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Political preferences and public sector outsourcing

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ABSTRACT

Given the intensive and ideologically charged debate over the use of private contractors for publicly funded services, it is somewhat surprising that many social scientists have preferred to explain government outsourcing by the pursuit of economic efficiency. Starting out from different theories, we investigate political explanations of government outsourcing using a Swedish data set in which outsourcing varies between municipalities and over time, as well as between services. Our identification strategy focuses on two services with similar contracting problems and local market conditions: preschools and primary schools. We study a period in which Swedish municipalities had full discretion in the provision of preschools, while their influence on the private provision of primary education was limited by a national voucher system. The comparison of preschools with primary schools in a difference-in-differences model suggests that the political color of the ruling majority influences outsourcing, which is consistent with the Citizen Candidate model of representative democracy.

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1. Introduction

The last 30 years have witnessed an intensive, ideologically charged debate over the use of private contractors for publicly funded services such as education and health care. With this in mind, it is somewhat surprising that many social scientists have preferred to explain government outsourcing by the pursuit of economic efficiency. Building on Coase (1937), Williamson (1981, 1985) and Grossman and Hart (1986), the Transaction Cost model of Hart et al. (1997) explains outsourcing by the contracting difficulties of different services. The difficulty of contracting, in turn, depends on the difficulty of measuring and monitoring quality, the need for flexibility, and the risk that "specific assets" give rise to hold-up problems.[1] An implicit assumption is that policy makers maximize social welfare; political parties, ideology, and the self-interest of voters and politicians do not matter.

Other models of government outsourcing or of policymaking in general have more of a political flavor. The political models assume that politicians are motivated either by the desire to implement their preferred policy or by the rents that come with holding office. The Citizen Candidate model of Besley and Coate (1997) and Osborne and Slivinski (1996) has policy motivated politicians. Office motivated politicians are found in the Patronage model of government outsourcing (Lopez-de-Silanes et al., 1997) and in the Downsian model of electoral competition (Downs, 1957).

In the Citizen Candidate model, politicians are motivated to run for office by the prospect of implementing their own preferred policy. Policies are expected to diverge such that outsourcing – like other political choices – depends on the identity of the winning side in elections. The prediction is that right majorities will use outsourcing to a larger extent than left majorities.

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[1] See Levin and Tadelis (2010) for a comprehensive theoretical account of the Transaction Cost model.

According to the Patronage model, politicians derive significant rents from in-house production by public employees, including support from public employee unions, and the ability to use local government employees on political projects, as well as the ability to control unemployment and to hire relatives (Lopez-de-Silanes et al., 1997). The cost of patronage is that it has to be paid for by higher taxes, which is something voters generally dislike. The Patronage model predicts that politicians will choose lower levels of outsourcing than voters prefer, but that this difference will be smaller in competitive elections as politicians then need to accommodate voter preferences in order to be reelected.[2] The model does not, however, predict any difference between political parties to the left and to the right.

As is well known, the Downsian model predicts policy convergence even if the competing politicians prefer different policies. The policy outcome is determined by the preferences of the median voter. The use of outsourcing is thus predicted to depend on the preferences of the voters and not on the political color of the ruling majority.

The Citizen Candidate model is thus the only one of the four described models in which the political color of the ruling majority influences outsourcing; right majorities are predicted to opt for higher levels of outsourcing than left majorities. The four models also differ with respect to the influence of voter preferences on outsourcing. Preferences for the right give rise to more outsourcing in the Citizen Candidate model and in the Downsian model, but not in the Transaction Cost model. In the Patronage model, voter preferences matter only when elections are competitive. In view of this, we focus our empirical investigation on the political color of the ruling majority and on the preferences of the voters, as captured by the vote share of parties to the right. In contrast to the traditional approach which uses a large battery of explanatory variables to compare different theories, we are able to assess the four leading theories in a simple empirical framework based on their ability to capture the increase and variation in outsourcing in Swedish municipalities.

For several reasons, Swedish municipalities provide a suitable testing ground for the models that we have described. Firstly, we have data in which government outsourcing varies between publicly financed services and between municipalities, as well as over time. The data contain information on the outsourcing shares of several services in 290 municipalities from 1998 to 2006. This is a considerable improvement compared with previous studies, which have either lacked the time dimension or have been limited to a single service (e.g., garbage collection).[3]

Secondly, Sweden has witnessed an ideological realignment in which the number of municipalities governed by right parties has increased considerably since around 1990. It is quite suggestive that this trend coincides with a steady increase in local government outsourcing. The Transaction Cost model predicts that outsourcing will differ between services rather than between municipalities or over time. Thus, the Transaction Cost model can neither account for the observed general increase in outsourcing nor for the fact that outsourcing varies widely between municipalities.[4]

Thirdly, we are able to compare the models by using a difference-in-differences strategy, making use of both similarities and differences between preschools and primary schools. This approach allows us to address selection problems that arise when political preferences are correlated with unobserved determinants of outsourcing. Preschools and primary schools are similar services when it comes to contracting difficulties and local market conditions, making it reasonable that unobserved determinants influence outsourcing of both services similarly. Moreover, the legislative treatment of these two services has differed in one important respect. The provision of preschools was fully determined by municipal discretion between 1992 and 2006. During the same period, a voucher system effectively limited the influence of local politicians on the choice between public and private primary schools. Since 1992, a municipality has to finance private schools that meet national requirements and attract pupils. This gives the ruling majority better possibilities to influence the outsourcing of preschools, whereas the preferences of the electorate have a direct and relatively larger influence on the private provision of primary schools. We test how the political color of the local majority and the outsourcing preferences of the electorate influence differences in outsourcing between preschools and primary schools.

Previous empirical studies have arrived at varying conclusions. Based on a literature review and meta-regressions, Bel and Fageda (2007, 2009) conclude that a general explanation of local government outsourcing has been hard to find. Still, pragmatic cost considerations seem to be more important than ideological motivations. If anywhere, ideology seems to matter in Europe and in large cities. Studies that report that political preferences are unrelated to outsourcing include Christoffersen and Paldam (2003), Dijkgraaf et al. (2003), McGuire et al. (1987), and Zullo (2009); they incorporate various services in Denmark, the Netherlands, and the United States. On the other hand, Bhatti et al. (2009) report that Danish municipalities with a conservative or liberal majority rely more on outsourcing than municipalities with a left majority. Merzyn and Ursprung (2005) study voting behavior and find that both income and ideology determine the support for education vouchers and subsidies to private schools in Switzerland. Lopez-de-Silanes et al. (1997) find that the Patronage model explains outsourcing in U.S. counties. Brown and Potoski (2003) and Levin and Tadelis (2010), instead, present evidence from local governments in the United States that supports the Transaction Cost model of public sector outsourcing. Ohlsson (2003) finds that cost differences did not affect outsourcing decisions of refuse collection in Swedish municipalities, suggesting that policy makers did not minimize costs.

We find that the political color of the ruling majority influences the choice between outsourcing and in-house production in Swedish municipalities. This finding appears both as a general visual pattern in our data and in econometric tests where we

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[2] The Patronage model of government outsourcing is similar to the theory developed by Boycko et al. (1996) on the privatization of state-owned enterprises, c.f. Bjørnskov and Potrafke (2011) for an empirical account of this kind of privatization with the focus on government ideology.

[3] Using cost shares of outsourcing is also an improvement compared with the discrete choice framework in most of the studies in the literature. For example Brown and Potoski (2003) and Levin and Tadelis (2010) both use dummy dependent variables for mode of production (partly or fully contracted out).

[4] Because the savings from outsourcing seem to be quite large when the public sector is first opened up for competition (Andersson and Jordahl, 2011), the fact that many municipalities produce several services fully in-house is another shortcoming of the Transaction Cost model.

address selection problems by making use of the similar service characteristics and different legal regulations of preschools and primary schools. The presented evidence is consistent with the Citizen Candidate model of representative democracy. Other economic and political models (the Transaction Cost, the Patronage, and the Downsian model) fail to capture the development of outsourcing in the Swedish public sector.

