The Political (Over)Representation of Public Sector Employees*

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Abstract

A long-standing debate in political science relates to the optimal stringency of eligibility constraints imposed on public sector employees' participation in politics. We contribute to this debate by arguing that public employees may have a strong motive as *both* consumers *and* producers of public services to run for political office and influence public policy. We analyse theoretically and empirically whether and how this 'double motive' leads to the political overrepresentation of public sector employees. Using population-wide individual-level register data covering Norwegian local elections between 2007 and 2019, we show that public sector employees are strongly overrepresented on election lists. As they also have a higher probability of election (conditional on running), they are even better represented in elected bodies. Looking at underlying mechanisms, we provide evidence consistent with public sector employees' self-selection into standing for elected office (at higher-ranked ballot positions). This raises questions about the active representation of public employees' policy self-interests and the optimal institutional arrangements regarding their eligibility for political office.

Key words: Descriptive representation, civil servant, bureaucracy, eligibility, institutions, Norway.

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1. Introduction

Should public sector employees be allowed to stand for election and enter elected assemblies? This question lies at the heart of a long-standing debate in political science. Fundamental disagreement on this critical issue is reflected in widely diverging institutional arrangements regarding public sector employees' eligibility for political office in countries around the world. While some countries – including the US and UK – impose very strict statutory limitations, other countries – including Norway, the Netherlands and Spain – have much more permissive legal frameworks (Miller 2010; Braendle & Stutzer 2016). One common argument in favour of strict incompatibility regimes is the traditional, Weberian conception that the civil service should be independent of party politics. Allowing public sector employees to stand for election and enter elected assemblies might distort bureaucratic incentives away from this normative ideal, weaken the independence of the bureaucracy, and impede principles of meritocratic recruitment and promotion (Dahlström & Lapuente 2018; Colonnelli et al. 2020; Fiva et al. 2020). The underlying concern is that passive representation of public sector employees in elected bodies is associated with active representation of their interests (such as a larger public sector and higher remuneration). When public sector employees cater to their personal and/or professional interests while holding elected office (Blais et al. 1990; Garand et al. 1991; Rattsø & Sørensen 2016), this may sway policies away from the interests of the broader public (Murdoch et al. 2018). Consistent with this concern, Hyytinen et al. (2018) show, using a regression discontinuity design, that higher public sector representation in Finnish local councils causes an increase in local public expenditures. Similar results are obtained by Braendle and Stutzer (2016) at the national level using an instrumental variables approach.

In this article, we explore an alternative rationale for (or against) strict incompatibility regimes, which focuses on public sector employees' incentives to stand for election – and their subsequent level of representation in politics – under permissive legal frameworks. Research on gender and ethnic representation among politicians and street-level bureaucrats has shown that a social group's *level* of representation matters in terms of "the substantive or policy effects that may be produced by subsequent active representation" (Lim 2006: 193; Thomas 1991; Atkins & Wilkins 2013; Meier 2019; see, however, Geys & Sørensen 2020). Consequently, any active representation by public sector employees of their own policy interests may become increasingly prominent (and problematic?) when, unconstrained by legislative restrictions, they take up a larger share on election lists and among elected representatives (Braendle & Stutzer 2016). Such a relation between passive and active representation would have immediate

implications for the stringency of eligibility constraints. If public sector employees remain politically under-represented when restrictions are low, this would obviate any need legally to limit their entry into politics. If instead they tend to be (heavily) over-represented, statutory limitations could be taken into consideration. Clearly, the optimal design of such (in)compatibility regimes would thereby need to reflect whether any over-representation arises due to parties'/voters' selection strategies or individuals' motives and self-selection.

While a large scholarship has studied the passive representativeness of elected assemblies, this literature mostly concentrates on traits such as gender (Paxton et al. 2007; Baskaran & Hessami 2018), ethnicity (Hughes 2011; Sobolewska 2013), education (Dal Bó & Finan 2018), or place of residence (Childs & Cowley 2011). Even though professional background is often an important part of one's social identity (Hogg & Terry 2000; Aschhoff & Vogel 2019), the representation of public versus private sector employees has not received similar scholarly scrutiny (for reviews, see Besley 2005; Dal Bó & Finan 2018). We address this research gap by investigating the nature and drivers of public sector employees' political representation. Theoretically, we argue that public sector employees are *both* consumers *and* producers of public goods and services, and therefore are likely to perceive stronger incentives to seek out political positions allowing them to influence public policies. As we show more formally below, a direct empirical implication of this 'double motive' hypothesis is that public sector employees will be over-represented on (high-ranked positions on) election lists and among elected representatives.[1] Furthermore, changing employment sector or job location would be expected to affect individuals' self-selection into politics by adding (or removing) an additional 'motive' to stand for election (more details below). We empirically scrutinize these theoretical propositions using population-wide individual-level register data covering Norwegian local elections in 2007, 2011, 2015 and 2019, surveys among municipal council representatives as well as several waves of the Norwegian Local Election Surveys.

Norway provides an ideal laboratory for this analysis since legislation allows nearly all public sector employees – defined as individuals working for the central, county or local governments – to be members of political assemblies. At the local government level, this implies that most public employees – including those in positions of power (such as heads of fire departments, nursing institutions and school principals) – can stand for election to local councils despite

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[1] Since elected officials in the legislative branch of government act as principals to civil servants in the executive branch of government, public sector employees holding elected office also have a third role as *supervisors* of public good provision (Braendle & Stutzer 2016). Public employees' decisions taken as legislators may thereby affect their own role in the executive branch, which could add a third motive to seek out political positions.

these services being core local government responsibilities. To motivate our analysis, Figure 1 displays the share of public sector employees in the county and municipal populations on the x-axis. On the y-axes, we depict the share of public sector employees on electoral lists (circles) and among local council representatives (triangles). We do this separately for both county (left-hand diagram) and municipal (right-hand diagram) elections. The diagonal 45-degree lines indicate perfectly representative election lists and local councils.

Figure 1. Public sector employee representation in local politics (2007-2019)
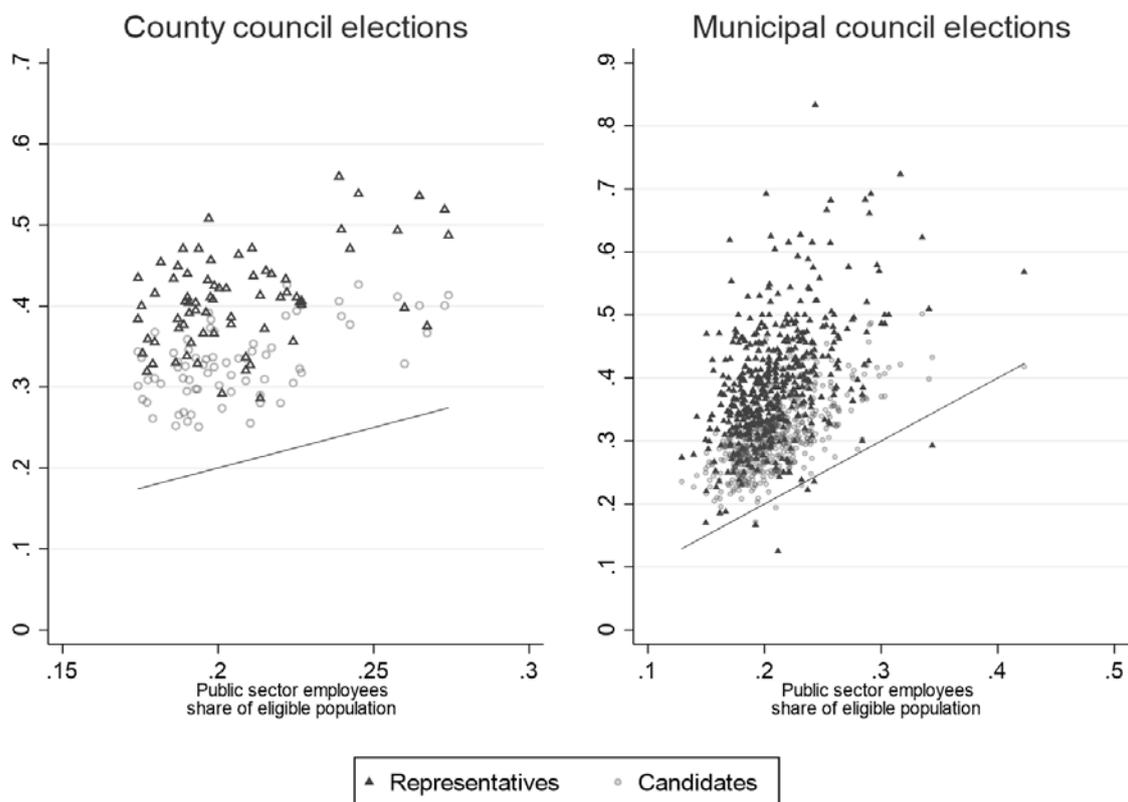
Notes. The vertical axes measure the share of public sector employees among local council representatives (triangles) and on local election lists (circles), while the horizontal axis indicates the share public sector employees in local electorates. The left diagram covers elections to the county council and the right diagram shows data for municipal councils. The 45-degree diagonal lines indicate where the share of public sector employees in the electorate corresponds to its share on election lists and among elected council members. The plots are based on data for the municipal and county council elections in 2007, 2011, 2015 and 2019.

Figure 1 clearly illustrates that public sector employees are politically overrepresented at the municipality and county levels. As most triangles are concentrated *above* the circles, the extent of overrepresentation is even larger among elected council members compared to candidate lists – suggesting that public sector employees on average have a higher probability of election conditional on standing for election. These patterns in Figure 1 set the stage for the remainder

3

of our analysis, which aims to address how key empirical implications of our 'double motive' hypothesis can shed light on public sector employees' striking degree of overrepresentation.

2. Theoretical framework

To present our theoretical arguments and derive testable hypotheses, we set up a simple formal model of individuals' decision to stand for election as a function of their occupational sector – i.e. public sector (g) versus private sector (x).[2] The decision for any person i to stand for election depends on three elements: the benefits from achieving public office, its associated costs, and the probability of election and influencing policy. The benefits from achieving public office lie in one's control over the level and composition of public good provision, which we assume to consist of both a consumer- and producer-related utility. The consumer-related utility from public goods is denoted by V, and is independent of one's occupational sector. The producer-related utility is denoted by W, and is positive only for individuals involved with public goods provision. While part of this production-related utility derives purely from being employed in the provision of public goods, another part could be conceived of as reflecting individuals' public service motivation (Francois 2000; Perry et al. 2010; Perry & Vandenabeele 2015). Either way, this implies that $W_x = 0$ and $W_g > 0$, which we refer to as the source of public sector employees' 'double motive'.[3]

The costs of achieving and holding public office ($C_i(r)$) include, for instance, the time costs related to campaigning efforts, public and party-group consultations, as well as preparations for and participation in council meetings. We assume these costs to increase for individuals closer to the top of the ballot: i.e. $C'_i(r) < 0$ (as the top-listed candidate has rank 1). Higher-ranked candidates tend to invest more in their campaign (Cox et al. 2020) and have greater (expected) costs of working as elected representative due to their higher probability of election. We also assume that $p_i'(r) < 0$ and $p_i''(r) < 0$, which implies that candidates' probability of election and influencing public policy increases disproportionately close to the top of the list. The underlying idea is that although the probability of election is an S-shaped function of rank

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[2] We abstain from explicitly introducing political parties to avoid additional notation. Since individuals self-select into parties closest to their ideological/policy preferences and party recruitment aims for some degree of ideological conformity (Aldrich 2011; Thomsen 2014), this simplification is inconsequential for the hypotheses derived below. We will, however, return to the role of parties in the empirical analysis.

[3] We assume that individuals' public service motivation – as well as other motives to stand for election unrelated to public good provision (e.g., intrinsic utility from involvement in politics or holding political office) – is a fixed, individual-level trait (Perry et al. 2010). As such, it will not affect our ability to identify the double motive effect based on *within*-individual changes over time in our empirical analysis.

4

(being close to 0 for 'hopeless' candidates and close to 1 for 'safe' candidates), the likelihood of influencing policy outcomes once elected is decreasing in rank r even for safe candidates.[4] We furthermore assume that costs (C) and the probability of election and influencing policy (p) may be sector-specific. A representative public sector employee thus faces a cost of running $C_g(r)$ and probability $p_g(r)$, with the equivalents for private sector employees being $C_x(r)$ and $p_x(r)$ (more details below).

The total net gains from running for office then can be written as (with i = g, x):

$$U_i(r) = p_i(r)[V + W_i] - C_i(r) \tag{1}$$

Individual i will be more likely to stand for election if $U_i(r) > 0$.[5] Comparing public and private sector employees' utility from standing for election using equation (1), we would expect that public employees are more likely to self-select into running for political office whenever $U_g(r) > U_x(r)$, and vice versa. Consequently, this simple framework allows deriving empirically testable predictions about various potential sources of public sector employees' self-selection into politics – and their resulting political under/over-representation – by exploring the model parameters in more detail.

