Does the Size of the Legislature Affect the Size of Government? Evidence from a Natural Experiment*

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First version: December 18, 2001

Abstract

Previous empirical studies have found a positive relation between the size of the legislature and the size of government. Those studies, however, do not adequately address the concerns of simultaneity and omitted variable bias. In contrast, this paper uses a credible exogenous variation in the size of the legislature, induced by a statutory law linking council size to the number of eligible voters in Swedish local governments. The statutory law creates discontinuities between number of eligible voters and council size, which are used to construct instrumental variable estimates of the effect of council size on government size. In contrast to previous findings, the results show that an increase of the council size induces a significant and substantial decrease in spending and revenues. Thus, the result in this paper has a radically different implication for any policy recommendation concerning legislature-size reforms to curb spending.

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* The views expressed in the paper are mine, as is the responsibility for any mistakes.

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1. Introduction

Some recent empirical papers have found a positive relationship between the number of legislators and the size of government.[1] A case in point is the recent study by Baqir (2001), where he uses data from American cities to address this issue. He finds that bigger city councils are associated with considerably larger expenditures per capita. He interprets this finding as causal. However, there are some general methodological problems with his approach. First, his study is cross sectional so he cannot control for unobserved heterogeneity. Second, there is a potential simultaneity problem, namely that the size of the city council is determined simultaneously with policy choices. Despite he instruments for council-size using the size of the city council 30 years ago, the use of a lagged endogenous variable as an instrument is highly problematic unless the equation error or omitted variables are not serially correlated. The studies by Bradbury and Crain (2001) and Gilligan and Matsusaka (1995, 2001) all have the similar simultaneity problem,[2] which put into doubt a causal interpretation of their findings.

The main contribution of this paper is to break the simultaneity between the size government and the size of the legislature. To achieve that goal requires an instrumental variable that is correlated with the size of the legislature, but is otherwise unrelated to the size of government. The exogenous source of variation used to create instrumental variables comes from a statutory law linking council size to the number of eligible voters in Swedish local governments. The statutory law induces discontinuities between the number of eligible voters and the size of the council. The idea is to use these discontinuities to construct instrumental variables.

In contrast to previous findings, this paper finds a negative relationship between the size of the legislature and the size of government when the instrumental variable method is used in order to account for unobserved heterogeneity and simultaneity. However, when the standard cross-sectional methodology is applied to my data, I find a positive relation between the size of the legislature and the size of government. These

[1] Baqir (2001), Bradbury and Crain (2001), and Gilligan and Matsusaka (1995, 2001)

[2] Bradbury and Crain (2001) and Gilligan and Matsusaka (1995) both include fixed effects. The legislature-size effect is then identified only when there has been a change in the size of the legislature. However, this approach does not solve the simultaneity problem.

two results together suggest that the previous studies might be subject to omitted variables and simultaneity problems.

This paper uses a natural experiment to infer the causal effect of the size of the legislature on the size of government. This type of analysis is closely connected to modern empirical labor analysis, which puts front and center the problem of identification of a causal relationship.[3] Put differently, addressing the concerns of selection, measurement errors, simultaneity and omitted variable bias are considered to be a requirement of any convincing empirical work. This study uses an empirical identification strategy similar to the one used by Angrist and Lavy (1999). The empirical strategy originates with Donald Campbell and the basic idea is to infer causality when the variable of interest changes abruptly for non-behavioral or arbitrary reasons. This kind of research strategy goes by the name the regression-discontinuity design. The idea of using natural experiments in order to study of how institutions, the rules by which decisions are made, affect policy outcome is quite rare in political economic.[4] The conventional approach is to run OLS on cross-sectional data and control for confounding variables and hoping that the omitted variable bias or the simultaneity can be eliminated,[5] as exemplified by the study by Baqir (2001).

The outline of the paper is as follows. Section 2, discusses the problem of causal inference applied to the question of whether the size of the legislature has any affect on the size of the government and the empirical identification strategy used to address this issue. Section 3 describes the data used in the analysis. Section 4, presents the results. Section 5 discusses the interpretations of the findings. Section 6 concludes.

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[3] See Angrist and Kreuger (1999) for a more thorough explanation of this literature.
[4] See, however, Acemoglu et al. (2001), Besley and Case (1995), Levitt and Snyder (1997), Pande (2001), and Pettersson-Lidbom (2001a,b, c).
[5] In the empirical labor literature, this is assumption is called the "selection on observables".