We proceed with a description of the relevant institutional details in Section 2 and of our data in Section 3. In Section 4 we introduce our econometric approach and conduct a descriptive analysis. Section 5 contains the empirical results and Section 6 our conclusions.

2. Institutional details

Sweden is a welfare state characterized by high taxes, generous benefits, and a large public sector. The public sector is organized into three levels: municipalities, counties and the national level. The 290 municipalities are entrusted with a constitutional right of self-governance, including levying income taxes and deciding on local public spending. The municipalities are required by legislation to provide childcare and early childhood education, primary and secondary education, elderly care, and a few other services. Health care is mainly provided at county level. In 2006, total municipal expenditure made up 29% of total public sector expenditure and 15% of GDP. A large share of the total costs of the municipalities (69%) is made up by the three services, elderly care (30%), primary and secondary education (26%), and preschools (13%).

For our purposes, it is important that municipalities are, in general, free to decide whether they should produce a service in-house using municipal employees or provide the service through outside contractors. For primary education, however, the share of pupils in private schools is determined within a national system of school vouchers. Swedish pupils can choose freely between public and private schools within their municipality, and there is free entry for private providers that meet national requirements. Between 1992 and 2006, with regard to preschools, the municipalities were free to decide between in-house production and contracting out. Thereafter, the system has been similar to that of primary education with free entry for private providers. Since we are making use of the institutional difference between preschools and primary schools between 1992 and 2006, we will briefly describe the rules and regulations governing these two municipal services. Importantly, in 1992 the government introduced national reforms both of primary schools and of preschools (as we will describe in Sections 2.1 and 2.2). Both of these national reforms are predetermined and can be seen as exogenous to our study of municipal variation in the period 1998–2006. Table A1 in Appendix A lists the major reforms of preschools and primary schools in Sweden between 1992 and 2006.

2.1. Primary schools

Before 1992, pupils had to attend the public school in their local area. In 1992, a school voucher reform was implemented that allowed parents and pupils to choose a private school and required the municipalities to pay private schools for each pupil at a rate corresponding to 85% of the average expenditure in the public schools in the same municipality. All schools have to follow the national curriculum, and the guiding principle behind the reform is that public and private schools should compete on equal terms. The private schools are not allowed to charge fees (including top-up fees) or to select pupils by ability, socio-economic characteristics or ethnicity.[5] The proportion of pupils in private schools has grown steadily since 1992. In 2006, 8% of all pupils in primary education (and 15% of all pupils in secondary education) were enrolled in private schools (Statistics Sweden, 2007: 76). The urbanized areas of south and middle Sweden (the Greater Stockholm area in particular) have the highest concentration of pupils in private schools.

2.2. Preschools

The municipalities are also legally required to provide preschools and school-age childcare for children between the ages of 1 and 12, allowing parents to work or study. In 2006, 79% of children between the ages of 1 and 5 were enrolled in municipally financed preschools: 83% in municipal and 17% in private units. There were private preschools in 80% of the municipalities. The most popular forms of private preschools are for-profit companies and parent cooperatives (with 37 and 32% of the children in non-municipal preschools respectively).[6]

Preschools are heavily subsidized by the municipalities and since the 1980s, the subsidies have been made more accessible to private providers.[7] This stepwise process started in 1984 when parent cooperatives and day-care centers with special forms of pedagogy were allowed to receive public subsidies. Subsidies to for-profit companies were introduced in 1992. Until 2006, the municipalities made discretionary decisions in each individual case, but since 2006, they have had to grant subsidies to non-municipal preschools and leisure centers that meet national standards. This means that since 2006, there are no major differences in the legislative conditions for outsourcing preschools and primary schools.

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[5] See Böhlmark and Lindahl (2012) for a description of the 1992 reform.

[6] Swedish National Agency for Education, www.skolverket.se, tables accessed June 17, 2011.

[7] As noted by Bergstrom and Blomquist (1996), childcare subsidies induce labor market participation and are therefore more attractive to voters in countries with high tax rates on labor income.

Table 1
Coalitions in Swedish municipalities 1994–2006.

Election period	Left bloc	Right bloc	Undefined (Greens holding balance)
1994–1998	144	65	78 (30)
1998–2002	112	93	82 (20)
2002–2006	108	98	81 (19)

Notes: When either of the blocs receives more than 50% of the seats, the majority coalition is classified accordingly. When neither of the blocs receives 50% of the seats, the majority coalition is classified as undefined. Cases when either of the blocs would need the support of the Green Party to form a majority are in parentheses in the last column.

Swedish preschools emphasize their educational content. In 1998, a national curriculum for preschools was introduced, and the responsibility of preschools was transferred to the Ministry of Education. The change made preschools even more similar to primary schools. In 2002, a price cap for parents' fees was introduced. Since the cap made no difference between public and private preschools it has no effect on our empirical investigation.

2.3. Local politics in Sweden

Politically, Sweden is often treated as a fairly stable two-bloc system even though the electoral system is proportional.[8] The left bloc includes the Left Party and the Social Democratic Party. The right bloc includes the Moderate Party, the Center Party, the Liberal Party, and the Christian Democrats. The Green Party has mostly been positioned outside of the two blocs. Elections are held every fourth year and the election day is fixed to the third Sunday of September. During our sample period, elections were held in 1998, 2002 and 2006. There is no minimum threshold for winning seats in the municipal councils and a number of small local parties are represented in some of the municipal councils without holding seats in parliament.[9] When a small local party or the Green Party holds the balance of power in a municipality, it is difficult to classify the majority as either left or right and we treat such cases as undefined. Table 1 gives the frequency of different types of coalitions in the municipalities from 1994 to 2006.

The classification of Swedish parties – and their voters – as either left or right, reflects an ideological divide which is clearly discernible in opinions on privatization and municipal outsourcing.[10] Survey data from the SOM Institute demonstrate that in every single year during our period of study (1998–2006), citizens who support parties in the right bloc are much more in favor of further outsourcing education, elderly care and health care than citizens who support parties in the left bloc.[11] The supporters of the Moderate Party are the most positive toward outsourcing and the supporters of the Left Party are the most negative. Within the right bloc, the supporters of the Center Party do not express as strong a support for outsourcing as the supporters of the other three parties; still Center Party supporters consistently surpass left bloc supporters in their approval of public sector outsourcing.[12]

3. Data

We have assembled a new data set from Statistics Sweden in which we observe the outsourcing of several different services in each of Sweden's 290 municipalities over a nine year period (1998–2006). We exclude two municipalities which were founded during our sample period (Nykvarn and Knivsta), and one municipality (Upplands Väsby) for which the outsourcing data is incomplete. This leaves us with 287 municipalities to be used in the further investigation. Our data distinguishes between outsourcing to private firms, to non-profit organizations and to other units in the public sector. Over the considered period, outsourcing made up 13% of the cost of public services in the average Swedish municipality (of which outsourcing to other public entities constitutes 45%, and outsourcing to private firms and to non-profit associations constitutes 35 and 10% respectively).

In our empirical analysis, we also include a group of economic and demographic control variables that may determine outsourcing.[13] Tables C1 and C2 in Appendix C contain definitions and summary statistics of the variables.

4. Econometric approach and descriptive analysis

In Section 4.1, we first describe our econometric approach for studying how government outsourcing is influenced by the political color of the ruling majority and by the preferences of the voters. In Section 4.2, we then present descriptive results suggesting that outsourcing is politically determined.

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[8] Sweden is typically classified as a two-bloc, or bipartisan, system; see e.g. Alesina et al. (1997), Elinder (2010), and Pettersson-Lidbom (2008).

[9] At the national level there is a 4% threshold for winning seats in parliament.

[10] On the general usefulness of left–right terminology, see Bobbio (1996) and Mair (2007).

[11] Party support is measured annually by the question "Which party do you like best today?"

