size coefficient. Also, the negative quantitative effect decreases only slightly from –0.064 to –0.040.

Second, we exclude the significant unemployment variable to show the effect of business cycle correlation on the other explanatory variables. Again and as indicated in Table 2, the exclusion of the unemployment rate hardly changes the results. Third, while the use of panel data is reasonable in order to lower risks of simultaneity and to allow for within-state variation, there are also disadvantages of using annual data (Fölster and Henrekson, 2001).

Table 2: Regression Results on the Impact of Government Size on Economic Growth for Different Specifications, 26 Swiss Cantons, 1981-2001.
Dependent Variable: Per Capita Growth

Explanatory Variables	FE	FE-I	FE-II	AV	FD-IV
Initial GDP p.c.	-0.142***		-0.132***	-0.022	-0.751***
	(-7.27)		(-6.73)	(-0.85)	(-9.35)
Government Size	-0.064***	-0.040***	-0.064***	-0.044**	-0.174**
	(-4.53)	(-2.78)	(-4.51)	(-2.01)	(-2.06)
Investment	0.003	-0.002	0.009	-0.003	0.002
	(0.47)	(-0.38)	(1.42)	(-0.25)	(0.19)
Labor Force	0.046*	0.010	0.037	-0.084*	0.065**
	(1.73)	(0.37)	(1.38)	(1.91)	(2.00)
Higher Schooling	-0.021	-0.005	-0.029	-0.037	-0.015
	(-0.97)	(-0.22)	(-1.31)	(-0.88)	(-0.76)
Unemployment Rate	-0.002***	-0.001**		-0.002**	-0.001
	(-3.56)	(-2.37)		(-2.23)	(-0.54)
Agglomeration	0.012	0.001	0.013	0.001	0.007
	(0.76)	(0.06)	(0.81)	(0.05)	(0.27)
Population	-0.109***	-0.016	-0.105***	0.011	-0.549***
	(-3.28)	(-0.49)	(-3.14)	(0.28)	(-4.41)
Population > 65	0.129*	0.069	0.051	0.0145*	0.261
	(1.92)	(0.98)	(0.79)	(1.71)	(1.20)
Population < 15	0.102	0.057	0.053	0.107	0.516**
	(1.63)	(0.86)	(0.85)	(1.38)	(2.57)
German Language	-0.031	-0.014	0.016	-0.063	-0.004
	(-0.96)	(-0.40)	(0.54)	(-1.38)	(-0.07)
Canton Effects	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes
R-Squared	0.638	0.597	0.635	0.560	
# of Observations	546	546	546	104	546

Note: t-statistics in parantheses.
*,** and *** denote significance at the 10%, 5% and 1% level.
FE: two-way fixed effects estimates,
AV: 5-year averages, two-way fixed effects
FD-IV: first differences with instrumental variables
For definitions of variables see Appendix.

Estimating a panel of annual data without bias requires that the error in the growth regression affects government spending in the same period, only. Presumably, this is not the case. A solution to address these concerns is to focus on five-year averages. The results of the estimate using five-

year-averages indicate that the level of significance for the impact of the size of government on economic growth drops to the 5 % level, approximately. However, public spending still affects economic growth significantly negative. Another way to address a possible endogeneity bias of government spending requires the estimation of instrumental variables. A common method is to use lagged values of the fiscal variables as instruments. However, in the fixed effects domain it is not possible to use lagged values. We therefore follow Kneller et al. (1999) and Henrekson and Fölster (2001) and estimate the regression in first differences. The choice of instruments contains state dummy variables, lagged values of the government spending and initial GDP. The results of the instrumental variable estimates are displayed in Table 2, column 6. Again, the impact of public spending on economic growth is negative and significant.

Figure 3: Correlation betw een Current Public Spending and Economic Grow th, 26 Sw iss Cantons, 1981-2001, 5-Year-Averages

