

Public Party Funding and Political Participation: Evidence from Swedish Municipalities

Author: Oskar Hultin Bäckersten

Supervisor: Andreas Bergh

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Department of Economics, Lund University

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Abstract

Across most contemporary democracies, different provisions of public funding for parties have been introduced in post-war times. Parties have come to rely heavily on this subsidy, yet, the effects of this change in party finance remains poorly understood. Sweden is no exception to this rule, where parties receive considerable amounts of funding from both state and local authorities. In this thesis, I utilize rich panel data on Swedish municipalities between 1998 and 2014 to study the effects of different levels of municipal party funding on two forms of political participation: Turnout in municipal elections, and membership in the Green Party. I apply time and unit fixed effects and a vector of control variables in regression models. Overall, estimated coefficients are negative for simpler specifications regarding turnout, and otherwise statistically inseparable from zero. This suggests that municipal party support does not live up to its express goal of strengthening local democracy, at least not in terms of increasing political participation, but might not necessarily be detrimental to it either.

Keywords: *Political finance; Political participation; Local democracy; Swedish municipalities*

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1. Introduction

In his seminal work, Schattschneider (1942, p. 1) asserted that “modern democracy is unthinkable save in terms of political parties”. This statement is no less true today than it was then, and unsurprisingly, political parties have been a central object of study for social scientists of many strains. Parties have remained of fundamental importance due to their function as the vehicle for the popular will to be mediated and resolved into government policy. Naturally, virtually all aspects of parties themselves, and how they relate to other societal entities have been studied extensively. The aim of this thesis is to further shed light on one aspect of parties that has not received considerable scholarly attention, due to both its rather recent introduction, but also due to the limited availability of comparable data – the public funding of parties, and in this case its eventual effect on political participation. I will utilize data for municipal public funding of parties in Sweden to examine the link between public funding of parties on the one hand, and electoral participation and party membership respectively on the other hand.

The history of assembling in groups to assert political power is arguably as indefinably old as society itself. The specific organizational form of the political party, however, is more particular in its historical emergence and is usually attributed to the British rise of Whigs and Tories in the late 17th century (Duverger, 2014). A brief history of modern parties in western democracies is conventionally put in terms of the evolution from elite parties, to mass parties, to catch-all parties, and subsequently in post-industrial times to cartel parties (e.g. Katz & Mair, 1995). This description inherently focuses on the relation between parties, the state and civil society, which makes it particularly useful as a theoretical backdrop for this study. The development of mass parties coincided with extensions of the political franchise, and conflicts of the concurrent time remain inscribed in these parties (e.g. Social Democratic movements as the political faction of trade unions, and their counterparts). From this, the catch-all party developed in post-war times, where the social cohesion of party bases were less pronounced – this type of parties served (or rather, serves) the role of “competing brokers between civil society and state” (Katz & Mair, 1995, p. 18). However, in recent times (from the 70’s), a new model of parties has emerged – the cartel party – which is more a part of the state than of civil society. To ascertain the validity of this narrative, and if so explain its emergence, the funding of parties of course becomes a central issue. It is undeniably true that public funding of parties has grown exponentially in recent history, from being virtually non-

existent in pre-war times, when nowadays more than 75 % of liberal democracies provide direct public funding to political parties (van Biezen & Kopecky, 2007, p. 245). To what extent parties rely on this public funding in comparison to other sources is notoriously hard to examine due to data limitations – since the design of public funding of parties is so diverse across countries, no comparative cross-country data for party funding exists. Thus, I will utilize the cross-municipal variation that exists in Sweden, where records of municipal funding are reported for the period 1998 and onwards (SKL, 2017a).

Municipal party support was introduced in Sweden in 1969, when municipalities gained the legal possibility to give economic support to parties, based on their representation in the elected municipal council (SFS 1969:596). After its introduction, all municipalities adopted municipal party funding. The municipal party support is quite extensive, and is about on par with the state's party funding in Sweden. The development over time over the period of interest for this study is shown in Figure 1, where it is clear that party support has increased (but not monotonically) over time, and that it tends to be somewhat higher in election years.

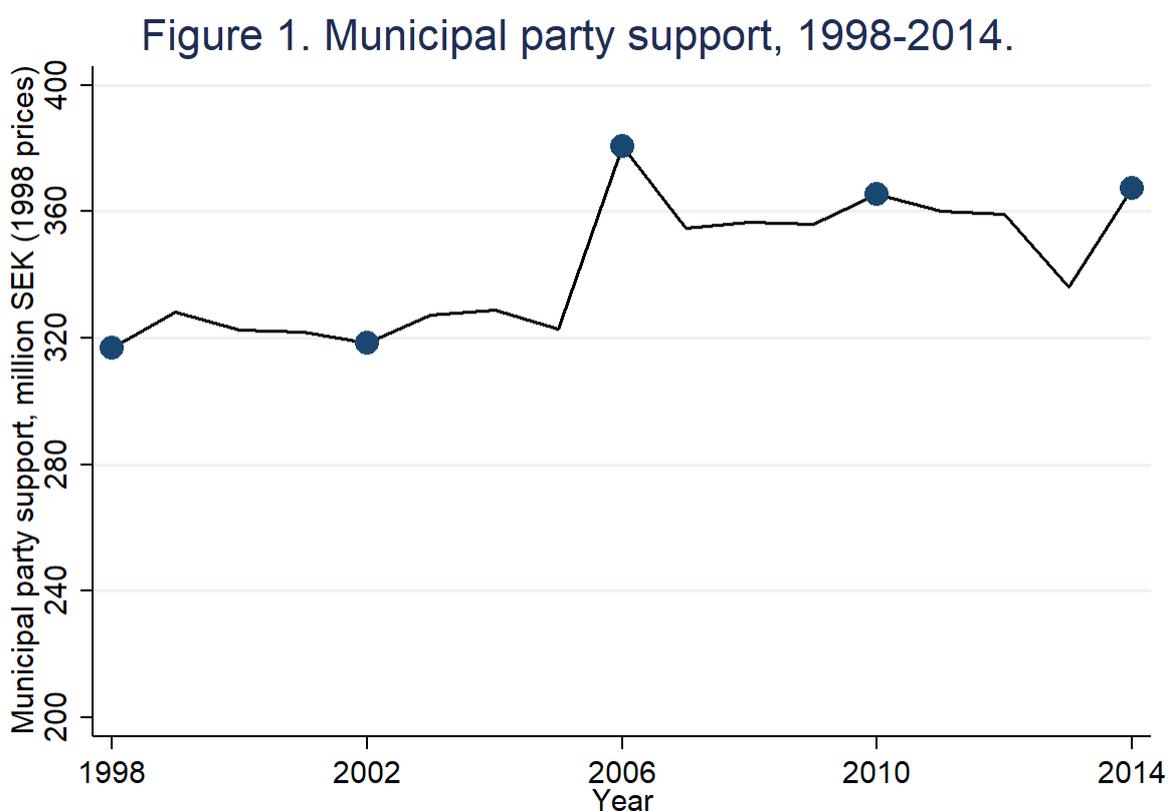


Figure 1. Municipal party support, 1998-2014, measured in million SEK in 1998 prices.

Sources: SKL 2017a, author's calculations.

1.1 Purpose

The purpose of this study is to investigate whether public funding of parties has an effect on political participation. Ways and means to answer this question are highly elusive, which is presumably the cause to why few studies have been produced on the topic. My attempt at this utilizes the richness of Swedish data, on municipal party support (SKL, 2017a) and turnout in municipal elections (SCB, 2017). In addition to that, I have reached out to the political parties in Sweden represented in the Riksdag for data on party membership on the municipal level. Only the Green Party (Miljöpartiet) have been kind enough to provide me with this. The temporal limits of this study are from 1998 when it comes to party funding, and from 2001 when it comes to party membership, to 2014, since this is currently when the last general election was held. The data on electoral turnout is naturally complete, and I use municipal elections as outcome, since this is where effects of local party funding is likely to be most pronounced if in any election. This choice probably has limited implications, since in Sweden, elections to all levels take place simultaneously, and thus most voters vote either on all or none of the levels one is eligible to vote on. When it comes to the data on party membership, I would ideally have had data for all Swedish parties. Having only one case, with a relatively small party, conclusions from these estimates have to be considered highly tentative when it comes to extrapolating to the question that I initially wanted to answer, regarding party membership in general. Thus, throughout this thesis, party membership is secondary in order as an outcome, and the principal results concerns the more robust data on electoral turnout in municipal elections. However, a scientific contribution remains when it comes to estimating the effects of public funding on Green Party membership, since this is decidedly unexplored terrain of considerable theoretical interest.