[12] The annual SOM surveys are made in the form of a repeated cross-section with a sample representative of the Swedish population. The surveys are available at The Swedish National Data Service (SND). The data in the SOM surveys were originally collected in a research project at the University of Gothenburg, under the guidance of Sören Holmberg, Lennart Weibull, and Lennart Nilsson. Neither SND nor the primary researchers are responsible for the analyses and interpretations presented in this paper. The details of our analyses of the SOM surveys are available upon request.

4.1. Identification strategy

We relate the measures of outsourcing to two political variables that should capture the influence of political parties and the preferences for outsourcing among the voters: a dummy for right bloc majorities in the municipal council (*Right*)[14] and the vote share of right bloc parties within the municipality in the county election (*Votes*).[15] There are two advantages of using vote shares in county elections, rather than vote shares in municipal elections, as a measure of the electorates' preferences for outsourcing: outsourcing is a dominant issue in county elections and strategic behavior by municipal politicians does not affect county election outcomes.

The first advantage, of using county election results to measure outsourcing preferences, is that outsourcing of health care has long since been a dominant issue in county politics, while municipal politics is more multidimensional. Health care amounts to 91% of total public expenditure at the county level (Statistics Sweden, 2008). Importantly, according to each of the yearly SOM surveys, preferences for outsourcing health care is strongly correlated with, and thus a good predictor for, preferences for outsourcing the municipal services of education and elderly care.[16] The election year SOM surveys also show that people who voted for any of the right bloc parties are considerably more likely to support further outsourcing of health care, education and elderly care than people who voted for a left bloc party. People who voted for a right bloc party in the county elections are also somewhat more likely to support the outsourcing of health care and education than people who voted for a right bloc party in the municipal elections, suggesting that county elections are preferable to municipal elections when measuring outsourcing preferences.[17]

The second argument for using voting in county elections as a measure of political preferences is that county elections are not confounded by strategic behavior of the political parties at the municipal level. As an example of this problem, the Downsian model of electoral competition predicts policy platforms to converge at the ideal point of the median voter. This results in close municipal elections, and hence election results that are not very informative about voter preferences. Although the Downsian model predicts county elections to be close too, the model does not say anything about the distribution of votes within single municipalities.[18]

There is a risk of obtaining biased estimates when regressing outsourcing shares on political variables. For instance, the transaction costs of outsourcing can arguably be lower in municipalities with many small business owners and a large private sector. Because businessmen and private sector employees are typically more likely to vote for a right party, we run the risk of falsely concluding that outsourcing, motivated by transaction costs, depends on political preferences. The optimal mix of public and private production could also differ between municipalities depending on their size, the composition of their population, and other variables that may be correlated with political preferences; if omitted, such variables will confound our estimates.

The traditional solution to the described selection problem is to add controls for all potentially confounding variables. However, doing so is far from easy; data is not available for all variables and it is difficult to know how to correctly specify the model. We address the problem by using a difference-in-differences strategy that relies on the institutional differences between preschools and primary schools. Importantly, preschools and primary schools are similar services when it comes to contracting difficulties and local market conditions. A common element is that quality is difficult to observe and verify; both since parents are absent and since many of the effects of the service are observed later in life. The pedagogical staff at Swedish preschools and primary schools have a similar education and follow a national curriculum, and the children experience a smooth transition between the two stages. The similarities are further demonstrated by the fact that several companies, including the preschool pioneer Pysslingen, operate both preschools and primary schools.

In particular, we use OLS to estimate different versions of the following general model:

$$Out_{i,t,s} = \alpha + \beta_P \, Right_{i,t} \times Pre_s + \gamma_P Votes_{i,t} \times Pre_s + \beta Right_{i,t} + \gamma \, Votes_{i,t} + Pre_s + \mathbf{X}_{i,t}\delta_s + \varepsilon_{i,t,s}.$$

Out is a measure of the degree of outsourcing of preschools and primary schools. *Right* is a dummy that equals one if the parties in the right bloc hold a majority of the seats in the municipal council. *Votes* measures the share of voters in the municipality who voted for a right bloc party in the county election. *Pre* is a dummy variable for preschool services. Subscript *i*, *t* and *s* are municipality, year and service indicators respectively. We have also added the vector **X** with controls for observable factors that may determine outsourcing. Note that we allow the influence of these factors to be different for the outsourcing of preschools and primary schools. Finally, ε is an error term.

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[13] See e.g. Poutvaara and Wagener (2008) for fiscal aspects of public sector outsourcing and Borck and Wrohlich (2011) for a link between income and outsourcing of childcare.

[14] To account for the budget process, values of *Right* in year t are matched with other variables in year t + 1.

[15] The correlation between *Right* and *Votes* is 0.63.

[16] When measuring opinions on outsourcing on a 1–5 scale where 1 is a "Very good suggestion" and 5 is a "Very bad suggestion", the 1998–2003 SOM surveys (the surveys in which those questions were asked to all respondents) show that the correlation coefficient between health care and education is 0.55–0.69 and the correlation coefficient between health care and elderly care is 0.71–0.80. There are no questions about the outsourcing of preschools or childcare in the SOM surveys.

[17] The share of right party voters who reported that outsourcing is a "Very good suggestion" or a "Rather good suggestion" differs by about one percentage point between the county and the municipal elections.

[18] On average each county consists of 13.8 municipalities.

Assuming that the influence of the political majority and of voter preferences will not differ between outsourcing of preschools and primary schools under the same legal framework, we obtain unbiased estimates of the effect of our political variables on outsourcing preschools relative to primary schools (β_P and γ_P); at least conditional on the control function $X_{i,t}\delta_s$. This approach accounts for unobservables that vary within municipalities over time (due to, for example, local market development or learning effects) as long as the influence of these factors is the same for preschools and primary schools. We can account for differences in contracting possibilities between services over time, as long as they are equal for all municipalities, by adding year-service fixed effects to our model. It could still be the case that the relative contracting possibilities for preschools and primary schools differ geographically. However, even if we fail to capture such differences with our control variables, we can account for them by adding county-service fixed effects.

Importantly, $\beta_P > 0$ is a distinguishing prediction of the Citizen Candidate model of Besley and Coate (1997) and Osborne and Slivinski (1996). This prediction follows as the model has two candidates at equidistant points from the median voter's preferred position running for office (one of whom will win the election) and as politicians from parties to the right typically have a preference for more outsourcing than left politicians. The other economic and political models (the Transaction Cost, the Patronage, and the Downsian model) either explicitly or implicitly predict $\beta_P = 0$. The Transaction Cost model explains outsourcing by the contracting difficulties of different services. As policy makers maximize social welfare, political parties do not matter. The Downsian model predicts policy convergence even if the competing politicians prefer different policies. We expect $\beta_P = 0$ in the Patronage model too since all parties, independently of their political color, prefer in-house production to outsourcing.

The four models also differ with respect to the influence of voter preferences on outsourcing. The estimate of γ_P is difficult to predict in the Citizen Candidate model and in the Downsian model. The reason is that we expect a positive effect of the right vote share for preschools (for which outsourcing is decided by politicians) and for primary schools (from the expectation that right voters are more inclined to choose a private school for their children). However, the two effects may not be equally large and the difference between them (γ_P) is ambiguous, but arguably close to zero.[19] In the Transaction Cost model only the latter effect is present (since politicians only care about economic efficiency) and we expect $\gamma_P < 0$. According to the Patronage model politicians prefer public employment and will choose lower levels of outsourcing than voters prefer. However, this difference will be smaller in competitive elections as politicians then need to accommodate voter preferences in order to be reelected. The Patronage model thus predicts that that γ_P is negative when elections are non-competitive (analogous to the Transaction Cost model) and ambiguous when elections are competitive (analogous to the Citizen Candidate and Downsian models). We briefly describe the four models and their parameter predictions in Table 2.

