

More politics, more corruption? Evidence 290 Swedish municipalities

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Abstract

The idea that more politics and a bigger public sector leads to more public corruption underlies several political economy models, yet the empirical support is lacking and cross-country correlations suggest the opposite relationship. We study the link between local parliament size and survey measured corruption in Sweden's 290 municipalities. Using constitutional discontinuities regarding minimum parliament size, we identify a causal link from the number of seats to corruption, robust to a large number of controls. We also find some partial correlations in line with theoretical priors: Media coverage and population education correlates negatively with corruption. While the effect of more seats on corruption is highly robust, we find no significant signs that a larger public sector correlates positively with corruption. We find no evidence that political competition curbs corruption.

1. Introduction

Does politics cause or curb corruption? According to the standard view in public choice and political economy research, represented by Mueller (2003), “corruption is almost an inevitable consequence of the existence of government and the principal/agent problems that come with it” (p. 545). Similarly, Persson, et al. (2003) note that “elected politicians have ample opportunity to abuse their political powers at the expense of voters” (p. 958). The same premise appears in theoretical models such those developed by for example Acemoglu and Verdier (2000) and Alesina and Angeletos (2005).

Empirically, however, countries with bigger public sectors are not systematically more corrupt. As noted by La Porta, et al. (1999) and Rothstein (2011), the pattern across countries is the opposite. Notably the Nordic countries, where taxes are high and thus the opportunities for public corruption ought to be plentiful, are consistently ranked among the least corrupt countries in the world by the well-known Corruption Perceptions Index issued by Transparency International.

Importantly, noting that the Nordic countries combine large government sectors with low corruption does not prove anything about the causal effect of politics on corruption. The Nordic countries are known to differ in many dimensions and we cannot observe what corruption levels would pertain in a counter-factual scenario with less political involvement in society. In this paper, we therefore use variation within one of these countries – Sweden – to infer about the effect of having more politicians on the level of corruption. To identify the causal effect of having more politicians, we use discontinuities in the minimum seat requirement (according to the constitution¹) for local parliaments in Sweden. Controlling for other measures of government size and a number of controls suggested by previous research, we find a robust effect of seats on corruption, and also some evidence that local media presence curbs corruption.

Our paper proceeds as follows:

- Literature review
- Theoretical model
- Background on Sweden and our corruption measure
- Analysis
- Conclusions

¹ Kommunallagen, chapter 5, paragraph 1.

Related literature

In a global perspective, a lot of work has been done on both the causes and consequences of corruption. From the survey by Andvig and Fjeldstad (2001), it is clear that perhaps the only highly robust finding in the literature is the negative correlation between corruption and economic development. There is also agreement that causation runs both from economic development to lower corruption, and from corruption to lower economic development. Additionally, Andvig and Fjeldstad note that there is some evidence that democracy reduces corruption, but probably only slowly (Paldam, 1999; Treisman, 2000). Furthermore, more open economies do exhibit less corruption (Wei, 2000a, b). Andvig and Fjeldstad report ambiguous results regarding the effect of fiscal decentralization and the level of public sector salaries.

Limiting focus to developed countries, a recent trend in the literature is increasing awareness that corruption and extraction of political rents is a problem not confined to developing countries and young democracies. A standard political economy strand of the literature can be traced back to Myrdal (1968), suggesting that extensive public sector regulations result from of a deliberate strategy by civil servants to increase citizen's willingness to pay bribes (see also Rose-Ackerman 1978; Tanzi 1998). It is fair to say, however, that existing empirical support for the standard view that big government increases corruption, is far from overwhelming. Goel and Nelson (1998) use annual US state-level data over 1983–1987, and find that that government size, in particular spending by state governments, has a strong positive influence on corruption. In a cross country setting, however, Montinola and Jackman (2002) find no such effect.

Theoretically, Alesina and Angeletos (2005) argue that redistributive and regulatory policies intended to reduce inequality or improve the fairness of economic outcomes may bring about even more opportunities for corruption. This creates a policy dilemma: a small government does not correct enough for market inequalities and injustices; a large government increases corruption and rent-seeking. The theoretical literature is however not entirely clear on the mechanisms by which bigger government causes corruption: Is corruption related to more politicians, higher public expenditure or higher share of public employment?

Naturally, the measurement of corruption is also highly discussed. Measures are typically based on either convictions or perceptions, both of which have obvious drawbacks. Goel and Nelson (2011) show that some results hold regardless of how corruption is measured:² Greater educational attainment lowers corruption, while greater judicial employment adds to corruption. Also, consistent with the cross-country evidence, perceived US corruption decreases with greater economic prosperity. Higher urbanization seems to

² Their measures are: i) individual state convictions of public officials for corruption over a five-year time horizon, (ii) convictions measured over a longer, three-decade time horizon, and (iii) perceptions of corruption across states based on survey data at a specific point in time.

significantly increase perceived corruption [[[a finding consistent with the notion that information flows affecting perceptions would be greater in urban areas, *ceteris paribus*]]]

Many authors also point to the importance of the political system. In a classic paper, Shleifer and Vishny (1993) argue that economic and political competition can reduce the level of corruption and its adverse effects. Similarly, Persson and Tabellini (1999) demonstrate how majoritarian – as opposed to proportional – elections increase competition between parties, resulting in less public goods, less rents for politicians, more redistribution and larger government.

Finally, the literature contains some case studies of countries that have successfully curbed corruption. Gentzkow, et al. (2004) note that in the US from 1870 to 1920, when corruption declined significantly, the press became more informative, less partisan, and expanded its circulation considerably. They stress in particular the rise in competition among newspapers, by noting that “As long as one major newspaper in a city exposed corruption, the story would get out” (p. 26). The importance of free press in curbing corruption is stressed also by Rothstein (2011), analyzing the case of Sweden.³ Rothstein also points to the fact that a number of institutional reforms occurred at about the same time in Sweden in the late 19th century, and argues that the concentration in time was important for success.

Maybe add: Pellegrini L, Gerlagh R (2008) Causes of corruption: a survey of cross-country analyses and extended results. *Econ Gov* 9:245–263

³ Footnote: The media effect is not theoretically unambiguous, as shown by Vaidya (2006) and Vaidya (2005). Apart from case studies, no empirical study (?) has examined the link between media coverage and corruption.

Local politics and corruption in Sweden – a brief introduction

This section provides an introduction to local politics in Sweden, and can be skipped by readers familiar with the topic. [Add: Wängmar] [Kommunallagen ger kommuner stor frihet att göra vad de vill].

Swedish municipalities

Apart from central government, Sweden consists of 21 regions and 290 municipalities. With 59 percent of public employment in Sweden, the municipalities are the most important administrative and unit both politically and economically.⁴ Financed mainly by approximately proportional income taxes at around 20 percent, municipalities have the sole responsibility for welfare provision when it comes to schooling, child care, elder care – all mainly tax financed. In addition, municipalities handle welfare provision, zoning issues (including building permits, permission to sell alcohol et cetera), culture and public transport. The local parliament (*kommunfullmäktige*) is the political body ultimately responsible for these activities. The public consumption of municipalities amount to 20 % of GDP, compared to 7% percent of GDP for central government.