Is there reason to expect a relationship between public funding of political parties and political participation? I will naturally go into this question further later in this thesis, but a short answer is needed to motivate this study. Empirical evidence is, as stated, scarce, but theoretically, one could clearly make a case for public funding to affect different kinds of political participation in different ways. The motivation for having municipal public funding is to “strengthen the political parties in opinion formation and through that local democracy” (Prop. 1991/92:66). Since municipal public support accounted for more than 84 % of the revenue for local party organizations in 2007 (Konstitutionsutskottet, quoted in TT, 2009), it is safe to assume that this support not only provides means for communication, but for all party activities. Thus, if parties spend more on mobilization the more resources they have,

and mobilization efforts of parties have a positive effect on turnout, which I deem likely, higher party income should lead to higher turnout. When it comes to party membership on the other hand, there are probably theoretical reasons to expect that higher provisions of public funding to parties lead to lower membership, given that parties want to maximize their influence through acquiring votes. Thus, parties don't "need" members in any greater extent than they are useful for providing resources for getting votes – through members' own votes, their effect on their networks, and their financial contributions through membership fees. If parties previously relied more heavily on membership fees to finance their activities, the shift to financing their activities through public funding (provided, in a sense, by themselves) should lead to members becoming of lesser importance to them. Thus, it is likely that the evolution of public funding of parties (the Cartel Party, cf. Katz & Mair, 1995) has led to a decrease in party membership. What is harder to ascertain, however, is if shifts in levels from year to year in public funding affects the "need" for members for parties. Arguably, parties will put more effort into curbing members in years when public provision of funds is low.

All in all, the hypothesized relationships presented here rests on fragile assumptions at best. The strength of this study is also its weakness – the field of study of the effects of public funding of parties on political participation is limited, and not explored at all previously on the municipal level in Sweden. Hopefully, this thesis can provide highly tentative results that can be a first shard of insight into this particular area of research.

2. Theory, Previous Research & Empirics

In this part, I will provide brief accounts of previous research on the topic of public party finance, theory about parties and public party finance, and empirical details of the case at hand, to present the context of the analysis. First, I would like to make a short note on the level of analysis this thesis uses, and what units that are of interest, since the sources discussed in this chapter considers quite different units – from individuals, to parties, municipalities and countries. The variables central to the analysis in some regard reside on different levels. Political participation, i.e. turnout and membership, is an individual action, whereas party funding is decided upon by politicians and affects parties, both on the municipal and state level. However, the unit of analysis in this thesis is municipalities, where the individual variables are taken in the aggregate. Thus, the question with this explicit unit of analysis can be formulated as: Will the level of municipal provision of funding for municipal party organizations affect municipal political participation? It can be of importance to keep this in mind throughout this section.

2.1 Previous Research

The question whether the research field of political finance is satisfactorily explored is a contested one. According to Fisher & Eisenstadt (2004, p. 619), “the study of party finance is underdeveloped”, but on the other hand, Ohman (2011, p.1) states that “political finance is no longer an understudied aspect”. The reason for Ohman’s claim is not only the research that has been carried out in the meantime between the publishing of the two works, but also that he considers several studies that are not comparative in the sense that they use actual, comparable quantities. For the purpose of this thesis, the previous research that is of greater interest is the one considering comparative political finance in a stricter meaning, which arguably Fisher & Eisenstadt’s claim still holds true for. I will very briefly describe this research field (for an overview, see e.g. Scarrow, 2007), since it relates to my research question only marginally, due to the focus on the cross-national level. When it comes to the particular units studied in this thesis, one article has used the same indicators of municipal party support (in that case as an outcome), namely Svaleryd & Vlachos (2009), which I will discuss shortly as well.

The ambition to study political finance comparatively has been carried out mostly at the international level, which there are appropriate reasons for – with the introduction of far-

reaching public financing of parties across most democracies in post-war times, research is not only due but should also be fairly straightforward, given that these measurements have been introduced at different times in different countries (e.g. IDEA, 2014). However, this research project has been plagued by the lack of appropriate data for cross-country comparisons. One source that is promising, but too limited in time for purposes of studying the (eventual) contemporary development of cartelization of parties is Katz & Mair (1992), which is used by e.g. Pierre, Svåsand & Widfeldt (2000). Another source, that is more widely used contemporarily, is IDEA's (2012) Political Finance Database (available in earlier editions as well), used by e.g. Ohman (2011), Pinto-Duschinsky (2002), and researchers at IDEA (2014). However commendable the attempt to establish a database over comparative political finance is, IDEA's attempt is lacking for purposes of studies of effects from different levels of public party support. Since public provisions of funding for parties come in so many different forms, and in such different magnitude, the database provided by IDEA (2012) only uses binary indicators for whether or not particular types of provisions are in place. This renders the database useful for some studies, but not for ones trying to estimate marginal effects of public party funding, e.g. on political participation.

The turn towards party finance can naturally firstly be explained by the empirical pattern of the introduction of extensive public provisions of funding for parties, but also linked to the influential theoretical account of Katz & Mair (1995, 2009). The idea of the cartel party is all but evident from the name, and in short consists of parties becoming part of the state rather than of civil society – it is a process of “cartelization”, which means that parties “increasingly function like cartels, employing the resources of the state to limit political competition and ensure their own electoral success” (Katz & Mair, 2009, p. 753). This is more of a theoretical proposition than an empirical pattern, but it has interesting implications for the study at hand here. Municipal party support in Sweden is subject to very limited auditing, and parties in power can practically choose whatever level they want to put their own funding from the municipality on. This is what leads Svaleryd & Vlachos (2009) to study municipal party support as a form of political rent. The conceptualization of municipal party support as a political rent can be discussed, since governing parties cannot decide on any distribution rules that disproportionately favor themselves, at least formally, and additionally, “after all, it is possible that voters have a preference for public sponsoring of political parties” (p. 365). However, one point that reinforces Svaleryd & Vlachos case is that on municipal levels, scrutiny is comparatively low, and political rent extraction is thus much more plausible than

e.g. on the national level. Ultimately, the authors find evidence for higher rent extraction (i.e. municipal party support) in municipalities with lower levels of political competition and local media coverage. In this thesis, I will not conceptualize municipal party support as political rent extraction, but rather take it at face value, which is sensible when used as an independent variable – the eventual effect of this variable on political participation is the same, regardless of the “nature” of this support.

When it comes to linking political participation to public party support, little empirical work has been done due to the data limitations mentioned above. There are some notable exceptions to this rule, such as e.g. Pierre, Svåsand & Widfeldt (2000) regarding party membership. Their work does not provide any estimations of effects, however, but rather observes whether or not certain developments coincide in time. Thus, this relationship remains an open question empirically. Furthermore, the outcome in this thesis, the concept of political participation is somewhat elusive. One “loose” definition is provided by van Deth (2016), as “citizens’ activities affecting politics”. Regardless of exact definition, the principal form of participation in modern democracies for most citizens is electoral participation, which stands at the center of representative democracy itself. Therefore, it is a natural measurement in this thesis to use as an operationalization of political participation. In addition to this, I will use party membership as an outcome, since this is one of the most commonplace and significant forms of political participation, but also of distinctive theoretical interest in connection to public funding of parties.

2.2 Theoretical Foundation

Theoretically, parties are often described in the terms put forth by Downs (1957) in his seminal work *An Economic Theory of Political Action in a Democracy*, which is loosely based upon an observation by Hotelling (1929, pp. 54f), that parties tend to converge policy-wise in two-party systems. Downs provides a theoretical explanation for why this is the case, given certain assumptions (p. 143), but also builds a more general model of rational political action for parties and voters. Parts of this work is too abstract to use in the setting of a thesis like this, but one of the main takeaways that I think is important to emphasize is that parties can be seen as vote-maximizers, or in Down’s (p. 137) words: “political parties in a democracy formulate policy strictly as a means of gaining voters.” A noteworthy conclusion that follows from this is that the decision on what level to put municipal support upon is endogenous to the outcome of attaining votes. However, for the purposes of this section, the main theoretical assumption of interest is that parties are rational actors who try to maximize

their power, which in this setting means to maximize vote share. Thus, when parties have the capacity to decide on their own levels of public funding, they do so to maximize votes for themselves as well. What is the expected result from this? One consequence is that parties are likely to jointly “cartelize” to at least keep outside competition scarce, over-financing themselves and creating considerable hurdles for market entry, i.e. an insider-outsider situation (e.g. Lindbeck & Snower, 1984). Furthermore, going to somewhat less abstract terms than Downs, parties are presumably likely to not be too interested in curbing members, as they would be when members not only provided the benefits of being enthusiastic campaigners etc., but also provided a greater share of total party revenue in membership fees. In somewhat crude terms, parties need money to sustain their existence, and votes to gain power – when they gain the ability to solve the first part themselves; members are likely to become of lesser interest to parties.