Let us start by looking at the source of public sector employees' 'double motive' (i.e. $W_g > W_x = 0$). Assuming for the moment that $C_g(r) = C_x(r)$ and $p_g(r) = p_x(r) = p(r)$, equation (1) implies that:

$$U_g(r) - U_x(r) = p(r)W_g \tag{2}$$

Equation (2) indicates that public sector employees' 'double motive' in and of itself makes them more likely to stand for election as long as $p(r) > 0$. Since p is a decreasing function of rank r (see above), the condition that $p(r) > 0$ is more likely to hold at higher ballot ranks. Two empirically testable predictions then follow naturally. The *first testable prediction* is that due to their 'double motive', public sector employees are more likely to self-select into politics and become overrepresented on election lists. The *second testable prediction* is that this public

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[4] While list rank position thus may have a different effect on the probability of election and the probability of influencing policy once elected, the key issue is that being ranked higher up the ballot positively impacts upon both probabilities (or, more accurately, their joint probability).

[5] In the short term, $p(r)$ converges to 0 for low-ranked candidates. Even so, certain individuals might still want to feature on a party list to climb the party ranks in the longer term or because they gain some intrinsic utility from being involved in politics (see also note 3). We could capture this in equation (1) by adding such preferences as fixed individual-level traits (a_i), similar to the 'civic duty' term often specified in models of voter turnout (e.g., Riker and Ordeshook 1968; Geys 2006). Still, as mentioned, this is inconsequential for our main hypotheses since these are derived based on *within*-individual changes.

sector overrepresentation on election lists will be stronger among high-ranked compared to low-ranked candidates. Both of these propositions persist even when $C_g(r) \approx C_x(r)$ and $p_g(r) \approx p_x(r)$, as long as higher list ranks do not disproportionately benefit candidates with a *private*-sector background. We have no reason to suspect that list rank affords sector-specific benefits, rather than affecting candidates equally across occupation sectors. Note also that as a direct corollary to our second prediction, we can expect public sector employees to have a higher probability of election, conditional on standing for election (i.e. by virtue of their higher list ranks). This is our *third testable prediction*, and would cause public employees' overrepresentation among elected representatives to exceed that for election lists.

It is important to observe at this point that W_g need not be equally large for all public sector employees. Particularly, its value is likely to be location-specific. Bhatti and Hansen (2013) argue that local public sector employees who work *inside* their residential municipality (where they can vote and stand for election) face distinct political incentives compared to those working *outside* their residential municipality. That is, when local public sector employees working in their residential municipality achieve political office, they can "influence their job security and work conditions more (…) than employees living and working in different municipalities" (Bhatti & Hansen 2013: 617). In terms of equations (1) and (2), this implies that the 'double motive' term W_g is larger when working in one's residential municipality. Moves between working outside/inside the residential municipality – keeping constant individuals' occupational sector – thus generates changes in 'double motive' term W_g, which we can exploit to identify political self-selection effects among public sector employees. Our *fourth testable prediction* therefore is that moving employment into (outside) the residential municipality increases (decreases) individual i's self-selection into standing for public office.[6] Note, however, that this effect depends critically on the level of government under consideration. For instance, moving employment across municipalities within a county would leave 'double motive' term W_g unaffected for county-level public goods, but *not* for municipality-level public goods. Consequently, such moves would be expected to affect individuals' decisions about municipal council elections, but *not* county council elections (we return to this in our empirical analysis).

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[6] To the extent that public employment within one's residential municipality also reduces information costs (Bhatti & Hansen 2013), this would further strengthen this prediction.

Equation (1) also illustrates, however, that aspects other than public sector employees' double motive may drive their self-selection into public office. One of these relates to the costs associated with achieving and holding public office. As mentioned, these costs may be sector-specific and affect public and private sector employees' self-selection into public office differently. For instance, public sector employees in many countries benefit from paid leave to participate in political meetings, while private sector employees generally do not. Moreover, public sector employees may have superior access to information about policy issues (Niskanen 1971; Braendle & Stutzer 2016), and thus could face lower expected participation and preparation costs. This implies that $C_x(r) > C_g(r)$. As this cost differential materializes when individuals shift employment from the private to the public sector (or vice versa), such occupational moves would be expected to increase individual i's self-selection into standing for public office *even independent of* any gain in work-related utility from public good provision (since $W_g > W_x = 0$). From an empirical perspective, this line of argument highlights that it is critical to keep constant individuals' occupational sector in order credibly to identify the 'double motive' effect.

3. Legal and institutional setting

Since an amalgamation wave prior to the 2019 local elections, the local government level in Norway consists of 356 municipal governments (down from 422 before the reform) and 11 county authorities (down from 19 before the reform). Municipalities and counties are separate public authorities managed by independently elected municipal and county councils, respectively. Each municipality and each county constitutes its own electoral district, where council elections are held every fourth year within the first two weeks of September. All Norwegian nationals are automatically included in the Population Register and are qualified to vote when aged 18 years or older (with very few exceptions). Citizens from other Nordic countries can also vote in local elections when registered in the Population Register, while foreign nationals have to reside and be registered in Norway for at least three years on Election Day.

In both county and municipal elections, political parties or independent groups present voters with candidate lists containing a minimum of seven candidates. The Election Act requires candidate lists to contain candidates' first and last names as well as their year of birth. Parties can also add candidates' occupation and/or place of residence. If doing so, this same

information must be included for all candidates on the list. Candidate lists – including candidate ranks and so-called 'cumulated' candidates [7] – are prepared by parties' local nomination committees and finalized at a nomination meeting commonly restricted to party members.[8] Declining numbers of party members have over time led to reduced participation in nomination processes, so nomination committee members in practice are often (top-ranked) list candidates. This need not imply tight control over lists by party elites since Christensen et al. (2008: vii) find that local candidates themselves maintain central "responsibility for recruitment of list candidates". As local political positions are generally unpaid beyond attendance fees and expense refunds (except the mayor and executive board members) while entailing a significant time investment, nomination committees often encounter substantial difficulties in enlisting candidates for local elections.

During local elections, voters can vote for a party list, give personal preference votes for one or more particular candidates, and – in the case of municipal elections – add candidates from other parties or groups to their preferred list. A proportional representational system then determines seat allocation across parties using a modified Sainte-Laguë method, while candidates' personal preference votes determine who gets awarded a council seat within each party or group (i.e. open-list PR; Fiva & Folke 2016). The elected council members subsequently select an executive board of minimum five individuals from among its members. This board's composition is proportional to the partisan composition of the council, and is a key decision-making body in Norwegian local politics (Geys & Sørensen 2020).

Key to our analysis, any person qualified for casting a vote in the election is generally also eligible for holding political office. Only a limited set of top civil servants is disqualified from standing for election into local elected bodies. This includes the top administrators in the municipal and county governments, the (deputy) chief executive, the council secretaries and the person responsible for the accounts or audits. The (assistant) county governor ("fylkesmann" in Norwegian) likewise cannot be an elected council member as this position includes the responsibility to control the legality of municipality and county decisions. All other public sector employees are eligible, even if they work for the municipal/county authority or hold managerial functions in local public institutions (such as school principals or heads of

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[7] Political parties and groups can mark a limited number of 'cumulated' candidates. These receive a 25 percent bonus in terms of their number of personal votes, which makes them much more likely to become elected.

[8] An official and more detailed outline of the election system is available in English: https://www.regjeringen.no/en/topics/elections-and-democracy/den-norske-valgordningen/the-norwegian-electoral-system/id456636/#en

nursing institutions). Section A in the Online Appendix provides an extract from the Local Government Act with more details about the exact legislative framework. In the words of Braendle and Stutzer (2016), Norway's regime is one of 'soft incompatibility'. Their comparative analysis of 76 countries' legal frameworks uncovers 28 soft incompatibility regimes, while seven (41) countries implement less (more) restrictive regimes. Norway thus is by no means exceptional, which benefits the generalizability of our findings to other countries with roughly similar frameworks (e.g., Austria, Canada, Israel, Spain and Switzerland).

4. Data sources and key variables

4.1 Population-wide register data

Our main source of information relates to population-wide individual-level register data covering the four local elections held in Norway between 2007 and 2019. This dataset includes the entire population entitled to vote and stand for election, and has been matched with election outcomes for each of these elections. As such, the dataset not only allows us to evaluate who did (not) stand for election, but also who was elected into the municipal and county councils. Table 1 presents an overview of the number of observations available for each election year, as well as how many individuals did (not) appear on a candidate list, or were elected into the municipal/county council. This indicates that roughly 1.5% (0.2%) of the Norwegian eligible population is included on a candidate list for municipal (county) elections, and on average approximately one fifth (one tenth) of these achieve elected office. Although not shown in table 1, we should also note that about 8% of candidates in municipal elections are also candidates in county elections, while 15% of elected municipal council members are also members of county councils (both offices can be combined in Norway). This implies that the vast majority of county council candidates (73%) and representatives (89%) are also politically active at the municipal level.

Table 1. Electors, candidates and representatives

		2007	**2011**	**2015**	**2019**
Municipal Council Elections	Not candidates	3,050,172	3,389,245	3,776,160	3,975,605
	Candidates not elected	51,536	47,874	47,472	44,827
	Candidates elected	10,892	10,689	10,597	9,333
	All	3,112,600	3,447,808	3,834,166	4,029,765
County Council Elections	Not candidates	3,105,713	3,441,046	3,827,143	4,023,561
	Candidates not elected	6,156	6,039	6,313	5,629
	Candidates elected	731	723	710	575
	All	3,112,600	3,447,808	3,834,166	4,029,765

Notes. The table displays the distribution of the complete Norwegian eligible population depending on their status as not running for office, election candidates (elected) or election candidates (not elected). Candidates may run for the municipal council elections only, the county council elections only, or both. The data includes the entire electorate in the 2007, 2011, 2015 and 2019 local elections.

Given our interest in public sector employees, a key aspect of our dataset relates to individuals' occupational sector. Our register data thereby provide important advantages compared to studies using self-reported occupations. Assignment of individuals to occupational sectors is not only more accurate and precise, but also relies on the exact same institutional classification for citizens, candidates and elected representatives (facilitating comparisons within and across these groups). The institutional classification by Statistics Norway follows international conventions: e.g., the US System of National Accounts (SNA93) or the European System of National Accounts (ESA95). This definition allows us to identify all employees working for the central, county and municipal governments, which we analyse as separate groups of public sector employees throughout the analysis. We thereby exclude individuals working for corporations owned by public authorities (both limited liability companies and state and local enterprises not holding limited liability) since they generally do not have civil servant status. Individuals *not* working for central, county and municipal governments are defined as private sector employees, which includes self-employed individuals as well as non-profit organization employees. Finally, people not classified by occupational sector are considered as not employed (including students, retirees, and people receiving social security benefits such as unemployment support or disability payments).

In Table 2, we display the distribution of individuals across institutional sectors depending on their status as election candidates (columns 1, 3 and 5) or elected council members (column 2, 4 and 6). We thereby look at municipal and county councils separately (columns 1 and 2 versus

columns 5 and 6) as well as jointly (columns 3 and 4). Column 7 in Table 2 also displays the institutional sector for the remainder of the eligible population not standing for election. Starting with column 7, we see that nearly 50% of the electorate works in the private sector, 23% in various parts of the public sector and 28% is not employed. The top row of Table 2 illustrates that people who are not employed are very substantially underrepresented among election candidates as well as elected council members. Private sector employees are fairly well represented among municipal election candidates and council members, but somewhat underrepresented when it comes to county council elections (both on the election lists and even more among elected council members). In sharp contrast, and in line with Figure 1, public sector employees working for the county and municipal governments are highly overrepresented among local election candidates. This overrepresentation increases further when looking at elected council members. For instance, municipal government employees account for 13.3% of the electorate, 22% of the candidates on municipal election lists and 28.5% of the elected municipal councillors. Similarly, 1.3% of the population works for the county governments, but they account for 6.7% of the candidates on county election lists (combining columns 3 and 5), and 9.8% of the elected county councillors (combining columns 4 and 6).

