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Partisan Impact on Local Government Spending

- The Effects of Party Politics on Municipal Expenditure in
Sweden

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List of Contents

	PAGE
1 INTRODUCTION.....	1
2 THEORETICAL BACKGROUND	4
2.1 PREVIOUS STUDIES.....	4
2.1.1 Ideological Influence.....	4
2.1.2 The Common Pool Problem.....	4
2.1.3 Fragmented Party Politics and Political Control.....	5
2.1.4 Coalitions and Divided Government.....	5
2.2 SWEDISH POLITICS AND SETTING	7
2.3 THE MODEL	10
2.3.1 Ideology.....	10
2.3.2 Fragmentation	11
2.3.3 Political Regimes.....	12
2.3.4 Control Variables.....	13
2.3.5 Specification of Regression and Panel Data Method.....	14
3 ANALYSIS	15
3.1 THE DATA.....	15
3.2 REGRESSION MODELS AND RESULTS.....	20
3.2.1 One Political Variable Testing.....	20
3.2.2 Combined Political Variable Testing	23
3.2.3 Robust Results.....	25
3.3 DISCUSSION	27
4 CONCLUSIONS	29
REFERENCES.....	31
APPENDIX.....	35

LIST OF TABLES:

	Page
1. <i>The Generated Random Selection of Observations</i>	37
2. <i>List of Variables, Definitions and Sources</i>	37
3. <i>Descriptive Statistics for the Whole Sample</i>	17
4. <i>Descriptive Statistics for the Committee Sample</i>	17
5. <i>Party Belonging of Mayor and Deputy Mayor of the Executive Board</i>	39
6. <i>Correlation between Share of Socialists and Other Political Variables</i>	18
7. <i>Relationship between Herfindahl Index and Share of Socialist</i>	19
8. <i>The Power Dispersion Index over the Time Frame Period</i>	40
9. <i>Single Variable Results – Fixed Effects Regression Model on Total Expenditure and Current Expenditure</i>	21
10. <i>The Impact on Total Expenditure, Combined Variables</i>	23
11. <i>The Impact on Current Expenditures, Combined Variables</i>	24
12. <i>Test of Robustness of Results, Percent of Significant Cases for Variables</i>	26
13. <i>Variation of Outcome in Total Expenditure and Current Expenditure of Significant Variables</i>	40

Abstract

This essay aims to examine whether there is a partisan influence on local government spending using three different measures, ideology, fragmentation and constellations of government. The ideology measure examines the share of socialists (left-wing parties) in the council. Fragmentation consists of a Herfindahl index which uses information on number of parties in the council and their respective strength, and number of committees in the political organization. The third measure is political regimes and tries to capture the effects of constellations of government. Three hypotheses are introduced to examine partisan impact where it is assumed that a higher share of left-wing parties lead to increased spending. Because of the common pool problem, that groups that assert pressure on the budget only internalizes parts of the costs of increased spending, fragmentation and weak forms of government are expected to lead to increased spending. The essay also tries to account for the political setting in Sweden in order to evaluate the accuracy of the measures. Using a panel data analysis on data from a selection of 17 municipalities during 1983-1999, the results show that there is a partisan impact on municipal expenditure and it is inflicted by ideology. An increase in left-wing party share by 1 % increases total and current expenditure by 0,4-0,5% of mean per capita spending. None of the other two measures come out significant and indicates that neither fragmentation nor constellation of government matter for local government spending. However, there are some technical and data problems that make inference difficult. The results also show that level of debt is positively related to total expenditure and municipal income is positively related to current expenditure. The demographic parameter shows that there are scale economies in the selection of municipalities.

Keywords: Expenditure, Local Government, Political Parties, Fragmentation, Government Constellations.

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1. Introduction

Historically, Sweden has always had a high turnout in elections. Recent trends have shown that interest for politics have decreased if counted in percentage of voters in both general and local elections. In 1982, voter turnout in local elections was as high as 90% but since, it has steadily decreased and in 2002 it was down to 78%. General elections showed a similar trend even though the numbers were slightly higher (91.4% and 80.1%) One might argue that local politics should be closer to citizens in that local governments' taxes and services directly affect the municipal population. Whilst there are government initiatives investigating how "democratic" Sweden is, or if one is able to influence decision-making, perhaps there is a sense of parties not making a real difference. Does it really matter whether one votes right or left or are both pursuing the same sort of economic policies once in power¹? Will parties make a difference for spending levels in the municipalities? Perhaps it is so that it is not the party belonging that matters but the amount of power they are attributed with, their bargaining strength, or the form of co-operation? Could constellations of council and executive be the main decision-makers of economic outcomes? What role does political strength play? The aim of this essay is to find out whether there is a partisan impact on local government spending in order to answer these questions.

Parties and political leadership have been the focus of many studies in the economic field, trying to capture different effects on economies and budgets. Partisan impact implies that elected representatives influence the economy in different ways. Ideology means there are preferable policies according to belonging on a left and right scale. Political leadership is concerned with strength, of position, formal and informal power as well as constellations of council and executive (see Borge, 2005 p.326). Strength is measured by fragmentation that suggests that there are many parties with their own preferred policies that try to influence spending decisions, and power dispersion that measures constellations, majority/minority set-ups that may inflict more or less strength and decision-making power. Hagen and Vabø (2005 p. 45) note that the fiscal performance of local councils can be seen as being the outcome of the bargaining power of the political leadership and the economic conditions. When competing interests from different groups assert influence on the budget, a common pool problem arises and this tends to make restrictive policies difficult to put in place (Borge, 2005, p. 325).

¹ The notion of strict divergence means that there are preferred policy outcomes that are the same for all parties (Pettersson, 2003a p. 18).

Local government and economic outcomes in Sweden have been under scrutiny before. In a series of papers, Pettersson (2001, 2003a, 2003b, 2003c) examines several areas including partisan impact on the budget deficit and fiscal policy, legislature size and spending during the period of 1974-1994². Pettersson (2003a) assumes that the local government political arena can be seen as a two bloc-system characterised by socialist and a non-socialist bloc, a bipartisan system and finds significance that parties matter for fiscal policy (p. 10). However, Bäck (2003) finds that party fragmentation has increased and the number of parties represented in the local council has increased. 1980, there was an average of 5.6 parties represented in the council whilst in 1993 the average was 7.3. (p. 98) Because of this amounting fragmentation and the complexity of party systems on the local level, inter-party negotiations and coalition formation are important features in the local policy-making process³.

Why should one study local government and party impact? Teune notes that “Local authorities is where the day-to-day activity of politics and government gets done” (1995, p.16). Local governments allow for a set of institutionally and constitutionally similar observations. They are responsible for providing certain welfare services and administratively work in the same fashion. Hence, systematically they are alike but, the politics of the local authorities differ (Kalseth and Rattsø, 1998 p.63-64) Bergström (2004, p. 217) argues that “in terms of social expenditure and personnel, the Swedish welfare *state* is very much a function performed by *local* governments. In fact, about 70 percent of total government consumption occurs at these levels“. Furthermore, Swedish municipalities are granted a high level of decision-making and they play an important role in the economy (Pettersson, 2003a p. 3). In sum, not only do local government ease the comparison problem that cross-country studies incur but it may be that local politics have a greater impact on citizens than the central government composition and programs.

Assuming however that all political systems work in the same way would be misleading. Many studies underline the specific setting in which the political process take place and the different conditions⁴. Acknowledging this, the features of Swedish local government need to be accounted for. This essay is concerned with the power relations within the *elected* local government and excludes the influence of other actors such as the administration⁵, other levels of government (such as central government, neighbourhood committees, European Union), lobbying groups, mass media, and other channels through which local policy making may be affected. The aim is to draw attention to party impact

² Pettersson (2003c) uses 1994-1998 when examining legislature size and spending.

³ Bäck (2003) also shows that party conflict has increased in average perceived party difference among councillors as well as the average number of dimensions of the local party system (p. 98-99).

⁴ Pettersson (2003) argues that previous studies on the national level ignore the problem of endogeneity. Hagen and Vabø (2005) concludes that their results are not directly transferable to other economies as it accounts for the Norwegian budget process and committee structure that may work differently in other countries.

⁵ There is a clear distinction between administration and politics in Sweden and different bargaining games can be found between these (Goldsmith and Larsen, 2004 p. 129).

by elected representatives; however, it touches upon the external groups as it deals with the common pool problem. It is also assumed that these elected politicians are in full control over the budget⁶.

The main hypothesis to be tested in this essay is *if there is a partisan impact on local government expenditure*. The partisan impact is measured through ideology and political strength asking if fragmentation and constellations affect the outcome. A model is composed by measures used by previous studies and a set of hypotheses will be introduced. The data consists of a generated random selection of 17 municipalities during 1983-1999. The reason for choosing a random sample is that no comprehensive data set is available on the constellations or on one of the fragmentation measures and therefore has had to be collected independently by contacting the selected councils. To test the hypotheses a panel data analysis is used in order to find effects that does not vary according to year or municipality. The intention is to include some of the complexity of the political system and hope to find an answer to whether it is preferable to interpret the Swedish significant partisan influence on the economy that has been found as being mainly a matter of the workings of blocs as Pettersson (above) has found in his studies on the Swedish municipalities or if there is more to it.

The essay is composed in the following way: section two concludes the theoretical background; previous studies, the Swedish political system and introduces the model. The analysis of the data and the regressions is found in section three and section four concludes and summarises the findings and suggests further research.

⁶ For an example, Kalseth and Rattsø (1998) studies the constraint imposed by the administration on the political control over the budget.

2. Theoretical Background

2.1 Previous Studies

Fiscal policy outcomes on the local government level was until recently little accounted for. During the last decade, a number of studies examining the impact of political parties and political setting on municipal budgets have been conducted. The studies that follow will introduce the areas that will be used in the model and the political setting will examine the context that we try to capture in the outline of the model.

2.1.1 Ideological Influence

Pettersson (2001, 2003a, 2003b, 2003c) investigates the local government level in Sweden. The compelling results show significance, there is a party effect on both fiscal policy and the budget deficit⁷. Assessing partisan impact on fiscal policy outcomes, he concludes that there is a “large and significant” party effect on local government spending in Sweden. Left-wing parties tax and spend on average 2.5% more than right-wing parties hence finding a party effect of 1% on the municipal income. (Pettersson, 2003a p. 20). Similarly, Hagen and Vabø (2005), Kalseth and Rattsø (1998) find that left-wing parties tend to spend more than right-wing parties. Borge (1995, 2005) does not find ideology to be a significant factor on budget deficits but on user fees leading to increases in local public spending.