Furthermore, there is a debate about whether or not governments *should* provide public funding for parties, and the arguments against this have been brought up in this section already. Public party support can be seen as evidence of “the successful co-optation of the state” by parties (Pierre, Svåsand & Widfeldt, 2000, p. 2), it can disrupt competition in the party system, and it can “virtually abolish the parties’ interests in sustaining or increasing their membership” (p.3), thus harming democracy through reducing political participation. However, there are theoretical reasons why states *should* provide public funding for parties, as well. Pierre, Svåsand & Widfeldt (2000, pp. 4ff) provides an account of three reasons why states should “subsidize” parties: First, parties should be compensated for the indispensable role they play in the democratic process (getting out the vote etc.), second, state support to parties make individual contributions of money less important, evening out political influence among the populace, and third, it ensures that parties have a stronger possibility to be independent from wealthy interest organizations of different kinds. Both the second and third argument have to do with political equality, and arguably have considerable merit. Ultimately, most of these arguments hinge upon assumptions about party and voter behavior that can be empirically tested.

Finally in this section, I will briefly discuss theoretical reasons to expect a relationship to exist between public funding and political participation, and the signage of this. The idea with municipal party support is to strengthen local democracy, and one consequence of this should ideally be that political participation, both in terms of turnout and (local) party membership, is increased (Prop. 1991/92:66). However, I expect that this might not be the case. Rather, as

described by Svaleryd & Vlachos (2009), municipal party funding could be conceptualized as the extent to which rents are extracted to parties, which are likely to crowd out the need for members for parties given that there is substitutability to some extent between different resources. It becomes clear that one has to differentiate between different forms of political participation when describing their theoretical linkage to public support to parties, since membership is, to reiterate, likely to be negatively affected by higher party support, while the expected effect on turnout is more ambiguous. Holding everything else constant, an increase in municipal party support would presumably lead to higher electoral turnout, assuming that parties' expenditure on getting out the vote (GOTV) efforts are monotonically increasing in party income, and that parties are at least so effective at curbing voters that their efforts yield marginally positive results. However, everything else is never constant in reality, and higher municipal support might very well have general equilibrium effects that are hard to predict – the subsequent change in membership structure that presumably follows might result in changes in voting patterns that are not only nigh impossible to theoretically predict, but also hard for parties to ascertain. Naturally, the relationships between these factors are highly complex and interdependent. There are many theoretical hurdles that persist, regarding e.g. simultaneity and spuriousities. In conclusion, some of these hurdles can arguably be overcome by methodological efforts, and some simply prevail barring experimental or quasi-experimental techniques, which is unfortunately not feasible in this setting. Nonetheless, the motivation for carrying out this study is that these hurdles shouldn't imply that the topic shouldn't be studied – just that results have to be interpreted very cautiously, since we know very little about both theoretical and empirical aspects of the relationship between public funding of parties and political participation.

2.3 Empirical Aspects

Before going into the methodological details, I will present the empirics that are the basis of this thesis specifically, namely municipal party support, electoral participation in municipal elections and membership in the Green Party, all of this for Sweden 1998-2014.

2.3.1 Municipal Party Support

In 1969, Sweden introduced the legal prerequisites for municipalities to give support to local parties, in addition to the state party support that was introduced in 1965 (SOU 2012:30, 314). Reviews of both legislation and practice occurred a few times during the 70's and 80's, and significant change of the system occurred in 1991 with the new municipal law (Kommunallagen SFS 1991:900, SOU 1991:80). From the outset, municipal party support

has been regulated so that it only can be distributed according to some objective measures such as vote share or share of representatives in the municipal council, and from 1991 the law reads: “the support must not be designed in such manner that it unduly favors or disfavors a certain party” (SFS 1991:900). Hagevi (2014) provides an exposé over Swedish party support both on the municipal and state level. For the purposes of this thesis, the minute details of how municipal party support has been regulated are not of particular interest. The empirical pattern of how municipal party support has developed over the time period of interest is shown in figure 1, and on average across municipalities in figure 4. Clear patterns are somewhat hard to discern, but it seems like municipal party support has increased since the electoral year 2006, and that party support tends to be somewhat higher during election years. This of course obscures a high degree of variation across municipalities, where rural municipalities in the north seem to have slightly higher levels of municipal party support, even though this pattern is hardly clear-cut.

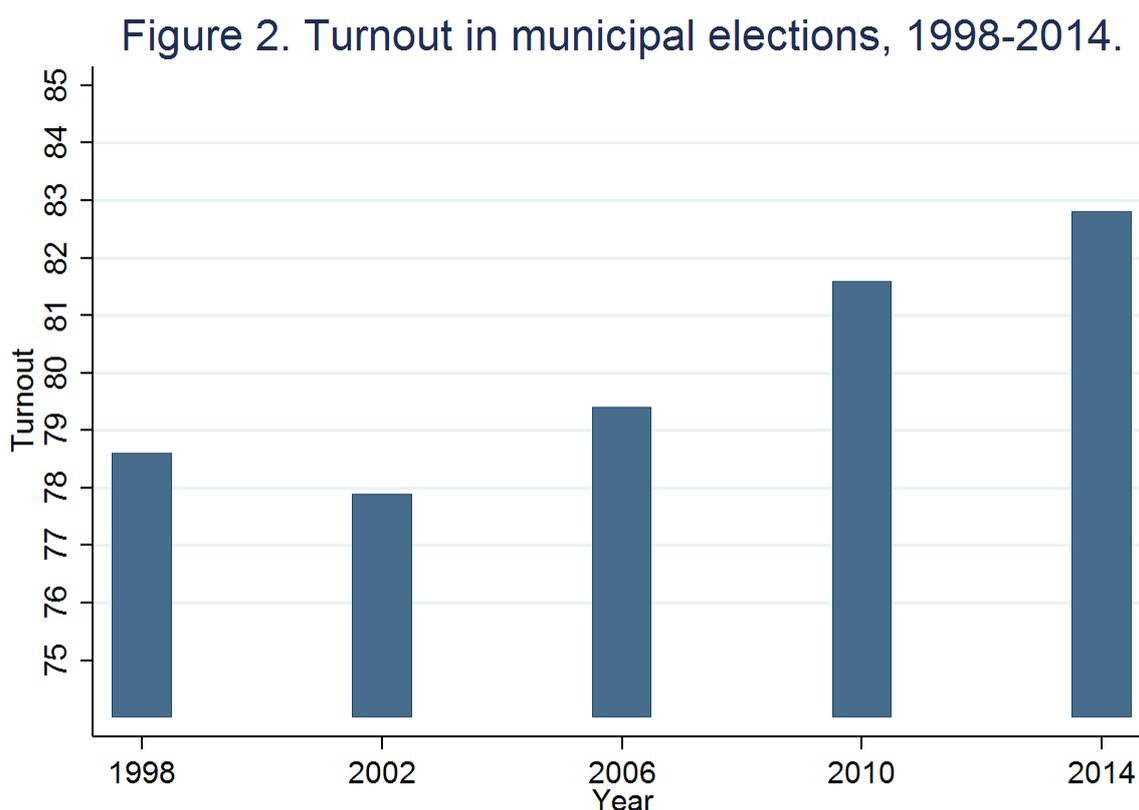


Figure 2. Turnout in municipal elections, 1998-2014. Source: SCB, 2017.

2.3.2 Turnout and Party Membership

Electoral turnout in Swedish general elections is among the very highest of democracies without compulsory voting laws (Öhrvall, 2012), and the pattern of turnout over time in municipal elections in the time period of interest is shown in figure 3, and across

municipalities on average this period in figure 5. Municipal elections occur on the same time, and through the same procedure, as elections to the parliament (Riksdagen) and the regional councils. Turnout in municipal elections are about 2-3 percentage points lower in municipal elections than in parliamentary elections, an effect that is partly due to a greater share of unconcerned individuals being eligible to vote in municipal elections. Looking at the pattern across municipalities in figure 5, more urban municipalities seem to have higher electoral turnout, generally, which is a known empirical pattern in Sweden usually considered to be the result of better socio-economic prerequisites (Öhrvall, 2012).