Table 2. Occupational sector, eligible population, candidates and elected councillors

	Municipal council Only		Municipal and county council combined		County council only		Eligible population
	(1) All candidates	(2) Elected politicians	(3) All candidates	(4) Elected politicians	(5) All candidates	(6) Elected politicians	(7) Not candidates
Not employed	18.4	8.1	17.1	8.4	21.5	6.0	28.1
Private sector	48.3	50.8	41.6	43.1	39.8	33.9	49.2
Central government	8.4	9.6	10.5	10.1	8.8	9.0	8.2
County government	2.9	3.1	6.1	7.1	8.3	31.4	1.3
Municipal government	22.0	28.5	24.7	31.3	21.6	19.7	13.3
Total	100.0	100.0	100.0	100.0	100	100	100.0
	(207,120)	(25,716)	(19,208)	(8,185)	(7,137)	(1,032)	(13,199,142)

Notes. The table displays the percentage distributions across occupational sectors for election candidates, elected politicians and the eligible population not running for office. Candidates may run for the municipal council elections only, the county council elections only, or both. The data includes the entire electorate in the 2007-2019 local elections. 'Not employed' includes all persons with no defined politicians, while 'private sector' is defined as employees not working for central, county or municipal governments.

4.2 Occupation, residence and other background information

Throughout the analysis, we are especially interested in comparing individuals performing the *same type of work* across the public and private sectors – such as to keep individuals' occupation type 'constant'. We operationalize individuals' occupation type using the four-digit ISCO classification (International Standard Classification of Occupations) employed by Statistics Norway, which is included in our dataset for all public as well as private sector employees.[9]

For all individuals in the dataset, we furthermore have access to a broad set of individual-level background characteristics, including age, gender, education (defined in five levels: primary school, secondary education, tertiary vocational education, lower-level higher education and higher-level higher education), immigration background, and so on. This also includes information about their municipality of residence as well as their municipality of employment. We can therefore exploit whether or not the municipalities of residence and employment are the same, which is particularly relevant since only the municipality of residence defines where individuals are entitled to vote and stand for election (more details below).

4.3 Other datasets

Beside the detailed individual-level register data, we exploit four further sources of information. First, we have the complete candidate lists as presented on Election Day. For all candidates in Norwegian local elections since 2003, we observe the party list name, candidates' rank on the party list, their preference votes and status as 'cumulated' candidates as well as whether the list contains information about candidates' occupational background and/or place of residence (Fiva et al. 2020). Second, we obtained detailed information about municipality characteristics including population size and composition as well as local public expenditures from Fiva et al. (2017). Third, we have access to a survey conducted in 2015 among all members of the municipal councils. This includes data on, for instance, party affiliation, occupation, policy preferences and left-right self-placement. Finally, we rely on data from the Norwegian Local Election Surveys conducted in 1999, 2003, 2007, 2011 and 2015 as provided by the Norwegian Centre for Research Data (NSD; https://nsd.no/nsddata/serier/norske_valgundersokelser.html). These surveys allow analysing the determinants of local voting behaviour. We return to more

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[9] For documentation on the ISCO-classification, see https://www.ssb.no/en/klass/klassifikasjoner/7

detailed discussions on the relevant variables taken from these various sources when relying on them in the analysis.

5. Political parties, voters and candidates' occupational background

As illustrated by the absence of political parties in the formal model presented in section 2, we are predominantly interested in individual-level factors driving public sector employees' self-selection into politics (and subsequent representation on election lists and local councils). Still, the political overrepresentation of public sector employees observed in Figure 1 and Table 2 could also reflect that political parties or voters prioritize candidates with specific occupational backgrounds. In this section, we want to rule out such party- and voter-based explanations of public employees' political overrepresentation, before testing our theoretical model's 'double motive' predictions in section 6.

5.1 Political parties and ballot information on candidate occupations

Political parties may have several reasons to engage in the targeted selection of public sector employees as well as their placement towards the top of candidate lists (thereby improving their election prospects). Such actions would constitute a rational strategy if *either* voters care about candidates' occupational background (analysed in section 5.3 below) *or* the prioritization of such candidate profiles helps bolster the credibility of parties' election promises (Besley 2005; Aldrich 2011; Thomsen 2014). When candidates' occupation acts as such a signalling tool, parties would naturally be incentivized to highlight this information to voters whenever possible during the campaign and, if allowed, on the ballot. Within the Norwegian system, the Election Law provides the opportunity for parties voluntarily to include information on place of residence and/or occupation on their ballot sheet. Hence, we can test whether parties de facto exploit candidates' occupations as a signalling tool by looking at the presence of this information on candidate lists. Each municipal election in the 2003-2019 period includes nearly 3,000 lists, and the five elections combined cover 14,612 lists. The county elections witness about 1,300 lists per election, for a combined total of 6,631 lists over the 2003-2019 period. We scrutinised all these party lists for the presence of information about candidates' occupational background.

Figure 2 displays the findings. It portrays the share of candidate lists including information about candidates' occupational background in municipal (circles) and county (triangles) elections. The results suggest a relatively small – and rapidly declining – share of election lists that includes information on candidates' occupational backgrounds. The share of lists including such information is somewhat higher in county council elections, but in recent years has fallen well below 10% for both types of elections. This is certainly much lower than what would be expected if parties considered this information an important signalling tool. A potential caveat to the analysis in Figure 2 is that the occupational background mentioned on the ballot sheet does not necessarily yield clear information on candidates' public versus private sector affiliation. Some occupations – such as 'farmer' – are typical private sector occupations, whereas others – such as 'teacher' – are predominantly public sector occupations. Similar assignments are much less obvious for occupations including 'engineer' or 'advisor'. Nevertheless, this lack of precision arguably strengthens our point. If political parties perceived strong incentives to signal the public sector affiliation of their candidates, they could have applied more specific occupational descriptions to their ballot sheets.

Figure 2. Occupational information on ballot lists
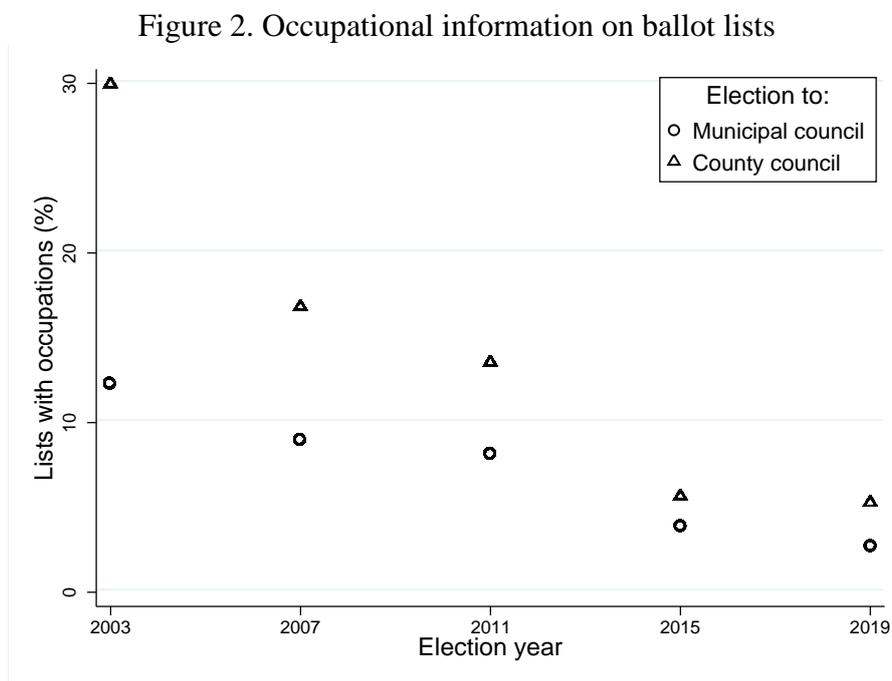
Notes. The diagram shows the percentage of lists containing information on candidates' occupational backgrounds for each local election year (2003-2019). The triangles refer to county council elections, and the circles to municipal council elections. The data source is the Local Candidate Dataset (Fiva et al. 2020).

Parties caring about candidates' occupational background should not only display this information prominently on the ballot. They can also give public sector employees 'cumulated' status on the ballot, which would make them more likely to be elected. To test whether parties exploit the possibility, we ran a regression model with a dummy variable equal to 1 for 'cumulated' candidates (0 otherwise) as the dependent variable. The main independent variables are indicator variables for individuals' occupational sector (i.e. not employed, central government, county government, municipal government; private sector is the omitted reference category). The regression model also includes fixed effects for election year, municipality/county (as applicable), and political party interacted with list rank. As such, we compare candidates in the same municipality/county and the same list rank in the same party. The results are summarized in Online Appendix table A.1, and show that all point estimates remain substantively very small. Although they are statistically significant for the politically less important county council elections (i.e. county employees), they are insignificant for the municipal council elections (i.e. municipal employees). Overall, therefore, these mixed findings indicate that parties have at best weak incentives to screen, select and promote candidates on the basis of their occupational background.

5.2 Distribution of candidates' occupational background across parties

Despite parties' apparent disregard of candidates' occupational backgrounds, the share of public sector employees varies dramatically across political parties. Figure 3 illustrates this point by displaying the share of public sector employees among municipal council candidates and representatives of each party over the period 2007-2019. The x-axis indicates parties' placement on a left-right scale (with extreme left equal to 0 and extreme right equal to 10), based on municipal council members' left-right self-placement in a 2015 survey. The y-axis displays the share of public sector employees. The size of the bubbles reflects the overall size of each party (defined as parties' share of election candidates or elected council members across the country). Figure 3 indicates a strong negative correlation between parties' left-wing position and their share of public sector employees – both among election candidates and elected representatives. This relationship corresponds closely to the observation in previous work that public sector employees tend to support and vote for left-leaning parties (Garand et al. 1991; Knutsen 2005; Jensen et al. 2009; Tepe 2012; Rattsø & Sørensen 2016; Bednarczuk 2018).

Figure 3. Public sector employees' representation by parties' left-right positions
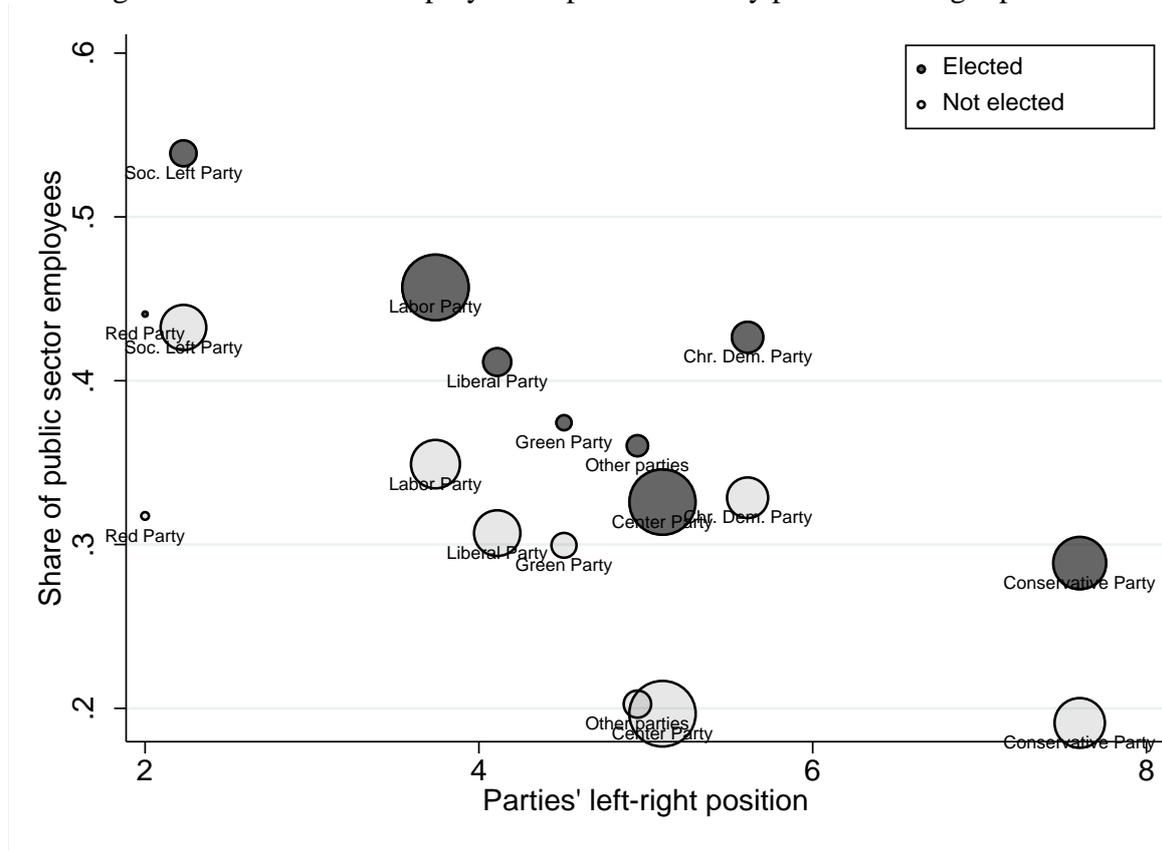
Notes. The diagram shows the share of public sector employees among municipal council candidates and representatives of any given party. Parties are placed on the horizontal axis by the average left-right self-placement of their municipal council members in a 2015 survey, using the question: "Where would you place yourself on a scale from 0 to 10 where 0 means the left and 10 means right?" Bubbles reflect parties' size as measured by their relative share of municipal council candidates and members across the country. The diagram relies on data from the 2007, 2011, 2015 and 2019 municipal council elections.