2.1.2 The Common Pool Problem

The common pool problem is based on the assumption that different groups benefit from certain forms of expenditure (be it on elderly care, education, health etc) and because the cost of increasing spending on this group is divided among the whole population through taxation only the benefits are fully internalised by the group. As the cost is only fractionally internalised this leads to increased lobbying and spending. A spending bias occurs as each group n internalises $1/n$ of the costs of the needed increase in revenue imposed on the whole economy and this fraction falls as n increases, meaning that the

⁷ Pettersson (2003c) also shows that council size affect fiscal policy. For each additional member, there is a decrease of 0.5-0.8% in spending and revenue.

larger the number of groups, the more spending⁸. Through their representatives the groups may exert pressure on the budget and the common pool problem can be seen as interest groups representing different service sectors compete over the budget (Borge, 2005 p. 325)

2.1.3 Fragmentated Party Politics and Political Control

Studies have shown significant results measuring the common pool problem. (i.e. Perotti and Kontopoulous, 2002, Hagen and Vabø 2005, Borge, 2005⁹) and it has been suggested that to overcome the common pool problem, budgetary or political institutions, such as budgetary procedures or political leadership, are needed (Kalseth and Rattsø, 1998 p. 329) An important feature of political leadership is its ability to represent the general interest and to overcome the common pool problem, that is, to fully internalise the costs among the interest groups (*ibid*). Borge (1995) shows that weak political leadership is more likely to allow increase in spending as it may be less resistant to lobbying. Strong political leadership is in a better position to keep increased spending pressure in place (Borge, 2005 p. 329). He also finds low fragmentation to lead to fee reduction in Norwegian local governments and that low fragmentation tends to be associated with a high socialist share in the council (p. 332) Similarly, Hagen and Vabø (2005) find that strong political leadership improves fiscal policy. Kalseth and Rattsø (1998) do not find fragmentation to be significant when measuring administrative spending.

2.1.4 Coalitions and Divided Government

Roubini and Sachs (1989) distinguish several reasons for why coalition governments have difficulties keeping budgets. Firstly, individual parties in a coalition have their own constituencies to look after and are reluctant to cut spending or increase taxes that would negatively affect their voters. Secondly, each party in the coalition may have power to block budget proposals but too little power to implement its own preferred program. Additionally, the coalition parties are aware of the fact that the electorate is unable to distinguish between which party is responsible for a specific part of a policy. The lack of

⁸ If $b_i(x)$ is the benefit to the representative of group i in x dollar and $c_i(x)$ the cost to the associated tax to the representative of group i then the spending level x is $b_i'(x) = c_i'(x)$. However, when representatives distribute spending from a common pool of funds to which all groups contribute then the group of representative i bear only $(1/n)$ th of the cost of spending given n groups. The relative price of public goods changes and the representatives seek spending for his group up to where $b_i'(x) = (1/n)c_i'(x)$. Assuming that all representatives act in this way, spending that is funded from a common taxbase increases with the number of n . (Bradbury and Stephenson, 2003 p. 187) This is also called the Law of $1/n$ used for relating spending and size of legislature where representatives are responsible for their respective constituencies i , when the number of districts increase, spending increase. Similarly, with more elected representatives, spending increases. (i.e Petersson, 2003c, Bradbury and Stephenson, 2003).

⁹ Borge (2005 p. 326) finds however when using a survey method when analysing spending preferences among politicians, the common pool problem is not captured when community-specific effect are included.

control weakens any enforcement mechanisms that exist between coalition parties and make it difficult to reach co-operative outcomes. A, in general, high turnover rate for coalitions also weakens enforcements, as a short tenure will decrease chances to play a repeated decision-making game. However, this means that it is not the number of parties that matter but the instability or stability of the system, assuming that a one-party majoritarian government stays in power longer than a coalition government (p. 909). De Haan et al (1999) perform a cross-national study on the “weak government thesis”. This thesis states that with a higher level of disagreement among policy makers, the more difficult it is to reduce budget deficits, as neither representative, looking after its own constituency, wants to increase taxes or cut spending. Reducing budget deficits after an economic shock may therefore prove difficult, especially for a coalition government, which is a weak government form. The outcome of the study however shows no evidence that the type of government (that is, coalition, one-party majority etc, as well as different political systems; presidential, stable parliamentary and unstable parliamentary) matter. However, they do find significant positive impact by the number of parties in government on central government debt-to-GDP. (p.163, 165) Allers, De Haan and Sterks (2001, p. 355) note that policies pursued are not necessarily the preferences of the electorate reflected by the elected representatives in council but policy makers have their own preferences. The set-up of the executive differs from the elected council in Dutch municipalities hence the composition of the council and difference between the set-up of the council and the executive need to be taken into account. They find that larger coalitions result in a lower taxation.

Alt and Lowry (2000 p. 1039-1040) assume that in American states, one should be able to observe an on average positive short term change in revenue and spending when an unified Democratic government has taken power and a negative short term change when Republicans are in transition. This is because they have ideologically different preferences than their abdicating counterpart and will adjust the budget accordingly (presuming they prefer a balanced budget). However, it only accrues to a unified change of government, of both legislature and executive. In this case, nothing stops the unified government from implementing their policy options as they control the budget process and need not bargaining. This change could occur stepwise as entitlements and constituent supported programs need to be fulfilled first. (*ibid*) As well, with divided government, a legislative party strong enough to override a veto in both chambers would achieve power in the same way as a unified government. Because of the nature of split branch governments, different outcomes are possible and depend on a bargaining process when a party strong enough to implement its preferred budget is absent. (p. 1041) The party that sets the target of the budget will decide on whether to increase or decrease revenues (and therefore state income) and the configuration of the government (whether or how it is divided) will decide how fast the revenues will change (if it is not already at the target setting party’s ideal)¹⁰ (p.13). Kalseth and Rattsø (1998) conclude that divided

¹⁰ It also depends on whether it is split-legislature and split-branch.

party control strengthens the power of the administration and because it is in the interest of the administration to maximise their resources, spending increases under such a condition.

Pettersson (2003) concludes that the assumption of a constant party effect cannot be rejected despite accounting for strength and bargaining¹¹. Different right- or left-wing coalitions do not alter the party effect significantly. (p.19) The approach taken by Pettersson (2003) is to find systematic differences hence focussing only on observations where there has been a change of government, right or left-wing, a regression-discontinuity approach. He finds that the most common type of government in the localities during 1974-1994 has been majority coalitions by the socialist or non-socialist bloc, hence it is a majority coalition effect rather than a party effect (p. 7ff) Perotti and Kontopoulos (2002) find that cabinet size matter for fiscal outcomes and so do coalition size and ideology but to a smaller extent. They also find transfers to be most affected by these¹².

Finally, Seitz (2002) finds that fiscal policy used by the German Laender is not determined by systematic ideological differences, neither by parties nor party constellations. Instead it is determined by economic forces and fluctuates accordingly. Another study where partisan impact is not found includes Pommerehne (in Allers, De Haan and Sterks, 2001) where no partisan influence on local public finance is exerted in Switzerland.

In short, there are no clear answers to whether fragmentation, constellations or party belonging matter. Studies performed on different observations show differing results, emphasizing the fact that countries are set in specific contexts.

2.2 Swedish Politics and Setting

The Swedish councils as we find them today are mainly the outcome of two reforms that ended in 1974 with 278 municipalities¹³. In 1974, the right of self government was also formally entered into the constitution, affirming the right of decision-making and independence within a certain framework. (Regeringskansliet, 2005 p. 5-6)

The Swedish local governments are composed by a popularly elected council, a collective executive committee and a structure of committees organized by policy sectors. The council is the highest decision-making body of the municipality and is constituted by

¹¹ This is done by allowing interaction between a party variable and a control variable as well as testing the average treatment effect, the party effect at the mean of the assignment variable. (Pettersson, 2003a p. 16).

¹² Note that the study is performed on a national level. However, its findings are important for the model in the essay.

¹³ Since then there has been only a few additions and in 2005 the total number of municipalities were 290.

party representatives distributed seats according to a proportional system based on an adjusted odd number method. Representatives are elected every fourth year on the same day as general election, which is held on the third Sunday in September¹⁴. It is the council that decides upon the budget, sets the proportional tax rate and user fees in the municipalities. The council also appoints the executive committee and committee leaders to the policy sector committees. The executive's main task is to lead and coordinate the activities in the municipality but it also has the responsibility of preparing the council agenda, managing and making proposals for the budget as well as deciding on the priority of implementing projects that has been agreed upon by the council. Another task is to overview the policy sector committees. (Regeringskansliet, 2005 p. 8-9) The total number of committees in the municipalities varies and is determined by the councils in each municipality. There is no hierarchical relationship between the executive committee and the policy committees and the latter are granted their own particular decision-making privilege in certain areas. (Bäck 2003, p 93, Goldsmith, 2004, p. 129) When introduced, the local government system was purely representative in both the council and the executive committee but since 1970s it has been 'quasi-parliamentary' in its functioning¹⁵. That means that the leaders of the executive committee, all policy sector chairs and all full-time commissioners have tended to be appointed by a party grouping holding a majority in the council (Bäck 2003 p. 98) It has been suggested that the executive committee could be seen as a cabinet and the council as being the legislature (Goldsmith and Larsen, 2004 p. 129 quoting Bäck et al, 2001).

As many of the studies used here have been done on Norwegian municipalities, it is important to emphasize two aspects. The local governments in Nordic countries are similarly set-up and Goldsmith and Larsen (2004) note that they are normally small with the main task to produce and deliver public services. The 'Nordic value' emphasizes consensus and cooperation along with corporatist decision-making which is "a tradition of broad based local decision-making where important interests are generally represented" (p. 121-123). The second aspect is the leadership role where the Swedish "mayor¹⁶" differs from its Nordic counterparts. The leader of the executive has less power¹⁷ and has no formally defined position (Bäck 2003, p. 94) The Swedish mayor has to seek its political role next to the departmental administration, chief executive officer of the administration, committee chairs and the other politicians. (Goldsmith and Larsen,

¹⁴ Elections were held every third year until 1993. From 1994, elections are held on a four-year basis.