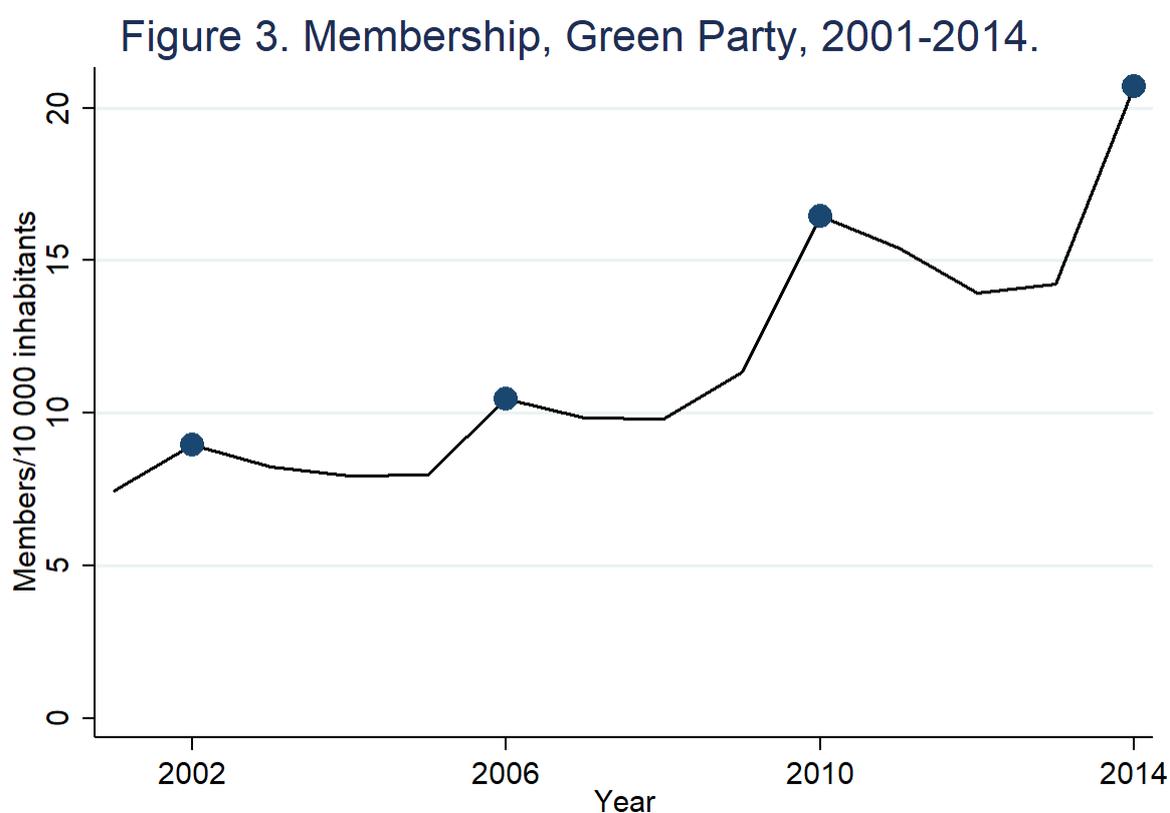


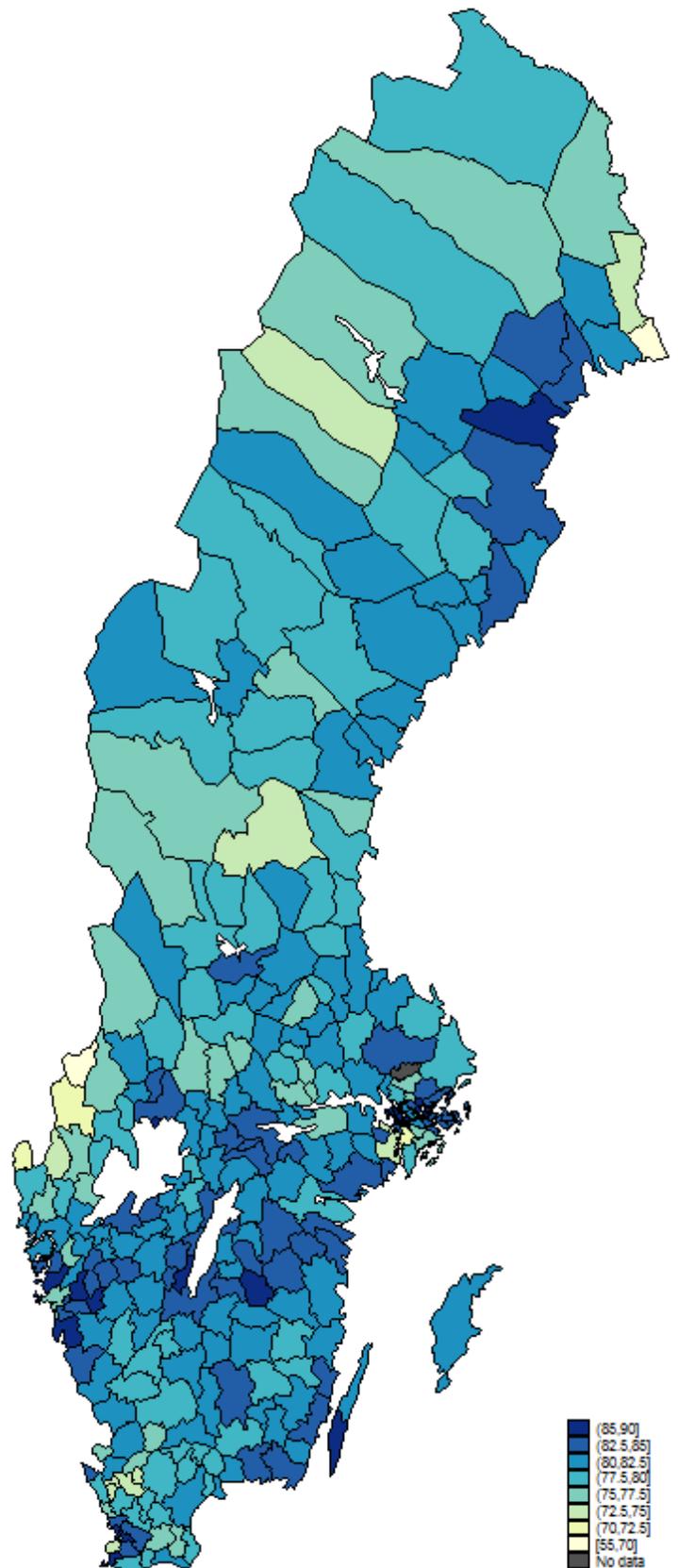
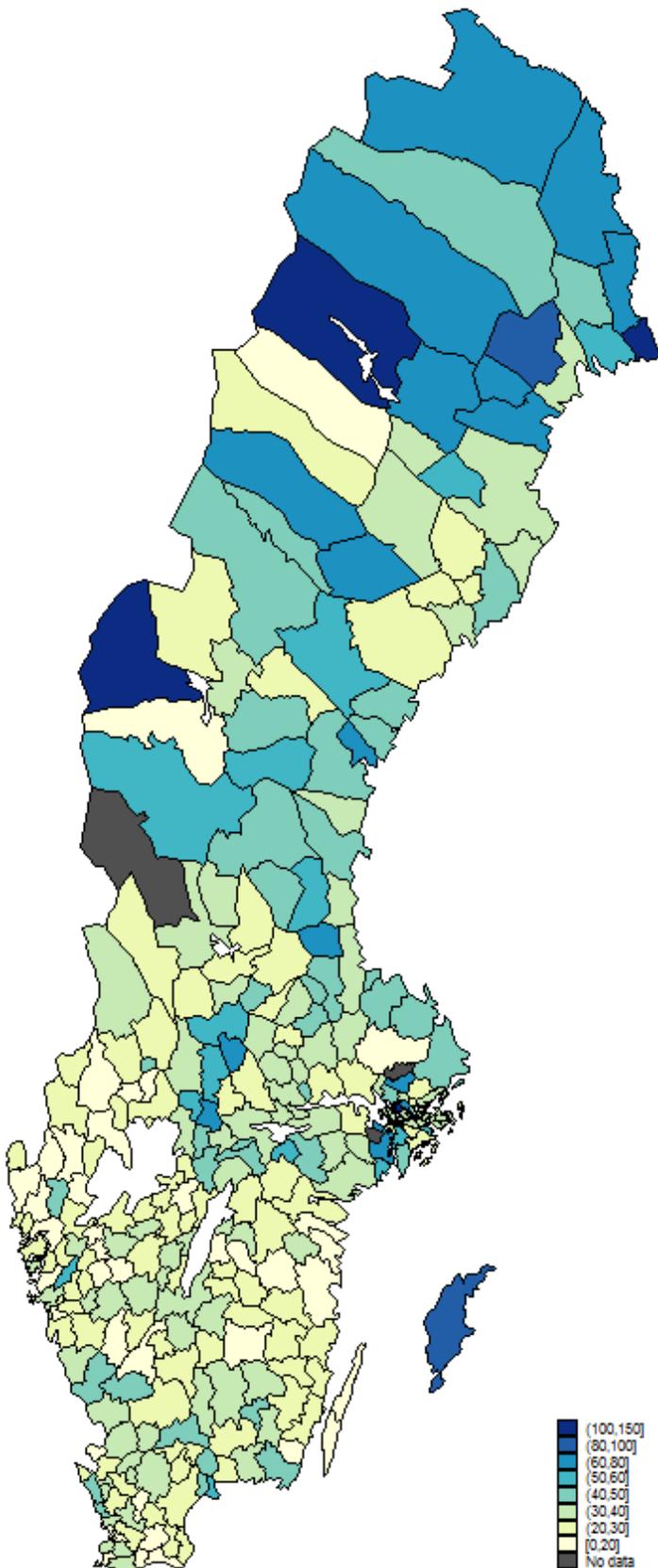
Figure 3. Membership in the Green Party, aggregated to the national level, 2001-2014.