4.2. Descriptive analysis

It is problematic to explain public sector outsourcing by economic efficiency. If transaction costs determine outsourcing, service characteristics should be decisive and we should observe little variation between municipalities and over time. However, our data show that outsourcing, as a share of the costs of municipal services, has increased by 30% from 1998 to 2006. While such a trend toward more outsourcing in the public sector does not necessarily contradict the Transaction Cost model (it is perhaps in line with the growth of outsourcing in the business sector), there are several public services – including preschools and primary schools – for which a substantial reduction of transaction costs seems unlikely. It is rather suggestive that the trend toward more outsourcing coincides with a political realignment in the municipalities. As described in Section 2.3, the right bloc had a majority in 65 municipalities after the 1994 election. After the 2002 election, this number had increased to 98. Fig. 1 displays the coinciding increase in outsourcing and the rise of right bloc majorities in the municipal councils.

Looking at the cross-section, the use of outsourcing differs considerably between municipalities. While the Transaction Cost model cannot account for this, the differences seem to follow a political pattern. The boxplots in Fig. 2 summarize outsourcing in Swedish municipalities in 2006. It is evident that municipalities with right bloc majorities are outsourcing more than municipalities with left bloc majorities. The large spread among right municipalities is another notable difference. On the one hand, several right municipalities produce all or almost all of the depicted services themselves. On the other hand, all of the observations with extremely high values of outsourcing are right municipalities. Finally, an unmistakable difference between preschools and primary schools is that the municipalities are more dispersed for preschools with several very high values of outsourcing in right municipalities, whereas the maximum levels for primary schools are more similar in left and right municipalities. Fig. 2 also contains boxplots for elderly care, which – like preschools – is a service over which municipalities had discretionary outsourcing control. Because the outsourcing of preschools and elderly care (but not of primary schools) varies considerably depending on political majority, it seems likely that the political preferences of the majority coalition influence outsourcing — when national legislation allows for this.

The time series of outsourcing in municipalities with different political majorities provide additional pieces of information. Fig. 3 plots the outsourcing patterns of preschools and primary schools between 1998 and 2006 in four types of municipalities. Taken together, these four graphs also suggest that political preferences influence the outsourcing of preschools, the service that municipalities were free to decide on. Firstly, note that the pattern of primary school outsourcing is very similar in all four groups of municipalities, demonstrating the lack of political influence on this service. Secondly, the difference between outsourcing preschools in municipalities with left and right majorities (the two upper graphs) suggests that right majorities are more prone to use outsourcing. Thirdly, the slope of preschool outsourcing falls over time in municipalities with a leftward shift of majority (the lower left graph), but increases in municipalities with a rightward shift of majority (the lower right graph).

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[19] The positive association between support for right bloc parties and support for the further outsourcing of education (which we reported in Section 2.3) does not differ much between parents and non-parents. In addition, an opinion survey conducted by Demoskop in 2001 reported that 35% of parents with children in a private school would vote for one of the right bloc parties, compared to only 24% of parents with children in a public school (Bergmark, 2001).

Table 2
Model predictions.

Model	Description	β_P	γ_P
Citizen candidate	Policy motivation and policy divergence	>0	≈ 0
Transaction cost	Service specific contracting difficulty determines outsourcing	0	<0
Patronage (non-competitive)	All politicians prefer in-house production	0	<0
Patronage (competitive)	Need to accommodate voter preferences	0	≈ 0
Downs	Median voter decisive	0	≈ 0
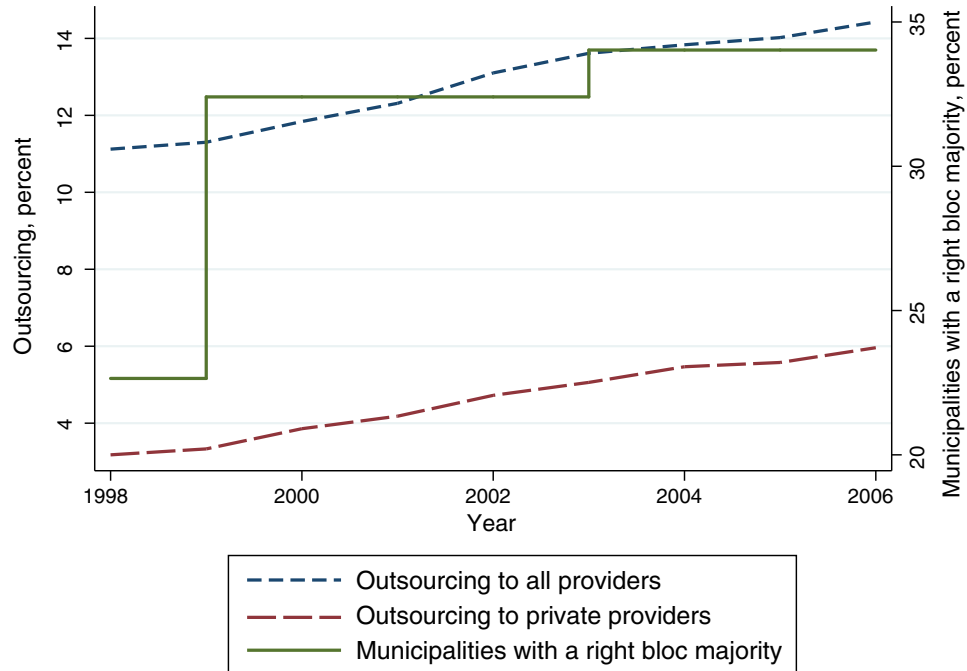
Fig. 1. Development of outsourcing and political majorities. Notes: Costs for outsourcing as a share of the total costs for municipal services on the vertical axis to the left. Share of municipalities with a right bloc majority on the vertical axis to the right.
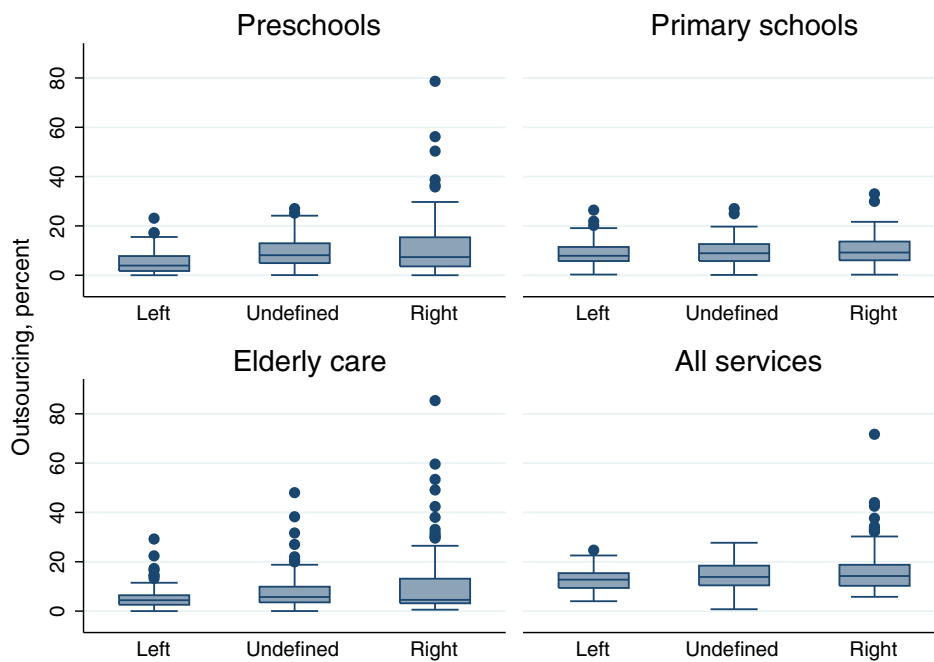
Fig. 2. Outsourcing by political majority. Notes: Costs of outsourcing to all providers as a share of the total costs of the service in 2006. The boxplots show median, 1st quartile, 3rd quartile, and outliers.
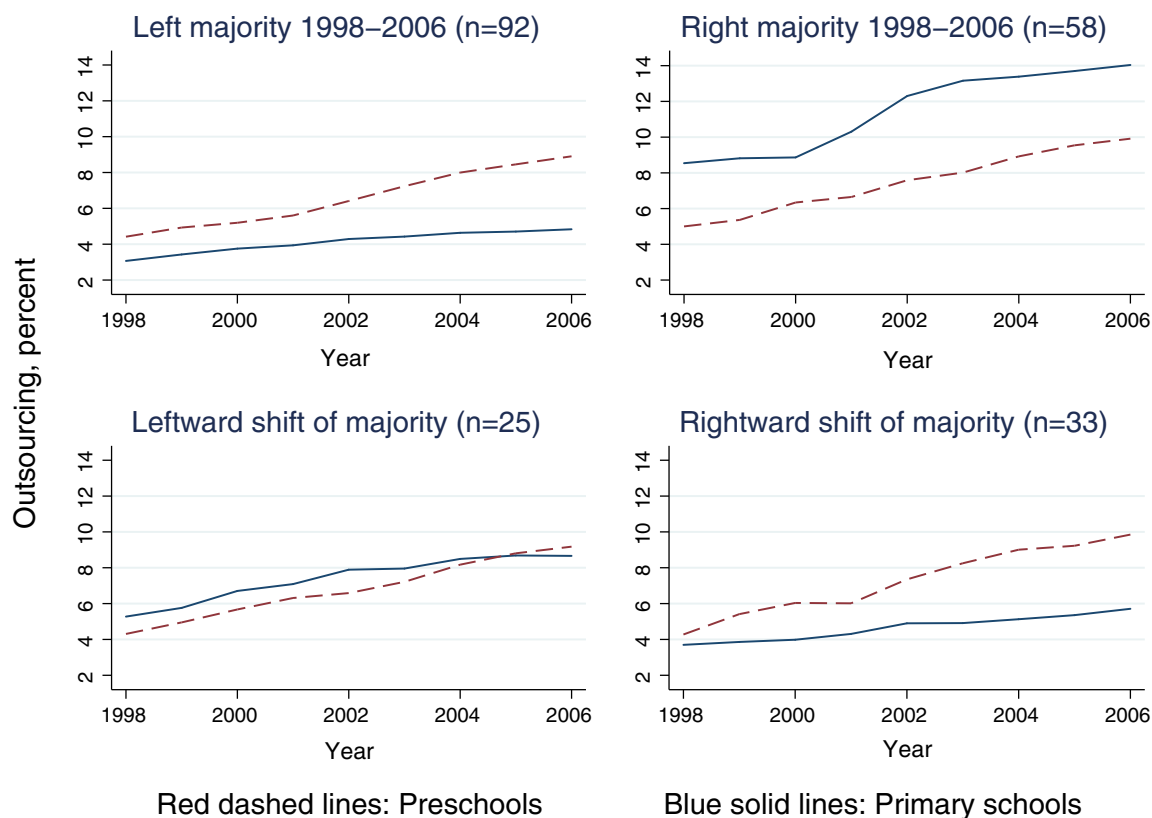
Fig. 3. Development of outsourcing in municipalities with different political majorities. Notes: Costs of outsourcing to all providers as a share of the total costs of the service. A leftward shift means that the majority in the municipality has changed from right to left, from right to undefined, or from undefined to left in the 2002 election. Correspondingly, a rightward shift means a change from left to right, from left to undefined, or from undefined to right in the 2002 election.