¹⁵ Compared to Norway where the executive board mirrors the elected party representatives of the council. There have been experiments trying a cabinet style system but only in a few municipalities. The Norwegian executive board is also the key decision-making group whereas in Sweden it has a formally weaker role. Neither is a mayor elected by the board in Sweden as it is in Norway. Directly appointed mayors have been under trial in Norway as well. (Goldsmith and Larsen, 2004 p. 125-126, 129)

¹⁶ Throughout the text, I will use the term mayor and deputy mayor for the leader of the executive and the deputy leader of the executive in order to facilitate reference to previous literature.

¹⁷ Sweden has a so called "committee-leader" system instead of a strong mayor system, and therefore lacks individual strong leadership. However, none of the other Nordic countries operate a strong mayor system. (Goldsmith, 2004 p. 123)

2004 p. 129) This means that not only needs the leader be aware of its own party and network but also the municipality as a whole. Despite this and a collective responsibility for policy direction in the Nordic countries, the mayor is recognised as playing the key role. (Goldsmith and Larsen, 2004 p. 122, 130).

Another aspect of the political system is the left-right scale belonging of the parties. The biggest two parties have been the Social Democrats and the Conservative Party. The Social Democrats have had strong position for much of the post-war period. Whilst the Social Democrats have dominated the left-wing, the right-wing has been more fragmented and more coalitions between right-wing parties have been necessary to hold a right-wing rule in the councils. Pettersson (2001 p. 575-576) shows that the turnover rate of right-wing governments is higher and more left-wing governments have been in power when counting majority coalitions. He also concludes that only 6 out of 833 cases has a one party majority (50% or more) been held by a right-wing party whilst for Social Democrats this has happen 515 times out of a 826 (Pettersson, 2003a p. 10). Goldsmith and Larsen (2004) underline that despite the acceptance of high taxes to provide extensive welfare system that has been provided by social democracy, recent years have shown a rejection of Social Democrats. Therefore, it has become less likely with a majority party but more likely with minority coalitions (p. 125) Another opinion on the party system is offered by Castles and Mair (1997 p. 154-156) on the tendency of *polarization* (a measure of the distance between the most left-oriented and the most right-oriented party in a country) and *core divergence* (a measure of the distance between the two biggest parties in a country). They show that during the years of 1984-1995, polarization has increased in Sweden but the two main parties, the Conservatives and the Social Democrats have actually moved towards each other¹⁸.

Finally, from an economic point of view, the municipalities have an important role to play. They employ around 20% of the Swedish workforce and their share of spending of the national GDP has during the last two decades been around 20-25%. Only about 20 % of their income is attributed from grants and as the councils set their own (proportional) income tax, this main revenue source can be affected directly by local government. As well, there are no restrictions on borrowing or balanced budget rules¹⁹. (Pettersson, 2003c p.13-14) Hence increased spending could be financed either through increased taxes or a budget deficit.

¹⁸ However, they conclude that overall, there is a tendency of when the system contracts, the main parties move closer and when it stretches, the main parties move apart (p. 156)

¹⁹ As of year 2000 there is a balanced budget restriction in place.

2.3 The Model

To measure local government spending, two dependent variables will be used, total expenditure (TOTEX) and current expenditure (CUREX). In total expenditure, investment is included whilst in current expenditure it is not. To measure partisan impact on these two variables, three main measures are used; ideology, fragmentation and political power dispersion. A number of control variables are also added to capture any effect on these political variables and the dependent variables.

2.3.1 Ideology

Borge (2005) measures ideology by using the share of socialists in the council. Hagen and Vabø (2005) measures ideology as share of socialists in the council and in the executive and so do Kalseth and Rattsø (1998). Borge and Sørensen (2002) categorize socialist, centre and conservative into different groups. Allers, De Haan and Sterks (2001) divide into left-wing, right-wing and neutral. Pettersson (2003 p. 10) argues that the Swedish system is mainly a two-bloc system and therefore it is applicable with a dummy variable. Left-wing majorities are coded 1 and right-wing majorities 0. I will use the share of left-wing seats in the council as this essay includes measures of constellations and the variable is coded SHSOC²⁰.

Left-wing parties are: the Social Democrats (S), the Left Party (V) and the Green Party (MP). The right-wing includes: the Conservative Party (M), the Centre Party (C), the Liberal Party (FP) and the Christian Democrats (KD)²¹. On the local level, there are a number of local parties that need to be classified but these parties are problematic to separate into left or right (Pettersson, 2001 p.575). The problem could be solved by only including municipalities where there are no local parties but that would not be consistent with recent trends that have been suggested above and Pettersson (2001, p. 572) finds in his study that the inclusion of local parties does not affect the robustness of his results. Therefore local parties are classified as a group that may consist of one or several parties²² that does not belong to the “distinct” left group. As previous studies have shown, left-wing parties are assumed to prefer a higher level of spending.

Hypothesis 1: A higher share of left-wing parties leads to higher expenditure.

²⁰ The proportional representation electoral system based on the adjusted odd-number method, the distribution of seats is highly correlated to the vote shares, larger than 0.99 (Pettersson, 2003 p. 9, 11).

²¹ (S) Socialdemokraterna, (V) Vänsterpartiet, (MP) Miljöpartiet, (M) Moderaterna, (C) Centerpartiet, (FP) Folkpartiet, (KD) Kristdemokraterna.

²² In this group, New Democracy is included for the years of 1991 and 1994.

2.3.2 Fragmentation

Perotti and Kontopoulos (2002 p. 195) suggest two determinants of the degree of internalisation²³. The one of importance here is the number of decision-makers that are related to the common pool problem. The spending bias means that the higher the number of decision-makers, the larger the aggregated expenditure. How to measure decision-makers however depends on how to interpret who the decision-makers are. Perotti and Kontopoulos uses the number of parties in government as each represented party can be seen as a decision-making unit. Another measure interprets the number of spending ministers to be the decision-making units as they all contribute with demands on the budget. (Kalseth and Rattsø, 1998 p. 71) notes that representation by several parties in the local council may make it more difficult when forming a controlling majority and may increase the “complexity of bargaining”²⁴. To measure fragmentation in local government, a Herfindahl index will be used (Borge, 2005). The index shows party fragmentation by taking the value 1 when a single party holds all the seats in the local council and when it is equally divided among all parties that are represented in the council, P , it takes the minimum value of $1/P$. If we let SH_p be the share of representatives from party p , then the Herfindahl index can be defined:

$$HERF = \sum_{p=1}^P SH_p^2$$

We expect the Herfindahl index to be positively related to fragmentation, that is, we expect fragmentation to increase expenditure hence it is expected to come out with a positive sign in our regressions (Borge, 2005 p. 330).

As is suggested by Perotti and Kontopoulos, the number of spending ministers will be measured by using the number of policy sector committee leaders (COMSIZE) in Swedish local governments where committees are strong and can be seen as bargaining for their share of the budget. What is proposed is that the political colour of the policy sector committee leaders do not matter as much as their concern for their own area of responsibility if one assumes that each interest group hold their respective committee leader responsible for a certain area (for a comparison of assumptions, see Hagen and Vabø, 2005, p. 52-53)

Hypothesis 2: Increased fragmentation increases spending.

²³ The second measure is the procedural fragmentation, the process in the government where fiscal policy is finally decided. The budget procedural is not accounted for in this essay.

²⁴ Note that Kalseth and Rattsø acknowledge that the presence of several parties may also lead to increased competition and may result in a better control of the budget (*ibid*).

2.3.3 Political Regimes

Roubini and Sachs (1989) have composed a power dispersion index by using information on party belonging and the numerical strength of the parties of the executive and legislative in the government. De Haan, Sturm and Beekhuis (1999 p. 173-174) points to some inconsistencies in the use of definitions in Roubini and Sachs' studies²⁵. Kalseth and Rattsø (1998) accommodate the power dispersion index to be applicable to Norwegian local government and takes into account information on the party belonging of the mayor and the deputy mayor and strength of their parties measured in share of seats. As suggested by Edin and Ohlsson (1991), a dummy formulation in the regression analysis will be used for each of the political regimes (POW). Kalseth and Rattsø (1998 p. 82-83) suggest the different forms of coalitions to be classified as follows:

- POW1: Minority coalition (multiparty coalition) - the mayor and the deputy mayor elected by the local council represent different parties and the two parties together hold less than 50% of the seats in the local council.
- POW2: One party minority - the mayor and the deputy mayor elected by the local council represent the same party and this party holds less than 50% of the seats in the local council.
- POW3: Majority coalition - the mayor and the deputy mayor elected by the local council represent different parties and the two parties together hold more than 50% of the seats in the local council.
- POW4: One party majority - the mayor and the deputy mayor elected by the local council represent the same party and this party holds more than 50% of the seats in the local council.

When using these dummies in the econometric analysis, multicollinearity needs to be accounted for. That means one of the POW will be used as a reference to which the other coalitions are compared. Borge (2005 p. 331) suggests POW1 is the weakest form of strength. Therefore by using POW1 as a reference, we expect the different constellations to come out with a negative sign.

Hypothesis 3: The less dispersed power is among parties, the less is the amount of spending.

²⁵ De Haan, Sturm and Beekhuis (1999) also refer to Edin and Ohlsson (1991) that suggest that the Roubini and Sachs index only captures the effect of minority governments rather than majority coalition governments.

2.3.4 Control Variables

A number of control (explanatory) variables are included to find out how they affect the political variables above. That is, if the political coefficients are proxying for some other variables hence inclusion of the control variables may reduce the coefficient of the political variables. (Gilligan and Matsusaka, 2001 p. 5) The following variables have been outlined by previous studies and a detailed definition of them and their sources is provided in the Appendix:

ELD: The share of the population 65 years and above.

CH: The share of children, 0-6 years old.

YO: The share of youths 7-15.

POP: Population size.

DEN: Population density.

AFFL: Municipality wealth.

INC: Grants from other levels of government and tax revenues.

DEBT: Debt.