Source: Miljöpartiet, 2017.

When it comes to membership in the Green Party, the development over the time period considered in this thesis is quite impressive – going from a membership base in 2001 of about 7 000 members to just above 20 000 members in 2014. One pattern that is evident from figure 3 is that the Green Party tends to have a significantly higher number of members in election years, which is an unsurprising result, considering that individuals both tend to be more politically active in an election year in general, but also that GOTV campaigns are likely to include offers of becoming a member in the party.

Figure 4. Municipal party funding.

Figure 5. Electoral participation.



Figures 4 & 5. Average municipal party support per inhabitant and year in 1998 prices, 1998-2014, and average electoral turnout in municipal elections, by municipality Sources: SKL, 2017a, SCB, 2017.

3. Method, Data & Models

3.1 Methodology¹

The main problem facing social scientists who want to study the effect of public funding of parties on political participation is the inherent endogeneity of the variables at hand. It is reasonable to expect that there are many aspects that determine both the level of public party support, and political participation, in a municipality. To take an example, one wider aspect that comes to mind is economic prerequisites for a municipality, where those with inhabitants with less economic-political resources will need higher public support for parties to sustain them economically, but still reaches lower levels of participation, thus introducing bias into a crude estimation of this relationship. Some of these aspects might be somewhat easy to nail down as observable variables, such as e.g. income and educational level of the population, and thus renders no problems in themselves. What is more problematic, on the other hand, is both getting the models right in the sense that one controls for the variables causing the bias, and only them, and all the *unobservable* characteristics that might bias the estimates. Nonetheless, there are probably good reasons to believe that there is a “true” relationship between municipal funding of parties and local political participation, as stated above – the hurdle that needs to be overcome is how to estimate it.

The ambition to draw causal conclusions is not an unusual one in economics, and the challenges to reaching that goal can be put in more general terms that remain valid for most studies using observational data, with the help of the Neyman-Rubin model of causal inference (Sekhon, 2008). With observational data, correlations are easily produced in terms of “when X happens, Y happens to a certain extent (in the sample)”, but the aim is to reach causal claims that X causes Y , which proves much harder due to the so-called *fundamental problem of causal inference*. The severity of this problem can be illustrated with an example from Rubin (1974, p. 689). An individual has a headache, and is faced with the decision whether or not to take an analgesic. The individual can take the pill and be relieved from the pain, the individual can take the pill and not be relieved from the pain, the individual can choose not to take the pill but still be relieved from the pain, or lastly the individual can elect to not take the pill, and still have a headache. Naturally, only one of these things happens, and

¹ In this section, I draw upon work done in my master’s thesis in political science (Hultin Bäckersten, 2016).

the intuitive conclusions that flow from them respectively are quite different. If the individual decides to take the analgesic, and the pain remains, the conclusion is presumably that the pill didn't work. However, if the individual had decided to not take the pill, the situation might very well have worsened, meaning that the pill would have had a positive effect on the experienced pain. The problem for the researcher is that we only observe *one* of these choices with associated outcomes for each individual, while causality is defined as the difference in outcomes for a single individual taking *different* lines of action (Rubin, 1974:689). The corollary to this thesis is that ideally, we would observe the same municipality both if it had decided on a higher level of party support, and on a lower level of party support – the causal effect of higher levels of party support is then simply the difference in outcomes. Since this is obviously not possible, strategies to attain causally interpretable estimates must be employed.

To formalize this problem slightly, I will use notation from Angrist & Pischke (2008, pp. 10ff), where the outcome for unit i is denoted Y_{Di} , and treatment status² D_i . What is observed for each individual unit is naturally the outcome when treated for the units assigned treatment, and the outcome when untreated for those not assigned treatment (see Table 1). The causal effect is defined as $Y_{1i} - Y_{0i}$, which is naturally never observed for any single unit. The most straightforward solution to this problem is to estimate the difference between observed outcomes, which gives the following expected result:

$$E[Y_{1i}|D_i = 1] - E[Y_{0i}|D_i = 0].$$

The problem with this estimation is easily seen by adding and subtracting the unobserved outcome for those in the “treatment group”, had they not been treated, and rearranging:

$$\underbrace{E[Y_{1i}|D_i = 1] - E[Y_{0i}|D_i = 1]}_{\text{Average treatment effect on the treated}} + \underbrace{E[Y_{0i}|D_i = 1] - E[Y_{0i}|D_i = 0]}_{\text{Selection bias}}$$

	Y_{0i}	Y_{1i}
$D_i = 0$	Actual	Counterfactual
$D_i = 1$	Counterfactual	Actual

Table 1. Potential outcomes.

² Treatment status is in this case considered to be binary, to facilitate a more straightforward presentation. It is however easily extended to cases where this is continuous, such as with municipal party funding.

In the second equation above, the true causal effect (on the treated) and the bias introduced by (potential) differences between groups treated and untreated can be separated. The goal is, rather obviously, to eliminate the latter term, to attain causal estimates from regressions.³ The most straightforward way of getting rid of the selection bias term is to randomize treatment status among individual units, since random assignment guarantees that treatment status D_i is independent of potential outcomes. Thus, the selection bias term disappears, and the equation above simplifies to $E[Y_{1i} - Y_{0i}]$ (Angrist & Pischke, 2008, p. 12). This, however impossible in the case of public funding of parties, is of significant theoretical interest to further understand other strategies to attain causal estimates. Ultimately, virtually all identification strategies to attain this relies on trying to come as close as possible to the ideal of randomization.

The question that remains unanswered is how causally interpretable estimates can be reached in the specific setting for this thesis. The variables of interest in this study are observed and cannot be manipulated by the researcher, and they also are likely to be endogenous to one another. In terms of the selection bias from the equation above, municipalities with higher party support would probably not have had outcomes in terms of political participation equal to those of municipalities with lower party support, had they not have had higher party support. The strategy that is applicable in this case is to try to control for all factors that cause this selection bias, through regular addition of controls in an OLS setting and the use of fixed effects. The methodological concept that is central to both these strategies is the *conditional independence assumption* (CIA), which provides arguments for causal interpretations of estimates from regressions with a specific set of control variables, given that the CIA holds. In more formal terms, with X_i denoting a set of characteristics, the CIA can be expressed as $Y_{Di} \perp\!\!\!\perp D_i | X_i$, which read out says that potential outcomes are independent of treatment status, conditional on characteristics X_i (Angrist & Pischke, 2008, pp. 44ff). This sounds familiar to the implications from random assignment of treatment status, which is just as it should be – given that one controls for the vector of characteristics X_i , treatment status can be considered *as if it was randomized*. Thus, the paramount task at hand is to control for the right characteristics to eliminate the selection bias. In this thesis, I will firstly use conventional control variables that presumably could be the ones (or good proxies for the

³ I will not go into how linear regressions capture the same elements that are described with the Rubin causal framework, but an interested reader can find a straightforward explanation in Angrist & Pischke, 2008, pp. 16ff.

ones) that determine selection into different levels of municipal party support, namely different characteristics of the municipalities and their inhabitants. This is based on what is usually referred to as a “selection-on-observables” assumption, discussed originally by Barnow, Cain & Goldberger (1961). Furthermore, I will apply both time and unit fixed effects, respectively and combined, since the confounding variables (i.e. the observables that selection occurs on) are highly elusive. Applying fixed effects is equivalent to “de-meaning” a variable, and takes away all time-invariant variation in the case of unit fixed effects, and all unit-invariant variation in the case of year fixed effects (Angrist & Pischke, 2008, pp. 165ff). The identifying assumption is once again a form of conditional independence assumption, just that the characteristics X_{it} (given that we now move to the world with panel data) need not be observed, but need to be time-invariant, unit-invariant or both. Whether the strategies presented here are sufficient to control for the selection process, on observed and unobserved variables, is open for debate, since it is a question that cannot be finally answered empirically. I am in no way certain that these strategies, with the particular variables used in detail, is enough to overcome the fundamental problem of causal inference. However, it is presumably true that these strategies get much closer to estimating a causal effect than a “crude” estimate, i.e. from the simple bivariate regression model.

3.2 Data

Before going to the final step before results are presented, namely model specifications, the data used in this thesis will be presented briefly in this section. In this thesis, I utilize data coming from three sources: Statistics Sweden (SCB), the Swedish Association of Local Authorities and Regions (SKL), and the Green Party (Miljöpartiet). As stated before, the main temporal limits of the analysis in this thesis comes from two variables, namely the independent variable of interest municipal party support, which is available from 1998- (SKL, 2017a), and one of the two dependent variables, party membership in the Green Party, which is available from 2001- (Miljöpartiet, 2017).