2. Causal inference and the identification strategy

We are interested in if the size of the legislature has any effect on the size of government. Let P denote the size of government, which will be measured as total spending or total revenues, and let S denote the size of legislature. We have now the following outcome equation of interest.

$$P_i = \alpha + \delta S_i + \varepsilon_i \quad (1)$$

where i indexes a unit such as countries, states or cities. We can we draw causal inference if the error term ε_i is independent of the size of the legislature S_i, a condition which can be stated as $E[\varepsilon_i \mid S_i] = 0$. In applied research this condition usually fail in one of three ways: due to omitted variables, measurement error, and simultaneity. In our case omitted variables and simultaneity are the prime concerns. For example, in the cross section study by Baqir (2001) there might be unobserved city characteristics that are related both to the size of government and the size of the city council. Using a panel of cities and controlling for fixed city effects would solve any time invariant omitted variables problem. This is the estimation strategy used by Bradbury and Crain (2001) for a cross-country data set, and Gilligan and Matsusaka (1995) for the U.S. states. However, their estimation strategy is only going to work if there is any variation over time in the size of the legislature, since the inclusion of fixed unit effects would make it impossible to identify any time invariant institutional factor. The fixed effect estimation strategy, however, does not solve the second problem of simultaneity, namely that the size of the legislature and the size of government are determined simultaneously. In order to solve this problem we need to find some exogenous variation in the size of the legislature. Put differently, we need to find an instrumental variable z_i, which should fulfill the following two requirements. First, z_i must be uncorrelated with ε_i, i.e., $\text{cov}(z_i, \varepsilon_i)=0$, Second, z_i must be *partially* correlated with the size of the legislature S_i once all other exogenous variables included in equation (1) have been netted out, i.e., $S_i = \theta_0 + \theta_1 S_i + \boldsymbol{X}_i\boldsymbol{\theta} + u_i$, and $\theta_1 \neq 0$ where $\boldsymbol{X}_i$ is a vector of other exogenous covariates. Baqir (2001) tries to solve the simultaneity problem by using lagged council size $S_{i,t-30}$, the size of the city council in 1960, as an instrumental variable. The problem with his approach is that if the omitted variables, i.e., unobserved city characteristics, are serially correlated this would lead to a correlation between the instrument and the error term, i.e., cov($S_{i,t-30}$, ε_i) $\neq 0$. Hence, his instrument must be greeted with considerable skepticism since he does not account for unobserved heterogeneity.

In this paper, I will use a more credible instrumental variable to solve the simultaneity problem. In Swedish local governments, the size of the local council is partly determined by a statutory law. The law prescribes a minimum council size in relation to the to the number of eligible voters. Table 1 shows the relationship between council size and number of eligible voters. The law states that the number of council members must be at *least* 31, 41, 51 and 61 depending on if the number of eligible voters in a local government falls into one of four intervals. Thus, the law potentially induces three discontinuities in the size of the council: at the number of 12,000, 24,000 and 36,000 of eligible voters. The idea is to use these discontinuities as instrumental variables. The instrumental variables are defined as follows: $Z(31)=1[0<v\leq 12{,}000]$, $Z(41)=1[12{,}000<v\leq 24{,}000]$, $Z(51)=1[24{,}000<v\leq 36{,}000]$, and $Z(61)=1[v>36{,}000]$ where v is the number of eligible voters. In order for these dummies to serve as instrumental variables, it must be the case that they are validly excluded from structural equation of interest. Such exclusions are invalid if there are other variables that are both correlated with the size of government and affected by the instrument. The identifying assumption behind the instrumental variable approach used in this paper can be expressed formally by first rewriting (1) as:

$$P_{it}= \mu_i + \lambda_t + \delta S_{it} + X_{it}\beta + u_{it} \qquad (2)$$

where i indexes a local government and t corresponds to time, μ_i is the fixed municipality effect, λ_t is the fixed time effect, X_{it} is a vector of other covariates, u_{it} is an i.d.d. error term, P_{it} is a measure of the size of government, and S_{it} is the council size. The coefficient δ is the structural parameter of interest. Council size S_{it} is treated as the endogenous explanatory variable. By writing the reduced form or the “first stage” equation for the endogenous variable S_{it} as:

$$S_{it}= \lambda_t+\mu_i+Z(41)_{it}+ Z(51)_{it}+Z(61)_{it}+X_{it}\pi + \xi_{it}, \qquad (3)$$

where the error term ξ_{it} is defined as the residual from the population regression of S_{it} on X_{it}, λ_t,μ_i and the instruments: $Z(41)_{\text{it}}$, $Z(51)_{\text{it}}$ and $Z(61)_{\text{it}}$,[6] the key identifying assumption is that once we control for X_{it}, λ_t, and μ_i , this will partial out any other affect between the instruments and the size of government. Since instrumental validity is the key to get unbiased estimate of the parameter of interest δ, some comments about the empirical specification is warranted.