It is assumed that ELD, CH and YO have a higher demand on local welfare services (child care, primary school, elderly care) whilst not contributing to municipal income²⁶. Hence a higher share of ELD, CH and YO means more expenditure. Hagen and Vabø (2005 p. 48) refer to these as interest groups that assert a pressure on the budget and influence the fiscal performance of the municipality. Size and density matter for congestion or scale economics. Bradbury and Stephenson (2003 p. 189-191) suggest size may matter for spending decisions for providing goods as larger size may require more spending and with population growth, per capita spending should decline with increased population, provided there are economies of scale in government output. Size and density may also result in higher costs if the municipalities become overly large²⁷. Income is related to fiscal capacity as the main revenue is the proportional tax income²⁸ and constituency wealth means that higher income will provide a larger base for income as well a higher demand for government (Wagner's Law, if government is a normal good then with higher income, demand for government expenditures will rise) and spending should also increase with an increase in intergovernmental transfers per capita (*ibid*). Debt is expected to have a negative impact on spending as larger interest payments and loan payments result leave less money for spending (if parties are concerned about the budget deficit). However, as there are no restrictions on borrowing, debt does not necessarily prove to be a restriction on spending. (Hagen and Vabø, 2005, p. 55 on debt).

²⁶ This is termed the dependency burden of the population, the part of the population that is not in the ages where they are able to join the workforce and therefore depend on the others to be supported. The workforce age in Sweden is 16-64.

²⁷ Resulting in diseconomies of scale. (p.11)

²⁸ Petersson (2003c, p. 577) also notes that income may be seen as a "control for local business cycle variations".

2.3.5 Specification of Regression and Panel Data Method

The general regression to be tested is found below. Any other regressions that will be tested are “special cases” to this static regression:

$$EXP_{jt} = \alpha_{jt} + \beta_1 HERF_{jt} + \beta_2 POW2_{jt} + \beta_3 POW3_{jt} + \beta_4 POW4_{jt} + \beta_5 SHSOC_{jt} + \beta_6 COMSIZE_{jt} + \beta_7 X_{jt} + \alpha_j + \beta_t + u_{jt}$$

$$t = 1, \dots, T; \quad j = 1, \dots, N$$

$$u_{jt} = \mu_j + \delta_t + v_{jt}$$

Where j denotes the local governments, t years. X is a vector consisting of the control variables above and u_{jt} is the error term consisting of μ_j which denotes the *unobservable* individual specific effects that is not included in the regression (the municipality's unobserved characteristics). δ_t captures the *unobservable* time effect (any year specific effects) and v_{jt} is the remainder stochastic disturbance term. The fixed effects model assumes μ_j and δ_t to be fixed and allows us to assess the behaviour of the municipalities without accounting for heterogeneity. However, our inference will be conditional on the particular number of municipalities over the specific years chosen and therefore this restriction needs to be taken into account. (Baltagi, 1995 p. 9-10, 27)

This means that we can capture any year specific changes, such as cyclical effects due to national business cycles, as well as municipal heterogeneity effects that may impact on the result and should provide robust and strong results (Hagen and Vabø, 2005, p.56). As Statistics Sweden has changed the definition of variables over time hence including time effects is important to capture these breaks in the data.

A short introduction to hypothesis testing and regressions is provided in the Appendix.

3. Analysis

3.1 The Data

The sample consists of panel data²⁹ for 17 municipalities during the period of 1983 – 1999 with a total number of 289 observations. The reason for only including 17 local governments is that data has had to be collected for the power dispersion index and for the committee size fragmentation measure as no comprehensive form of the data is available. As the main concern of the essay is to test several measures, more weight has been put on the measures hence focusing on a smaller sample in order to include these³⁰. The starting year has been chosen due to the availability of data on share of seats and the end date depends on the restriction that the balanced budget rule incurs. During this period, six elections have taken place with elected representation periods 1983-85, 1986-88, 1989-91, 1992-94, 1995-98 and 1999³¹. The included municipalities have been chosen by generating a random selection from 280 municipalities³². This approach may incur problems in finding the expected results as we might end up with a bad selection instead of when we control the selection by choosing according to some criteria that we believe may influence spending (e.g. share of socialists, demography). The strength in using this method is that as we do not know exactly what influences spending, we may be mistaking the criteria and therefore affect the selection with our bias. As this essay aims to explain several factors impacting on spending, I have chosen the random selection.

The municipalities in the sample represent different geographical locations although the selection may not be fully representative as there are no municipalities from i.e. the Stockholm area or any other major city region (see table 1 in the Appendix). As well, certain counties were not selected whilst some counties are well represented such as Skaraborgs and Älvsborgs, later part of Västra Götaland. The municipalities differ in size and population and the sample seem to have generated municipalities within the same county close to each other (e.g. Svenljunga and Herrljunga). How this geographical

²⁹ Panel data follow units over time compared to cross-section data that uses a sample at a particular point in time or time-series that follow one unit over time (Hill et al, 2001 p. 8)

³⁰ Kommunförbundet has collected data on party belonging and number of committees since 1971 however these data are not available in a form suitable for this essay as the main focus of Kommunförbundet's collection has been on representation (i.e. male and female representation in committees).

³¹ The executive committee is elected on 1 November and instated at the beginning of the consecutive year.

³² New municipalities have been formed during the years after 1974, Nykvarn, Södertälje, Bollebygd, Lekeberg, Örebro, Borås, Gnesta, Trosa and Nyköping and all of them have been excluded as well as the ones they were split from.

dispersion may affect the sample is not certain. One possibility lies in weak regions or strong regions where more or less expenditure may be needed. Another aspect is tradition of political colour where in the Northern part of Sweden, socialist politics seem to have a strong voter platform.

20 municipalities were contacted in order to collect the statistics. Two municipalities were unable to respond whilst one was at a later stage excluded due to comparability difficulties (Gotland is both a municipality as well as a county administrative district). The variable measuring number of committees has been problematic since the tasks and responsibilities vary between committees and councils as these are free to choose how to organize their areas and sectors. The problem lies mainly in the definition of what is a committee with political importance hence the use of this data is somewhat questionable³³. The number of committees varies between 4 and 17 in the 13 municipalities that contributed with this information³⁴. Despite this, the data will be used in order to test one of the fragmentation aspects although not as extensively.

Descriptive statistics of the variables and their expected outcome signs follow in table 3 and 4 below. The tables show that we expect fragmentation and ideology to increase spending whilst all government forms except a minority coalition will decrease spending. Dependency groups, debt and income should increase expenditure whilst population size, density and affluence could come out positive or negative. The tables also show the mean value of the variables, median, maximum and minimum value and the standard deviation of them. The number of observations varies as there has been some data missing and as not all the municipalities were able to provide committee size data.

³³ The definition has been committees in the political organisation with drafting *and* managing tasks. This is to refer to similar definition by Kommunförbundet in their collected data.

³⁴ The municipalities that are excluded are Pajala, Degerfors, Mullsjö and Storfors.

Table 3 and 4. Descriptive Statistics of the Samples and Expected Outcome Signs of Variables

Descriptive Statistics for the Whole Sample

	TOTEX	CUREX	HERFIN	POW1	POW2	POW3	POW4	SHSOC	COMSIZE
Mean	32668	27116	0,30	0,08	0,15	0,51	0,27	0,52	10
Median	31673	26165	0,28	0,00	0,00	1,00	0,00	0,49	11
Maximum	58009	48144	0,46	1,00	1,00	1,00	1,00	0,80	17
Minimum	20551	17563	0,18	0,00	0,00	0,00	0,00	0,29	4
Std. Dev.	6123	5137	0,07	0,28	0,35	0,50	0,44	0,14	3
Observations	289	287	289	289	289	289	289	289	221
Expected Outcome Sign			+		-	-	-	+	+
	POP	YO	CH	ELD	DEN	DEBT	AFFL	INC	
Mean	13427	0,12	0,09	0,19	28	13054	88	21779	
Median	10506	0,12	0,09	0,20	19	13157	87	21398	
Maximum	52392	0,21	0,13	0,26	121	40185	113	40029	
Minimum	4872	0,09	0,06	0,05	1	619	75	10434	
Std. Dev.	9847	0,02	0,01	0,04	27	7079	7	5132	
Observations	289	289	289	289	289	289	289	287	
Expected Outcome Sign	+/-	+	+	+	+/-	+	+/-	+	

The data above summarises the variables on the unbalanced set of the sample. The balanced set with the imported data increases the mean value with only 32 SKr on CUREX and 17 SKr INC. The balanced set where the years have been excluded increases with 235 SKr TOTEX, CUREX 58 SKr, POP 14 people, DEBT 406 SKr and INC 301 SKr whilst POW3 and POW4 decrease with 0,01. All prices in 1999 price level.

Descriptive Statistics for the Committee Sample

	TOTEX	CUREX	HERFIN	POW1	POW2	POW3	POW4	SHSOC	COMSIZE
Mean	31824	26476	0,29	0,11	0,09	0,62	0,22	0,49	10
Median	31175	25759	0,28	0,00	0,00	1,00	0,00	0,46	11
Maximum	45899	39958	0,46	1,00	1,00	1,00	1,00	0,80	17
Minimum	20551	17563	0,18	0,00	0,00	0,00	0,00	0,29	4
Std. Dev.	5389	4720	0,07	0,31	0,29	0,49	0,41	0,13	3
Observations	221	219	221	221	221	221	221	221	221
Expected Outcome Sign			+		-	-	-	+	+
	POP	YO	CH	ELD	DEN	DEBT	AFFL	INC	
Mean	15056	0,12	0,09	0,19	31	12179	88	21111	
Median	11032	0,12	0,09	0,20	19	12081	88	21017	
Maximum	52392	0,21	0,12	0,24	121	27876	113	34494	
Minimum	6803	0,09	0,06	0,05	8	619	78	10434	
Std. Dev.	10673	0,02	0,01	0,04	29	6479	7	4550	
Observations	221	221	221	221	221	221	221	219	
Expected Outcome Sign	+/-	+	+	+	+/-	+	+/-	+	

The data above summarises the variables on the sample with only the municipalities with committee data. This data excludes four municipalities (Pajala, Storfors, Mullsjö and Degerfors). This set is unbalanced however there are no major differences in the sets (CUREX differs with 37 SKr less in the balanced set and INC with 8 SKr less). All prices in 1999 price level.

The data shows that similarly to Pettersson’s findings on majority coalitions being the most common form government (see page 5), if the mayor and deputy mayor represents the set-up of the council, this is also the case here. POW3 is the most common type of constellation where mayor and deputy mayor belong to different parties and their party holds more than 50 % of the seats in the council. However, Pettersson finds that in the council it is majority coalitions within the two blocs whilst the data over the executive board shows in most cases that the set-up of two party executives consists of Social Democrats and the Center party or another right-wing bloc party (see table 5 in the Appendix).

We also measure correlation between our political variables to see if or to what extent they measure the same thing. Table 6 shows that the share of socialists is highly correlated with the Herfindahl index and POW3 and POW4 (majority coalition and one party majority).