The reliability of the data used in this thesis is presumably generally very high. The data on some variables, such as turnout, municipality characteristics and most demographic characteristics are likely to be all but impeccable. The measurement of municipal party support, however, is more questionable, since harmonization across municipalities is not in any way guaranteed. For example, the reporting of free provision of rooms for offices, meetings, etc. by the municipality to political parties as a subsidy is likely to vary greatly across municipalities. I see no reason to expect that this would introduce any systematic bias

to the data (especially in models where municipality fixed effects are applied), but it is likely to incur more noise and thus less precise estimates. Lastly, the reliability of the data on membership in the Green Party is by design nigh impossible to ascertain. Ultimately, I simply have to trust that the records kept by the Green Party centrally are valid enough to use as at least an approximation of the “true” numbers, which I find no good reason to doubt.

Furthermore, it should be noted that I remove a few outliers that might distort estimations. Namely, Båstad held a reelection to their municipal council in 2014, severely lowering their electoral participation for this particular year, resulting in this observation affecting especially models with fixed effects disproportionately. The same goes for public party funding, for Åre municipality, which has all three values in the sample that are greater than 500 SEK per year per inhabitant (more than 40 standard deviations over the mean!), thus distorting the picture severely. To conclude this section, I present summary statistics of all variables used in this study (with the mentioned outliers, but naturally without municipality and year dummies) in table 2, together with measurements and sources to make results more readily interpretable for the reader.

Variable	Mean	Min	Max	SD	N	Years	Measurement	Source
Turnout, municipal elections	80.24	57.8	92	3.86	1447	1998-	%*100 of eligible	SCB, 2017
Members in the Green Party	11.27	0	87.26	7.18	4018	2001-	Members per 10,000 inhabitants	Miljöpartiet, 2017
Municipal party funding, same year	37.69	0	842.88	25.73	4922	1998-	SEK/inhabitant/year, 1998 prices	SKL, 2017a
Municipal party funding, full term	148.19	22.61	1549.73	84.86	1157	2002-	SEK/inhabitant/term, 1998 prices	SKL, 2017a
Post-High School education	27.42	12.6	72.7	9.26	4346	2000-	Share of inhabitants (*100)	SKL, 2017a
Pre-High School education	18.72	3.3	37.6	5.31	4346	2000-	Share of inhabitants (*100)	SKL, 2017a
Foreign born	10.56	2.01	41.59	5.79	4922	1998-	Share of inhabitants (*100)	SCB, 2017
Working age (15-74)	72.91	67.78	78.37	1.66	4922	1998-	Share of inhabitants (*100)	SCB, 2017
Working	45.67	30.72	54.22	3.18	4922	1998-	Share of inhabitants (*100)	SCB, 2017
Women	49.79	46.42	52.43	0.78	4922	1998-	Share of inhabitants (*100)	SCB, 2017
Left-wing governing coalition	0.44	0	1	0.5	1446	1998-	1 if left-wing government, 0 otherwise	SKL, 2017b
Right-wing governing coalition	0.39	0	1	0.49	1446	1998-	1 if right-wing government, 0 otherwise	SKL, 2017b
Mixed governing coalition	0.17	0	1	0.38	1446	1998-	1 if mixed government, 0 otherwise	SKL, 2017b
Municipality type	5.69	1	10	2.48	4922	1998-	10 groups (see source)	SKL, 2011
Taxpaying power	121629.2	74094	267955.8	21231.07	4922	1998-	Taxable income per inhabitant, 1998 prices	SKL, 2017a

Table 2. Summary statistics of the variables used in estimations. For sources, see table.

3.3 Models

In this thesis, I will as previously stated estimate a number of regression equations on two separate outcomes, namely turnout in municipal elections and membership in the Green Party. For these two outcomes, I will estimate the same set of eight equations, and thus I will present the models with a generic outcome term denoted y_{it} .

The model in its full form, where all estimated equations are nested, can be expressed with the following equation, in a quite simplified form:

$$y_{it} = \alpha + \beta x_{it} + \boldsymbol{\gamma}_i + \boldsymbol{\delta}_t + \boldsymbol{\varphi}_{it} + \varepsilon_{it}$$

Explanations for what these terms signify are due: The left-hand side is as stated the outcome, measured as percentage points for turnout and members per 10 000 inhabitants for party membership. The right-hand side consists of the intercept to be estimated, α , the coefficient to be estimated, β , the variable of interest x_{it} , which is municipal party support for either the same year as an election or full term (4 years) preceding an election, measured as kr per inhabitant per year or term in 1998 prices, $\boldsymbol{\gamma}_i$ is a vector of dummies for each municipality (except one) and associated coefficients, $\boldsymbol{\delta}_t$ is a vector of dummies for each election year (except one) and associated coefficients, $\boldsymbol{\varphi}_{it}$ is a vector of control variables concerning both municipality characteristics and demography characteristics (see Table 2 for details and measurements) and ε_{it} is the usual idiosyncratic error term.

I will estimate eight different regression models for both outcomes that are nested in the equation above. In the first model, all parameters except α and β are constrained to be equal to zero – in other words, this is the simple bivariate regression model. In the second model, municipality fixed effects are applied, which in equation-terms means that $\boldsymbol{\gamma}_i$ is no longer constrained to zero. In the third model, time fixed effects are applied, meaning that α , β and $\boldsymbol{\delta}_t$ are estimated. In the fourth model, time *and* unit fixed effects are applied. In the fifth model, demographic control variables (shares of inhabitants that are foreign born, women, working, of working age, have high school education only, and have a university degree respectively) are added to the model in addition to the variable of interest, public funding. In the sixth model, municipality characteristics controls (taxpaying power per capita, municipality type, and governing coalition) are applied. In the seventh model, both demographic and municipality characteristics control variables are applied. Finally, in the

eighth model, all control variables are applied in addition to time fixed effects, constraining only the vector of municipality dummies⁴ γ_i . In the results section, estimates of the intercept and the coefficient in focus here (α and β) are the only ones that will be reported to facilitate reading.

The independent variable in all of these models is municipal party funding, measured in krona per inhabitant in 1998 prices, but all models will be estimated with this measured as support in the same year or for the full term preceding an election. It is naturally crucial to get the temporal aspect of this variable correct, and the reason why I choose to use both of these as explanatory variables separately is mostly as a robustness check. One could in addition consider estimating this variable with a lag, since party support in the previous time period might affect outcomes in terms of political participation in the current period. However, I think there are convincing reasons not to do this, especially given that in all but a few models, the only years of interest are election years. When it comes to the models where non-election years are used, the outcome of interest is party membership – an outcome that is likely to be affected to a much greater extent in the concurrent year, in comparison to the preceding year. Furthermore, given what we know about election campaigns, get out the vote-campaigns rarely if ever take place in the year preceding an election year in Sweden, which of course to a high extent is a particular feature of this particular political system (where general elections always occur in September).

The interpretations of the models to be estimated in this thesis are somewhat different over different specifications. As stated before, crude estimates from model 1 are highly likely to be biased, i.e. the error term will be correlated with the variable of interest. Nonetheless, these estimates say something interesting about the relationship studied, even if not in a causal manner – it shows how the “raw” relationship between e.g. municipal party support and electoral turnout looks. Further, models where fixed effects are applied are somewhat harder to interpret. In somewhat crude terms, estimates from model 4 can be interpreted as how deviations from the mean level in respective municipalities and years of municipal funding affects (or is related to) deviations from the mean level in respective municipalities and years of e.g. Green Party membership. Interpretations of models with control variables are more straightforward to interpret, where the relationship between the outcome and the variable of

⁴ Notably, including municipality fixed effects in any model with municipality type controls is not possible due to collinearity.

interest is estimated, holding values of the control variables constant. These latter estimates are, as discussed in the methodology section, attempts at reaching causal estimates of the effects of interest. To put it in other terms, with these models I attempt to achieve *ceteris paribus* – other (relevant) things equal – which, if valid, gives unbiased estimates. The extent of achievement of this is not as clear-cut as in experimental or quasi-experimental settings, and there can naturally be an argument made against causal interpretation of these estimates. However, for the purposes of this thesis, these estimations remain highly interesting regardless – in this sample, they show the relationship between outcomes and variables of interest, holding the aspects controlled for constant.

4. Results

The main results for this thesis are shown in tables 3-6. Before going into interpretation of these results, I will show graphical representations of two particular relationships, which I think are highly illustrative.