First, the fixed effect μ_i controls for any unobserved time invariant factor. This also mean that the council-size parameter δ will *only* be identified when a municipality actually was obliged to change its council size due that number of eligible voters passed one of the three thresholds: 12,000, 24,000 or 36,000. This will turn out to be important in the empirical analysis. Second, the time effect λ_t controls for any aggregate variable, which might be related to the size of government and to both council size and the instruments. Third, X_{it} is a vector of controls for covariates that are considered to be a standard set in the local public finance literature The following controls will be included proportion of people of age 0 to 15, proportion of people older than 65, population size, income, and grants-in-aid. Finally, and perhaps most important, since the instruments are constructed from number of eligible voters, which is highly correlated with population size, there might be reasons to suspect that the number of eligible voters are related to the government size if there are economies of scale in the production of local public goods. For this reason it is necessary to include a smooth function of number of eligible voters in the vector of covariates X_{it}. In other words, the instrumental variable approach used here is a hybrid regression-control/IV identification strategy. This is distinct from a conventional IV approach since the instruments are derived explicitly from discontinuities in the relationship between the explanatory variable of interest and a control variable. Next, I turn to a more thorough discussion of the data used in this paper.

[6] The $Z(31)$=1 is the reference category.

3. Data

Before turning to the description of the data it is perhaps helpful to make a digression and briefly describe the workings of Swedish local governments. Local governments (or municipalities) play an important role in the Swedish economy, both in terms of the allocation of functions among different levels of government and economic significance. They are, for example, responsible for the provision of day care, education, care of the elderly, and social welfare services. In trying to quantify their economic importance, it can be noted that during the 1980s and 1990s, their share of spending out of GDP was 25 percent and they employed roughly 20 percent of the total Swedish workforce. Swedish local governments also have a large degree of autonomy. They have the constitutional right of self-government, they have no restrictions on borrowing, and they have no balanced budget rules.[7] Moreover, only 25 percent of their income comes from grants, whereas the rest mostly comes from a proportional income tax, which each municipality can set freely.

The panel data used in the empirical analysis consists of 288 municipalities between 1974 and 1998. However, the statutory law regulating the minimum council-size requirement has only been in affect since 1977, and it was not after the election in year 1979 that municipalities had to comply with it. Therefore, some of the empirical analysis is restricted to the period 1980 to 1998, which concerns the instrumental variable approach in particular.

Table 2 shows the descriptive statistics of the size of the local council for each of the four intervals with a minimum requirement of council size. We can see that many municipalities have larger council sizes than required. This is particularly true for the ones with the lowest requirement of 31 seats. On average, this group had slightly more than 40 seats. As discussed in the previous section, the municipalities who were obliged to change its council size due to the statutory law are the ones who will help to identify council-size parameter, since fixed municipality effects are included in the econometric specification. Table 3 presents data on those municipalities who passed one of the three thresholds: 12,000, 24,000 or 36,000 of eligible voters, during the sample period. No

[7] However, from 1998 there exists a balanced budget rule.

municipality was forced to change its council-size at the lowest threshold, whereas 12 and 6 municipalities had to change its number of seats for the middle and highest cutoff, respectively. That no municipality had to change its council-size at 12,000 creates an opportunity of refuting a causal interpretation between council-size and size of government. In other words, there should be no association between the size of government and the council-size at this discontinuity. Therefore, a statistical test of this relation will be made in the empirical analysis.

The size of government will be measured as total spending and revenues per capita. Expenditures and revenues are expressed in per capita terms and in 1991 prices. Table 4 present summary statistics of the dependent variables. Table 4 also presents summary statistics for the additional covariates: proportion of people of age 0 to 15, proportion of people older than 65, population size, income, and grants-in-aid.