Clearly, the pattern in Figure 3 could be an artefact of other individual-level characteristics, such as gender, age, education level or immigrant status. We therefore estimated regression models using an indicator variable equal to 1 for public sector employees (0 otherwise) as response variable, and parties' left-right position as the main independent variable. In even columns, we also include a host of individual-level control variables. The results are reported in Table 3, and indicate that the probability of working in the public sector is significantly larger (smaller) among candidates and representatives of parties with a left-wing (right-wing) orientation. In terms of effect size, a one-point shift to the right yields a 3-4% reduction in the likelihood of a party's candidates and representatives being public sector employees. Given the weak incentives for partisan selection strategies based on occupational background documented previously, this pattern more likely reflects candidates' self-selection into specific political parties. We return to the importance of this observation below.

Table 3. Party positions and public sector employee representation

	(1)	(2)	(3)	(4)
	All candidates		Elected representatives	
Parties' left-right positions	-0.0488*** (0.00106)	-0.0299*** (0.000844)	-0.0471*** (0.00200)	-0.0358*** (0.00190)
Observations	171,209	170,836	31,104	31,071
R-squared	0.045	0.199	0.053	0.159
Municipality FE	Yes	Yes	Yes	Yes
Covariates	No	Yes	No	Yes

Notes. The table displays regression analysis using public sector employee (=1) as response variable. The left-right positions of individual parties are derived from a survey among municipal council members (2015). Models (1) and (3) include municipality and election year fixed effects only. Columns (2) and (4) add a number of individual-level controls: gender, age dummies (one-year intervals), education level (five levels), and immigrant status (four categories). The standard errors are robust and clustered on municipalities. Significance levels: *** $p<0.001$, ** $p<0.01$, * $p<0.05$.

5.3 Voters and preferential voting based on candidates' occupational background

Since local council seats are awarded based on preferential vote tallies (see above), Norway's open-list PR electoral system allows voters considerable influence on who is elected (Bergh et al. 2010; Fiva & Folke 2016). In this section, we therefore explore whether voters' preferential votes on Election Day are cast to the benefit of public sector employees (despite parties' scant supply of relevant occupational information on the election ballots; see Section 5.1). Using detailed information on local election lists as well as local election results, Figure 4 displays the share of elected representatives improving their list rank with at least one position as a consequence of preferential voting. Rank improvement is thereby defined as the difference between candidates' post-election realized rank (after personal votes have been taken into account) and their pre-election ballot rank (as decided by the party), with a negative difference implying a lower rank position after the election. For instance, an improvement of one rank would occur where candidate X was listed third on the party ballot, but due to her preference votes fills the party's second elected seat.

Figure 4 shows that voters' preference votes for individual candidates have very little impact on the final rank of the higher ranked candidates (reflecting their limited upward potential), but can have substantial importance for lower-ranked candidates. Crucially, however, the findings clearly illustrate that voters' preferential ballots do *not* consistently benefit public sector employees compared to private-sector employees or candidates without occupation. Figure A.2 in the Online Appendix confirms this result even when we focus on the subset of lists where

parties provide occupational information on the ballot. Since preferential voting patterns thus do not appear to take into account candidate occupations, these results strongly suggest that voters do not display a preference for public sector employees.[10]

Figure 4. The impact of preferential voting
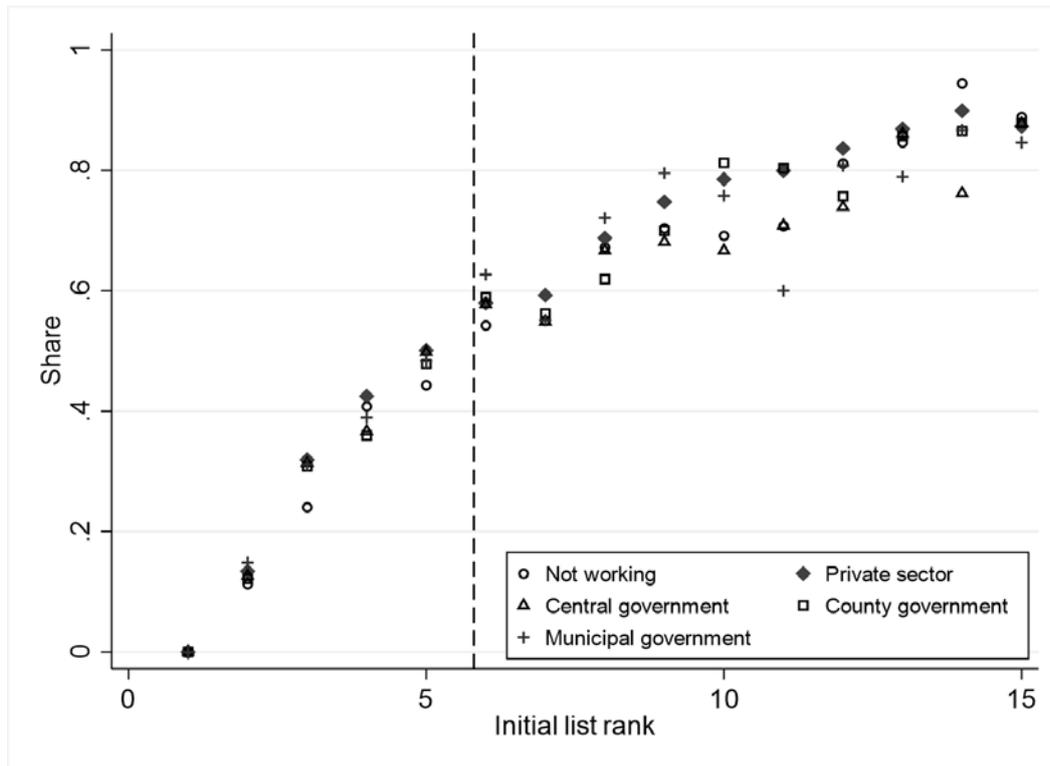
Notes. The plot displays the share of elected municipal council members getting a lower (=better) list rank based on preference votes compared to their original rank on the party ballot. We show separate percentages depending on candidates' sectoral affiliation. The dashed vertical line indicates average list rank of elected candidates. The graph covers the municipal council elections over the period 2003-2015.

These findings are substantiated by data from five Norwegian Local Election Surveys over the period 1999-2015. Respondents were asked "*what had the greatest influence on your choice of party or list in the local elections?*". Answer options included 'local issues', 'persons on the list', 'national issues', or 'general trust in the party'. The results – displayed in Figure 5 – show that 'general trust in the party' and 'local issues' for municipal elections are much more important for voters than 'persons on the list' or 'national issues'. Moreover, the importance

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[10] Using Norwegian register data for the local elections of 2003-2015, Fiva and Røhr (2018) show that a candidate who narrowly wins a seat in the municipal council elections has a significantly higher probability of re-election compared to a candidate who barely lost a seat. Much of this incumbency advantage is due to incumbents getting a better list rank when they stand for re-election, rather than preference votes. Whether the higher rank position is due to candidates self-selecting into better rank positions or to decisions by party leaders remains unsettled.

of 'persons on the list' declines substantially over time, particularly for municipal elections. Even though no specific reference is made in the survey question to candidates' occupational background, these results nonetheless suggest that vote preferences regarding candidate occupations are at best weak.[11]

Figure 5. Voter preferences and candidate characteristics
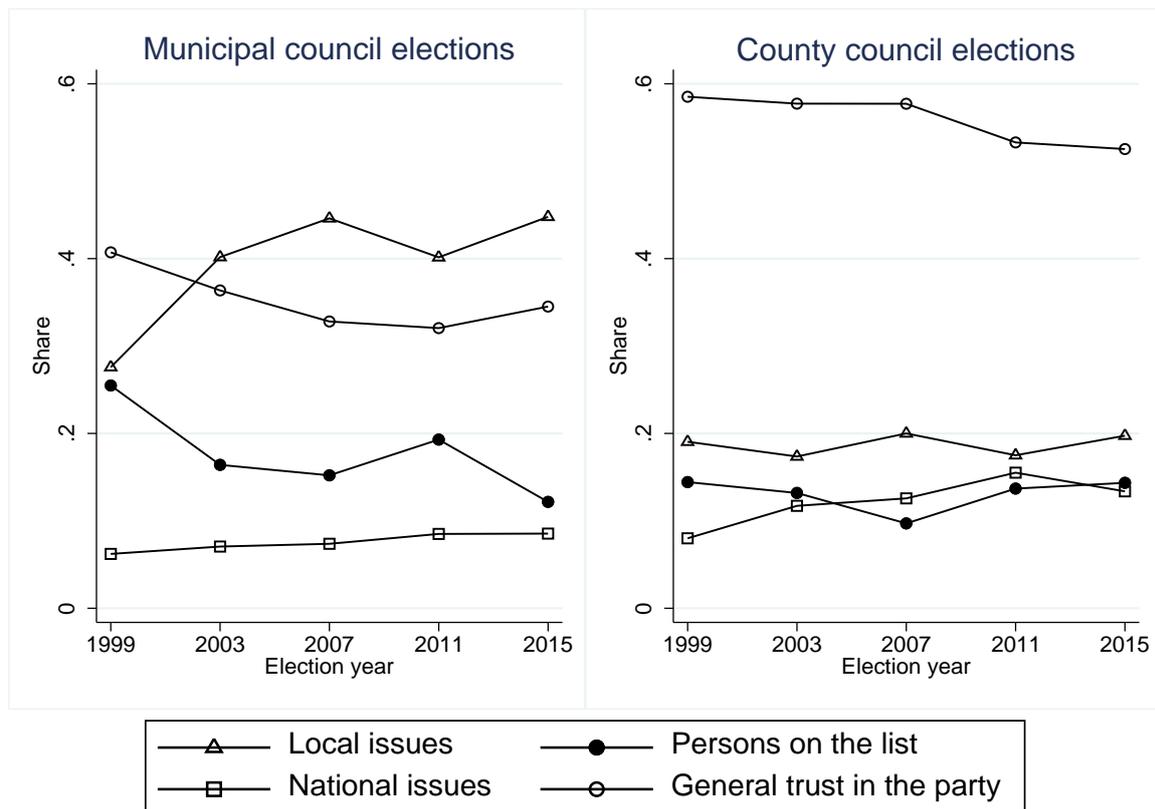
Notes. The diagrams displays responses to the survey question: «What had the greatest influence on your choice of party or list in the local elections? Local issues, the persons on the list, national issues, or general trust in the party?" Source: Local election surveys 1999-2015.

6. Occupational background and self-selection into public office

The evidence presented thus far indicates that the political overrepresentation of public sector employees does not appear to derive from party selection or voter preferences. In this section,

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[11] Campbell and Cowley (2014) provide experimental evidence on the impact of candidates' occupation on voter ratings of approachability, experience and effectiveness as well as overall candidate preferences. While their study suggests that occupation – as well as sex, age, education and religion – matters to some extent for voters' ratings of candidates, they do not include a treatment for private versus public sector employment (possibly reflecting its assumed irrelevance to voters). Their analysis also cannot address whether the observed shifts in candidate ratings would translate into similar effects on choices during real-world elections.

we turn attention to the theoretical predictions deriving from our 'double motive' hypothesis to evaluate public sector employees' *self*-selection into (standing for) public office. Our individual-level register data thereby allow us to exploit <u>shifts</u> in individuals' occupation (i.e. moving between the public and private sectors) as well as, crucially, <u>shifts</u> in place of residence (i.e., moving place of work to/from the residential municipality).

6.1 Occupational sector and list rank

The theoretical model in section 2 illustrates that public sector employees' 'double motive' ($W_g > 0$) makes them more likely to stand for election as long as $p(r) > 0$. Since p is a decreasing function of rank r (remember the top-ranked candidate has rank 1), this implies that $p(r)W_g$ obtains larger values for individuals placed towards the top of the ballot and public sector overrepresentation should become stronger among high-ranked compared to low-ranked candidates (our second testable prediction). To evaluate this, we estimate regression models with individuals' list rank as the dependent variable. The main independent variables are indicator variables for individuals' occupational sector (i.e. not employed, central government, county government, municipal government; private sector is the omitted reference category). All models include fixed effects for election years, municipalities, political parties and occupation types (using 42 occupation types differentiated at the 2-digit level in ISCO), as well as additional controls for individuals' age, sex, immigration background (6 categories) and education level (5 categories). Models in even columns are additionally extended with individual-level fixed effects. This implies deriving inferences only from variation over time *within* individuals (i.e. from a given individual shifting employment from the private sector to the public sector). Throughout this analysis, we restrict estimations to all electoral candidates since no list ranks exist for individuals not standing for election. As such, we effectively analyse whether public sector employees are more likely to be located on higher list ranks (with lower numbers!) *conditional on standing for election*. The results are summarized in Columns (1)-(4) of Table 4.