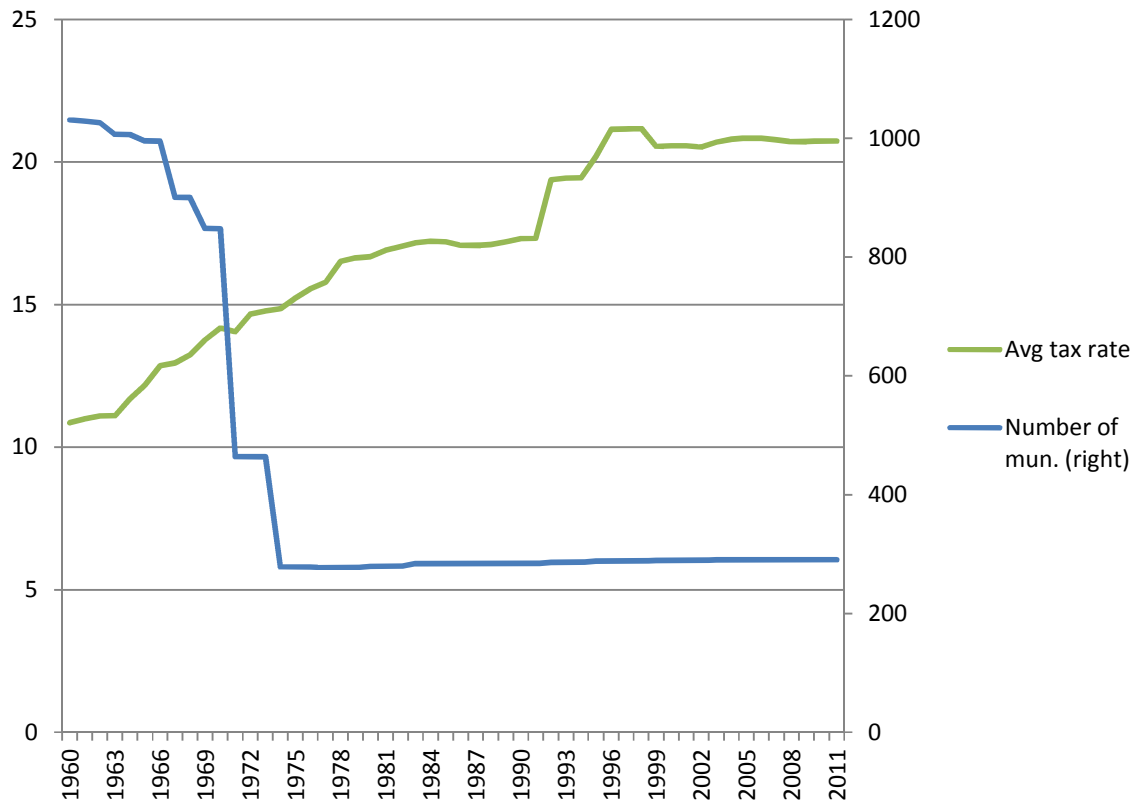
Members of local parliament are elected on party lists and gather approximately once a month. Depending on municipality size, parliament delegates to various sub-committees, typically populated with politicians who are also in the local parliament as well as politicians who only serve in local sub-committees. In both local parliament and sub-committees, most politicians have regular day-jobs. In bigger municipalities, however, being the head of a sub-committee is typically a full time job. Local parliaments are elected (together with regional and central elections) every fourth year (before 1994, every third year).

Historically, the number of municipalities has been high in Sweden, but a series of fusions in the 1960s and the early 1970s reduced the number from approx. 2 500 in the 1950s to 274 in 1970. Since then it has increased to the current number 290. Figure 1 shows the number of municipalities and the average municipal tax rate since 1960 to present day.

- Payments: most politicians in the municipal council receive very small remunerations (and in some cases none)
- Some rationale (belief that more seats is good), as well as history of the law

⁴ 53 percent are employed by municipalities, 6 are employed by companies owned by municipalities, according to Statistics Sweden.

Figure 1 Number of municipalities (right) and average municipality tax rate (left) in Sweden 1960 – 2011



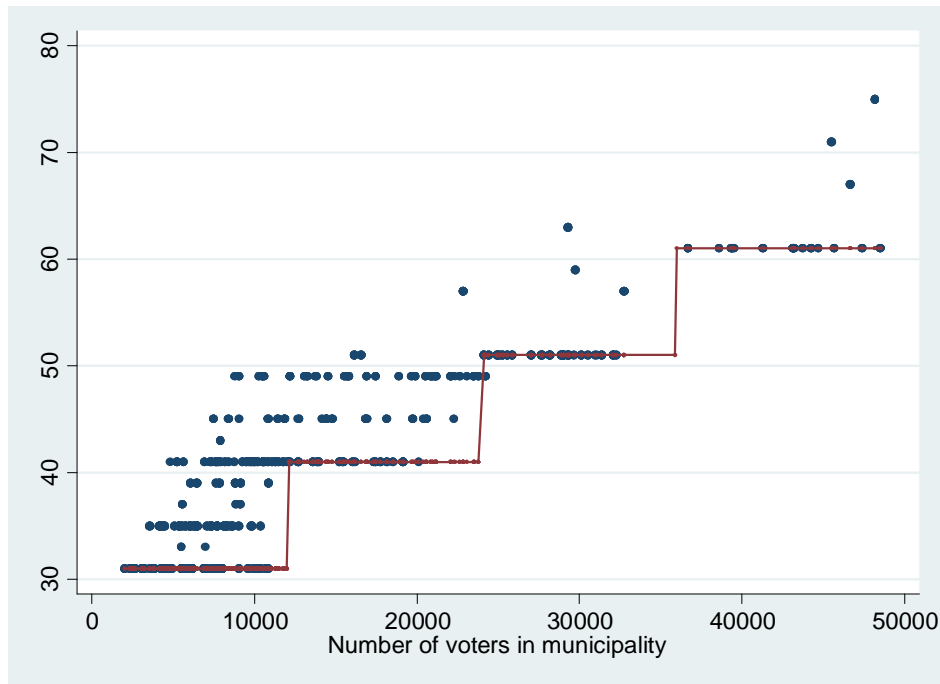
The law *Kommunallagen* functions as a constitution, and dictates a minimum number of seats for each local parliament depending on the number of registered voters residing in the municipality. The idea is to maintain a high level of proportionality and also *lokal förankring*. The size limits of parliaments are as follows (kommunallagen, ch. 5, p. 1). Importantly, these limits have been constant since 1979

Table 1: Constitutional minimum seat requirements

Number of Voters	Minimum number of seats
0 – 12 000	31
12001 – 24 000	41
24001 – 36 000	51
36001 –	61
Stockholm	101

Municipalities are allowed to increase the number of seats above the minimum requirement, and several have chosen to do so. The minimum requirement does however clearly affect the number of seats, as can be seen from figure 2, where the red line indicates the minimum seat requirement according to the constitution.

Figure 2: Actual and Minimum Number of Seats in local Parliaments 2007



Corruption in Sweden?