Table 6. Correlation Measures

Correlation between Share of Socialists and Other Political Variables

	SHSOC <i>Whole Sample</i>	SHSOC <i>Committee Sample</i>
HERFIN	0,89	0,89
POW1	-0,09	-0,14
POW2	0,05	0,05
POW3	-0,68	-0,68
POW4	0,83	0,83
COMSIZE	-0,20	-0,20

The reason for the high correlation between POW4 and SHSOC is the strong position of the Social Democrats in Sweden where both the mayor and deputy mayor belong to this party whilst holding more than 50% of the seats. Westerlund (2004 p. 130) suggests that if correlation is above 0,8 then collinearity is a problem. Hence we should not use both the variables at the same time in the regressions. Hagen and Vabø, (2005, p.55) also emphasize that some of the underlying independent variables are assumed to describe identical underlying causes. Borge (2005, p.333) advises cautiousness in using POW4 as in most cases the same party is represented by socialists. In our case, we also find the Herfindahl index to be strongly correlated with the share of socialists in the council and we continue to investigate this.

It has also been suggested that party low fragmentation is associated with a high share of socialists in the council (see page 4). Table 7 below confirms this and shows a tendency for increasing fragmentation in the Northern municipalities.

Table 7. Herfindahl Index and Share of Socialists

Relationship between Herfindahl Index and Share of Socialist

Value of Herfindahl Index		Range	Mean SHSOC	Number of observations
	First Quarter	0,18-0,25	0,42	37
	Second Quarter	0,26-0,32	0,50	39
	Third Quarter	0,33-0,39	0,63	15
	Fourth Quarter	0,40-0,46	0,74	11
Mean: 0,29			Total: 102	

Election Year	Whole Sample		Northern Sample		Southern Sample	
	Herfindahl Index	Share of Socialist	Herfindahl Index	Share of Socialist	Herfindahl Index	Share of Socialist
1982	0,33	0,52	0,40	0,69	0,29	0,43
1985	0,30	0,51	0,36	0,66	0,27	0,43
1988	0,30	0,53	0,36	0,68	0,26	0,45
1991	0,26	0,46	0,32	0,62	0,24	0,38
1994	0,30	0,56	0,36	0,71	0,27	0,48
1998	0,24	0,52	0,27	0,63	0,23	0,46

Northern Sample: Storfors, Hagfors, Laxå, Degerfors, Kalix, Pajala

Southern Sample: Häbo, Tierp, Valdemarsvik, Vadstena, Mullsjö, Skurup, Varberg, Karlsborg, Mellerud, Svenljunga, Herrljunga

The Herfindahl index ranges from 0,18 to 0,46 in the sample. Borge finds (see page 4), low fragmentation tend more often be associated with a high share of socialists and this is the case in the Swedish councils as well. Another feature that has been suggested is that since the 1980s, there has been a tendency for increased fragmentation in local governments with the decline of the strength of socialists (see page 7 and 8 above). Table 7 shows that any conclusions on this subject prove difficult as there is no clear trend in the whole sample. However, if one divides the sample according to geographical belonging then there is a pattern of a higher share of socialists and lower fragmentation in the Northern municipalities and higher fragmentation and lower share of socialists in the more Southern.

It was also suggested (page 8) that there has been a move from one party majority to minority coalition. Using the variables POW (although not fully representative as we can not say anything about the mayor and deputy reflecting the council), there has been a clear tendency towards moving from majority to minority. In 1983, 1 municipality belonged to POW1 and 1999, there were 5. The respective figures for POW4 is 6 and 0. As well, 2 municipalities belonged to POW1 and POW2 (minority coalition/one party minority) in 1983 and 12 in 1999. For POW3 and POW4 (majority coalition/one party majority), the figures are 15 and 5 (see table 8 in the Appendix). This implies that we are moving towards weaker government forms.

3.2 Regression Models and Results

The outcome of the regressions shows differing results and only SHSOC is significant in both total expenditure and current expenditure. Debt also matter for total expenditure whilst income matter for current expenditure. Difficulties with the POW-measure have led to a necessity to test and compare outcomes of the variables in different combinations. In total, I have run 182 regressions in order to test the robustness of the results. These regressions have been estimated on all sets of data using fixed effects on years, community fixed effects when possible, community dummies and no community effects. The first regressions estimates only one variable then I move on to test several combinations.

3.2.1 One Political Variable Testing

One major problem in estimating the regressions have occurred when including the power dispersion index. When including these dummy categories the equation nears singular matrix. This means that in order to try to control for community effects in the POW estimations, two or three municipalities have had to be excluded and this affects the size of the parameters³⁵. To try to get results close to the fixed effects on communities, regressions have been estimated for each of the 17 municipalities without the power dispersion measure and the community dummies were compared³⁶. The municipalities that lay closest to each other were chosen and then the combinations of these were tested. The combination closest to the original set with community dummies was selected and has been used in all regressions that include the power dispersion index. The combination of communities differs for TOTEX and CUREX as we want the smallest possible difference³⁷.

The estimated equation using TOTEX and CUREX respectively is tested by using a two-way error model performing a static fixed effects regression on both cross-section and years³⁸. When estimating the POW, fixed effects on years has been included plus community dummies excluding the combination of municipalities explained above. Reg I is run on TOTEX for each of the political measures on an unbalanced set of data where

³⁵ I have tested estimating the POW-measures in a number of ways but the outcome remains the same. It is not possible to include more than two of the dummies for the POW-measure when controlling for community-specific effects. In theory, this measure should not cause that type of problem and the measure worked when testing them in Gauss. The problem remains though as testing the regression model in Gauss would require programming and learning this software which is not within the range of this essay.

³⁶ The community dummies will capture any difference between the communities hence show how much they differ between each other.

³⁷ For TOTEX, the combination of municipalities is Vadstena, Degerfors and Karlsborg. CUREX-combination consists of Laxå, Karlsborg and Valdemarsvik on whole sample and Laxå and Valdemarsvik on committee sample.

³⁸ The two-way error components μ_j and δ_t .

six observations are missing and on two balanced sets. One set of the latter two includes estimated values for the missing observations and one set excludes the year where observations are missing, 1987. Reg I is also estimated using the COMSIZE measure on the committee sample with both an unbalanced and a balanced set with imported values. Reg I includes only *one* of the political measures at a time. Reg II is estimated in the same way as Reg I but uses CUREX as the dependent variable. The size of the parameters and significance status are summarized in table 9 beneath:

Table 9. Regression Outcomes on Political Variables Separately.

Single Variable Results – Fixed Effects Regression Model on Total Expenditure and Current Expenditure

	Data set	Reg I	t-stat	Reg II	t-stat
SHSOC	<i>Unbalanced</i>	158***	3,411	102***	2,750
	Balanced 1	158***	3,434	100***	2,774
	Balanced 2	172***	3,628	100***	2,774
	<i>Committee unbalanced</i>	242***	4,971	169***	3,835
	Committee balanced	241***	5,001	164***	3,888
HERFIN	<i>Unbalanced</i>	84	1,491	54	1,201
	Balanced 1	82	1,468	45	1,034
	Balanced 2	76	1,313	45	1,034
	<i>Committee unbalanced</i>	129**	1,986	22	0,378
	Committee balanced	125*	1,953	5	0,087
POW2	<i>Unbalanced</i>	-1839	-1,435	1974**	2,425
	Balanced 1	-1825	-1,442	3749***	3,540
	Balanced 2	-1763	-1,341	3866***	3,547
	<i>Committee unbalanced</i>	-1310	-1,135	575	0,561
	Committee balanced	-1310	-1,141	480	0,486
POW3	<i>Unbalanced</i>	391	0,607	937*	1,843
	Balanced 1	393	0,613	949*	1,931
	Balanced 2	408	0,619	977*	1,958
	<i>Committee unbalanced</i>	753	1,012	1100*	1,666
	Committee balanced	754	1,019	1043	1,641
POW4	<i>Unbalanced</i>	-668	-0,498	3324***	3,692
	Balanced 1	-656	-0,495	5137***	4,489
	Balanced 2	-740	-0,537	5253***	4,440
	<i>Committee unbalanced</i>	484	0,350	2113	1,723
	Committee balanced	483	0,352	1832*	1,553
COMSIZE	<i>Unbalanced</i>	108	0,952	-119	-1,186
	Balanced	106	0,942	-140	-1,460

Significance levels are: * = $p = 0,1$; ** = $p = 0,5$; *** = $p = 0,01$. All prices in 1999 years price level.
Balanced 1 = imported set, Balanced 2 = excluding years.

Table 9 shows that share of socialists are significant in all cases and increases both total and current spending whilst all forms of government compared to a minority coalition will increase current expenditure when using the whole sample.

Table 9 also shows that the exclusion of some data in the unbalanced sets, on both the whole sample and the committee sample, does not alter the results much. However, there is a clear difference between the two samples which is a result of the relatively small number of municipalities in the sample where excluding three municipalities accounts for a total of 70 observations. The biggest difference occurs in HERFIN and the POW measures on current expenditure.

In table 9, SHSOC is significant on both total expenditures and current expenditure. The value of the parameter varies between 158 to 242 SKr (in 1999 prices). A 1% change in the share of socialists will increase total spending per capita by 158 SKr according to the unbalanced set on the whole sample and 242 SKr according to the unbalanced set using the committee sample. Hence an increase in mean total per capita spending by 0,5 % (the mean total per capita spending is 32 668 SKr, see table 3). In Reg II, the parameter measures 102 SKr, an increase in current expenditure per capita of 0,5 % per 1 % increase of socialists in the local council, same as total per capita expenditure. The committee unbalanced sample lead to a 0,8 % increase with a 1% increase in SHSOC in TOTEX and 0,6 % in CUREX.

The HERFIN variable comes out significant in two cases (fragmentation increase spending with 129 and 125 SKr). In the other eight cases it does not show any significance. Contrary to what Borge (2005, 1995) and Hagen and Vabø (2005) find in Norway, party fragmentation does not seem to matter in the Swedish political setting (see page 4). The second fragmentation measure offered by Kontopolous and Perotti (page 9), the number of committees, shows no significance and either.

POW2, POW3 and POW4 come out significant in the current expenditure regressions on the whole sample but it is difficult to estimate the value of the parameter as it picks up some of the heterogeneity that has not been able to control for in the regression. The signs on the parameters differ from what we expected and imply that all other forms of government compared to a minority coalition will increase spending. This runs opposite to our hypothesis and could be questioned. It could be a weakness in method of testing as we cannot use a fixed effect on cross-section data and/or it could be a misfit between the measure and the nature of the Swedish political setting. In total expenditure, the type of government does not seem to matter.