Taken together, the trends and patterns of local government outsourcing provide suggestive evidence in favor of political explanations. Next we move on to our econometric analysis which allows us to address several methodological difficulties.

5. Results

In this section, we present the estimates of our empirical model. Table 3 contains the estimated parameters, with outsourcing to all providers as the dependent variable. The specifications in columns 1–4 differ according to whether we include interactions between the economic and demographic control variables and the preschool dummy, and year and county fixed effects (all interacted with the preschool dummy). In general, specifications with interactions provide more reliable results since they are more flexible and rely on weaker assumptions. Column 5 presents results from a specification that makes a distinction between more and less competitive elections. Detailed regression results (including all estimates for control variables and interaction terms) are presented in Table B1 in Appendix B and description of variables in Appendix C.

Comparing columns 1 and 2 in Table 3, we see that the coefficient for *Right × Pre* (β_P) increases and becomes statistically significant when *Pre* is interacted with the control variables. As we show in Table B1 in Appendix B, this is due to the interactions including the two demographic variables *Preschool children* and *School children* (which capture the share of the population in preschool age and school age). Adding additional interaction terms changes the main coefficients of interest only moderately. That the share of children in preschool age is more important for the outsourcing of preschools and that the share of children in school age is more important for the outsourcing of primary schools is intuitive and something that the specification should allow for.

The positive coefficient for *Right × Pre* (β_P) implies that municipalities with a right majority are outsourcing relatively more preschools than primary schools when compared to municipalities with a left or undefined majority. The size of the effect is economically significant. Given the ideological preferences of the electorate, the average right government is outsourcing about 1.5 percentage points more of preschools than of primary schools (the average outsourcing share over the period is 7.1 both for preschools and primary schools).

Note that the estimated effects are for a right majority relative to a left or an undefined majority. The choice to look at right majorities vs. left and undefined majorities, rather than at left vs. right and undefined, is largely arbitrary. Results for the latter specification are presented in Appendix B, Table B2, and are consistent with the results presented in Table 3.

The other coefficient of interest, for *Votes × Pre* (γ_P), is also positive and statistically significant in all but column 2. However, the effect of voter preferences on outsourcing appears quite weak. A ten percentage point gain in the vote share for the parties in the right bloc – i.e. a very large rise – increases the outsourcing of preschools relative to primary schools by at most 0.9 percentage points, according to our estimates.

Table 3

Estimates of outsourcing of preschools and primary schools.

Dep. var: outsourcing (all providers, share of costs)					
	(1)	(2)	(3)	(4)	(5)
Right × Pre (β_P)	0.398	1.603***	1.581***	1.429***	1.458***
	(0.368)	(0.374)	(0.369)	(0.359)	(0.365)
Votes × Pre (γ_P)	0.210***	0.023	0.056**	0.087***	0.092***
	(0.020)	(0.022)	(0.024)	(0.025)	(0.026)
Pre	−9.246***	−45.44***	−42.38***	−39.63***	−39.33***
	(0.796)	(7.655)	(7.485)	(8.566)	(8.569)
Right	0.990***	0.388*	0.388*	0.112	0.099
	(0.241)	(0.234)	(0.234)	(0.237)	(0.237)
Votes	−0.068***	0.025**	0.032**	0.001	−0.006
	(0.015)	(0.013)	(0.014)	(0.015)	(0.015)
Votes × Pre × Competitive					−0.057
					(0.046)
Votes × Competitive					0.081***
					(0.028)
Competitive × Pre					2.411
					(2.229)
Competitive					−3.607***
					(1.367)
Constant	−2.978*	4.891	5.985	12.02**	11.13**
	(1.661)	(4.670)	(4.764)	(5.384)	(5.372)
Controls	Yes	Yes	Yes	Yes	Yes
Controls × Pre		Yes	Yes	Yes	Yes
Year fixed effects			Yes	Yes	Yes
Year fixed effects × Pre			Yes	Yes	Yes
County fixed effects				Yes	Yes
County fixed effects × Pre				Yes	Yes
Observations	5128	5128	5128	5128	5128
Municipalities	287	287	287	287	287

Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

The specification in column 5 investigates whether or not the relationship between votes and outsourcing differs between competitive and non-competitive elections, as suggested by the Patronage model. We identify competitive elections as elections in which the right bloc obtains between 45 and 55% of the votes; when this is the case, we set the dummy *Competitive* equal to one. Again, note that we measure voters' preferences for outsourcing by the vote share for the right bloc within a municipality in the *county* election; whereas we measure competitiveness by the vote share in the *municipal* election.