Table 4. Occupational sector, list ranks and elected candidates

	List rank				*Elected candidate*			
	Municipal elections		County elections		Municipal elections		County elections	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Not	-0.716***	-0.529**	-1.322***	-1.630	0.0485***	0.0137*	0.0289***	0.00437
Employed	(0.0977)	(0.173)	(0.366)	(1.029)	(0.00271)	(0.00560)	(0.00692)	(0.0216)
Central	-0.907***	-0.521*	-1.632**	-2.974*	0.0653***	0.0306***	0.0477***	0.00492
Government	(0.135)	(0.261)	(0.496)	(1.404)	(0.00378)	(0.00870)	(0.00916)	(0.0305)
County	-1.259***	-0.966**	-8.219***	-4.474**	0.0748***	0.0248	0.288***	0.157***
Government	(0.192)	(0.370)	(0.652)	(1.554)	(0.00603)	(0.0132)	(0.0168)	(0.0430)
Municipal	-1.963***	-1.318***	-1.904***	-2.413*	0.0931***	0.0375***	0.0487***	0.0251
Government	(0.129)	(0.186)	(0.396)	(1.017)	(0.00381)	(0.00759)	(0.00924)	(0.0228)
Observations	205,845	128,771	19,011	8,927	205,845	128,771	19,011	8,927
R-squared	0.284	0.737	0.231	0.668	0.133	0.675	0.178	0.722
Individual controls	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	X	X	X	X	X	X	X	X
Municipality FE	X	X	X	X	X	X	X	X
Occupation FE	X	X	X	X	X	X	X	X
Party list FE	X	X	X	X	X	X	X	X
Individual FE		X		X		X		X

Notes. The table displays regression estimates using as dependent variables a candidate's list rank (columns 1-4) and a dummy variable equal to 1 for elected candidates (columns 5-8). The analyses include data for the all candidates standing for local elections in the 2007, 2011, 2015 and 2019 local elections. Columns (1), (2), (5) and (6) display estimates for municipal council elections, while columns (3), (4), (7) and (8) show estimates for county council elections. The estimates indicate effects for occupational sector, using private sector employees as reference group. Significance levels: *** $p<0.001$, ** $p<0.01$, * $p<0.05$

The results indicate that public sector employees are ranked significantly higher on candidate lists in both municipal and county elections compared to private sector employees. This is particularly true for municipal (county) public sector employees during municipal (county) council elections. This pattern is consistent with the idea that municipal (county) public sector employees should be more interested in influencing public good provision – due to a higher value of W_g in equation 1 – in the municipal (county) council elections. Importantly, these results persist even when controlling for individual-level fixed effects in even columns. The point estimates suggest that shifting employment from the private sector to the municipal public sector causes an improvement in one's list rank by 1.3 positions in municipal council elections. Shifting employment to the county public sector causes an increase of on average 4.4 positions on county council candidate lists. Overall, given parties' disregard for candidates' occupation (see above), these findings are consistent with political self-selection among public sector employees inducing increased overrepresentation among high-ranked compared to low-ranked candidates.

As mentioned, a direct corollary of public sector employees' higher list ranks is that their likelihood of achieving elected office should increase – conditional on being an electoral candidate. This is confirmed in columns (5)-(8), where we estimate the same regression models as before except that the dependent variable now is a dummy equal to 1 for elected candidates (0 otherwise). In column (6), we see that shifting employment from the private sector to the municipal public sector causes an increase in one's probability of election by 4 percentage points in municipal elections. Column (8) shows that the impact of shifting employment to the county authorities is again much larger (nearly 16 percentage points). These effects decline substantially in size and statistical significance when we directly control for candidates' list rank in these regressions (see appendix table A.2). This confirms that the increased election probability of public sector employees found in columns (5)-(8) is predominantly due to their higher list ranks observed in columns (1)-(4).

6.2 Occupational sector and the likelihood of standing for election

Turning now to our first testable prediction – i.e. public sector employees' 'double motive' ($W_g > 0$) makes them more likely to stand for election – we test whether moving from a private to a public sector job increases individual *i*'s self-selection into standing for public office. For this analysis, we extend our dataset to the entire Norwegian electorate. We estimate a regression model where an indicator variable equal to 1 for individuals standing for election (0 otherwise) is the response variable. The explanatory variables are the same as in Table 4 (except for the party list fixed effects, which are excluded here). As before, we estimate the model separately for municipal and county council elections, and include also a full set of individual-level fixed effects. The latter means that we estimate public sector employment effects as a consequence of *the same individuals* shifting between sectors. This is important since we can then assume that individuals' inherent traits potentially correlated with both public sector employment and willingness to stand for election – such as public sector motivation (Perry et al. 2010) – are controlled for in the analysis. The results are presented in columns (1) and (2) of Table 5.

Table 5. Occupational sector and candidates for local elections

	Municipal elections (1)	County elections (2)	Municipal elections (3)	County elections (4)
Not employed	-0.0022***	-0.0024***	0.0003	0.0005***
	(0.0004)	(0.0004)	(0.0002)	(0.0001)
Central Government	-0.0009**	-0.0010**	0.0002	0.0005**
	(0.0003)	(0.0003)	(0.0005)	(0.0002)
County Government	0.0043***	0.0047***	0.0030*	0.0054***
	(0.0009)	(0.0010)	(0.0013)	(0.0008)
Municipal Government	0.0029***	0.0031***	0.0013**	0.0011***
	(0.0003)	(0.0003)	(0.0005)	(0.0002)
Interaction terms:				
Home*Not employed	-	-	0.0028***	0.0001
			(0.0006)	(0.0001)
Home*Central gov.	-	-	0.0015*	0.0001
			(0.0007)	(0.0002)
Home*County gov.	-	-	0.0053**	-0.0007
			(0.0017)	(0.0008)
Home*Municipal gov.	-	-	0.0049***	0.0005
			(0.0008)	(0.0002)
Observations	12,811,098	12,839,030	12,811,098	12,839,030
R-squared	0.564	0.577	0.564	0.486
Individual controls	YES	YES	YES	YES
Year FE	X	X	X	X
Municipality FE	X	X	X	X
Occupation FE	X	X	X	X
Individual FE	X	X	X	X

Notes. The table displays regression estimates using a dummy variable for list candidate as response variable. The analyses include data for the entire eligible population in the 2007, 2011, 2015 and 2019 local elections. Columns (1) and (3) analyse likelihood of standing for election to the municipal council elections, while Columns (2) and (4) investigate the probability of standing for election to the county and municipal council elections. The estimates indicate in Columns (1) and (2) indicate effects of institutional sector, using private sector employees as reference group. In Columns (3) and (4), the baseline effects indicate the effects of institutional sector conditional on the person working *outside* the residential municipality, while the interaction effects indicate the additional effect of institutional sector for persons working *inside* the home municipality. Private sector employment is used as the reference group. Significance levels: *** p<0.001, ** p<0.01, * p<0.05

The findings indicate that a *given* individual i's shift in employment from the private sector to the municipal public sector increases the probability of being a candidate in municipal council election with 0.0029. As the overall probability of standing for election among the eligible population is 0.0168, our point estimate suggests a 17% increase compared to this baseline probability. Shifting work to the county public sector produces a similar (and substantively slightly larger) increase in the probability of standing for election, while shifting employment

to the central government – or losing one's employment – has a small negative effect. Column (2) displays corresponding estimates for the probability of standing for county council elections (which effectively often implies running in *both* municipal and county council elections; see above). The share of the eligible population standing for the county council elections is about 0.0020. Compared to this baseline probability, the estimated effects in Column (2) suggest that shifting employment to the county public sector roughly triples the probability of standing in county council elections. Taken together, self-selection into standing for public office thus appears to be significantly higher among public sector employees.

6.3 Occupational sector, place of work and the likelihood of standing for election

The analysis thus far implicitly assumes that work-related utility from public good provision ($W_g > 0$) is independent of working inside or outside one's residential municipality. This is unlikely to hold because working in one's residential municipality gives increased possibilities to influence local public policies affecting one's own job security and work conditions (Bhatti & Hansen 2013). To accommodate this possibility, we augment the regression model with a full set of interactions between individuals' occupational sector and an indicator variable equal to 1 when the individual works inside the residential municipality (0 otherwise). This specification allows us to exploit the different incentives of local government employees working inside/outside their residential municipality (i.e. $W_{g,inside} > W_{g,outside}$) in a more demanding test of the double motive hypothesis. We expect that moving to a municipal (or county) public sector position within one's municipality increases the probability to stand for election in municipal elections, whereas no similar effect should arise with respect to county council elections (see also section 2).

The results are brought together in columns (3) and (4) of Table 5. In column (3), all coefficients for the interaction terms are positive, and are substantively largest when focusing on individuals working for the municipal or county government. Moving employment to one's residential municipality – while keeping fixed one's occupational sector – increases the probability of standing for election to the municipal council elections by approximately 37% compared to the baseline probability of candidacy in such elections (i.e. 0.0168). As expected, no similar effect is observed when looking at the county council elections in column (4). These county-level findings can effectively be interpreted as placebo estimates since moving employment across municipalities *within* a county does not change one's (potential) influence

on county-level public good provision. As such, it does not affect individuals' work-related utility from county-level public good provision, and should *not* impact upon their self-selection into political office.

## 7. Policy preferences and occupational misrepresentation

Our results in section 6 are consistent with public sector employees showing higher interest in standing for election to public office at the level of government that employs them, especially when employed in their residential municipality. One potential concern with such behaviour is that it may reflect self-serving preferences whereby public sector employees seek public office to sway policies towards their own benefit (e.g., Braendle & Stutzer 2016; Hyytinen et al. 2018). This would naturally suggest a strong need for statutory limitations on public sector employees' eligibility for political office (Miller 2010; Braendle & Stutzer 2016), and this section takes a first step towards exploring this issue using a large-scale survey among almost 3000 municipal council members collected in 2015.

Our analysis starts from the observation that any policy effects of public sector (over)representation require the existence of substantively meaningful differences in preferences across public and private-sector employees *within any given party*. The reason for this *intra*-party requirement is that public sector employees are more likely to be members of left-leaning parties (see Figure 3 and Table 3 above). Hence, differences in policy preferences across both groups might predominantly reflect their diverging partisan leanings (for a similar argument in a different setting, see Slegten & Heyndels 2020). Any policy effects arising from the replacement of private sector employees in a local council with public sector employees then are unproblematic, since they would simply reflect a (voter-induced) shift in the partisan balance of the council towards more left-wing, pro-government parties (rather than being due to representatives' occupational sector). If instead private and public sector employees have diverging policy preferences *after controlling for partisan affiliation*, public sector over-representation might become particularly problematic.

Figure 6 displays municipal council members' average self-placement along a left-right ideological scale, differentiated by occupational sector and party affiliation. The data highlight large disparities in council members' ideological position *across* parties, as would be expected. More importantly, however, we find at best very small differences by occupational sector

25

within parties. Politicians from distinct employment sectors within any given party thus differ little in terms of their overall ideological orientations. This is consistent with both public and private sector employees selecting themselves into distinct political parties based on their inherent ideological orientations (Aldrich 2011; Thomsen 2014; see also note 2 above).