The F-test (prob. 0) in Reg I and II indicates that all variables are significant and none should be excluded. However, the F-test may be significant whilst the t-tests in the individual cases are not, a sign of collinearity. (Westerlund, 2003 p. 130-131) We have shown that the variables are highly correlated but another way of observing collinearity is if the parameters are sensitive to exclusion or inclusion of observations or variables (*ibid*). By combining the variables, we will find if they come out significant in other cases and how the parameters are affected. We proceed by estimating regressions using a combination of variables keeping in mind the problem with collinearity.

3.2.2 Combined Political Variable Testing

Combinations of the variables are now tested to see how the political variables are affected by the inclusion of the other measures. Regression III is a fixed effects model including the Herfindahl index and share of socialists. Regression IV holds years fixed whilst community dummies are included, except for the combination of municipalities in order to be able to insert the POW-measure. Both these two regressions use the unbalanced data set of the whole sample. Regression V is a fixed effects model on the unbalanced committee data set combining COMSIZE, HERFIN and SHSOC. Reg VI estimates the Herfindahl index and the power dispersion index on the balanced data of the whole set holding years fixed and including community dummies. Despite the collinearity problem, we include our POW-measure and HERFIN in the combinations in order to see how they affect the results³⁹. Table 10 summarizes the parameters and significance status using TOTEX as the dependant variable and table 11 uses CUREX.

Table 10 and 11. Outcome of Combined Measures on Total Expenditure and Current Expenditure

The Impact on Total Expenditure, Combined Variables

	Reg III		Reg IV		Reg V		Reg VI	
		t-stat		t-stat		t-stat		t-stat
SHSOC	150***	3,115	115**	2,393	248**	5,018		
HERFIN	3625	0,631	1565	0,225	8244	1,337	3431	0,498
POW2	-938	-0,708	-938	-0,708			-1754	-1,375
POW3	503	0,780	503	0,780			434	0,671
POW4	-197	-0,143	-197	-0,143			-770	-0,572
COMSIZE					191,20*	1,781		
POP	-1,11***	-4,462	-0,71***	-3,848	-1,19***	-5,446	-0,59***	-3,329
CH	103	0,377	263	0,907	108	0,358	286	0,985
YO	437**	1,792	200	0,838	399	1,413	240	1,005
ELD	-360	-1,587	-325	-1,419	-253	-1,003	-492**	-2,240
DEN	149	1,500	-89**	-2,453	152	1,538	-105***	-2,977
DEBT	0,12***	3,013	0,10	2,51**	0,20***	4,065	0,12***	2,899
AFFL	-15,49	-0,256	40,98	0,730	-16,92	-0,306	46	0,819
INC	0,00	0,024	-0,03	-0,270	-0,05	-0,437	0,04	0,439
Model	<i>Fixed Effects</i>		<i>Combination of community dummies</i>		<i>Fixed Effects</i>		<i>Combination of community dummies</i>	
Adj R²	0,9096		0,9074		0,9198		0,9062	
Observations	287		287		219		289	
Data set	Whole Sample (Unbalanced)		Whole Sample (Unbalanced)		Committee Sample (Unbalanced)		Whole Sample (Balanced)	

N.B Year effects are included in all regressions. The combination of municipalities in Reg IV and Reg VI that has been excluded in order to include POWs consists of Degerfors, Vadstena and Karlsborg.

³⁹ Borge (2005 p. 333) use this method although it should be noted that he does not have such a high correlation.

The Impact on Current Expenditures, Combined Variables

	Reg III		Reg IV		Reg V		Reg VI	
		t-stat		t-stat		t-stat		t-stat
SHSOC	97**	2,512	72**	2,021	165***	3,639		
HERFIN	2299	0,500	-4719	-0,877	-396	-0,070	-4395	-0,844
POW2			2291*	1,706			3918***	3,633
POW3			882*	1,744			897*	1,812
POW4			3764**	2,447			5547***	4,460
COMSIZE					-58	-0,590		
POP	-0,75**	-3,779	-0,69***	-4,048	-0,65***	-3,220	-0,6***	-3,687
CH	13	0,060	-20	-0,085	-231	-0,830	46	0,204
YO	311	1,594	146	0,791	-586**	-2,255	222	1,236
ELD	-12	-0,067	-75	-0,437	-103	-0,444	-169	-1,014
DEN	-30	-0,377	-101	-1,408	-243***	-2,668	-138**	-2,013
DEBT	0,05	1,430	0,036	1,172	0,084*	1,911	0,03	1,020
AFFL	34,43	0,712	39,70	0,846	33,09	0,652	70	1,565
INC	0,204**	2,391	0,181**	2,178	0,225**	2,283	0,18**	2,382

	<i>Fixed Effects</i>	<i>Combination of community dummies</i>	<i>Fixed Effects</i>	<i>Combination of community dummies</i>
Model				
Adj R²	0,9175	0,9207	0,9113	0,9234
Observations	287	287	219	289
Data set	Whole Sample (Unbalanced)	Whole Sample (Unbalanced)	Committee Sample (Unbalanced)	Whole Sample (Balanced)

N.B Year effects are included in all regressions. The combination of municipalities in Reg IV and Reg VI that has been excluded in order to include POWs consists of Laxå, Valdemarsvik and Karlsborg.

Table 10 and 11 show that the only political variable to come out significant in all regression on both total and current expenditure is SHSOC and the control variable is POP. Debt is significant in total expenditure and income in current expenditure. All other variables are sensitive to exclusion or inclusion.

The size of the SHSOC parameters suggest that share of socialists will increase spending by the similar amount as found in the one variable regression (0,4%; 0,5% and 0,8% on total expenditure per capita, and 0,4%; 0,3% and 0,6% on current expenditure per capita). The population variable show that an increase in the municipal population by one person would lead to a decrease in total expenditure by on average 0,90 SKr per capita and on current expenditure on average 0,70 SKr per capita. This implies that there are scale economies in the municipality in both the operational costs as well as the costs for infrastructure if we assume that the capital expenses results from investment. The absence of congestion also seems valid as there are no major city councils included in the samples.

In the total expenditure in table 10, we also find debt to be a significant variable in all regressions. For each 1 SKr increase in debt, total expenditure per capita will rise by an

average of 0,14 SKr, 0,0004% of mean total per capita spending. This seems plausible as increases in debt will increase the capital payments per capita hence increasing the total expenditure. The current expenditure table show that grants and tax revenue income affects the operational spending, when this income increases then more will be spent on operational activities. The size of the parameter shows that a 1 SKr rise in municipal income increases current expenditure by on average 0,20 SKr. Table 10 and 11 also show that the power dispersion index comes out significant again on current expenditure with all forms of governments inducing more spending compared to a minority coalition.

According to the F-test, we should not exclude any variables although this is probably a consequence of the high correlation. Another way of testing the fit of the model is provided by the adjusted coefficient of determination (Adj R²), the goodness of fit⁴⁰. In this case, the adjusted R² show a high value implying we have captured most of the variation in the dependent variables over the sample period.

The difference between the significance in the regressions above show that our results may be sensitive to the inclusion or exclusion of variables. This leads us to try to find results that are fairly robust.

3.2.3 Robust Results

Collinearity, measuring difficulties and problems with the power dispersion index make inference difficult. Alternative sets of data and regression models change the outcome on some of the variables. In order to try to find robust results, a large amount of regressions were estimated using different combinations and effects (fixed effects on years, community fixed effects when possible, community dummies and no community effects) on all sets of data.

Table 12 uses the number of significant cases relative to the number of regressions where the variable has been included. It shows that share of socialists and population are robust results in both total and current expenditure. Debt is robust in total spending whilst income and to a smaller extent density are robust in current spending.

⁴⁰ The difference between R^2 and the adjusted R^2 is that we loose the predictability of the model but the adjusted R^2 is still a better measurement as R^2 can be made large by just adding more variables (Hill et al, 2003 p. 163).

Table 12. Robustness of Variables

Test of Robustness of Results, Percent of Significant Cases for Variables

TOTEX	SHSOC	HERFIN	COMSIZE	POW2	POW3	POW4	POP	CH	YO	ELD	DEN	DEBT	AFFL	INC
Total Number of Regressions	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Number of:														
Regressions	41	39	13	17	17	17	59	59	59	59	59	59	59	59
Significant Cases	***	29	5	0	0	0	48	0	4	2	5	52	0	4
	**	12	1	0	0	0	4	1	4	13	8	7	1	0
	*	0	1	8	0	0	0	0	18	9	5	0	0	0
Total		41	7	8	0	0	0	52	1	26	24	18	59	1
Percent		1,00	0,18	0,62	0,00	0,00	0,00	0,88	0,02	0,44	0,41	0,31	1,00	0,02

CUREX	SHSOC	HERFIN	COMSIZE	POW2	POW3	POW4	POP	CH	YO	ELD	DEN	DEBT	AFFL	INC
Total Number of Regressions	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Number of:														
Regressions	44	47	25	38	38	38	83	83	83	83	83	83	83	83
Significant Cases	***	28	0	0	5	0	1	56	0	0	1	34	11	3
	**	9	0	0	4	2	4	6	0	15	5	15	20	4
	*	4	0	1	6	11	4	11	1	37	14	11	3	3
Total		41	0	1	15	13	9	73	1	52	20	60	34	10
Percent		0,93	0,00	0,04	0,39	0,34	0,24	0,88	0,01	0,63	0,24	0,72	0,41	0,12

Significance levels are: * = $p = 0,1$; ** = $p = 0,5$; *** = $p = 0,01$.

As can be read from table 12, there has been an asymmetrical test of regressions as there has been 59 run on total expenditure and 83 on current expenditure. This is because of testing different methods before finding a more systematic way. However, the fixed effects regressions have been tested including all possible combinations as it is the preferred method. Another important feature of the table above is that the regressions used for the selection of POWs have been excluded in most cases as the initial 17 regressions yielded the same result hence only one of them has been included.