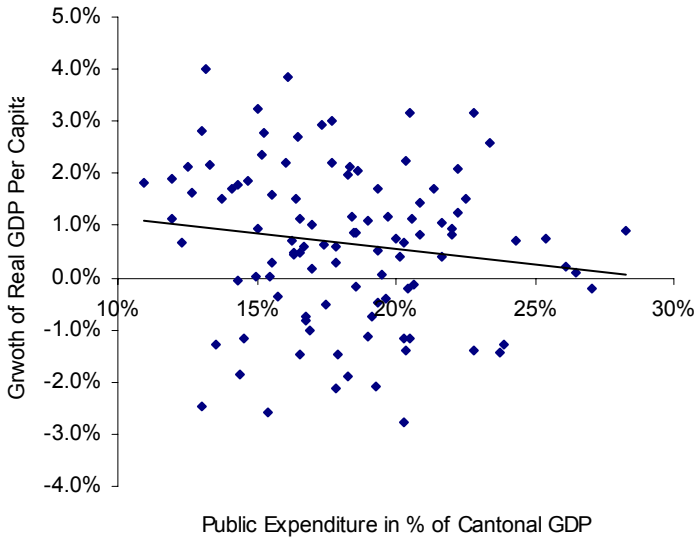
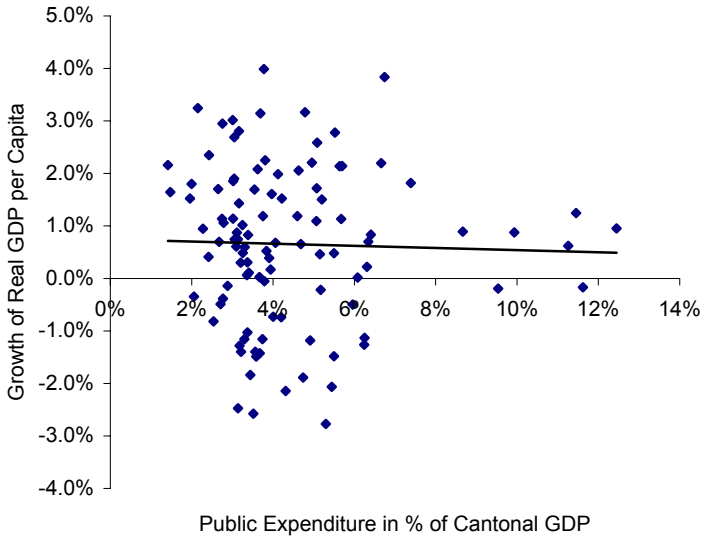


Figure 4: Correlation Between Public Investment Spending and Economic Growth, 26 Swiss Cantons, 1981-2001, 5-Year-Averages



Anyhow, it has to be noted that even after introducing instruments, the results of the coefficients may be biased. For example, Agell et al. (1999) are very skeptical about the instrumental variable

technique in this case since the implemented instruments may still be correlated with the error term.[5] Comparing the results of Table 1 and 2, it can be assumed that the effect of fiscal policy decisions on economic growth is not simply due to endogeneity.

Table 3: Regression Results on the Impact of Government Size on Economic Growth Distinguishing for Different Budgets, 26 Swiss Cantons, 1981-2001.
Dependent Variable: Per Capita Growth

Explanatory Variables	FE	AV	FD-IV
Initial GDP p.c.	-0.239***	-0.047	-0.710***
	(-10.65)	(-1.27)	(-9.11)
Government Size I	-0.148***	-0.047*	-0.364***
(Current spending)	(-8.89)	(-1.76)	(-4.62)
Government Size II	0.006	-0.003	0.015
(Investment spending)	(1.62)	(-0.34)	(0.80)
Investment	-0.007	-0.009	-0.005
	(-1.21)	(-0.74)	(-0.78)
Labor Force	0.038	-0.092**	0.060*
	(1.51)	(2.13)	(1.77)
Higher Schooling	-0.021	-0.035	0.007
	(-1.02)	(-0.82)	(0.31)
Unemployment Rate	-0.003***	-0.003**	-0.001
	(-5.09)	(-2.41)	(-0.79)
Agglomeration	0.006	0.003	0.013
	(0.39)	(0.14)	(0.46)
Population	-0.117***	0.003	-0.376***
	(3.72)	(0.08)	(-2.72)
Population > 65	0.018	0.141	0.070
	(0.28)	(1.62)	(0.30)
Population < 15	-0.001	0.077	0.356*
	(-0.02)	(0.98)	(1.70)
German Language	-0.031	-0.063	-0.046
	(-1.02)	(-1.35)	(-0.71)
Canton Effects	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes
R-Squared	0.671	0.560	
# of Observations	546	104	546

Note: t-statistics in parantheses.
*,** and *** denote significance at the 10%, 5% and 1% level.
FE: two-way fixed effects estimates,
AV: 5-year averages, two-way fixed effects
FD-IV: first differences with instrumental variables
For definitions of variables see Appendix.

In spite of different econometric reasons to be careful with the interpretation of the estimated coefficients there is at least some evidence supporting the view that the expansion of the size of

[5] Agell et al. (1999, p. 363) write: "This procedure will, however, introduce more problems that it solves".

government hampers economic growth in a rich country with a developed public sector. The estimated results indicate a significant and negative correlation between public spending and the rate of economic growth throughout the different specifications and estimation techniques. While the obtained results may be interpreted as evidence for a crowding-out effect, where public expenditure displace private sector productivity, it is reasonable to assume that investment spending have a different impact on economic growth than transfer spending or public consumption (Barro, 1990). The traditional approach is to divide public spending into the two broad categories of public consumption and public investment. The former is said to retard economic prosperity while the latter should promote growth prospects.

Implicitly, consumption spending are classified as unproductive and growth-retarding public programs whereas investments fall into the category of productive and growth-inducing government activities. This distinction has an intuitive appeal but is also problematic since investment projects can be wasteful as well while public consumption need not necessarily be unproductive (Tanzi and Zee, 1997).

Hence, some authors distinguish between productive and unproductive government activities by sorting all spending tasks of the budget according to that criterion. For example, Kneller et al. (1999) show that productive government expenditure enhance growth rates of the 22 OECD countries over the 1970-1995 period analyzed in their empirical study.