Figure 6. Within-party ideological heterogeneity
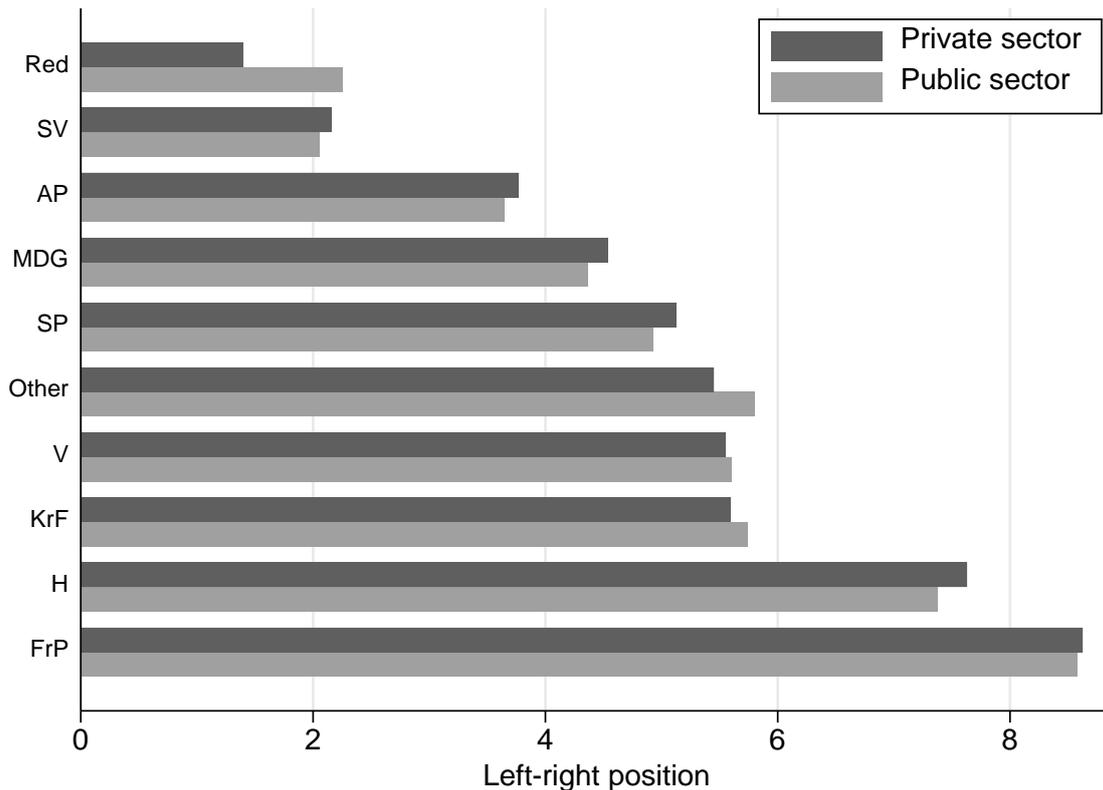
Notes. The bar chart displays the average left-right positions of council representatives working in the private sector/ not employed (blue bars) and representatives working in the public sector (central government, county government or local government). Left-right positions are measured by a standard survey instrument (cf. main text), and the representatives are classified by party affiliation (2015). In the diagram, political parties are sorted by the average scores on the left-right scale. Party codes: Red: Red Party; SV: Socialist Left Party; AP: Labour Party; MDG: Green Party; SP: Centre Party; Other: Other parties; V: Liberal Party; KrF: Christian Democratic Party; H: Conservative Party; FrP: Progress Party.

We pursue this issue further by estimating a series of regression models that focus on three specific local public policies: i.e. increasing property taxes (a key local revenue source), mergers with neighbouring authorities (a persistent debate in Norwegian local politics), and increasing local government spending. The results are presented in Table 6. Columns (1) and (2) corroborate the findings presented in Figure 6. Once we control for representatives' party affiliation in column (2), local government employees are on average situated merely 0.28

points to the left of private sector employees on an 11-point left-right scale. While the coefficient estimate is statistically significant, it is substantively small relative to the within-municipality standard deviation of 2.0. Furthermore, comparing this to the results in column (1), it is clear that the majority of any left-right difference between private and public sector employees is de facto absorbed by the ideological distinctions between parties.[12]

Table 6. Within party preference heterogeneity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Left-right positions		Property taxes		Municipal mergers		Public spending	
Not employed	-0.503***	-0.231**	0.0609*	0.0194	-0.0426	-0.0422	0.0182	0.0109
	(0.127)	(0.075)	(0.0285)	(0.0236)	(0.0297)	(0.0260)	(0.0201)	(0.0205)
Central gov.	-0.730***	-0.262***	0.0952**	0.0159	0.0143	0.0157	0.0410*	0.0293
	(0.147)	(0.079)	(0.0352)	(0.0295)	(0.0305)	(0.0280)	(0.0199)	(0.0204)
County gov.	-0.943***	-0.241	0.187***	0.0692	-0.0785	-0.0440	0.0654	0.0509
	(0.226)	(0.129)	(0.0465)	(0.0399)	(0.0604)	(0.0584)	(0.0354)	(0.0350)
Local gov.	-0.950***	-0.279***	0.132***	0.0279	-0.0737**	-0.0345	0.0346*	0.0190
	(0.101)	(0.065)	(0.0247)	(0.0220)	(0.0247)	(0.0229)	(0.0150)	(0.0153)
Other parties		-3.063***		0.369***		-0.209**		0.100*
		(0.226)		(0.0610)		(0.0764)		(0.0406)
Labor Party		-4.868***		0.742***		-0.147**		0.107***
		(0.109)		(0.0330)		(0.0456)		(0.0267)
Conservative P.		-1.002***		0.129***		0.198***		0.0160
		(0.101)		(0.0296)		(0.0415)		(0.0280)
Christian Dem P.		-3.013***		0.560***		0.000340		0.0190
		(0.137)		(0.0514)		(0.0583)		(0.0349)
Green Party		-4.279***		0.766***		-0.427***		0.0410
		(0.309)		(0.0694)		(0.118)		(0.0676)
Center Party		-3.608***		0.541***		-0.462***		0.0437
		(0.120)		(0.0434)		(0.0497)		(0.0318)
Soc. Left Party		-6.448***		0.911***		-0.227*		0.189**
		(0.166)		(0.0537)		(0.0915)		(0.0620)
Liberal Party		-3.135***		0.513***		0.0701		0.0221
		(0.170)		(0.0671)		(0.0739)		(0.0335)
Red Party		-7.246***		0.581**		-0.644***		0.0822
		(0.228)		(0.181)		(0.0951)		(0.0592)
Municipality FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	2,921	2,921	2,921	2,921	2,831	2,831	2,624	2,624
R-squared	0.232	0.740	0.319	0.547	0.388	0.520	0.202	0.224

Notes. The analysis is based on a survey to municipal council representatives in 2015. The reference groups are persons employed in private sector, and representing the Progress Party. The standard errors are robust standard errors, clustered on municipalities. Significance: *** p<0.001, ** p<0.01, * p<0.05

The remaining columns in Table 6 show statistically significant differences in policy preferences across occupational sectors for all models that do not include party fixed effects (i.e. columns 3, 5 and 7). However, the estimates in columns 4, 6 and 8 highlight that these

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[12] Similar findings have been documented for sex gaps in politicians' policy preferences (see Slegten & Heyndels 2020).

differences are always fully absorbed by individuals' party affiliation.[13] These results highlight that there exist very homogenous ideological profiles and policy preferences *within political parties* in our setting. This is important since it suggests that public sector employees' self-selection into politics (as documented in section 6) is unlikely to affect the overall positioning of political parties or lead to a misrepresentation of electoral preferences. As such, the political over-representation of public sector employees is likely to have at best a modest bearing on subsequent policy outcomes.

8. Policy outcomes and occupational misrepresentation

To evaluate whether public sector employees' political representation causes a shift in public policy outcomes, one could rely on a regression discontinuity design (RDD) exploiting close elections (Lee 2008; Eggers et al. 2015; Fiva & Røhr 2018). By comparing policy outcomes in situations where an additional public sector employee was narrowly elected / not elected, this approach has high internal validity and allows for causal inferences (Hyytinen et al. 2018). The results using this approach are summarized in Online Appendix B. While the estimates are very imprecise, they suggest that public sector representation has no statistically significant impact on public spending. Nonetheless, due to its focus on close elections the Local Average Treatment Effect estimates from an RDD may be conceptually much less than ideal in our setting (Hainmueller et al. 2015). Indeed, one would suspect that narrowly elected public sector employees – which in our dataset are ranked on average on the 6th position of the party ballot – are unlikely to be in a sufficiently influential position to sway budgetary allocations considerably.

We therefore turn to within-municipality variations in the representation of distinct types of public sector employees to estimate policy effects. While less rigorous in terms of causal inference than the RDD approach, this analysis is nonetheless of value for two reasons. First, we found no evidence that voters exhibit a preference for candidates with a public sector occupational background (see section 5.3). Second, comparing policy effects across distinct types of public sector employees within a given municipality keeps constant any local preference for candidates with a public sector occupational background (which could be

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[13] In auxiliary analyses not reported here, we show that these findings are unaffected by individuals working inside/outside their residential municipality. Hence, individuals' preference-based self-selection into specific political parties appears to be independent of workplace location.

correlated with preferences for higher spending). More specifically, we use individual-level register data for the 2003, 2007, 2011 and 2015 municipal council elections to calculate the share of elected representatives working for the central, county or municipal government. The latter group is furthermore differentiated by those working inside/outside the residential municipality. The 'double motive' hypothesis suggest that the latter group is of key interest (which is also supported by our results in Table 5). In Figure A.3 in the Online Appendix, we display the distribution of these variables within our sample.

Our regression models have total public spending per capita as response variable, and variables capturing public sector employees' representation in the municipal council as explanatory variables. We thereby link the representation level in a given election year (for example, 2003) to policy outcomes in all four years of the subsequent legislative period (for example, 2004-2008). The model includes municipality and year fixed effects, as well as controls for party seat shares, population size and composition as well as the effective number of political parties, and a dummy equal to 1 when the mayor and deputy mayor are from the same party.[14] Standard errors are clustered at the municipality level. The results are presented in table 7.

Column (1) of table 7 shows that total public sector representation (including public sector employees at all levels of government) has a weak, positive association with total government spending. Separating employees by level of government in columns (2) to (5), we find that *only* public sector representation of staff working and living in the residential municipality has a statistically significant coefficient estimate. This is confirmed when including all public sector representation shares simultaneously in the 'horserace' specification of column (6). The estimated effect size indicates that an increase from zero to full representation (0 to 1) increases spending by just over 4.000 NOK per capita, which amounts to nearly 30% of the standard deviation. Since approximately 25 percent of elected council members work for a residential municipal government, a simple back-of-the-envelope calculation suggests that legally excluding all of these from public office would induce a drop in spending of about 1.000 NOK per capita. With average municipal expenditures at roughly 80.000 NOK per capita, this constitutes a spending reduction of approximately 1.25%. This demonstrates that public sector representation on the whole is associated with a very modest public spending increase, and that ousting public sector representatives will induce at best a similarly small reduction in spending

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[14] Within municipality shifts in electoral preferences could in principle correlate with both public sector representation and budgetary outcomes. Adding political parties' seat shares as control variables mitigates the influence of this potential confounder since voters as well as parties appear unaware of, and/or uninterested in, public sector representation (see our results in section 5).

levels. The small magnitude of these public policy effects therefore is consistent with our analysis of representatives' policy preferences in the previous section.[15]

Table 7. Public sector employees' representation and size of government

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
	Elected	Elected	Elected	Elected	Elected	Elected	Elected	Placebo
All levels of gov.	2.943							
	(2.254)							
Central gov.		-0.110				0.813	2.878	-15.68*
		(3.575)				(3.594)	(4.151)	(8.299)
County gov.			2.808			3.683	4.336	18.38
			(5.201)			(5.271)	(5.267)	(14.71)
Municipal gov.				3.204				
				(2.628)				
Municipal gov., *work inside home mun.*					4.100*	4.302*	5.566**	-5.966
					(2.380)	(2.434)	(2.599)	(10.35)
Municipal gov., *work outside home mun.*					-2.115	-1.814	3.340	2.334
					(7.230)	(7.262)	(5.578)	(5.917)
Control								
Observations	6,354	6,354	6,354	6,354	6,354	6,354	6,302	
R-squared	0.901	0.901	0.901	0.901	0.901	0.901	0.903	

Notes. The table displays estimates of public sector representation on total local public spending per capita. Public sector representation is measured as the council share of representatives working in the public sector (measured as total, central, county and municipal government). Municipal public sector employees are also differentiated by working inside/outside their residential municipality. The 'placebo' in column (7) reflects the share of public sector employees on the candidate list that did *not* get elected. All models include controls for party seat shares (left-wing parties, other parties; right-wing parties as reference group), municipality and year fixed effects, municipal population size (including squared term), share of populations aged 0-5 years, 6-15 years, 67+ years, share of women, the effective number of political parties, and an indicator showing whether the mayor and deputy mayor represent different political parties. The standard errors (in parentheses) are clustered at the municipality level. Significance levels: *** $p<0.01$, ** $p<0.05$, * $p<0.1$

These results survive a several robustness checks. First, we re-estimated the models with all covariates excluded (except year and municipality fixed effects). This has negligible influence on the estimates. Second, we implement a placebo check using data on the share of public sector employees among the set of election candidates that failed to become elected. These *non-elected* candidates most likely have no influence on budgetary allocations. The

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[15] Hyyttinen et al. (2018) estimate very substantially larger effects in Finland. They calculate that one extra seat occupied by a municipal employee increases per capita total expenditures by approximately 1%. Since the average Norwegian municipality has 25 seats, our estimates instead suggest an increase in per capita total expenditures of 0.2% when one extra seat is occupied by a municipal employee. This difference gets even starker when considering that the estimates by Hyyttinen et al. (2018) reflect only the effect of narrowly elected municipal employees and thus could be a lower bound for potential effects of less marginal public sector representatives (which are included in our estimates).

insignificant estimates of these placebo variables – presented in the second section of column (7) – further substantiate the validity of the remainder of the results in Table 7.[16]

9. Conclusion

Many countries allow public sector employees to stand for political office. Our analysis shows that in such permissive legal frameworks public sector employees are substantially overrepresented on election lists – particularly on the top ranks. As a consequence, their overrepresentation among local elected representatives is even larger. We find little evidence that political parties use candidates' occupational background as a selection or signalling tool, nor that voters use it as a basis for their (personal) vote decision. In contrast, our results suggest that public sector employees' 'double motive' as *both* consumers *and* producers of public services makes them more interested in standing for election, more interested in high-ranked positions, and more interested in entering the councils. Indeed, exploiting detailed individual-level register data including the entire eligible Norwegian population across four elections, we show that shifting jobs between occupational sectors as well as changing work location given one's public sector occupation increases the probability to stand for election – confirming theoretical predictions based on our double motive hypothesis. This is consistent with the political overrepresentation of public sector employees being mostly driven by their *self-selection* into running for political office.