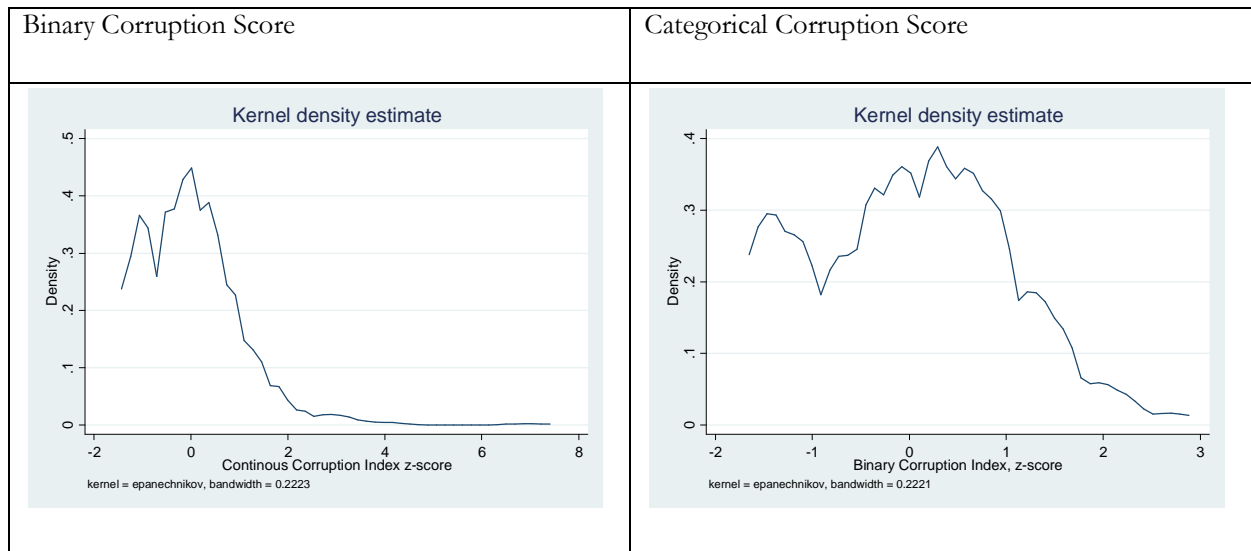
According to the 2010 version of Transparency International's corruption perception index, the least corrupt countries in the world are Denmark, New Zealand and Singapore (sharing the #1 spot with a score of 9.3 on the 10 point scale), with Sweden and Finland tied for second place (with a score of 9.2). The corruption scores for these countries have been very stable over time. Sweden's high TI-ranking does not mean that Sweden is more or less free from corruption problems. According to the *International Social Survey Programme 2006*, 22 percent answer 'almost all' or 'quite a lot' when asked their opinion about how many politicians in Sweden are involved in corruption. This is lower than the 48 percent average among countries covered by the ISSP, but also substantially higher than the top countries Denmark (3), Switzerland (9) and New Zealand (11).⁵

As stressed by Erlingsson, et al. (2008), there are some reasons to expect corruption and similar problems to increase in Sweden as a result of organizational changes such as municipal level New Public Management (NPM).

⁵ Data from the ISSP are available at <http://www.gesis.org/en/issp/>.

Perhaps most importantly, the data we use, derived from a survey among local political elites (Sjölin et al, 2009), show that XX percent of local political elites (top politicians and officials) have actually been offered money in exchange for. Using this information, and answers to 5 additional questions regarding corruption perceptions and experiences (all listed in Appendix B) we compute two corruption indices for Swedish municipalities: Both indices use all questions regarding corruption included in the survey. They differ only in that one index is binary in the sense that all answers are coded as either 1 (some experience of corruption, regardless of how much) or 0 (no corruption), and the other index is categorical and preserves respondents subjective regarding the severity/frequency of the problem. We use the binary index in our baseline regressions, and show results with the categorical index as a robustness test. Figure 2 shows the distribution of Z-scores for both indices.

Figure 2: Distribution of Corruption Z-scores



Clearly, both measures are skewed towards no or few corruption problems, but the graphs also indicate that it would be wrong to claim that corruption is a non-existing problem in Sweden.⁶

⁶ Despite this, as shown by Bauhr et al (2010), most people in Sweden perceive the level of corruption to be relatively low.

Data and empirical strategy

As mentioned above, our corruption measure is constructed from a web-based survey of local political elites conducted by Sjölin et al. (200X).¹ In each municipality, the survey asked the top 4 politicians and the top 3 civil servants. In all, 1811 respondents actually received the survey and 933 answered, which is a response rate of 51.5 percent. For details regarding the construction of the index, see appendix A.

The survey also provides individual level information on the respondents such as sex, education, politician/civil servant. We add municipality level data from the K-fakta database (Johansson 2006), containing a large set of descriptive statistics for Swedish municipalities. Table 2 gives descriptive statistics for our variables and some descriptive statistics.

Table 2: Descriptive Stats

Variable	Mean	Std.dev.	Min	Max
Municipal seats	45.56	12.13	31	101
Respondent female	0.29	0.46	0	1
Respondent bureaucrat	0.42	0.49	0	1
Respondent secondary education	0.18	0.39	0	1
Respondent tertiary education	0.70	0.46	0	1
Respondent 2-10 years of tenure	0.45	0.50	0	1
Respondent > 10 years of tenure	0.28	0.45	0	1
Population size in millions	0.03	0.06	0.00	0.77
Area in '000 square km	0.00	0.00	0.00	0.02
Income per capita (US\$, '000)	40.26	17.75	17.25	174.58
Average growth 2000-2008	4.14	2.19	-2.59	14.68
Percentage of citizens with tertiary education	12.22	5.98	5	48

[standard deviation for dummy variables - what do we learn from them?]

Results

We start by regressing corruption on the number of seats in parliament, controlling only for respondents' individual characteristics, with standard errors clustered at the municipality level (column 1). As expected, experienced responders are more likely to have experienced corruption related problems, and there are no significant differences between male/female, politician/civil servant, or respondent education level. The number of seats correlates significantly positively with corruption.

Column 2 controls for municipal population, which matters non-linearly, and column 3 adds controls for size, average income, growth, population education and region fixed effects. In line with findings in other studies, richer municipalities are less corrupt, but no other control variables are significant.

Importantly, size and significance of the number of seats in parliament, increases as more control variables are added to the regression.

Table 3: Main Results (OLS)

Dependent:	Corruption Index Z-score			
	(1)	(2)	(3)	(4)
Municipal parliament seats	0.00772** (0.00299)	0.0128*** (0.00463)	0.0153*** (0.00473)	0.0130*** (0.00500)
Respondent female	0.0179 (0.0697)	0.0193 (0.0694)	0.0232 (0.0689)	0.0427 (0.0700)
Respondent bureaucrat	-0.104 (0.0688)	-0.110 (0.0687)	-0.121* (0.0689)	-0.119* (0.0699)
Respondent high school	-0.142 (0.111)	-0.145 (0.111)	-0.148 (0.112)	-0.156 (0.115)
Respondent college	0.00311 (0.105)	0.00842 (0.105)	0.0134 (0.106)	0.0103 (0.107)
Respondent in office 2-10 years	0.190*** (0.0708)	0.201*** (0.0707)	0.219*** (0.0706)	0.220*** (0.0729)
Respondent in office > 10 years	0.123 (0.0811)	0.130 (0.0806)	0.143* (0.0815)	0.136 (0.0827)
Municipal population		-3.751** (1.604)	-3.085** (1.516)	-2.271 (1.449)
Municipal population squared		5.846*** (1.756)	5.457*** (1.653)	4.732*** (1.627)
Municipal area (square km)			6.511 (35.21)	0.0767 (55.99)
Municipal area squared			800.3 (2,594)	500.5 (3,491)
Income per capita (US\$ '000)			-0.00478** (0.00226)	-0.00444** (0.00218)
Economic growth 1998-2005			0.0234 (0.0165)	0.0236 (0.0160)
Percentage college, age 25-64			-0.00701 (0.00726)	-0.00865 (0.00767)
Region fixed effects	NO	NO	NO	YES
Constant	-0.408** (0.160)	-0.556*** (0.201)	-0.534*** (0.203)	-0.531* (0.272)
Observations	1,093	1,093	1,093	1,093
R-squared	0.018	0.025	0.031	0.047

Robust standard errors in parentheses are clustered at the municipality level.