4.1 Graphical Representation

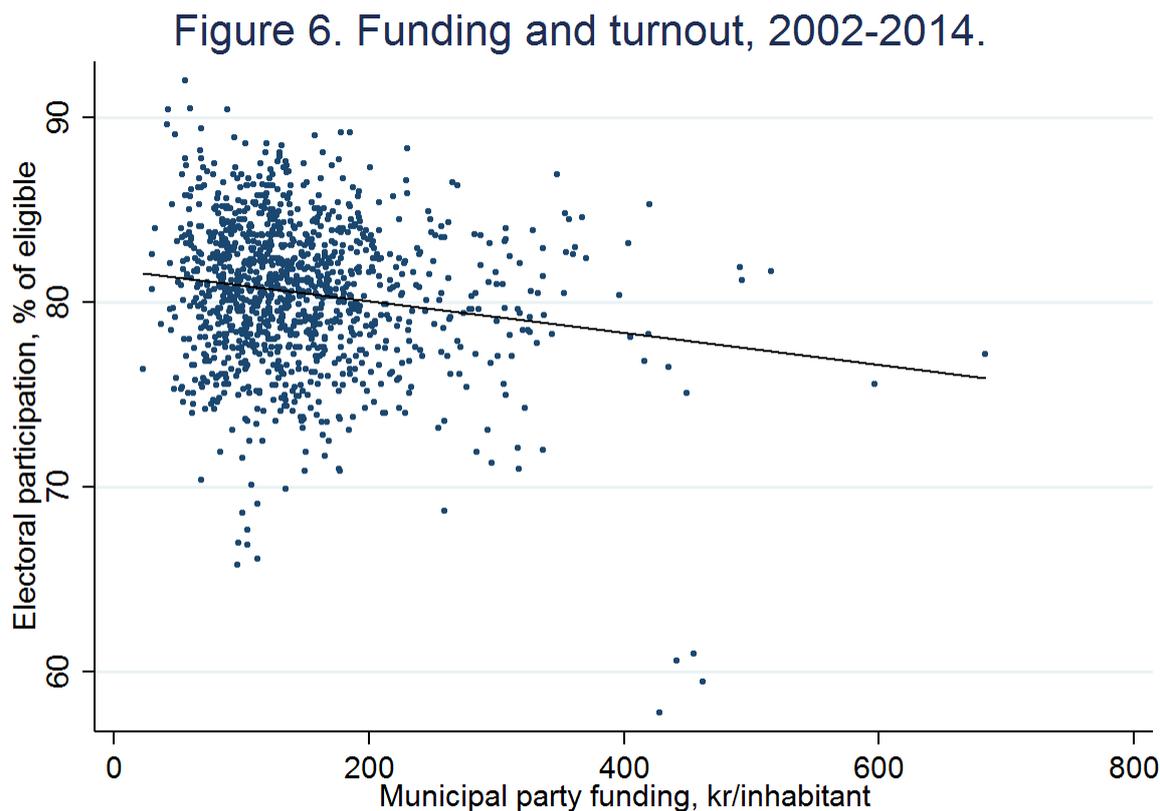


Figure 6. The relationship between municipal party support and turnout, 2002-2014.

Firstly, figure 6 shows the relationship between municipal party support for the whole preceding term (4 years) and electoral participation in municipal elections, for the period of 2002-2014. What can be seen here is a quite evident negative relationship, where the line fitted to the scatterplot is equivalent to the coefficient in table 3, model 1. This is the “crude” relationship between public funding of parties in the four years preceding an election and turnout in that municipal election, and it is clearly so that higher levels of municipal party funding are associated with lower levels of turnout. The argument is similar if one considers only support in the same year as explanatory variable, as can be seen in table 4, model 1, where the estimate is virtually equivalent (at roughly 4 times the magnitude).

Turning to figure 7, this shows the relationship between municipal party support for the whole preceding term and electoral participation in municipal elections when both these variables have been “de-meant” with respect to both municipality and year indicators⁵, i.e. both time and unit fixed effects have been applied. The line fitted to the scatterplot corresponds to the estimate from table 3, model 4, showing a marginally negative coefficient, which is far from statistically different from zero, which can also be seen from the line in figure 7 being virtually flat. Interpretation of this estimate, and estimates from other models, follows in the next section.

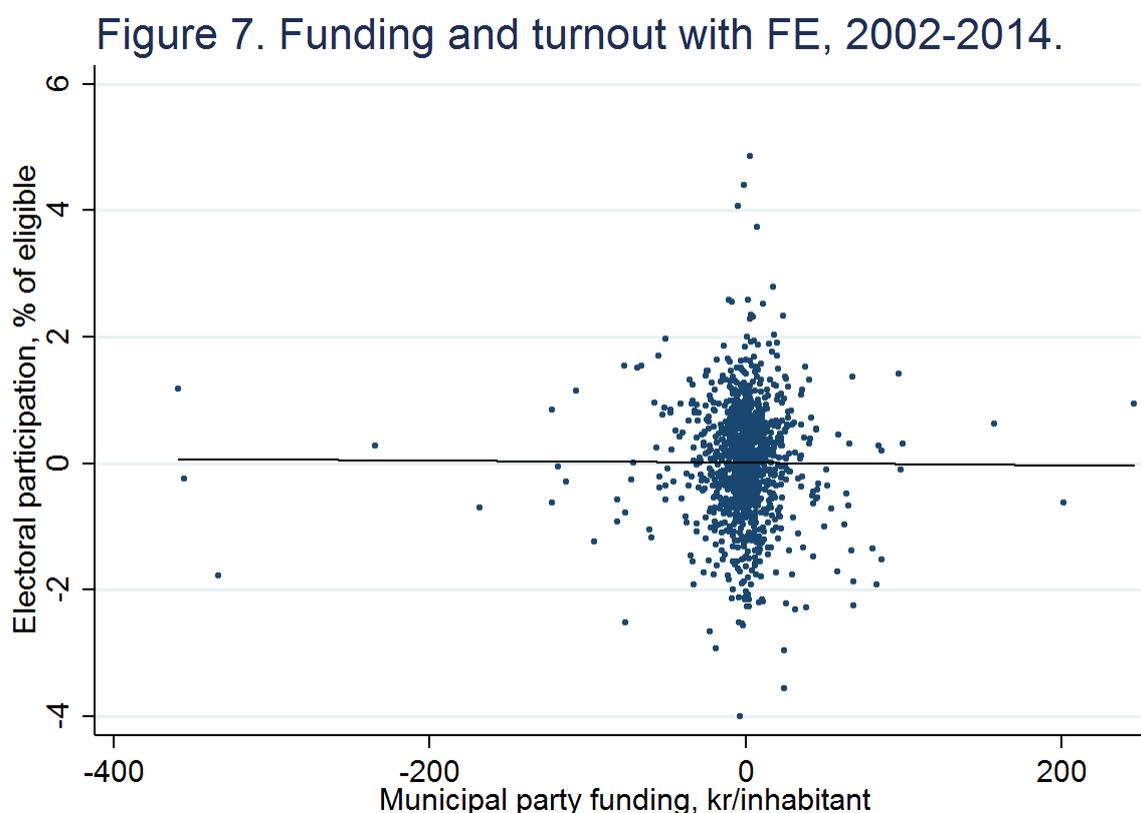


Figure 7. The relationship between municipal party support and turnout, with time and unit fixed effects applied.

⁵ Technically, I simply regressed these variables separately on vectors of municipality and time dummies and saved the residuals.

Table 3. Estimates of the effect of full-term support on electoral turnout.

Models:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Full-term public funding	-0.00854** (0.00412)	0.00930* (0.00550)	-0.00971** (0.00407)	-0.000783 (0.00158)	-0.00630*** (0.00217)	-0.00837** (0.00341)	-0.00311 (0.00190)	0.00104 (0.00164)
Constant	81.76*** (0.595)	76.17*** (0.756)	79.39*** (0.574)	75.06*** (0.220)	115.6*** (13.40)	60.10*** (1.499)	111.1*** (11.46)	83.93*** (11.18)
Mun. controls	NO	NO	NO	NO	NO	YES	YES	YES
Demographic controls	NO	NO	NO	NO	YES	NO	YES	YES
Mun. FE	NO	YES	NO	YES	NO	NO	NO	NO
Year FE	NO	NO	YES	YES	NO	NO	NO	YES
Observations	1,155	1,155	1,155	1,155	1,155	1,155	1,155	1,155
R-squared	0.026	0.705	0.287	0.956	0.537	0.485	0.689	0.771

Table 3. Estimates from regressions using municipal funding during the preceding term as explanatory variable, 2002-2014. The dependent variable for all models is turnout in municipal elections, measured in percentage points (% * 100). Estimates from controls are not reported to facilitate readability. Standard errors in parentheses are heteroskedasticity-robust and clustered on the municipality level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4. Estimates of the effect of same-year support on electoral turnout.