In the specification in column 5, we include the dummy *Competitive*, an interaction between *Competitive* and right votes in the county election (*Votes*), an interaction between *Competitive* and the preschool dummy (*Pre*), and, finally, the interaction between all three variables. The Patronage model predicts the parameter of the triple interaction to be negative, as the voters' preferences for outsourcing should only influence outsourcing for preschools when elections are close. The estimates in column 5 do not indicate that patronage is more widespread in non-competitive elections.[20]

All of the specifications in Table 3 are linear, which could be problematic since our dependent variable is bounded between zero and 100. First, predictions for the dependent variable may be out of the feasible range for large values of the explanatory variables. It turns out that our model predicts no values above 100% and very few below zero (it does so for 2.5% of the observations, and none of these predictions fall below −3%). Second, a linear model might produce misleading estimates of the effects, in particular for extreme values of the explanatory variables. These problems are, however, not immediate in our setting since both explanatory variables that we focus on are also bounded (*Right* is a dummy and *Votes* is bounded between zero and 100). To address such issues of non-linearities, we have estimated the specification in column 4 when excluding observations in the tails of the distribution of *Votes*. Since our coefficients of interest are relatively stable when we do this (see Table B3 in Appendix B for results from nine different exclusions) we believe that our linear estimates are informative of the relevant effects.

Finally, it is possible that outsourcing to private and public providers has different explanations. Table 4 contains estimates from specifications where the dependent variable is outsourcing to private providers. The estimates are smaller both for *Right × Pre* (β_P) and for *Votes × Pre* (γ_P), but choices of private outsourcing do not seem to differ markedly from outsourcing choices within the public sector. Municipalities with a right bloc majority use both public and private providers to outsource relatively more preschools than primary schools, compared to left or undefined majorities.

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[20] We have also tested for different effects of *Votes* above and below the 50% threshold in competitive elections. This test gives no support for the Patronage model either.

6. Conclusion

Traditional explanations of public sector outsourcing have mainly focused on contracting difficulties and transaction costs. The few papers that have tested for political explanations have either focused on the Patronage model or failed to connect their results to specific political theories.

In this paper, we have tested for political explanations of outsourcing by making use of a new data set containing detailed information on outsourcing in Swedish municipalities. We find that right governments are more prone to use outsourcing to provide publicly financed services than left governments. This is consistent with the political view of government outsourcing in the Citizen Candidate model of Osborne and Slivinski (1996) and Besley and Coate (1997), in which politicians are motivated by the chance to implement their own preferred policy.

Other political models (the Patronage model and the Downsian model) fail to capture the development of outsourcing in the Swedish public sector. The Downsian model explicitly predicts that there should be no difference in outsourcing between left and right governments, whereas the Patronage model does not give any comparable prediction. The Patronage model predicts that voters' preferences will have a larger influence on outsourcing in close elections, a prediction which our data do not support. Given its prominence among economists, most notable is the inability of the Transactions Cost model to explain the outsourcing pattern in Swedish municipalities. Both our descriptive and our econometric evidence speak against the relevance of the Transaction Cost model.

Our result stands in contrast to previous studies in other countries, which have mostly concluded that political preferences are unrelated to outsourcing. We conclude that the political preferences of the ruling majority appear to be important in explaining public sector outsourcing. The related question of whether outsourcing affects electoral outcomes and whether it does so differently for the left and for the right is left for future research.

Acknowledgments

Table 4
Estimates of outsourcing of preschools and primary schools to private providers.

Dep. Var: outsourcing (private providers, share of costs)				
	(1)	(2)	(3)	(4)
Right×Pre (β_P)	0.615**	0.617**	0.572**	0.728***
	(0.289)	(0.274)	(0.278)	(0.281)
Votes×Pre (γ_P)	0.003	0.043**	0.050**	0.058**
	(0.017)	(0.019)	(0.022)	(0.023)
Pre	−26.95***	−22.03***	−27.29***	−24.83***
	(6.426)	(6.025)	(6.997)	(6.926)
Right	0.297	0.301*	0.099	0.134
	(0.184)	(0.182)	(0.184)	(0.187)
Votes	0.016*	0.021**	0.015	0.010
	(0.010)	(0.010)	(0.011)	(0.012)
Votes×Pre×Competitive				−0.054
				(0.037)
Votes×Competitive				0.061**
				(0.026)
Competitive×Pre				1.360
				(1.769)
Competitive				−3.050**
				(1.252)
Constant	−0.941	0.071	7.511*	8.071*
	(3.496)	(3.514)	(4.198)	(4.203)
Controls	Yes	Yes	Yes	Yes
Controls×Pre	Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes
Year fixed effects×Pre		Yes	Yes	Yes
County fixed effects			Yes	Yes
County fixed effects×Pre			Yes	Yes
Observations	5120	5120	5120	5120
Municipalities	287	287	287	287

Robust standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Detailed regression results (including all estimates for control variables and interaction terms) are presented in Table B4 in Appendix B.

Appendix A Reform descriptions

Table A1
Major reforms of preschools and primary schools in Sweden 1992–2006.

Reform	Year	Description	Comment
Subsidies to for-profit preschools	1992	Subsidies to for-profit preschools are legalized.	A voucher system with freedom of entry is part of the reform, but is not implemented (by the left government taking office in 1994).
School voucher system	1992	Free entry of private for-profit and non-profit primary schools that meet national requirements; pupils are free to choose between schools; municipalities pay private schools for each pupil.	Limits the influence of municipalities on the private provision of primary education.
National curriculum for preschools	1998	Pedagogical content strengthened through national curriculum; preschools handled by the Ministry of Education.	Preschools become even more similar to primary schools.
Fee reform for preschools	2002	A price cap for parents' fees is introduced.	No difference between public and private preschools; no effect on our empirical investigation.
Preschool voucher system	2006	Freedom of entry and freedom of choice similar to the school voucher system.	Removes the difference between the municipalities' ability to outsource preschools and primary schools.

Appendix B Detailed and additional regression results

Table B1
Detailed estimates of outsourcing of primary schools and preschools.

Dep. var: outsourcing (all providers, cost share)	(1)	(1′)	(2)	(3)	(4)	(5)
Right×Pre (β_P)	0.398	1.291***	1.603***	1.581***	1.429***	1.458***
	(0.368)	(0.378)	(0.374)	(0.369)	(0.359)	(0.365)
Votes×Pre	0.210***	0.131***	0.023	0.056**	0.087***	0.092***
	(0.020)	(0.020)	(0.022)	(0.024)	(0.025)	(0.026)
Pre	−9.246***	−11.089***	−45.437***	−42.384***	−39.625***	−39.332***
	(0.796)	(1.751)	(7.655)	(7.485)	(8.566)	(8.569)
Right	0.990***	0.543**	0.388*	0.388*	0.112	0.099
	(0.241)	(0.242)	(0.234)	(0.234)	(0.237)	(0.237)
Votes	−0.068***	−0.028**	0.025**	0.032**	0.001	−0.006
	(0.015)	(0.014)	(0.013)	(0.014)	(0.015)	(0.015)
Votes×Pre×Competitive						−0.057
						(0.046)
Votes×Competitive						0.081***
						(0.028)
Competitive×Pre						2.411
						(2.229)
Competitive						−3.607***
						(1.367)
Employment	−0.234***	−0.234***	−0.229***	−0.247***	−0.279***	−0.287***
	(0.051)	(0.050)	(0.059)	(0.062)	(0.068)	(0.068)
Business employment	0.078***	0.078***	0.053***	0.059***	0.070***	0.070***
	(0.012)	(0.011)	(0.012)	(0.012)	(0.012)	(0.012)
Tax base	0.081***	0.081***	0.093***	0.121***	0.029	0.033*
	(0.008)	(0.008)	(0.009)	(0.017)	(0.019)	(0.019)
Municipal net profit/loss	−4.81e^{-6}	−4.81e^{-6}	1.33e^{-5}	2.07e^{-5}	2.46e^{-5}	2.59e^{-5}
	(3.42e^{-5})	(3.41e^{-5})	(4.26e^{-5})	(4.29e^{-5})	(3.50e^{-5})	(3.46e^{-5})
Grants	0.000168***	0.000168***	0.000277***	0.000354***	0.000294***	0.000296***
	(3.09e^{-5})	(3.07e^{-5})	(3.21e^{-5})	(4.23e^{-5})	(5.69e^{-5})	(5.66e^{-5})
University education (3≥years)	0.737***	0.737***	0.305***	0.261***	0.434***	0.431***
	(0.054)	(0.053)	(0.060)	(0.066)	(0.064)	(0.065)
Preschool children (<7 years, percent)	0.949***	−0.048	−0.112	−0.264	−0.611***	−0.614***
	(0.137)	(0.134)	(0.146)	(0.191)	(0.192)	(0.193)
School children (7 to 16, percent)	0.309***	0.660***	−0.032	−0.105	0.087	0.101
	(0.109)	(0.133)	(0.126)	(0.143)	(0.131)	(0.130)
Old (≥65 years)	0.074	0.074	−0.285***	−0.366***	−0.265***	−0.260***
	(0.066)	(0.065)	(0.076)	(0.083)	(0.089)	(0.089)
Foreign citizens	0.064**	0.064**	0.050	0.032	−0.104***	−0.102**
	(0.028)	(0.028)	(0.038)	(0.038)	(0.040)	(0.040)
On welfare	0.185***	0.185***	−0.022	−0.058	−0.258***	−0.254***
	(0.065)	(0.063)	(0.081)	(0.082)	(0.085)	(0.085)