*** p<0.01, ** p<0.05, * p<0.1

To verify that results above are not driven by reverse causality, we use the minimum seat requirement (as shown in figure 2) as instrument to predict the number of seats, and then re-estimate the regression using predicted values. This two-stage procedure allows a causal interpretation of our results if our instrument can be considered exogenous with respect to corruption levels and still induces a sufficient amount of variation in seats to allow the effect on corruption to be estimated precisely. As the minimum requirements have been exactly the same since 1979, it seems plausible that the limits are sufficiently exogenous. Furthermore, the power of the instrument is more or less clearly visible from figure 2 (and also from the first stage F-statistics, reported in table 3).

Table 3 reports the main results from the instrumented regression. Compared to the OLS-estimates, coefficients are remarkably similar: The number of seats seems to have a causal effect on corruption, and again both size and significance increases as more control variables are added. Most other results are identical, with some signs that bureaucrats are less likely to report corruption problems.

Table 3: Main Results (instrumented regressions)

Dependent:	Corruption Index Z-score			
	(1)	(2)	(3)	(4)
Municipal parliament seats	0.00746** (0.00340)	0.0131** (0.00651)	0.0177** (0.00695)	0.0182*** (0.00692)
Respondent female	0.0181 (0.0693)	0.0192 (0.0689)	0.0227 (0.0682)	0.0410 (0.0686)
Respondent bureaucrat	-0.104 (0.0686)	-0.110 (0.0684)	-0.120* (0.0684)	-0.118* (0.0688)
Respondent high school	-0.142 (0.111)	-0.145 (0.111)	-0.150 (0.111)	-0.157 (0.113)
Respondent college	0.00420 (0.105)	0.00814 (0.105)	0.0111 (0.106)	0.00778 (0.105)
Respondent in office 2-10 years	0.190*** (0.0704)	0.201*** (0.0703)	0.221*** (0.0701)	0.222*** (0.0717)
Respondent in office > 10 years	0.123 (0.0807)	0.130 (0.0801)	0.144* (0.0808)	0.136* (0.0813)
Municipal population		-3.849* (2.113)	-3.823* (2.114)	-3.788* (1.969)
Municipal population squared		5.948*** (2.206)	6.234*** (2.230)	6.304*** (2.086)
Municipal area (square km)			4.583 (35.21)	-10.08 (57.70)
Municipal area squared			964.1 (2,605)	1,059 (3,581)
Income per capita (US\$ '000)			-0.00497** (0.00232)	-0.00473** (0.00218)
Economic growth 1998-2005			0.0245 (0.0169)	0.0254 (0.0160)
Percentage college, age 25-64			-0.00754 (0.00725)	-0.00984 (0.00765)
Region fixed effects	NO	NO	NO	YES
Constant	-0.397** (0.173)	-0.566** (0.261)	-0.613** (0.270)	-0.710** (0.309)
Observations	1,093	1,093	1,093	1,093
R-squared	0.018	0.025	0.031	0.046
First stage F-stat	4855	974.4	907.4	1007

Robust standard errors in parentheses are clustered at the municipality level.

*** p<0.01, ** p<0.05, * p<0.1

We now turn to testing three hypotheses on how corruption can be curbed, by including the number of newspaper offices, number of outside committee members and a measure of political competition, all expected to decrease corruption. As shown in table 4 (where a full set of control variables are included but not shown), coefficients on the two former have the expected sign, but political competition (measured by a dummy indicating a very close last election) is actually positively correlated with corruption.

Table 4: Curbing corruption?

Dependent:	Corruption Index Z-score			
	(1)	(2)	(3)	(4)
Municipal parliament seats	0.0206*** (0.00700)	0.0215*** (0.00664)	0.0177** (0.00702)	0.0232*** (0.00679)
Number of newspaper offices	-0.0784* (0.0470)			-0.0743 (0.0456)
Number of outside committee members		-0.00310*** (0.000980)		-0.00324*** (0.000939)
Block distance 2008 < 5%			0.167* (0.101)	0.187* (0.0985)
Estimator	2SLS	2SLS	2SLS	2SLS
Region fixed effects	NO	NO	NO	YES
Constant	-0.806*** (0.308)	-0.775*** (0.296)	-0.706** (0.308)	-0.864*** (0.299)
Observations	1,093	1,093	1,093	1,093
R-squared	0.048	0.052	0.049	0.057
Cragg Donald F statistic	945.3	1006	1003	945.7

Robust standard errors in parentheses are clustered at the municipality level.

*** p<0.01, ** p<0.05, * p<0.1

All regressions include the full set of covariates used in column (4) of Table 3.

Table 5, includes various measures of public sector size: The number of public employees, the total expenditure on public employees and total public expenditure. None of these measures correlate significantly with corruption, suggesting that it is indeed the number of parliament members that matters for corruption, rather than public sector size.

Table 5: Different measures of public sector size and corruption

Dependent:	Corruption Index Z-score			
	(1)	(2)	(3)	(4)
Municipal parliament seats	0.0181*** (0.00690)	0.0181*** (0.00691)	0.0194*** (0.00724)	0.0175** (0.00744)
Number of public employees	0.00265 (0.00440)			
Human resource expenditure		5.02e-06 (1.21e-05)		
Total public expenditure			7.05e-06 (8.94e-06)	
Share contracted out				-0.00286 (0.00786)
Estimator	2SLS	2SLS	2SLS	2SLS
Region fixed effects	NO	NO	NO	YES
Constant	-0.868** (0.413)	-0.828* (0.432)	-1.054* (0.588)	-0.625 (0.395)
Observations	1,093	1,093	1,090	1,093
R-squared	0.047	0.046	0.046	0.047
Cragg Donald F statistic	1008	1000	958.0	873.6

Robust standard errors in parentheses are clustered at the municipality level.

*** p<0.01, ** p<0.05, * p<0.1

All regressions include the full set of covariates used in column (4) of Table 3.

Finally, note that the effect of seats remains large and significant in all specifications in table 4 and 5.

Table 6: Public sector as a result of additional seats

Dependent	Number of municipality employees	Total human resource expenditure	Total expenditure per capita	Percentage of activities contracted out
	(1)	(2)	(3)	(4)
Municipal parliament seats	0.0587 (0.0908)	21.32 (32.75)	-165.4*** (54.91)	-0.271*** (0.0542)
Estimator	2SLS	2SLS	2SLS	2SLS
Region fixed effects	NO	NO	NO	YES
Constant	59.42*** (3.939)	23,428*** (1,401)	49,405*** (2,141)	29.78*** (2.446)
Observations	1,093	1,093	1,090	1,093
R-squared	0.700	0.713	0.579	0.560
Cragg Donald F statistic	1007	1007	1005	1007

Robust standard errors in parentheses are clustered at the municipality level.

*** p<0.01, ** p<0.05, * p<0.1

All regressions include the full set of covariates used in column (4) of Table 3.