Models:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Same-year public funding	-0.0347** (0.0152)	0.0114 (0.00844)	-0.0369** (0.0147)	0.00275 (0.00382)	-0.0228*** (0.00759)	-0.0310** (0.0123)	-0.0106 (0.00649)	0.00455 (0.00548)
Constant	81.55*** (0.556)	76.68*** (0.281)	80.60*** (0.543)	75.99*** (0.147)	115.0*** (13.31)	65.96*** (0.816)	110.7*** (11.44)	83.63*** (11.19)
Mun. controls	NO	NO	NO	NO	NO	YES	YES	YES
Demographic controls	NO	NO	NO	NO	YES	NO	YES	YES
Mun. FE	NO	YES	NO	YES	NO	NO	NO	NO
Year FE	NO	NO	YES	YES	NO	NO	NO	YES
Observations	1,444	1,444	1,444	1,444	1,157	1,443	1,157	1,157
R-squared	0.034	0.709	0.275	0.943	0.537	0.398	0.689	0.771

Table 4. Estimates from regressions using municipal funding during the same year as explanatory variable, 1998-2014. The dependent variable for all models is turnout in municipal elections, measured in percentage points (% * 100). Estimates from controls are not reported to facilitate readability. Standard errors in parentheses are heteroskedasticity-robust and clustered on the municipality level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 5. Estimates of the effect of full-term support on membership in the Green Party.

Models:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Full-term public funding	-0.00398 (0.00552)	0.00620 (0.0153)	-0.00581 (0.00555)	-0.00952 (0.00761)	-0.00757 (0.00538)	-0.00511 (0.00530)	-0.00598 (0.00507)	0.00277 (0.00487)
Constant	13.88*** (0.840)	10.65*** (2.107)	10.90*** (0.852)	9.529*** (1.063)	56.06 (34.33)	0.779 (3.200)	30.44 (36.62)	-35.84 (39.18)
Mun. controls	NO	NO	NO	NO	NO	YES	YES	YES
Demographic controls	NO	NO	NO	NO	YES	NO	YES	YES
Mun. FE	NO	YES	NO	YES	NO	NO	NO	NO
Year FE	NO	NO	YES	YES	NO	NO	NO	YES
Observations	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145
R-squared	0.001	0.617	0.143	0.760	0.095	0.120	0.162	0.255

Table 5. Estimates from regressions using municipal funding during the preceding term as explanatory variable, 2001-2014. The dependent variable for all models is membership in the Green Party in an election year, measured as members per 10 000 inhabitants. Estimates from controls are not reported to facilitate readability. Standard errors in parentheses are heteroskedasticity-robust and clustered on the municipality level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 6. Estimates of the effect of same-year support on membership in the Green Party.

Models:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Same-year public funding	-0.0183 (0.0165)	-0.00168 (0.0209)	-0.0214 (0.0165)	-0.0164 (0.0146)	-0.0211 (0.0156)	-0.0174 (0.0180)	-0.0194 (0.0171)	0.0126 (0.0165)
Constant	11.95*** (0.677)	10.47*** (0.742)	9.707*** (0.704)	8.616*** (0.540)	38.42 (35.04)	1.021 (3.198)	30.68 (36.56)	-35.78 (39.20)
Mun. controls	NO	NO	NO	NO	NO	YES	YES	YES
Demographic controls	NO	NO	NO	NO	YES	NO	YES	YES
Mun. FE	NO	YES	NO	YES	NO	NO	NO	NO
Year FE	NO	NO	YES	YES	NO	NO	NO	YES
Observations	4,015	4,015	4,015	4,015	4,015	1,147	1,147	1,147
R-squared	0.003	0.627	0.129	0.756	0.062	0.120	0.161	0.254

Table 6. Estimates from regressions using municipal funding during the same year as explanatory variable, 2001-2014. The dependent variable for all models is membership in the Green Party, measured as members per 10,000 inhabitants. Estimates from controls are not reported to facilitate readability. Standard errors are heteroskedasticity-robust and clustered on the municipal level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

4.2 Interpretation

I will turn first to the principal results of this study, concerning electoral turnout in municipal elections as the outcome variable, i.e. the results in tables 3 and 4. Firstly, as described above, crude estimates from model 1 in both tables are negative, statistically significant and practically equal, considering that the measurement of the independent variable in table 3 is simply four separate years of funding added together. This means that there is a negative association between municipal party funding and turnout in municipal elections at face value – without specifying reasons for it, municipalities with higher party support have lower turnout in their elections: To make sense of this, an increase in same-year funding of about one standard deviation (25 kr/inhabitant) is associated with a reduction in turnout of about 0.9 percentage points, which is not an economically insignificant number in this context. Turning to models with municipality fixed effects, they show estimates that are marginally positive or zero, both with and without time fixed effects added (models 2 and 4 respectively). An interesting result is the statistical significance (at the 10 % level) of the positive estimate in table 3, model 2, which could be interpreted as higher full-term support than on average in a given municipality being associated with higher electoral turnout than on average in that municipality. However, one should probably not emphasize this result too much, since it is only marginally statistically significant and not robust to slight model changes. Adding time fixed effects to the bivariate model, as in model 3, does not change conclusions significantly. Controlling for unit-invariant effects makes sense in this setting, since it is likely that single-election, national, trends (such as lower turnout in the 2002 election) will affect most municipalities more or less uniformly, incurring imprecision but not necessarily bias if not controlled for. Turning to models 5-8, where control variables are introduced, it is clear that the further one gets from the bivariate model, the closer estimates get to zero – introducing only demographic or municipal type controls results in statistically significant negative estimates across both measurements of party support, while both models with the full set of control variables renders estimates that are not statistically separable from zero.

When it comes to the results regarding membership in the Green Party, presented in tables 5 and 6, the first striking pattern is that no single coefficient is statistically significant. One reason why this might be the case is that this study could simply be statistically underpowered when it comes to discerning this relationship – membership in the Green Party might be responsive to changes in municipal support, but not enough so to be noticed in a sample of this size. On the other hand, it could clearly be the case that membership in the

Green Party in fact isn't affected by municipal party funding. However, if one counts signs – keeping in mind that this doesn't say anything about the results *statistically* – 13 out of 16 estimates are negative. Again, results from model 1 in both tables are more or less equivalent, and interpreting the relationship in table 6, model 1, an increase in municipal support to parties with about one standard deviation is associated with a decrease in Green Party members per 10 000 inhabitants by about 0.5. While this effect is clearly marginal (and not statistically significant), it could be seen as a *relatively* substantial one, given that the mean value of Green Party membership is 11.27 members per 10 000 inhabitants.

4.3 Conclusion

To sum up the results of this thesis, the relationship between municipal party support and political participation seems to be negative or non-existent. In this context, however, a “non-result” is also a result – considering e.g. that the models with both time and municipal fixed effects rendered estimates close to zero for turnout, a conclusion is that higher municipal support to parties than on average with respect to a given municipality and a given year, is not associated with either higher or lower turnout than on average with respect to a given municipality and a given year in this sample. When it comes to the results using turnout as dependent variable, it seems that there is a real negative relationship when it comes to simpler model specifications. This relationship is presumably not interpretable as a causal one, however, since it disappears conditional on characteristics that could be expected to determine selection, biasing estimates from underspecified models. Regarding the results concerning membership in the Green Party, they are as stated before secondary to the purpose of this thesis, and have to be seen as highly tentative when it comes to external validity especially. However, in this sample, it is clear that the relationship between municipal party support and membership in the Green Party is again best described as non-positive, but in this case, in statistical terms, not distinguishable from zero.

5. Concluding Remarks

The development of public provisions of funding for political parties is arguably one of those with most far-reaching implications for political systems that have occurred in recent times. In virtually all European democracies, public party support has been introduced in one form or another, and Sweden is no exception to this rule (SOU, 2012:30). Rather, party funding comes in great sums both at the national level from 1965 and at the municipal level from 1969. Still, many aspects of public party support remain understudied, especially with a comparative approach, since the cross-country data is all but incommensurable, and cross-municipal studies remain very few, even if data is remarkably more complete (cf. Svaleryd & Vlachos, 2009). Thus, I have tried to make a contribution on the margin to this area of research by studying the effect of municipal party support on two different aspects of political participation in Sweden – turnout in municipal elections, and membership in the Green Party. While results for the second outcome in particular have to be seen as highly tentative, a pattern emerges for both measures of political participation, in particular regarding electoral turnout – the provision of public funds does at least not have a positive effect on local democracy, as is intended, measured in these two forms of political participation. However, concluding that municipal party support has a negative *causal* effect on turnout in municipal elections is presumably to go one bridge too far. Rather, when one controls for aspects that are likely to determine selection into different levels of public funding of municipal party support *and* electoral turnout, this relationship is statistically inseparable from zero.

I will end this thesis, as is so often done, with a call for more research on the topic studied. Political participation, which the outcomes studied here are broadly conceptualized as, is only one area of many where one could expect that increased public funding of parties has far-reaching implications. The utilization of the richness of data on Swedish municipalities is one rather straightforward way of studying political finance comparatively, within a certain political system. However, one venue of further research that suggests itself is to study political finance comparatively, across countries, in a more thorough way. What is most strikingly lacking for that to be possible is the absence of good, reliable comparative data, which requires a considerable effort to collect. Given that economists and political scientists have studied topics relating to political power in democracies to such great extent; it simply seems like a waste of knowledge not to incorporate this aspect further into new research projects.

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