Our analysis is closely related to a large literature showing that public sector employees turn out to vote at higher rates than private-sector and self-employed individuals (e.g., Bennett & Orzechowski 1983; Jaarsma et al. 1986; Corey & Garand 2002; Bhatti & Hansen 2013) and vote with a significantly higher probability for left-wing candidates (e.g., Blais et al. 1990; Garand et al. 1991; Knutsen 2005; see, however, Jensen et al. 2009). However, their decision to stand for election and influence public policy as elected officials has been awarded much less attention. Our results suggest that this is an important oversight. Still, do our results imply that further constraints should be placed on the eligibility of public sector employees for political office? We think not – at least not in our Norwegian setting. The main reason is that public sector employees' self-selection into politics does not appear to lead to a substantial

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[16] We also replicated the same analysis with (the natural logarithm of) average municipal government employees' wages as the dependent variable. This provides substantively small and statistically insignificant point estimates for the share of public sector employees (see Table A.3 in the Online Appendix).

31

misrepresentation of the electorate's policy preferences. Indeed, we observe very homogenous ideological profiles and policy preferences *within political parties* in our setting, and a substantively small impact of representatives' occupational background on subsequent policy outcomes.

Our analysis brings up several possible directions for future research. First, while institutional arrangements were fixed within the time period of our analysis, analysis of historical data related to (changes in) eligibility restrictions on public sector employees might provide an interesting extension to our work. Second, we treat public sector employees as a homogenous group (except for the level of government that employs them). In reality, they are active across many different occupational categories, such as health- and social care, infrastructure, and so on. Future work could investigate whether policy effects of public sector representation might be sector-specific. Closely related, we abstain from analysing public sector employees' partisan affiliations. This leaves open the question whether differences in party discipline and/or centralization play a mediating role in the translation of passive into active representation. Finally, from an academic as well as policy perspective, it would be interesting to assess how our results are influenced by the exact characteristics of the institutional and electoral framework. One could imagine, for instance, that the higher level of competition for top-ranked positions at the national level provides increasing room for selection by party elites, while greater media coverage at that level mitigates opportunities for public sector employees' self-selection.

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ONLINE APPENDIX

The Political (Over)Representation of Public Sector Employees

Benny Geys, Zuzana Murdoch and Rune J. Sørensen

A. Legislative framework and robustness checks

Section 14 of the Local Government Act describes in detail who cannot stand for election in local (i.e. county and municipal) elections. The unofficial translation from the Norwegian original reads as follows:

> "*Disqualified from election are the county governor, assistant county governor, and any person who in the municipality or county concerned is the chief executive or the latter's deputy, is secretary to the municipal council or county council, is head of a branch of the administration, is responsible for the accounts of the municipality or county, or conducts the audit for the municipality or county authority. Nevertheless, the managers of individual undertakings are not disqualified from election.*"

The entire document can be accessed at https://www.regjeringen.no/contentassets/81a7befa78f04d358ace73997145d974/juni_2019_election_act_updated-01.03.2019.pdf

Figure A1. Ballot information on candidate characteristics
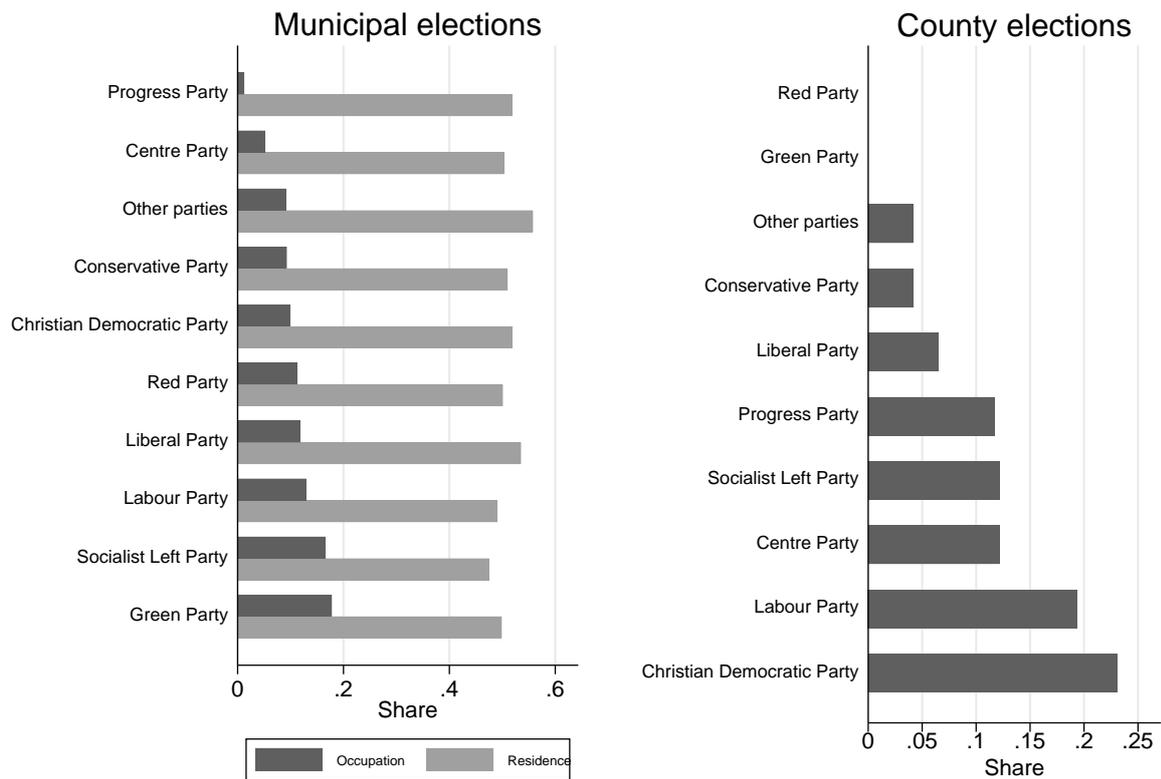
Notes. The diagrams shows the share of party lists with information on candidates' occupations and residence. The diagrams exploit data on the 2993 lists in the municipal council elections and the 230 lists in the county council elections (2015). In the county council elections, all candidates are identified by their home municipality. In the municipal county elections, the lists offer information on candidates' town or settlement area in the municipality.

Figure A.2. The impact of preferential voting conditional on ballot information
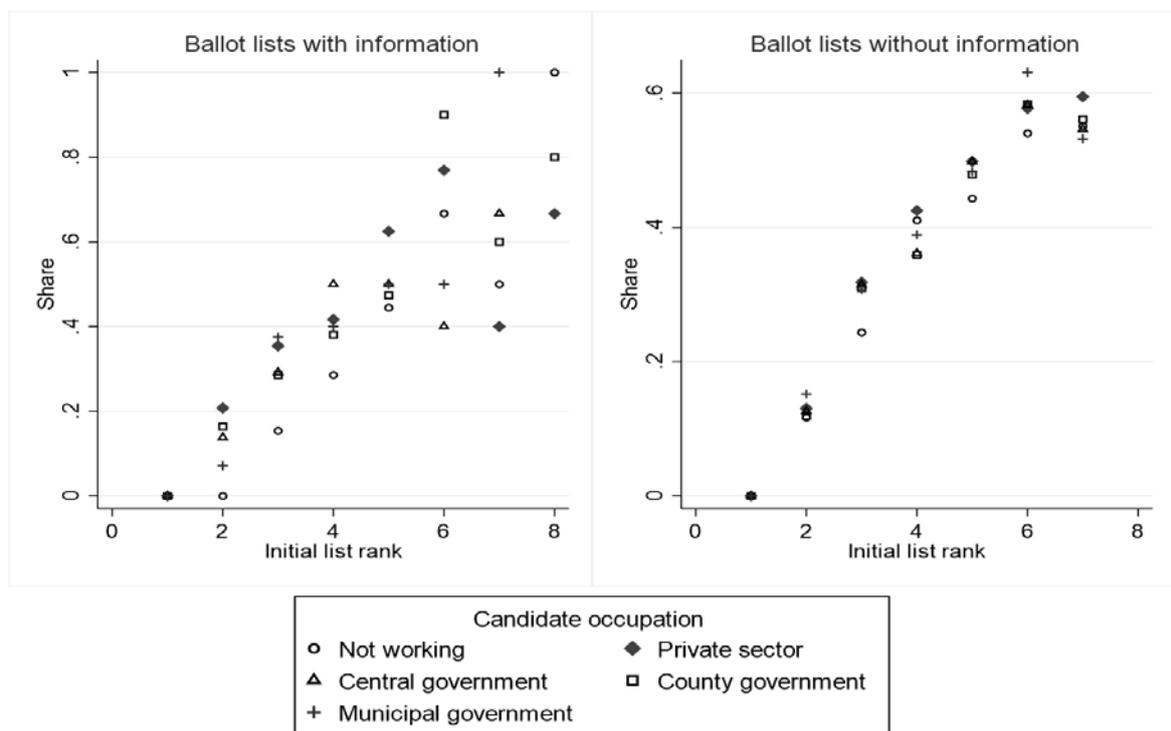
Notes. The plot displays the share of elected municipal council members getting a lower (=better) list rank, conditional on the initial rank. The share is defined by the difference between candidates' realized rank (after personal votes has been taken into account) and candidates' initial rank (as proposed on the ballot list), and a negative difference implies a lower rank position. The plot shows the share of council members with improved rank positions, conditional on sectoral affiliation and conditional on ballot lists including information of candidates' occupations. The graph covers the municipal council elections in 2003-2015.

Figure A.3. Distribution of public sector representation
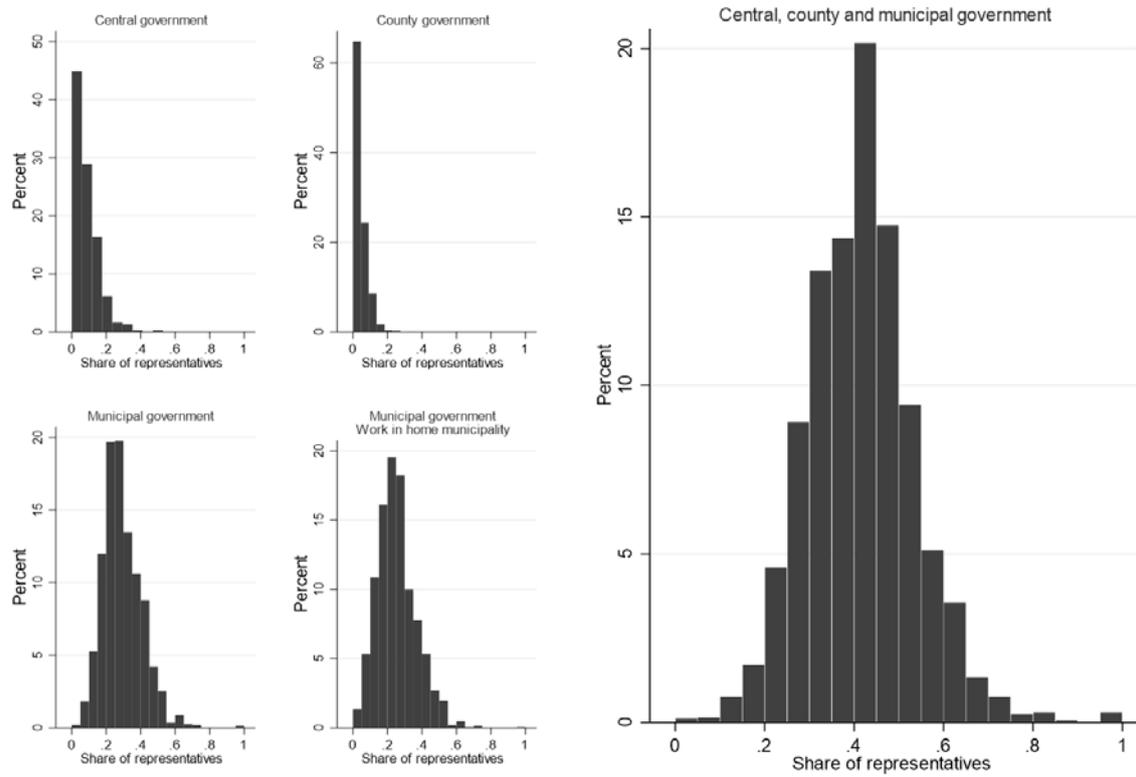
Note: The diagram displays the distribution of public sector representation across municipalities for the 2003, 2007, 2011 and 2015 municipal council elections. Public sector representation has been measured as the share of the total number of elected candidates in the council-year. The titles specify the types of public sector included in each of the five graphs.