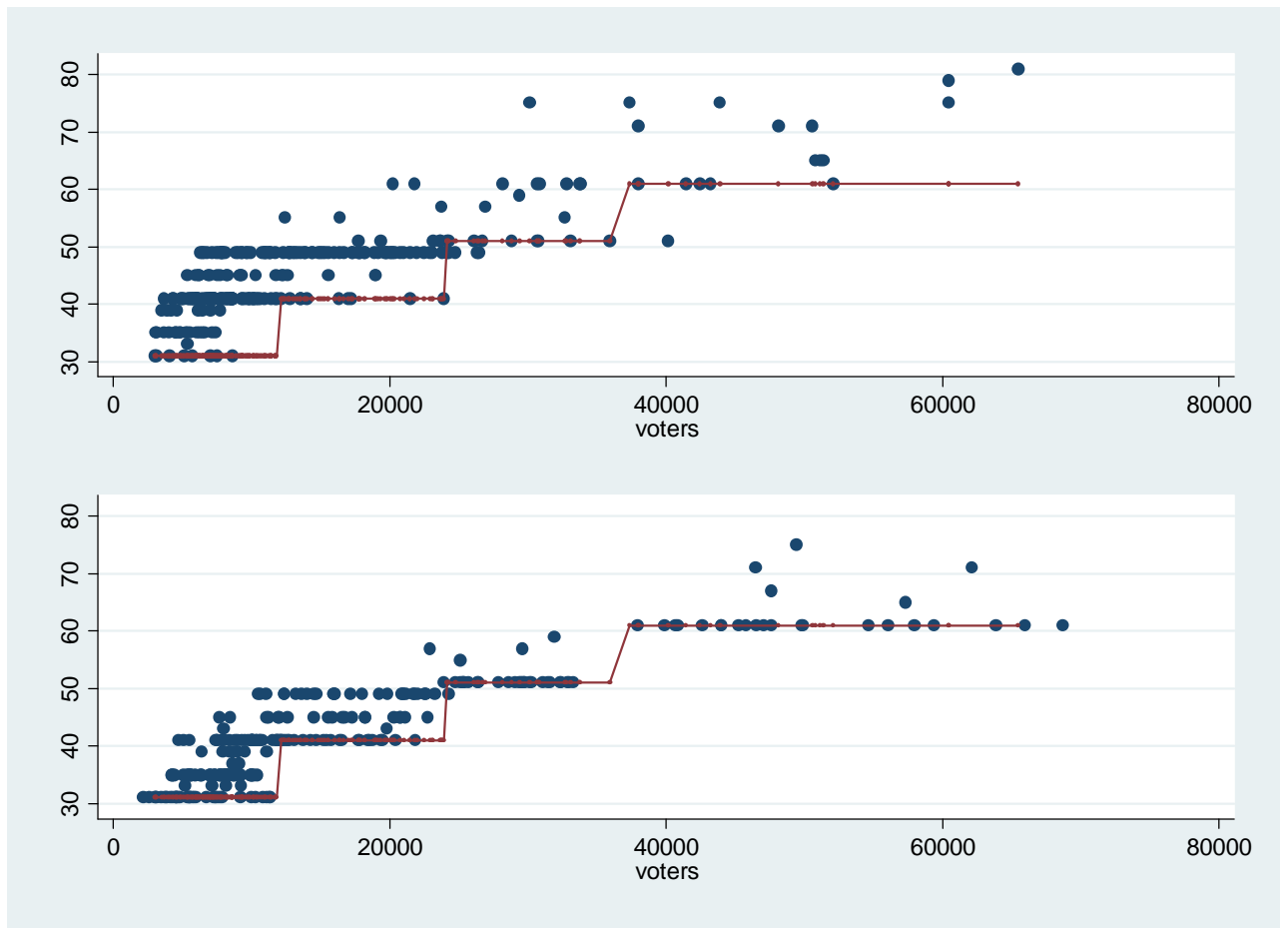
Discussion: Seats over time

Table 7: Municipality Seats over Time

	Average number of seats	Average number of required seats	Average "excess" of seats	Fraction of municipalities at minimum
1973	47.24	38.46	8.78	0.13
1976	47.38	39.22	8.16	0.15
1979	47.63	39.37	8.26	0.20
1982	47.62	39.56	8.06	0.22
1985	47.68	39.86	7.82	0.23
1988	47.85	40.13	7.72	0.25
1991	47.44	40.32	7.12	0.26
1994	47.28	40.39	6.89	0.28
1998	46.56	40.36	6.20	0.32
2002	46.02	40.24	5.78	0.34
2006	45.35	40.36	4.99	0.40
2010	44.93	40.58	4.35	0.43

Based on 265 municipalities without territorial adjustments over the period 1973-2010.

Figure XX: Minimum and required seats 1973 & 2010



When did most of this happen, and what was the role of political competition?

Table XX: Change in Seats over Time

Dependent:	Change in Seats relative to previous election			
	(1)	(2)	(3)	(4)
1982	-0.144 (0.153)	-0.0363 (0.151)	-0.0399 (0.151)	-0.0372 (0.151)
1985	-0.0773 (0.152)	0.0100 (0.150)	0.0105 (0.150)	0.00870 (0.150)
1988	0.0260 (0.152)	0.120 (0.150)	0.116 (0.150)	0.118 (0.150)
1991	-0.535*** (0.152)	-0.427*** (0.150)	-0.430*** (0.150)	-0.429*** (0.150)
1994	-0.305** (0.152)	-0.176 (0.150)	-0.183 (0.150)	-0.172 (0.150)
1998	-0.827*** (0.152)	-0.684*** (0.150)	-0.677*** (0.150)	-0.682*** (0.150)
2002	-0.673*** (0.152)	-0.509*** (0.150)	-0.510*** (0.150)	-0.508*** (0.150)
2006	-0.779*** (0.152)	-0.656*** (0.150)	-0.663*** (0.150)	-0.658*** (0.150)
2010	-0.548*** (0.152)	-0.446*** (0.150)	-0.453*** (0.149)	-0.443*** (0.150)
Change in required number of seats		0.189*** (0.0189)	0.187*** (0.0189)	0.189*** (0.0189)
Vote share gap last election			-0.00460** (0.00231)	
Last election difference < 5%				0.0997 (0.0850)
Constant	0.136 (0.109)	-0.00673 (0.108)	0.0812 (0.116)	-0.0235 (0.109)
Observations	2,985	2,985	2,985	2,985
R-squared	0.034	0.065	0.066	0.066

Robust standard errors in parentheses. All estimates based on OLS regressions.

*** p<0.01, ** p<0.05, * p<0.1

Appendix A: Survey Structure and Population

The survey was sent by e-mail to individuals belonging to something we have labelled “the local political elite”. This means that seven categories of individuals from Sweden’s 290 municipalities have received this survey: the chairman of the municipal board, the vice chairman of the municipal board, the chairman of the municipal council, the chairman of the municipal audit (these four categories are all politicians), the municipal manager (“kommunchef”), the budget manager (“ekonomichef”) and the staff manager (“personalchef”). These three categories are all high-level civil servants. These categories are present in most but not all municipalities, and some do not have e-mail addresses. In all, 1811 respondents actually received the survey and 933 answered, which is a response rate of 51.5 percent.