Table B1 (*continued*)

Dep. var: outsourcing (all providers, cost share)	(1)	(1′)	(2)	(3)	(4)	(5)
Interactions with preschool dummy						
Employment			−0.010	−0.075	0.044	0.050
			(0.098)	(0.105)	(0.122)	(0.122)
Business employment			0.050**	0.066***	0.056**	0.057**
			(0.022)	(0.024)	(0.026)	(0.027)
Tax base			−0.022	0.078**	0.045	0.041
			(0.016)	(0.037)	(0.038)	(0.038)
Municipal profit/loss			$-3.62e^{-5}$	$-8.99e^{-6}$	$-4.29e^{-5}$	$-4.38e^{-5}$
			$(6.73e^{-5})$	$(6.71e^{-5})$	$(6.13e^{-5})$	$(6.11e^{-5})$
Grants			−0.000217***	$6.15e^{-5}$	−0.000175*	−0.000175***
			$(6.02e^{-5})$	$(7.25e^{-5})$	$(9.60e^{-5})$	$(9.59e^{-5})$
University education (3≥years)			0.864***	0.628***	0.517***	0.524***
			(0.101)	(0.100)	(0.103)	(0.104)
Preschool children (<7 years, percent)		1.994***	2.122***	2.112***	2.038***	2.033***
		(0.170)	(0.259)	(0.320)	(0.322)	(0.323)
School children (7 to 16, percent)		−0.703***	0.682***	0.113	0.215	0.201
		(0.133)	(0.210)	(0.221)	(0.217)	(0.215)
Old (≥65 years)			0.718***	0.472***	0.650***	0.640***
			(0.128)	(0.125)	(0.137)	(0.138)
Foreign citizens			0.028	−0.061	−0.056	−0.060
			(0.055)	(0.057)	(0.071)	(0.072)
On welfare			0.414***	0.334***	0.491***	0.483***
			(0.123)	(0.122)	(0.137)	(0.137)
Constant	−13.205***	−12.283***	4.891	5.985	12.02**	11.987**
	(3.928)	(3.915)	(4.670)	(4.764)	(5.384)	(5.407)
Year fixed effects				Yes	Yes	Yes
Year fixed effects×Pre				Yes	Yes	Yes
County fixed effects					Yes	Yes
County fixed effects×Pre					Yes	Yes
Observations	5128	5128	5128	5128	5128	5128
Municipalities	287	287	287	287	287	287

Robust standard errors in parentheses.*** p<0.01, ** p<0.05, * p<0.1.

Table B2
Outsourcing of preschools and primary schools using left majority and preferences.

Dep. var: outsourcing (all providers, share of costs)				
	(1)	(2)	(3)	(4)
Left×Pre (β_P)	−0.544	−0.663**	−0.862***	−1.032***
	(0.348)	(0.333)	(0.332)	(0.344)
Votes×Pre (γ_P)	−0.070***	−0.107***	−0.109***	−0.105***
	(0.019)	(0.021)	(0.022)	(0.023)
Pre	−42.15***	−37.34***	−30.70***	−30.01***
	(7.769)	(7.530)	(8.762)	(8.732)
Left	−0.442**	−0.497**	−0.291	−0.213
	(0.220)	(0.222)	(0.218)	(0.223)
Votes (for the left bloc)	0.003	−0.001	0.0141	0.017
	(0.012)	(0.013)	(0.013)	(0.013)
Votes×Pre×Competitive				−0.031
				(0.049)
Votes×Competitive				−0.055*
				(0.029)
Competitive×Pre				0.896
				(2.194)
Competitive				2.674**
				(1.297)
Constant	0.280	1.263	9.820*	9.238*
	(4.546)	(4.619)	(5.461)	(5.468)
Controls	Yes	Yes	Yes	Yes
Controls×Pre	Yes	Yes	Yes	Yes
Year fixed effects		Yes	Yes	Yes
Year fixed effects×Pre		Yes	Yes	Yes
County fixed effects			Yes	Yes
County fixed effects×Pre			Yes	Yes
Observations	5128	5128	5128	5128
Municipalities	287	287	287	287

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table B3
Robustness with respect to high and low values of *Votes*.

Sample:	(1) Excl. top 1%	(2) Excl. top 5%	(3) Excl. top 10%	(4) Excl. bottom 1%	(5) Excl. bottom 5%	(6) Excl. bottom 10%	(7) Incl. mid 95%	(8) Incl. mid 90%	(9) Incl. mid 50%
Right×Pre	1.274***	1.398***	1.169***	1.330***	1.166***	1.135***	1.327***	1.092***	0.934**
	(0.365)	(0.356)	(0.347)	(0.361)	(0.372)	(0.376)	(0.356)	(0.369)	(0.471)
Votes×Pre	0.135***	0.109***	0.0729***	0.0947***	0.102***	0.110***	0.119***	0.137***	0.116**
	(0.0269)	(0.0247)	(0.0244)	(0.0256)	(0.0275)	(0.0289)	(0.0239)	(0.0273)	(0.0539)
Pre	−43.75***	−42.96***	−29.67***	−39.37***	−30.49***	−26.09***	−40.54***	−32.18***	−17.06
	(8.867)	(8.875)	(8.612)	(8.634)	(8.927)	(9.149)	(8.766)	(9.168)	(12.06)
Right	0.0543	0.0956	−0.140	0.0649	0.207	0.198	−0.0142	0.189	−0.0420
	(0.238)	(0.240)	(0.239)	(0.239)	(0.243)	(0.243)	(0.241)	(0.248)	(0.323)
Votes	0.0191	0.0295*	0.0527***	0.000334	−0.0127	−0.0161	0.0199	0.0101	0.128***
	(0.0152)	(0.0166)	(0.0173)	(0.0147)	(0.0157)	(0.0166)	(0.0161)	(0.0184)	(0.0382)
Constant	11.16**	12.19**	10.09*	9.631*	8.839	1.847	9.375*	0.229	31.14***
	(5.369)	(5.374)	(5.535)	(5.444)	(5.517)	(5.574)	(5.510)	(5.759)	(8.699)
Controls×Pre	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects×Pre	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County fixed effects×Pre	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5072	4876	4610	5076	4860	4628	4878	4608	2530

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table B4
Detailed estimates of outsourcing of primary schools and preschools to private providers.