In order to get a more detailed picture of different public spending impacts on growth for the Swiss sub-federal governments, we distinguish between spending from the capital budgets to finance investments and spending in the operating budget to finance current expenditure.[6] Figure

[6] However, as argued by Shepsle and Weingast (1984) it is possible that such a distinction of the budgets only affects the labelling of government spending without affecting the composition of spending. For example, cantons with fiscal requirements for the operating budgets may try to relabel operating expenditure as capital projects

3 and Figure 4 give us a first indication that growth impacts of the two budgets are different. While the picture for current spending is very similar to the picture for overall government spending, there is no correlation between investment spending and economic growth. The first clue becomes confirmed in the multivariate analysis. As can be seen by Table 3, there is evidence that the growth impact differs between spending from the current budget and spending from capital budgets. While current spending have a significantly strong negative impact on economic prosperity of cantons, the same does not hold for investment spending. This result confirms that the type of government expenditure matters for economic growth. Thus, our results are very much in line with those obtained by Romero de Ávila and Strauch (2003) for the European countries. Both studies find that government consumption negatively affect growth rates of GDP per capita, while public investment has a positive impact.

4. Conclusions

There is a huge empirical literature investigating the relationship between government size and economic growth. To date, the cross-country empirical evidence on growth effects of public expenditure is still inconclusive, however. Theoretically, this is not surprising since small or big government by itself is not an asset. A negative relationship should only apply for rich countries with a large public sector while in developing countries a growing size of government typically reveals safer property rights and the enforcement of contracts. Thus, there is no reason to believe that small governments will generally promote economic growth. In this respect, restricting the analysis on rich countries only may give us a more detailed picture of the issue. Naturally, a selection of a sub-sample of rich countries is always somewhat arbitrary. Another possibility is to

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in order to evade constitutional spending limitations. Poterba (1995) finds empirical evidence for the US states that states with separate capital budgets spend more on public capital projects than comparable states with unified budgets.

concentrate on governments within a rich country. However, only few studies investigate the effect of state and local spending on economic growth. This paper attempted to test the impact of the size of government on economic growth for the sub-federal level of a rich country using panel data of a full sample of the 26 Swiss cantons over the 1981-2001 period. The general finding is a fairly robust negative relationship between government size and economic growth. Even though we do not claim to settle the issue, the results are found to be robust also after adopting changes in specification and applying different estimation techniques.

Anyhow, theory does not only predict that fiscal policy affects growth by the level of government spending but also by the expenditure structure. That's why we test the effect of government spending of the operational budget separately from the impact of investment spending from the capital budget. Consistent with Barro's (1990) predictions, an increase in public spending from operating budgets significantly reduces growth while there is no significant impact on economic growth by expenditure from capital budgets.

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Appendix A

Data description		
Variable name	*Description*	*Source*
Government Size	Total cantonal expenditure per GDP	Own calculations on the basis of Swiss Federal Finance Administration and BAK Basel Economics
Current Spending	Cantonal expenditure in the operational budget per GDP	Own calculations on the basis of Swiss Federal Finance Administration and BAK Basel Economics
Investment Spending	Cantonal expenditure in the capital budget per GDP	Own calculations on the basis of Swiss Federal Finance Administration and BAK Basel Economics
GDP	Real cantonal GDP	BAK Basel Economics
Investment	Investment spending per GDP	Swiss Federal Statistical Office
Labor Force	Share of employment on the cantonal population	Swiss Federal Statistical Office
Higher Schooling	Share of population with secondary education on the cantonal population	Swiss Federal Statistical Office
Unemployment Rate	Share of unemployment on the cantonal population	Own calculations on the basis of Swiss Federal Statistical Office
Agglomeration	Proportion of local communities having more than 10'000 inhabitants.	Swiss Federal Statistical Office
Population	Cantonal population	Swiss Federal Statistical Office
Population > 65	Share of cantonal population over the age 65 on total cantonal population	Swiss Federal Statistical Office
Population < 15	Share of cantonal population under the age 15 on total cantonal population	Swiss Federal Statistical Office
German Language	Dummy = 1 for German speaking cantons	Own investigations

Appendix B

Table A2: Descriptive statistics

Variable	*Mean*	*Std. Dev.*	*Minimum*	*Maximum*
Government Size	0.226	0.047	0.118	0.386
Current Spending	0.183	0.037	0.098	0.291
Investment Spending	0.044	0.023	0.012	0.145
GDP	41590	13064	26324	117228
Investment	0.160	0.055	0.050	0.477
Labor Force	0.480	0.032	0.396	0.564
Higher Schooling	0.137	0.059	0.023	0.334
Unemployment Rate	0.018	0.018	0	0.078
Agglomeration	0.324	0.249	0	0.995
Population	261938	272497	12781	1228628
Population > 65	0.146	0.021	0.103	0.210
Population < 15	0.186	0.024	0.113	0.241
German Language	0.714	0.353	0.050	0.980

Note:
For a detailed description of the variables see Appendix A.
All statistics are computed for 546 observations.