Table 12 is an indication of how the variables fared when included in a variety of regressions⁴¹. It shows clearly that the only variable to be significant on both total expenditure and current expenditure is share of socialists. Debt also comes out significant on total expenditure but not on current expenditure which implies financing investment with loans. Income matters for current expenditure but not for total expenditure and indicates that a rise in grants or tax revenue will lead to an increase in operational

⁴¹ This way of testing for robustness has been inspired by Xavier X. Sala-i-Martin's article "I Just Ran Four Million Regressions". Note however that it is not the same method used as the aim of the essay is not to test robustness of variables on expenditure but to test selected political variables accuracy on the Swedish political setting.

spending. Population does not make the 90 % mark but still I would treat this as a significant variable; there are no diseconomies of scale in the municipalities. Another variable I have highlighted is density on current expenditure. This has to do with population and would suggest that there is still room for an increase in the population on per capita spending in current expenditure.

Finally, we turn to the size of the impact of our interpreted robust parameters. Again we find that a 1% increase in the share of socialists in the council lead to a 0,5 % increase in total expenditure and 0,4 % in current expenditure. A one person population increase leads to a decrease in total expenditure per capita by 0,002 % in both total and current expenditure whilst density leads to a decrease in current expenditure by 0,06 %. Debt increases total spending by 0,0006 % and municipal income increases the current spending by 0,0013 %. (see table 13 in the Appendix).

The results on the other political variables do not show robustness however they do come out significant in some cases and a short discussion is in place.

3.3 Discussion

Some of the variables above show differing results in both significance and expected outcome sign. Fragmentation and constellation of government do not seem to matter in Swedish political setting. We discuss the Herfindahl index, the POW-measure, committee size and age groups briefly.

We have shown that HERFIN and SHSOC are highly correlated and using these two together is problematic. Low fragmentation has been associated with high share of socialists in the Norwegian studies too but the Herfindahl index show significant value in those. The Herfindahl index comes out significant in only a few cases in total expenditure and it is only in combination with committee size, the second fragmentation measure. COMSIZE do show significance in 62 % of the cases on total expenditure (see table 12) and lead to an increase in spending. The idea behind the committee size was to contrast it with the Herfindahl index and it does show better results than the party fragmentation measure. One problem with the committee size measure was the definition when collecting data and may have inflicted on the result. The suggestion however is that when measuring political impact on expenditure, a party fragmentation index does not fit the Swedish context but size may. This is consistent with Pettersson's (page 3) findings that the size of the council matters for spending. This may be a more accurate way of testing for the common pool problem.

The other measure that has caused difficulties is the power dispersion index. In total expenditure, there has been no significance at all whilst in current expenditure some significance was shown. The problem with the results is that the expected outcome sign

and the sign of the estimated parameters do not match. Operational costs increase with all other constellations compared to a minority government. The fact that we have not been able to control fully for community specific effects could be one reason for the sign of the parameters and the selection of excluded municipalities could affect these. Assume however that the parameters are of accurate size then an explanation could be that the right-wing tends to be more fragmented in Sweden and possibly forming weaker government constellations more often (POW1). Then the strong forms of governments are more affected by left-wing and a strong government could more easily agree on increasing spending and consistent with previous findings that right-wing prefers less spending. However, this contradicts the common pool assumption.

Another reason for our index not to come out significant could be a result of the measure not reflecting the Swedish system. Pettersson (2003a p. 10) argues that in the Swedish councils during 1974-1994, no socialist parties formed coalitions with any non-socialist parties or vice versa. As our data show, there seem to be differences between the set-up of the executive committee and the council. In many cases there are co-operation across the political blocs (Social Democrats and Centre Party as well as the Conservative Party). Furthermore, Sweden does not operate a strong “mayor” system hence the role of the executive may be less prominent (see page 7). Alt and Lowry (page 6) suggest that a unified government and a divided government lead to different outcomes and with the quasi-parliamentary style of Swedish local governments (where a party recognized by the council tends to take control of most of the committee chairs too even if they only represent a minority of the council) a measure taking into account the share of seats in all the committees and the share of seats in the council could be of a better fit⁴².

Finally, our included control variables would imply that the only age group of the population that matters for spending is the share of youths (see table 12) as in current expenditure 63 % tests are significant and 44 % in total expenditure. The sign of the parameter comes out in negative in the fixed effects model and positive when using community dummies and suggests that the variable is sensitive to what municipalities are excluded.

⁴² Gilligan and Matsusaka (2001 p. 7) accommodate Alt and Lowry’s dummies and they are (1) the Democrats had a majority in the upper house, (2) the Democrats had a majority in the lower house, (3) the Republicans had a majority, in the upper house, and (4) the Republicans had a majority in the lower house. The omitted category is that no party had a majority and happens when members of a third party or independents are the swing voters.

4. Conclusions

The aim of this study was to find out whether political parties impact local government spending. Partisan impact is measured through ideology, fragmentation and different forms of government. Left-wing governments have been shown to increase spending. It has also been implied that the strength of the governing party matters for its possibilities of getting through its desired policies and measures of constellations were used. The common pool problem means that a fragmentation and weak forms of government may cause higher spending as interests exert pressure on the budget without internalising the costs fully. Socialist governments are associated with less fragmentation and we find the share of socialists to be highly correlated with both low party fragmentation and a strong form of government. To contrast the party fragmentation index, number of committees are included.

The results from the data and regression analysis show that our main hypothesis was confirmed. *There is a partisan impact on local government spending.* This impact was assessed through the inclusion of a set of hypotheses. The first hypothesis stated that an increased share of socialists in the council will increase spending. This hypothesis was confirmed on both total and current expenditure and the result proved robust in close to all our combinations of variables. A 1% increase in the share of left-wing parties would lead to an increase in per capita spending by around 0,4 - 0,5 % The second hypothesis concerned fragmentation where a higher share of fragmentation would lead to increased spending. Fragmentation was measured in two ways, by the Herfindahl index that uses information on number of parties in the council and their respective strength, and by number of policy committees in the political organisation. The results showed that in neither case was this hypothesis confirmed. Number of parties and their strength do not matter for spending and neither does number of committees. The third hypothesis claimed that the less dispersed power is the less is the amount of spending. This could not be confirmed either.

Main hypothesis: we cannot reject that there is a partisan impact on local government spending.

Hypothesis 1: we **cannot reject** that left-wing parties increase spending

Hypothesis 2: we **reject** that fragmentation increases spending

Hypothesis 3: we **reject** that less power dispersion decreases spending.

The result above also showed that we cannot find different age groups to exert any additional pressure on the budget however we do find economies of scale in the municipalities where size of population decreases spending per capita by 0,002 %. We also find debt to be positively related to the level of total expenditure by 0,0006 % and municipal income to be positively related to the level of current expenditure by 0,0013 %.

The answer to our initial questions is that it does matter whether one vote left or right but the set-up and bargaining strength of the local government do not incur any changes in spending. However, it should be pointed out that the Swedish political system exhibits specific features and therefore we may not have been able to capture these by our measures why it is problematic to conclude that only left- or right-wing party share of seats matter for per capita spending.

Further research would fully incorporate the institutional setting and introduce the bargaining position of interest groups and the administration (i.e see Kalseth and Rattsø 1998, Hagen and Vabø, 2005, Perotti and Kontopoulos, 2002). An important aspect in the Swedish political system literature is the emphasis on the role of the Chief Executive of the Administration (Goldsmith and Larsen, 2004). Following the balanced budget restriction, research in Norway has been conducted on localities including this constraint where municipalities may run a deficit one year but have to cover it the consecutive year (or two) (see Hagen and Vabø, 2005). The same restriction applies to Swedish local government since 2000, where a deficit has to be covered within the two consecutive years⁴³. Another aspect is offered by introducing different layers of government into the local government performance. Ibrahim (1994 p. 64ff) argues in his study of English counties that local government elections, which are held at different times as the general elections, are influenced by the governing party performance. Furthermore, central government influences local authorities' economies.⁴⁴

⁴³ As of 2005, within three consecutive years (Regeringskansliet, 2005).

⁴⁴ By looking at the mean of spending during the time of governing, Ibrahim (1994) found that the lowest spending changes occurred under a period where Central Government intervened and capped expenditures to a target imposed by it. When Central Government abolished this target, expenditures rose again. (p.71)

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Population:

<http://www.ssd.scb.se/databaser/makro/Visavar.asp?yp=tansss&xu=C9233001&huvudtabell=Befolkning&deltabell=K&deltabellnamn=Befolkningen+efter+kommun%2C+civilst%2E+%E5lder+och+k%2F6n%2E+%C5r&omradekod=BE&omradetext=Befolkning&preskat=O&innehall=Folkmangd&starttid=1968&stopptid=2004&Prodid=BE0101&fromSok=&Fromwhere=S&lang=1&langdb=1>

Density (1992- 1999):

<http://www.ssd.scb.se/databaser/makro/Visavar.asp?yp=tansss&xu=C9233001&huvudtabell=BefathetkvkmK&deltabell=K1&deltabellnamn=Befolkningst%28inv%29+per+kvadratkilometer%29+efter+kommun%2E+%C5r&omradekod=BE&omradetext=Befolkning&preskat=O&innehall=Invkvkm&starttid=1992&stopptid=2004&Prodid=BE0101&fromSok=&Fromwhere=S&lang=1&langdb=1>

Appendix

Short on Regressions

The text that follows is a short summary of some basics in hypothesis testing and regressions from Westerlund, 2003, chapter 5, 7 and Hill et al, 2001, chapter 5.

A regression analysis means that we estimate the parameters in an equation to find values on these that do not change for different councils or years. That means that we should be able to tell how much the dependent variable is affected when one of the other variables changes. For example, in a one variable regression, if our political variable SHSOC increases by 1% when the Social Democrats win another seat in a local election we will be able to tell how much the total (or current) expenditure increases/decreases by the value of the parameter for SHSOC-variable (i.e β_5). The sign on the parameter will tell whether the Social Democrats will increase or decrease expenditure (+/-).