4. Results

Table 5 presents OLS estimates without controlling for unobserved heterogeneity. These estimates show a strong positive correlation between council size and the size of government. The estimates are very precisely measured when only time effects are included as controls. Columns 1 and 2 show that spending and revenues increase with SEK 130 per capita (0.5 percent of total spending and revenues) for each additional council member. Including a full set of covariates, the estimated council-size effect falls to SEK 30 per capita, but they are still significant. This, result is consistent with previous estimates in the literature that rely on cross-section variation and do not take into account heterogeneity or the simultaneity.

Table 6 shows the OLS estimates when controlling for unobserved heterogeneity, i.e., including fixed municipality effects. In contrast to Table 5, the estimated council-size effects are now all negative. Without any control variables, they are large (SEK -200 per capita) and significant, but controlling for the additional covariates makes them much smaller and insignificant.

Next**,** I present reduced-form results between the instruments and council-size and between the instruments and spending and revenues. These reduced-form estimates will provide evidence of the strength of the instruments and whether the instruments can be considered as valid. Table 7 presents the results where I control for both a full set of covariates, but also for a smooth function of the number of eligible voters by using a third order polynomial. We can see that the instruments are strongly related to council size, except for Z(41). As discussed previously, no municipality was forced to change its council size at the threshold of 12,000 eligible voters. We can also see that this particular instrument is unrelated to spending and revenues, as can be seen from columns 2 and 3. Hence, if Z(41) was related to council-size or government size, the use of the discontinuities, implied by the council-size law, as instruments would have been refuted. The finding that the my identification strategy was not refuted by this test suggest that factors other than statutory law are not responsible for the correlation between council-size and the instruments and size of government and the instruments. The two other instruments, Z(51) and Z(61) are positively and highly significantly (with t-values of 10 and 14 respectively) related to number council seats. These two instruments are not weak: the F-statistic yields 103, which is much higher than 10, the rule of thumb value suggested by Staiger and Stock (1997). On average, those municipalities which passed the threshold of 24,000 eligible voters was forced to change its council size with nearly 3 members, whereas those municipalities which passed the 36,000 cutoff had to increase its council size with 7.5 members. Table 7, columns 2 and 3, also reveals a large and negative relation between the instruments Z(51) and Z(61) and the policy outcomes. The estimate of Z(51) is significantly different from zero at the 1 percent level, whereas the estimate of Z(61) is almost significant at 10 percent level. To summarize, the results from Table 7 suggest a direct and negative relationship between council size and the size of government. In fact, one can construct simple Wald-type of estimates along the lines suggested by Angrist (1991). For example, dividing the spending and revenue effects in column 2 and 3 by the council-size effect in column 1 leads to an estimated council-size effect on spending and revenues of -1,422/2.93= -485 and –1,472/2.93= -502 respectively when Z(51) is used as an instrument. Using Z(61) as an instrument leads to an estimate of –985/7.57= -130 and –869/7.57= -114 on spending and revenues respectively. Thus, it seems that the relationship might be nonlinear since the estimates differ with respect to the instrument being used. However, even if the structural relationship between the council size and the government size is nonlinear, using all three dummy variable: Z(41), Z(51) and Z(61), as instruments produces a linear combination of the Wald estimates and capture an average effect of economic interest (e.g., Angrist et al. 2000; Heckman and Vytlacil, 1999). Table 8 shows the results from the two-stage least squares estimates, when all three dummies are used as instruments. The estimate of the effect of the council-size on spending and revenues without any controls for the number of eligible voters are presented in columns 1 and 2. The estimates are roughly SEK –130 per capita. The estimates for from models including linear, quadratic and qubic controls for the number of eligible voters are very similar. Thus, it seems that the council-size effect is robust the parameterization of the variable that generates the discontinuity.

The interpretation of the relation between council-size and government size as causal, relies on the identification assumption that there are no omitted time varying and municipality specific effects correlated with the discontinuities induced by statutory council-size law. One factor that could produce such a correlation is party effects. Following Pettersson-Libom (2001), I control for whether the incumbent party is left, right or undefined. Table 9 present a two-stage least square specification that also control for partisanship. The council-size effect is unaffected by the inclusion of partisanship. I have also dropped Z(41) as an instrument, since we saw in the last section, is unrelated to both council size and spending and revenues, and it does not affect the results.