Appendix B: The Corruption Index

Even survey questionnaire discussed a variety of issues related to corruption, with a particular focus on attitudes and perceptions of the social and moral acceptability of range of activities in and outside of the office as well as various benefits potentially accruing to politicians . Out of the 35 questions asked, six questions directly asked about evidence of corruption in the respondent’s municipality. The six questions, which

Table XX: Questions directly related to corruption in municipality

Question number	Specific Question
7	How often are you, in your position as elected representative or in your duty, been offered money, or other benefits, in order to make a decision in favour of the person/persons who has offered the benefit? [Have you ever been offered money as politician or representative?]
9	How often do you think other politicians and civil servants in your municipality are offered money, or other benefits, in order to make a decision in favour of the person/persons who has offered the benefit? [How often do others in your municipality get offered money?]
11	How often do you think other politicians and civil servants in your municipality have actually accepted the benefit offered to them? [How often do you think others actually accept money?]
17	How often have you been subject to violence, threat of violence or blackmailing, where the person exposing you, has demanded that you, in your municipal duty/service, act in a way that you would otherwise had not? [How often have you been blackmailed?]
21f	In my municipality, the public procurement is impartial [Is procurement impartial in your municipality?]
21 i	If I wanted to, it would be easy for me to bring benefits to me or my close ones, at the expense of the municipality. [Is it easy to deviate resources to your own pocket in your municipality?]

All questions offered multiple answer categories, generally ranging from “never” to “very often”. To rank communities with respect to their reported corruption, we compute two corruption scores. The first score we compute is based on a simple dichotomous classification, where we assign a value of 1 to the municipality for a given question if the respondent reports any kind of corrupt behavior, no matter how frequent such behavior is. The result of this dichotomous scoring is a count variable ranging between zero and six, with zero marking communities where no corrupt behavior was reported at all, and a score of six marking communities where at least some (even if infrequent) corrupt behavior was reported on all six questions.

In order to also capture the subjectively perceived frequency of reported corruption, we generate a second [categorical] “continuous” [NOTE: we probably need a different name for this, as continuous does not quite sound right for a count variable] corruption score, where we assign a value of zero if no corrupt behavior was reported, a value of 1 if the corrupt behavior was observed “very rarely”, a score of 2 if the bad behavior was reported “fairly rarely”, a score of 3 if the behavior was reported “fairly often” and a score of 4 if the behavior was reported “very often”. The maximum value of the “continuous” corruption score is 24 in theory.

Figure 1 shows the distribution of the resulting scores. Since some respondents chose to not answer some of the few questions, we use the response patterns on the available items to impute cumulative corruption scores. Approximately 20% of respondents (215) do not report any experienced corruption, so that both the binary and continuous corruption scores are zero. The most frequent score is 3 on the binary corruption score (238), followed by a score of zero (215) and a score of 2 (216). The distribution of the continuous corruption score is a bit more dispersed by construction, with a maximum empirically observed score of 18.

Figure 1: Distribution of Corruption Scores

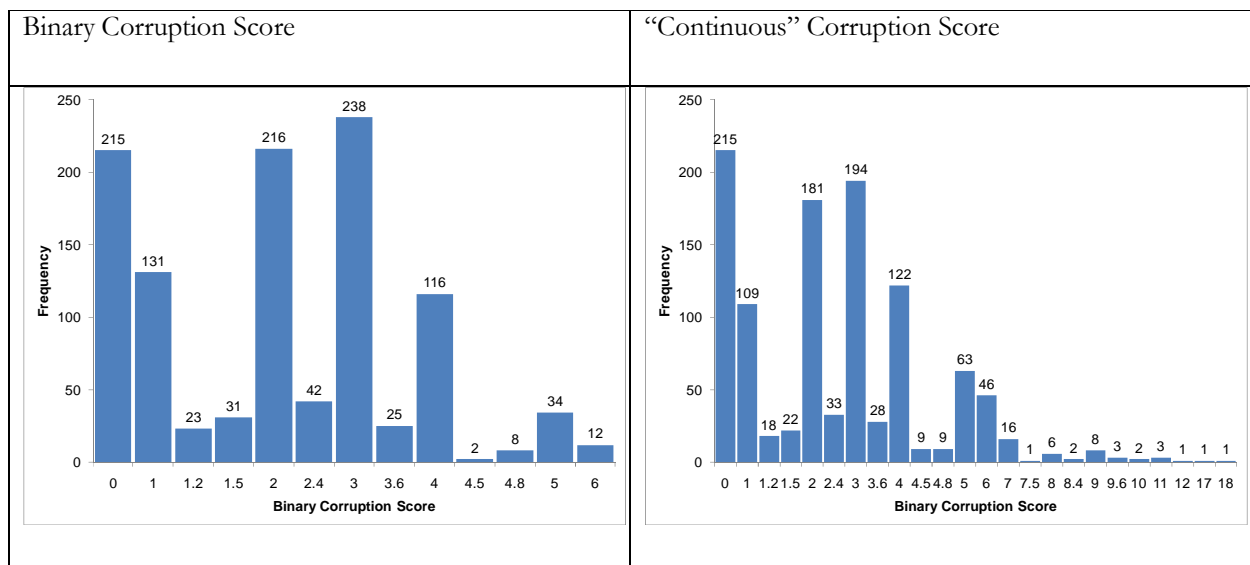
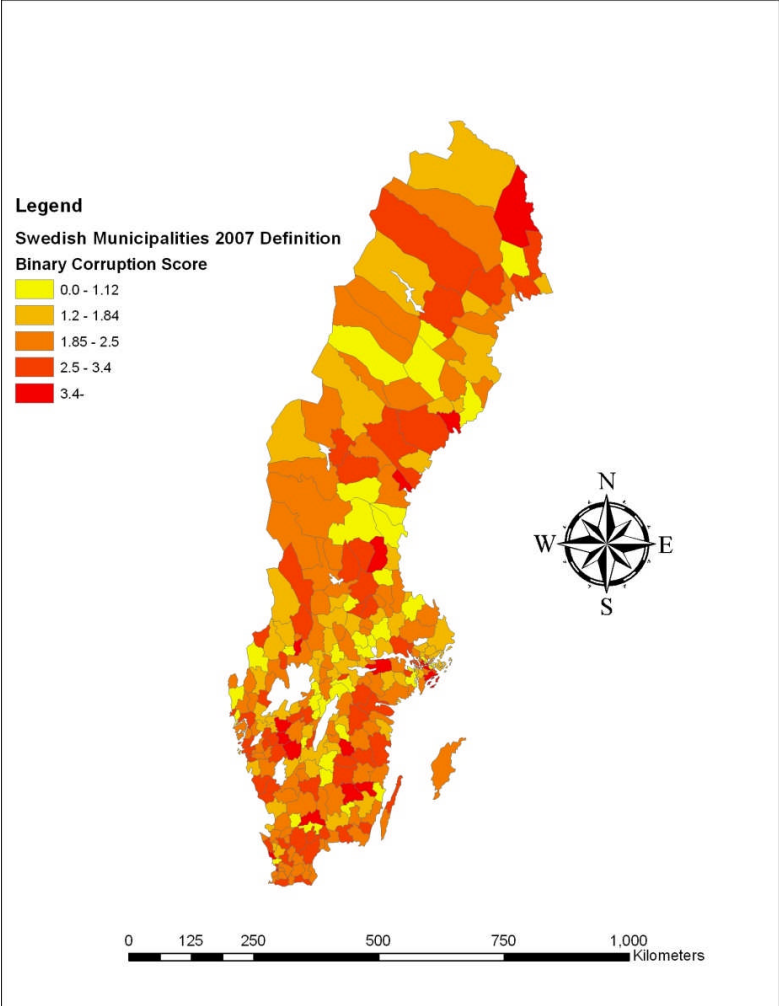
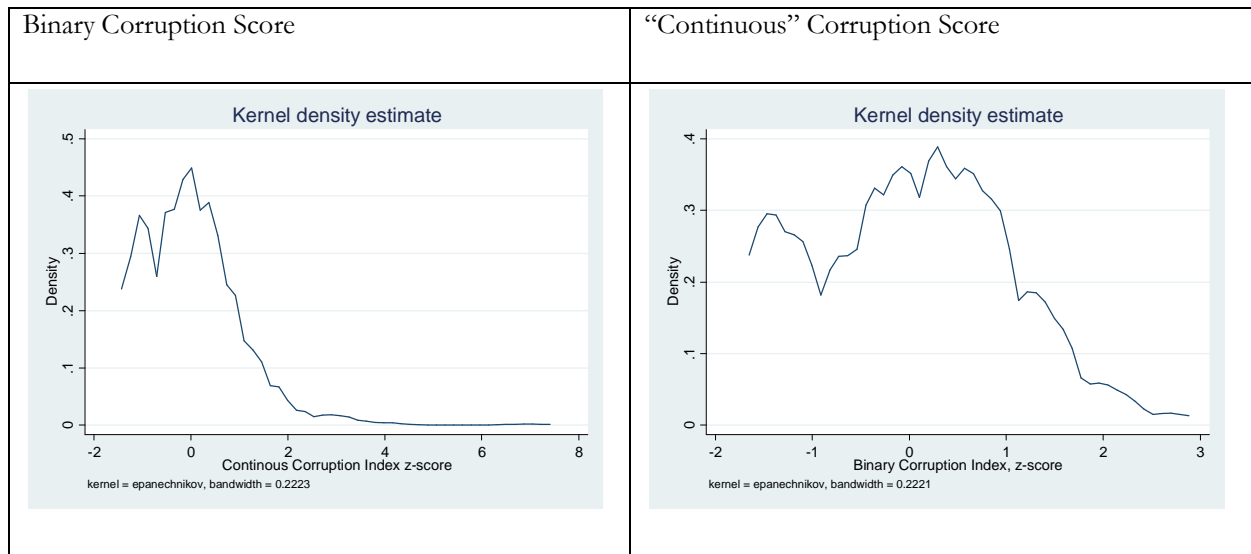