However, our variables may not have anything to do with the dependant variable and if that is the case the parameter is not significant. Before we estimate the regression, we will not know if the measures we believe impact the expenditure matter therefore we need to conduct hypothesis testing. A hypothesis test includes a null hypothesis (H_0), an alternative hypothesis (H_1), a test statistic and a rejection region. Let's use the political variable again: β_5 . We would like to test whether the Social Democrats have an effect on spending. The null hypothesis states that the Social Democrats do not effect spending (a two-tailed test as we are not implying whether they increase or decrease spending) and the alternative hypothesis states that they do:

$$H_0: \beta_5 = 0$$

$$H_1: \beta_5 \neq 0$$

The variable is then tested by using the t-statistic (or a different statistic depending on regression) that will tell us whether or not to reject the null hypothesis when we compare the t-statistic against the value of the rejection region. In other words, if we decide that the rejection region is $\alpha = 0,05$ (this is the level of significance) then we would compare the t-statistic from the test with the value of the t-distribution on $\alpha = 0,025$ (as it is a two-tailed test). If the t-statistic falls within the rejection region then we reject the null hypothesis and β_5 is significant. The conclusion would be that Social Democrats matter for spending and the sign of the parameter would show us they have a positive or negative effect on spending. If the t-statistic does not fall within the rejection region then we cannot reject the null hypothesis and we do not find β_5 to be significant. That is Social Democrats do no matter for spending. Another way is to use the p-value. The p-value is the lowest level of significance where the null hypothesis is rejected and is the exact level of significance for the value of the t-statistic of the parameter. Hence we will

be able to tell what the exact probability that β_5 is or is not a significant variable. If β_5 has a probability of 0,02 then it is 98% probable that social democrats matter for spending and 0,02% that they do not. This is the method that is used throughout the analysis.

The difference between a one variable regression and a multiple regression (several parameters, when not counting the intercept) is that when we make inference we base it on the ceteris paribus assumption. A change in a variable by one unit will increase/decrease the dependent variable with the value of the parameter assuming everything else is constant.

Table 1.

The Generated Random Selection of Observations

Municipality	County	Land Area (sq km)
<i>0305 Håbo</i>	Uppsala	142
<i>0360 Tierp</i>	Uppsala	1543
<i>0563 Valdemarsvik</i>	Östergötlands	736
<i>0584 Vadstena</i>	Östergötlands	184
<i>1622 Mullsjö</i>	Skaraborgs 1983-1997, Jönköpings 1998-	201
<i>1264 Skurup</i>	Malmöhus 1983-1996, Skåne 1997-	3140
<i>1383 Varberg</i>	Hallands	196
<i>1637 Karlsborg</i>	Skaraborgs 1983-1997, Västra Götaland 1998-	873
<i>1561 Mellerud</i>	Älvsborgs 1983-1997, Västra Götaland 1998-	433
<i>1565 Svenljunga</i>	Älvsborgs 1983-1997, Västra Götaland 1998-	513
<i>1566 Herrljunga</i>	Älvsborgs 1983-1997, Västra Götaland 1998-	923
<i>1760 Storfors</i>	Värmlands	500
<i>1783 Hagfors</i>	Värmlands	393
<i>1860 Laxå</i>	Örebro	1835
<i>1862 Degerfors</i>	Örebro	565
<i>2514 Kalix</i>	Norrbottn	386
<i>2521 Pajala</i>	Norrbottn	1799

Table 2.

List of Variables, Definitions and Sources

Variable	Name	Definition	Source
<i>TOTEX</i>	External expenditure per capita	External expenditure per capita. External expenditure is the sum of operating costs and costs of investment. In external expenditure, commercial activities are not included from 1989-1999. 1983-1988 it is not possible to discern these numbers and before the 90's, commercial activities were not a large entry in the account. Internal costs have been deducted as far as possible.	Årsbok för Sveriges kommuner 1990-2001, Kommunernas finanser 1983-1987
<i>CUREX</i>	Operating expenditure per capita	Total operating expenditure divided by municipal population. External expenditure minus capital expenditure. Commercial activities is not included from 1989-1999. 1987-1988 has been calculated using external expenditure minus operating expenditure (in 1987 and 1988, Tierp has not excluded capital expenditures, Karlsborg and Svenljunga are missing in the data. In the balanced data, Tierp has been calculated by using the sum of TOTEX divided by years and subtracting this sum from Tierp's expenditure. Karlsborg and Svenljunga have been interpolated between	Årsbok för Sveriges kommuner 1990-2001, Vad kostar verksamheten i Din kommun 1988-2001, Kommunernas finanser, Appendix 1983-1987.

		1986 and 1988 and calculated by summing the difference between TOTEX and CUREX between 1983-1986 and 1988 divided by five and subtracting the sum from TOTEX 1987. From 1998, costs for pensions are included.	
AFFLUENCE	Tax capacity per capita in the municipality relative to average tax capacity in the country	The tax capacity is calculated by dividing the tax basis by the municipal population. (The tax basis does not include the government grants for equalization of local taxes that municipalities receive from central government)	Årsbok för Sveriges kommuner 1981-2001
DEBT	Amount of debt per capita	Total amount of debt divided by municipal population. Total amount of debt includes long term and short term loans and 1990-1997 it also includes pension liabilities.	Årsbok för Sveriges kommuner 1985-2003
INC	Grants per capita plus revenues from municipal taxation per capita	Total grants plus total local revenues divided by municipal population. In grants, government grants for equalization of local taxes and other grants are included. 1983-1986, the government grants include grants for equalization of local taxes, operating grants and investment grants. Data is missing for Karlsborg and Svenljunga 1987 and the observations have been estimated by summing 1983-1986 and divide by four.	Kommunernas finanser, Appendix 1983-1987 and Vad kostar verksamheten i din kommun? 1988-1999
COMSIZE	Number of committees with drafting and executing tasks	Mullsjö, Degerfors, Storfors and Pajala are missing hence they have been excluded in the data.	Collected.
DEN	Municipal population density	Total municipal population divided by geographical area of municipality.	www.scb.se , Årsbok för Sveriges kommuner 1983
POP	Total municipal population	Total municipal population.	www.scb.se
CH	Share of children 0-6 in the municipality	Number of children aged 0-6 in the municipality divided by total municipal population.	www.scb.se
YO	Share of youths 7-15 in the municipality	Number of youths aged 7-15 in the municipality divided by total municipal population.	www.scb.se
ELD	Share of elderly people in the municipality	Number of people aged 65 and above in the municipality divided by total municipal population.	www.scb.se

Note: All costs and revenues have been deflated by using 1980 Consumer Price Index to 1999 prices “fasta priser”. The deflator is calculated by using the formula: $1983 * (CPI\ 1999 / CPI\ 1983)$

Glossary and Definitions of Terms to Table 2:

Account	Bokföring
Tax capacity	Skattekraft
Tax basis	Skatteunderlag
Government grants for equalization	

of local taxes	Skatteutjämningsbidrag
Revenues from municipal taxation	Skatteintäkter
Amount of debt	Låneskuld
Pension liabilities	Pensionsskulder
Expenditure	Externa utgifter
Annual Financial Report	Årsredovisning
Internal costs	Interna kostnader, avskrivningar, internränta och interna avgifter till andra förvaltningar.
Capital expenditure	Kapitalutgifter, utgifter för investeringar, inköp av fastigheter och anläggningar och amorteringar på långfristiga skulder.
Commercial activities	Affärsmässig verksamhet, kommundriven verksamhet stor del finansieras genom avgifter t.ex. gas-, el-, och fjärrvärme försörjning, VA- och avfallshantering, hamnverksamhet

Table 5.

Party Belonging of Mayor and Deputy Mayor of the Executive Board

		1983	1986	1989	1992	1995	1999
0305 Håbo	Mayor	m	m	m	m	s	s
	Deputy Mayor	c	fp	fp	fp	fp	c
0360 Tierp	Mayor	s	s	s	s	s	s
	Deputy Mayor	s	s	s	s	s	s
0563 Valdemarsvik	Mayor	c	c	c	c	c	c
	Deputy Mayor	s	s	s	s	s	m
0584 Vadstena	Mayor	c	c	c	c	c	c
	Deputy Mayor	m	m	m	m	s	mp
0642 Mullsjö	Mayor	m	m	m	m	m	s
	Deputy Mayor	s	s	s	kd	c	c
1264 Skurup	Mayor	c	c	c	m	s	s
	Deputy Mayor	s	s	s	c	c	m
1383 Varberg	Mayor	c	c	c	c	c	m
	Deputy Mayor	s	s	s	s	c	s
1446 Karlsborg	Mayor	s	c	s	c	s	s
	Deputy Mayor	c	s	c	s	c	m
1461 Mellerud	Mayor	c	c	c	c	c	c
	Deputy Mayor	s	s	s	s	s	s
1465 Svenljunga	Mayor	c	c	c	c	c	c
	Deputy Mayor	s	s	s	s	s	s
1466 Herrljunga	Mayor	c	c	c	c	c	c
	Deputy Mayor	s	s	s	s	s	s
1760 Storfors	Mayor	s	s	s	s	s	s
	Deputy Mayor	s	s	s	s	s	s
1783 Hagfors	Mayor	s	s	s	s	s	s
	Deputy Mayor	s	s	s	s	s	s
1860 Laxå	Mayor	s	s	s	s	s	s
	Deputy Mayor	s	s	s	s	s	s
1862 Degerfors	Mayor	s	s	s	s	s	s
	Deputy Mayor	s	s	s	s	s	s
2514 Kalix	Mayor	s	s	s	s	s	s
	Deputy Mayor	s	s	s	s	s	s
2521 Pajala	Mayor	s	s	s	s	s	s
	Deputy Mayor	s	s	s	s	s	s

Table 8.

The Power Dispersion Index over the Time Frame Period

	1983	1986	1989	1992	1995	1999	Total
POW1	1	1	1	2	1	5	11
POW2	1	2	2	4	2	7	18
POW3	9	9	9	8	9	5	49
POW4	6	5	5	3	5	0	24
Total	17	17	17	17	17	17	102

Table 13.

Variation of Outcome in Total Expenditure and Current Expenditure of Significant Variables

TOTEX	Variation	Percent of Mean Total Spending Per Capita	Average Percentage	CUREX	Variation	Percent of Mean Current Spending Per Capita	Average Percentage
SHSOC	76 - 257	0,233 – 0,787	0,51	SHSOC	68 - 170	0,251 – 0,627	0,439
DEBT	0,0988 - 0,2483	0,0003 – 0,0008	0,0006	INC	0,05 - 0,66	0,0002 – 0,0024	0,0013
POP	(-0,036) – (-1,209)	(-0,0001) – (-0,0037)	-0,0019	POP	(- 0,33)- (- 0,75)	(-0,0012 – (-0,0028)	-0,002
				DEN	(-2,31) - (-336)	(-0,0085) – (-1,24)	-0,0624

Mean total spending and current spending per capita is used from table and is descriptive of the unbalanced set from the whole sample. Mean total expenditure is 32 668 SKr and mean current expenditure is 27 116 SKr. In 1999 prices.