5. Discussion

In the previous section, it was established empirically that there is a negative relation between the size of legislature and the size of government using data from Swedish local governments. I interpret the negative council-size effect as causal. In other words, I claim that my findings are internally valid since I am using a credible source of exogenous variation to identify the council-size effect. However, whether my findings generalize to other countries is another issue. To be able to generalize my results to other populations one often need economic theory. The theory that has guided previous studies is the "Law of 1/n," which posits that fiscal inefficiency in the form of excessive spending increases with the number of legislative district, i.e., Weingast et al. (1981). In other words, the greater the number of districts the greater is the size of government. At a more general level, the overspending bias arises from that legislators view the tax base as a common pool from which to finance constituent specific projects.

When testing this theory, all previous studies have equated the number of districts with the number of seats in the legislature. However, as Baqir (2001) notes "it is unclear whether by the number of districts we should mean the number of seats in the entire house, the number of members in the federal cabinet (or the number of members of the relevant committee), the number of political parties in the government, or some combination of the three." This study also uses the number of seats so it is, perhaps, unclear if my results could be interpreted as a test of the "Law of 1/n," in particular because Swedish local council members are elected at large in 75 percent of the municipalities. However, the same critique can be raised against the previous studies, since they all use the number of seats as a proxy for number of legislative districts. Moreover, Baqir (2001) does not find any differences in response between electoral systems where the candidates are elected from the entire city or from wards within the city.[8] Thus, my result seems to be at odds with the "law of 1/n" explanation. The question is now whether we can we find an alternative explanation that could explain the negative relationship between the size of the legislature and the size of government?

[8] This finding is also interesting because it suggest that there might be an omitted variable, which affect his estimates in a such a way that it does not seem to be any difference between the two systems.

Unfortunately, I am not aware of such a theoretical model so there is a challenge for future theoretical work to explain my finding.

6. Conclusion

Previous empirical studies have found a positive relation between the size of the legislature and the size of government. Those, studies, however, do not adequately address the concerns of simultaneity and omitted variable bias. In contrast, this paper uses a credible exogenous variation in the size of the legislature, induced by a statutory law linking council size to the number of eligible voters in Swedish local governments. The statutory law creates discontinuities between number of eligible voters and council size, which are used to construct instrumental variable estimates of the effect of council size on government size. In contrast to previous findings, the results show that an increase of the council size induces a significant and substantial decrease in spending and revenues. On average, spending and revenues are decreased by 0.5 percent for each additional council member.

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Table 1. Minimum requirement of council size in relation to the number of eligible voters

Minimum requirement of council size	Number of eligible voters
31	Less than 12,000
41	12,000 – 24,000
51	24,000 – 36,000
61	More than 36,000
Stockholm is required to have at least 101 council members	

Table 2. Actual council size

Minimum requirement of council size	Average council size	St. Dev.	Min	Max
31	40.23	5.20	31	49
41	47.62	4.20	41	61
51	52.67	4.23	51	75
61	67.05	7.78	61	85
101	101	0	101	101

Table 3. Identifying information of the estimated council-size effect

Threshold of number of eligible voters	Number of municipalities that crossed the threshold during the period 1980 to1998
12,000	0
24,000	12
36,000	6

Table 4. Descriptive statistics for the dependent and the covariates

Variables	Mean	Standard d.	Min	Max
Total expenditures	29,174	6,015	14,392	70,032
Total revenues	29,083	5,929	15,515	71,699
Proportion of young, 0-15	21.05	2.69	12.65	36.69
Proportion of old, 65+	17.79	4.22	3.27	28.14
Income	72,624	12,357	15,945	162,962
Population size	29,923	53,074	2,865	727,339
Grants-in-aid	2,589	2,598	-4,749	19599

Total expenditures and average income is expressed in per capita terms and in 1991 prices.

Table 5. The effect of council size on the size of government

	Expenditures	Total revenues	Expenditures	Total revenues
Council size	129	130	31	34
	(17.15)	(17.36)	(3.19)	(3.57)
Population 0-15			-765	-747
			(-17.71)	(-17.69)
Population 65+			-422	-402
			(-12.87)	(-12.36)
Population size			0.03	0.03
			(7.31)	(7.24)
Income			0.13	0.13
			(11.66)	(12.02)
Grants			1.39	1.37
			(36.71)	(39.55)
Time effects	Yes	Yes	Yes	Yes
R2	0.3705	0.3725	0.6100	0.6183
Number of observations	7,051	7,050	7,051	7,050

Notes: Estimates are based on Swedish municipality data for 1974-1998. *t*-statistics are in parentheses and white standard errors were used in calculating *t*-statistics.