Dep. var: outsourcing (private providers, share of costs)				
	(1)	(2)	(3)	(4)
Right×Pre (β_P)	0.615**	0.617**	0.572**	0.728***
	(0.289)	(0.274)	(0.278)	(0.281)
Votes×Pre	0.00266	0.0433**	0.0503**	0.0576**
	(0.0017)	(0.019)	(0.0217)	(0.0228)
Pre	−26.95***	−22.03***	−27.29***	−24.83***
	(6.426)	(6.025)	(6.997)	(6.926)
Right	0.297	0.301*	0.0994	0.134
	(0.184)	(0.182)	(0.184)	(0.187)
Votes	0.0163*	0.0212**	0.0149	0.0103
	(0.010)	(0.010)	(0.0114)	(0.0119)
Votes×Pre×Competitive				−0.0542
				(0.0374)
Votes×Competitive				0.0611**
				(0.0260)
Competitive×Pre				1.360
				(1.769)
Competitive				−3.050**
				(1.252)
Employment	−0.0928	−0.110	−0.183***	−0.189***
	(0.047)	(0.049)	(0.0564)	(0.0564)
Business employment	0.0552**	0.0581***	0.0748***	0.0757***
	(0.010)	(0.011)	(0.0116)	(0.0117)
Tax base	0.0561***	0.0718**	0.0156	0.0159
	(0.007)	(0.014)	(0.0146)	(0.0144)
Municipal net profit/loss	$2.11e^{-5}$	$2.41e^{-5}$	$3.28e^{-5}$	$3.35e^{-5}$
	$(3.54e^{-5})$	$(3.61e^{-5})$	$(3.25e^{-5})$	$(3.24e^{-5})$
Grants	0.000190***	0.000233***	0.000128***	0.000132***
	$(2.6e^{-5})$	$(3.25e^{-5})$	$(4.47e^{-5})$	$(4.47e^{-5})$
University education (3≥years)	0.106	0.0713	0.134***	0.140***
	(0.043)	(0.045)	(0.0447)	(0.0453)
Preschool children (<7 years, percent)	−0.0782	−0.114	−0.289**	−0.308**
	(0.110)	(0.138)	(0.147)	(0.147)
School children (7 to 16, percent)	−0.126	−0.199*	−0.165	−0.164
	(0.102)	(0.113)	(0.110)	(0.110)
Old (≥65 years)	−0.0751	−0.123**	−0.116*	−0.124*
	(0.058)	(0.059)	(0.0668)	(0.0669)

Table B4 (*continued*)

Dep. var: outsourcing (private providers, share of costs)				
	(1)	(2)	(3)	(4)
Foreign citizens	-0.104^{***}	-0.119^{***}	-0.186^{***}	-0.189^{***}
	(0.027)	(0.027)	(0.0305)	(0.0306)
On welfare	0.0931	0.0773	-0.0687	-0.0770
	(0.061)	(0.060)	(0.0670)	(0.0670)
Interactions with preschool dummy				
Employment	-0.273^*	-0.357^{**}	-0.223^{**}	-0.216^{**}
	(0.086)	(0.092)	(0.106)	(0.105)
Business employment	0.048^{**}	0.077^{***}	0.0861^{***}	0.0896^{***}
	(0.020)	(0.022)	(0.0260)	(0.0260)
Tax base	0.0212	0.173^{***}	0.118^{***}	0.107^{***}
	(0.014)	(0.036)	(0.0326)	(0.0321)
Municipal profit/loss	$-3.63e^{-5}$	$-4.68e^{-6}$	$-2.14e^{-5}$	$-2.30e^{-5}$
	$(6.35e^{-5})$	$(6.28e^{-5})$	$(5.99e^{-5})$	$(5.96e^{-5})$
Grants	-0.000273^{***}	0.000145^{**}	$-4.87e^{-5}$	$-4.26e^{-5}$
	$(5.19e^{-5})$	$(5.77e^{-5})$	$(7.69e^{-5})$	$(7.71e^{-5})$
University education (3≥years)	0.507^{***}	0.226^{***}	0.246^{***}	0.276^{***}
	(0.086)	(0.079)	(0.0811)	(0.0818)
Preschool children (<7 years, percent)	1.712^{***}	1.172^{***}	1.276^{***}	1.225^{***}
	(0.213)	(0.267)	(0.276)	(0.273)
School children (7 to 16, percent)	0.490^{**}	-0.0704	0.200	0.160
	(0.193)	(0.194)	(0.199)	(0.196)
Old (≥65 years)	0.550^{***}	0.149	0.392^{***}	0.349^{***}
	(0.108)	(0.098)	(0.114)	(0.112)
Foreign citizens	0.148^{***}	0.0417	0.0359	0.0198
	(0.042)	(0.041)	(0.0483)	(0.0493)
On welfare	0.146	-0.0190	0.253^{**}	0.215^{**}
	(0.097)	(0.089)	(0.107)	(0.107)
Constant	-0.941	0.0713	7.511^*	8.071^*
	(3.496)	(3.514)	(4.198)	(4.203)
Year fixed effects		Yes	Yes	Yes
Year fixed effects×Pre		Yes	Yes	Yes
County fixed effects			Yes	Yes
County fixed effects×Pre			Yes	Yes
Observations	5120	5120	5120	5120
Municipalities	287	287	287	287
R-squared	0.317	0.356	0.394	0.401

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Appendix C Description of variables

Table C1
Definition of variables.

Variable name	Definition
Out	Outsourcing of preschools or primary schools as share of the total costs for that service. Percent. In the main specifications (Table 3) it refers to outsourcing to all providers. In Table 4 it refers to outsourcing to private companies.
Right	Dummy that equals 1 if the parties in the right bloc hold a majority of the seats in the municipal council.
Votes	Votes for the parties in the right bloc within the municipality in the county election. Percent.
Pre	Dummy that equals 1 for preschool and zero for primary schools.
Competitive	Competitive election. Dummy that equals 1 if the parties in the right bloc obtained 45 to 55% of the votes in the municipal election.
Employment	Employed as share of population. Percent.
Business employment	Private sector employment as a share of total employment. Percent.
Tax base	Taxable labor income. Unit: Thousands of Kronor per capita.
Municipal net profit/loss	Municipal net profit. Unit: Kronor per capita.
Grants	General and cost equalizing grants from the national government. Unit: Kronor per capita.
University education	Share of population with a university degree equivalent to three or more years of study. Percent.
Preschool children	Share of population that is six years old or younger. Percent.
School children	Share of population that is between seven and sixteen years old. Percent.
Old	Share of population that is 65 years or older. Percent.
Foreign citizens	Share of population who are not Swedish citizens. Percent.
On welfare	Share of population that receives public subsistence support. Percent.

Source: Statistics Sweden.

Table C2

Summary statistics.

Variable name	Obs.	Mean	Std. Dev.	Min	Max
Out: preschool	2582	7.1	7.6	0	78.6
Out: primary school	2582	7.1	4.7	0	33.0
Right	2583	0.32	0.46	0	1
Votes (county)	2583	43.9	11.9	10	85.9
Votes (municipal)	2574	43.5	11.2	9.9	85.4
Competitive	2592	0.29	0.45	0	1
Employment	2574	44.8	3.3	30.7	54.2
Business employment	2583	57.7	9.0	23.7	83.9
Tax base	2574	116	21	74	257
Municipal net profit/loss	2574	399	2273	− 12,986	32,358
Grants	2574	7123	4728	− 15,521	25,010
University education	2574	6.8	3.4	2.3	25.8
Preschool children	2583	7.3	1.1	4.7	11.8
School children	2583	13.6	1.3	7.3	17.7
Old	2574	19.2	3.6	7.7	30.0
Foreign citizens	2574	4.0	2.7	0.7	29.3
On welfare	2574	3.0	1.2	0	10.4

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