Figure 3 shows the spatial distribution of the binary corruption score across all Swedish municipalities.



To facilitate the interpretation of the estimated coefficients, we normalize both variables, and use the resulting z-scores as dependent variables in our empirical analysis. As Figure 2 shows, the distribution of both z-scores is, by construction, discontinuous and slightly skewed to the right. [[? To the left?]]

Figure 2: Distribution of Corruption Z-scores



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Appendix – The survey

(TRANSLATED FROM SWEDISH TO ENGLISH)

Survey on corruption and abuse of power in Swedish municipalities

1. I am

- Male
- Female

2. I work in/am politically active in ... (fill in the name of the municipality)

3. I am a

- Civil servant
- Politician

4. What party do you represent? (N.B. This question is only to be answered by politicians.)

- Social Democratic Party
- Moderate party
- Centre party
- Liberal people's party
- Christian Democrats
- Left Party
- Green Party
- Other party

5. My highest educational level is

- Primary school
- Secondary school
- University

6. I have held my current position for

- Less than two years
- Two to ten years
- More than ten years

7. How often are you, in your position as elected representative or in your duty, been offered money, or other benefits, in order to make a decision in favour of the person/persons who has offered the benefit?

- Never
- Very rarely
- Fairly rarely (not very often)
- Fairly often (sometimes)
- Very often
- Refrain from answering

8. Comments, if any, on the above question

9. How often do you think other politicians and civil servants in your municipality are offered money, or other benefits, in order to make a decision in favour of the person/persons who has offered the benefit?

- Never
- Very rarely
- Fairly rarely (not very often)
- Fairly often (sometimes)
- Very often
- Refrain from answering

10. Comments, if any, on the above question

11. How often do you think other politicians and civil servants in your municipality have actually accepted the benefit offered to them?

- Never
- Very rarely
- Fairly rarely (not very often)
- Fairly often (sometimes)
- Very often
- Refrain from answering

12. Comments, if any, on the above question

13. How often do you think politicians and civil servants in other municipalities are offered money, or other benefits, in order to make a decision in favour of the person/persons who has offered such a benefit?

- Never
- Very rarely
- Fairly rarely (not very often)
- Fairly often (sometimes)
- Very often
- Refrain from answering

14. Comments, if any, on the above question

15. How often do you think politicians and civil servants in other municipalities have actually accepted the benefit being offered to them?

- Never
- Very rarely
- Fairly rarely (not very often)
- Fairly often (sometimes)
- Very often
- Refrain from answering

16. Comments, if any, on the above question

17. How often have you been subject to violence, threat of violence or blackmailing, where the person exposing you, has demanded that you, in your municipal duty/service, act in a way that you would otherwise had not?

- Never
- Very rarely
- Fairly rarely (not very often)
- Fairly often (sometimes)
- Very often
- Refrain from answering

18. Comments, if any, on the above question

19. How often do you think politicians and civil servants in general are subject to violence, threat of violence or blackmailing, where the person exposing them, has demanded that they, in their municipal service, act in a way that they would otherwise had not?

- Never
- Very rarely
- Fairly rarely (not very often)
- Fairly often (sometimes)
- Very often
- Refrain from answering

20. Comments, if any, on the above question

21. Own opinions

a. It is common that full time and part-time politicians in Swedish municipalities abuse their position of power and trust, and bring benefits to themselves or their close ones, at the expense of the municipality.

- Fully agree
- Mostly agree
- Somewhat agree
- Disagree
- No opinion

b. It is common that higher civil servants in Swedish municipalities abuse their power, and bring benefits to themselves or their close ones, at the expense of the municipality.

- Fully agree
- Mostly agree
- Somewhat agree
- Disagree
- No opinion

c. It is more common for full-time and part-time politicians to benefit themselves at the expense of the municipality in other municipalities than in my municipality.

- Fully agree
- Mostly agree
- Somewhat agree
- Disagree
- No opinion

d. It is more common for civil servants to benefit themselves at the expense of the municipality in other municipalities than in my municipality.

- Fully agree
- Mostly agree
- Somewhat agree
- Disagree
- No opinion

e. In general, public procurement functions/operates impartially in Swedish municipalities.

- Fully agree
- Mostly agree
- Somewhat agree
- Disagree
- No opinion

f. In my municipality, the public procurement is impartial.

- Fully agree
- Mostly agree
- Somewhat agree
- Disagree
- No opinion

g. The municipal audit is an important instrument in checking and revealing abuse of power in my municipality.

- Fully agree
- Mostly agree
- Somewhat agree
- Disagree
- No opinion

h. Local media coverage is an important instrument in checking and revealing abuse of power in my municipality.

i. If I wanted to, it would be easy for me to bring benefits to me or my close ones, at the expense of the municipality.

- Fully agree
- Mostly agree
- Somewhat agree
- Disagree
- No opinion

j. I intervene if I suspect that someone is bringing benefits to themselves or their close ones at the expense of the municipality.

- Fully agree
- Mostly agree
- Somewhat agree
- Disagree
- No opinion

h. It is easy to trust people in general, even if they are strangers that you have never met before.