Table A.1. Occupational sector and 'cumulated' candidates

	Municipal elections	County elections
Not	-0.00504***	-0.0893***
Employed	(0.00137)	(0.0112)
Central	0.00451*	-0.0194
Government	(0.00209)	(0.0184)
County	0.00537***	0.0884***
Government	(0.00160)	(0.0182)
Municipal	0.00598	-0.0117
Government	(0.00312)	(0.0193)
Observations	159,832	13,518
R-squared	0.644	0.167
Municipality FE	Yes	Yes
Party-rank FE	Yes	Yes

Notes. The table displays regression estimates using as dependent variable a dummy variable equal to 1 for party cumulated candidates. The analyses include data for the all candidates standing for local elections in the 2011, 2015 and 2019 local elections. The two regressions include fixed effects for party lists interacted with candidates' list rank, election year and municipality/county. The estimates indicate effects for occupational sector, using private sector employees as reference group. Significance levels: *** $p<0.001$, ** $p<0.01$, * $p<0.05$

Table A.2. Occupational sector and elected candidates

	Municipal elections		County elections		Municipal elections		County elections	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Not	0.0485***	0.0137*	0.0289***	0.00437	-0.0241**	-0.0130	-0.0076	0.0394
Employed	(0.00271)	(0.00560)	(0.00692)	(0.0216)	(0.0081)	(0.0129)	(0.0136)	(0.0394)
Central	0.0653***	0.0306***	0.0477***	0.00492	0.0138***	0.0032	0.0152	-0.0128
Government	(0.00378)	(0.00870)	(0.00916)	(0.0305)	(0.0037)	(0.0083)	(0.0094)	(0.0318)
County	0.0748***	0.0248	0.288***	0.157***	0.0215***	0.0058	0.0180*	0.0134
Government	(0.00603)	(0.0132)	(0.0168)	(0.0430)	(0.0035)	(0.0062)	(0.0065)	(0.0196)
Municipal	0.0931***	0.0375***	0.0487***	0.0251	0.0146**	0.0068	0.2680***	0.1549**
Government	(0.00381)	(0.00759)	(0.00924)	(0.0228)	(0.0056)	(0.0101)	(0.0244)	(0.0514)
List rank	**NO**	**NO**	**NO**	**NO**	**YES**	**YES**	**YES**	**YES**
Observations	205,845	128,771	19,011	8,927	224,947	148,134	19,101	9,072
R-squared	0.133	0.675	0.178	0.722	0.3235	0.7794	0.0805	0.7044
Individual controls	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	X	X	X	X	X	X	X	X
Municipality FE	X	X	X	X	X	X	X	X
Occupation FE	X	X	X	X	X	X	X	X
Party list FE	X	X	X	X	X	X	X	X
Individual FE		X		X		X		X

Notes. The table displays regression estimates using as dependent variable a dummy variable equal to 1 for elected candidates. The analyses include data for the all candidates standing for local elections in the 2007, 2011, 2015 and 2019 local elections. Columns (1)-(4) replicate Columns (5)-(8) from Table 4 in the main text for reasons of comparison. Columns (5)-(8) in an additional control for individuals' list rank. The estimates indicate effects for occupational sector, using private sector employees as reference group. Significance levels: *** $p<0.001$, ** $p<0.01$, * $p<0.05$

Table A.3. Public sector employees' representation and local public sector wages

	(1)	(2)	(3)	(4)	(5)
All levels of gov.	0.002				
	(0.004)				
Central gov.		-0.009			
		(0.007)			
County gov.			0.018		
			(0.013)		
Municipal gov.				0.003	
				(0.005)	
Municipal gov., *work inside home mun.*					0.004
					(0.005)
Municipal gov., *work outside home mun.*					-0.003
					(0.011)
Observations	5,136	5,136	5,136	5,136	5,136
R-squared	0.993	0.993	0.993	0.993	0.993

Notes. The table displays estimates of public sector representation on and (log) local public sector wages. Public sector representation is measured as the council share of representatives working in the public sector (measured as total, central, county and municipal government). Municipal public sector employees are also differentiated by working inside/outside their residential municipality. All models include controls for party seat shares (left-wing parties, other parties; right-wing parties as reference group), municipality and year fixed effects, municipal population size (including squared term), share of populations aged 0-5 years, 6-15 years, 67+ years, share of women, the effective number of political parties, and an indicator showing whether the mayor and deputy mayor represent different political parties. The standard errors (in parentheses) are clustered at the municipality level. Significance levels: *** p<0.01, ** p<0.05, * p<0.1

B. Regression discontinuity estimates of public sector representation

This appendix provides results from a Regression Discontinuity Design (RDD) to estimate the causal effect of public sector representation on local public policy outcomes. The analysis employs data on the municipal council elections in 2003, 2007, 2011, 2015 and 2019. We measure local public policy by total municipal government spending per capita. Let x denote election period – i.e. the periods 2004-2007, 2008-2011, 2012-2015, 2016-2019 – and let t represent years within each election cycles ($t=1,2,3,4$). We then estimate the following regression model.

$$Public\ policy_{ixt} = \beta_t Share\ of\ elected\ public\ sector\ employees_{ixt} + \theta_{xt} + \epsilon_{ixt} \quad (1)$$

Where the share of elected public sector employees refers to indicators of public sector representation in the municipal councils. We estimate effects separately for each year within the election cycle and hypothesize that $\beta_t > 0$. In line with Hyytinen et al. (2018), we exploit close elections to identify as good as random variation in the share of elected public sector employees. Using the 'Local Candidate Dataset' (Fiva et al. 2020) and following Fiva and Røhr (2018), we define the WinMargin for each candidate j on list l as follows for each municipal council in each election:

$$WinMargin_{jl} = \begin{cases} \dfrac{Poll_{jl} - Poll_{jl}^{S_l+1}}{Partyvotes_l} & if\ R_{jl} \geq S_l\ (\text{Elected candidates}) \\[4mm] \dfrac{Poll_{jl} - Poll_{jl}^{S_l}}{Partyvotes_l} & if\ R_{jl} < S_l\ (Not\ elected\ candidates) \end{cases}$$

Where 'Poll' measures the number of personal votes including candidates' potential cumulated status, which yields the basis for the within-party distribution of seats for a given list rank (R_{jl}). Let S_l denote number of seats the party won in the election, and the candidate won the seat if $R_{jl} \geq S_l$.

We restrict the analysis to cases where $abs(WinMargin_{jl}) < 0.01$, which represent extremely narrowly won/lost council seats. Figure B.1 below shows that these narrowly awarded council seats are well balanced over candidates' age, gender and work municipality.

Figure B.1. Balancing tests
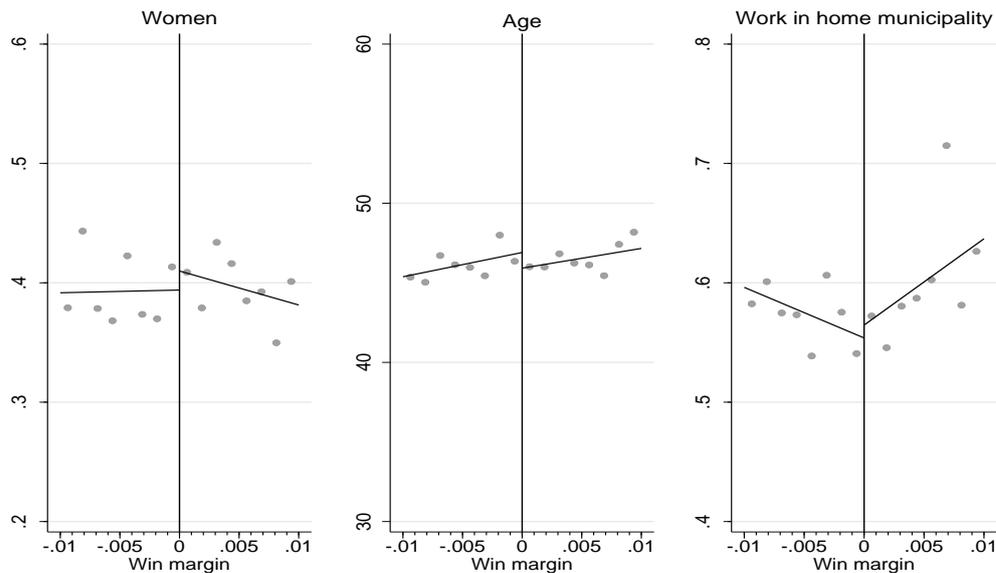
The graph displays balancing tests using a bandwidth of 1 percentage point.

We further limit the sample to cases where one of the candidates involved in a close race worked in the public sector and the other one did not. We thereby defines a new indicator variable PublicSectorVictory equal to 1 if the public sector employee was elected in th narrow contest (0 otherwise). Figure B.2 displays a binned scatterplot of this dummy variable against the win margin indicator. Defining $List_{xil} = 1$ as indicating lists including a close candidate contest as defined above, this allows us to construct an instrument variable as the share of lists l in each municipality-election where a public sector candidate was (barely) elected:

$$Instrument_{xi} = \frac{\sum_l PublicSectorVictory_{xil}}{\sum_l List_{xil}}$$

This yields the first-stage regression equation:

$$Share\ of\ elected\ public\ sector\ employees_{ix} = \gamma_t Instrument_{ix} + \vartheta_{xt} + \varepsilon_{ix}$$

The predicted values of this model can then be used in equation (1) to identify the causal effect of public sector representation on total public sector spending per capita. We display the resulting estimates in Figure B.3 for total public sector representation (top panel), municipal public sector employees (middle panel) and public sector employees working and living in the residential municipality (bottom panel). The F-test statistic for the first stage exceeds 30 in all specifications. The estimates of interest in all cases are negative, but precision is very low.
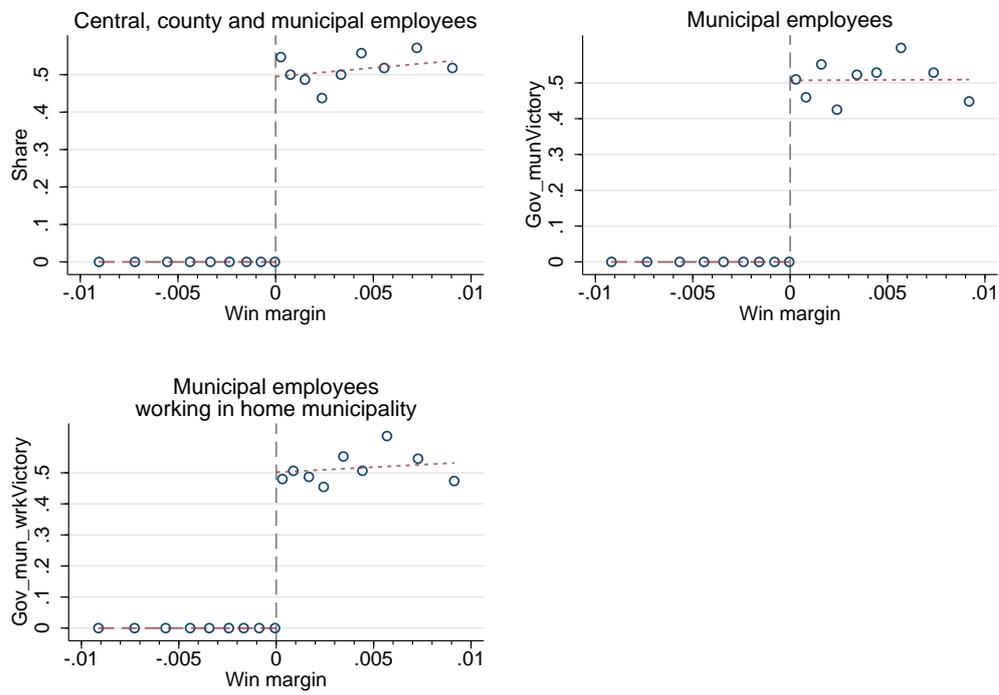
Figure B.2. RD regression plot

Figure B.3. The impact of public sector representation on public policy