Table 6. The effect of council size on the size of government

	Expenditures	Total revenues	Expenditures	Total revenues
Council size	-204	-202	-15	-15
	(-9.73)	(-9.46)	(-0.67)	(-0.66)
Population 0-15			189	162
			(4.57)	(3.92)
Population 65+			-178	-142
			(-4.14)	(-3.47)
Population size			-0.23	-0.21
			(-9.67)	(-10.27)
Income			0.10	0.12
			(5.50)	(5.55)
Grants			0.48	0.55
			(9.00)	(11.05)
Municipality effects	Yes	Yes	Yes	Yes
Time effects	Yes	Yes	Yes	Yes
R2 within	0.6409	0.6436	0.6799	0.6856
Number of observations	7,051	7,050	7,051	7,050

Notes: Estimates are based on Swedish municipality data for 1974-1998. *t*-statistics are in parentheses and white standard errors were used in calculating *t*-statistics.

Table 7. Reduced form estimates

	Council size	Expenditures	Revenues
Z(41)	-0.15	70	119
	(-1.66)	(0.21)	(0.38)
Z(51)	2.93	-1422	-1472
	(10.06)	(-2.81)	(-3.01)
Z(61)	7.57	-985	-869
	(14.30)	(-1.54)	(-1.40)
Number of eligible	0.0002	-0.14	-0.23
voters	(3.11)	(-1.20)	(-2.12)
Squared	-2.43e-09	-2.59e-06	-2.26e-06
	(-9.31)	(-3.52)	(-3.13)
Cubic	2.08e-15	2.79e-12	2.31e-12
	(8.31)	(3.44)	(2.92)
Population 0-15	-0.05	309	277
	(-1.26)	(4.89)	(4.37)
Population 65+	0.17	-321	-250
	(5.07)	(-4.85)	(-4.05)
Population size	.0002	-.038	0.024
	(3.70)	(-0.56)	0.38
Income	-0.00005	0.15	0.17
	(-2.55)	(5.76)	(5.73)
Grants	-0.00008	0.39	0.47
	(-4.11)	(7.12)	(9.19)
Municipality effects	Yes	Yes	Yes
Time effects	Yes	Yes	Yes
R2	0.9860	0.8316	0.8389
Number of observations	5,403	5,389	5,389

Notes: Estimates are based on Swedish municipality data for 1980-1998. *t*-statistics are in parentheses and white standard errors were used in calculating *t*-statistics.

Table 8. The effect of council size on the size of government: Two-stage least square estimates

	Expenditures	Total revenues	Expenditures	Total revenues
Council size	-124	-129	-152	-145
	(-2.08)	(-2.28)	(-2.24)	(-2.24)
Number of eligible voters			-0.11	-0.22
			(-0.91)	(-1.77)
Squared			-2.91e-06	-2.58e-06
			(-3.69)	(-3.33)
Cubic			3.05e-12	2.55e-12
			(3.58)	(3.09)
Population 0-15	352	329	308	276
	(5.46)	(4.95)	(4.83)	(4.30)
Population 65+	-362	-293	-286	-215
	(-5.41)	(-4.65)	(-4.13)	(-3.34)
Population size	-0.25	-0.23	0.00008	0.06
	(-6.46)	(-6.77)	(0.00)	(0.89)
Income	0.13	0.15	0.14	0.16
	(3.84)	(3.79)	(5.11)	(5.20)
Grants	0.37	0.46	0.38	0.46
	(6.77)	(8..83)	(6.99)	(9.09)
Municipality effects	Yes	Yes	Yes	Yes
Time effects	Yes	Yes	Yes	Yes
Number of observations	5,389	5,389	5,389	5,389

Notes: Estimates are based on Swedish municipality data for 1980-1998. *t*-statistics are in parentheses and white standard errors were used in calculating *t*-statistics.

Table 9. The effect of council size on the size of government controlling for partisanship: two-stage least square estimates

	Expenditures	Total revenues
Council size	-151	-146
	(-2.25)	(-2.24)
Left majority	217	414
	(1.10)	(1.98)
Undefined	192	262
	(1.38)	(1.99)
Full set of controls; see Table 8	Yes	Yes
Municipality effects	Yes	Yes
Time effects	Yes	Yes
Number of observations	5,389	5,389

Notes: Estimates are based on Swedish municipality data for 1980-1998. *t*-statistics are in parentheses and white standard errors were used in calculating *t*-statistics.