- Fully agree

- Mostly agree
- Somewhat agree
- Disagree
- No opinion

Scenarios

We would like your position on the scenarios following below. Remember that we are not asking for what is right or wrong in the legal sense, but what you consider to be an unethical behaviour, namely, whether the scenarios express abuse by an elected representative/"civil service". What is acceptable and unacceptable behaviour among municipal politicians and civil servants?

Scenario 1.

A logging company invites the municipal commissioner for dinner. The municipal commissioner accepts the invitation. Then, the municipal commissioner is invited by the company to go elk-hunting, gets free lodging and a couple of more dinners. Thereafter, the municipal commissioner makes a number of phone calls to friends, who are influential civil servants; and arranges for the hunting-party to get an increased hunting allotment so the group can shoot five additional adult animals.

22. What is your view on this?

- Unacceptable
- Doubtful, but unacceptable
- Doubtful, but acceptable
- Acceptable
- Refrain from answering

23. Comments, if any, on the above question

Scenario 2.

Bonds of friendship develop between an important business man in the IT sector in a Swedish municipality and the municipal manager. The businessman's IT-company has important contracts with the municipality. The "kommunchef" lets the businessman invite him/her on a trip to an exotic destination, to a value of about 35 000 SEK.

24. What is your view on this?

- Unacceptable
- Doubtful, but unacceptable
- Doubtful, but acceptable
- Acceptable
- Refrain from answering

25. Comments, if any, on the above question

Scenario 3.

A construction company invites top local politicians and officials in a county to a seminar, where the construction company informs about its business. The seminar goes on all day. Late-morning coffee, lunch and afternoon coffee is offered. In the evening, the participants are invited to a dinner with their husbands and wives. Since it is important to maintain good relations with the business sector, the municipal manager and the chairman of the municipal executive board decide to go to the seminar and participate in all the activities, and bring their husbands/wives to the dinner.

26. What is your view on this?

- Unacceptable
- Doubtful, but unacceptable
- Doubtful, but acceptable
- Acceptable
- Refrain from answering

27. Comments, if any, on the above question

Scenario 4.

The elder care in a Swedish municipality will procure a new supplier of diapers. The former producer does not get a renewed contract, although it sells the least expensive product, and the workers in the elder care facility think that the former supplier's products are the best. Instead, the products are procured from a producer whose production takes place in the municipality, and who buys most of the material for the diapers from local suppliers.

28. What is your view on this?

- Unacceptable
- Doubtful, but unacceptable
- Doubtful, but acceptable
- Acceptable
- Refrain from answering

29. Comments, if any, on the above question

Scenario 5.

A position as director at intermediate level is vacant. The staff manager's cousin is formally qualified for the position, and for this reason the personnel officer does not advertise the position in due order. The number of applicants is therefore limited, and the cousin finally gets the position.

30. What is your view on this employment procedure/process?

- Unacceptable
- Doubtful, but unacceptable
- Doubtful, but acceptable
- Acceptable
- Refrain from answering

31. Comments, if any, on the above question

Scenario 6.

A local politician is a member of the municipal council, of the board of a municipal company and is the vice chairman of a committee. He/she never reads documents, never give comments and always vote according to the party line. Thanks to the assignments, he/she only has to work half-time as a teacher, but can still manage well financially.

32. What is your view on this?

- Unacceptable
- Doubtful, but unacceptable
- Doubtful, but acceptable
- Acceptable
- Refrain from answering

33. Comments, if any, on the above question

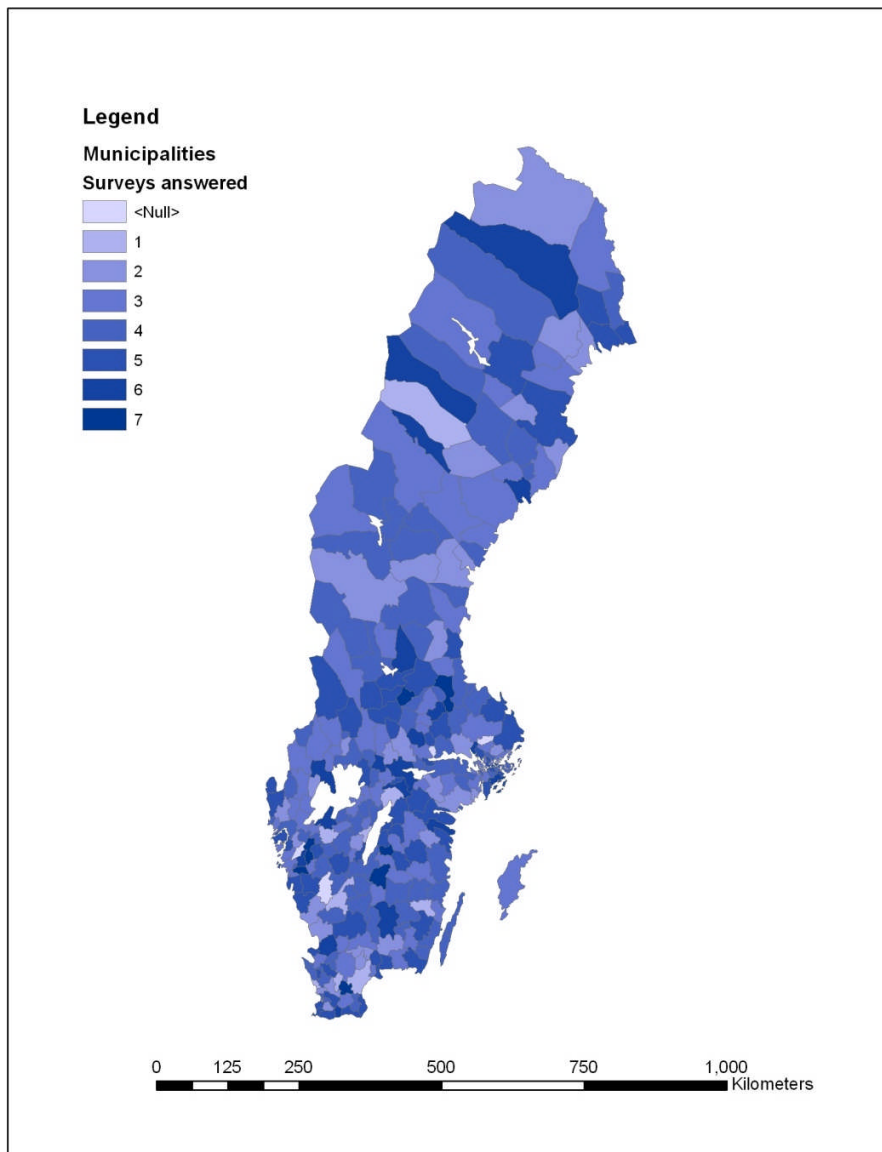
34. As compared to when you started as a local politician/local government official, problems with abuse of power have...

- Increased significantly
- Somewhat increased
- Not changed
- Somewhat decreased
- Decreased significantly
- Refrain from answering

35. As compared to when you started as a local politician/local government official, problems with blackmailing –when someone tries to force a local politician/local government official to act differently than they would otherwise have done in local politics- have...

- Increased significantly
- Somewhat increased
- Not changed
- Somewhat decreased
- Decreased significantly
- Refrain from answering

Appendix: Survey Response Rates



Average response rate: 0.5. Correlation response rate Binary Corruption Index: -0.0014.