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ABSTRACT

Young versus Old Politicians in Local Politics*

Do young politicians prioritize other types of municipal spending than old politicians? We study this question using hand-collected candidate-level data on municipal elections (1996-2020), along with detailed administrative data on municipal spending in Bavaria. Our identification strategy makes use of within-party candidate-level races for marginal seats. Our findings indicate that municipalities with a higher proportion of young councilors allocate more resources to social spending. Further analysis reveals that this social spending increase is primarily driven by the expansion of public child care. Exploring mechanisms, we find evidence suggesting that young councilors affect policy choices in- directly through between- and within-party bargaining.

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1 Introduction

Three recent crises have brought implicit divisions and even outright conflicts between generations to the forefront of the political discourse. The young are more worried about climate change than the old (BBC, 2021). During the Covid-19 pandemic, far-reaching restrictions were imposed on children and young adults, ostensibly to protect the elderly (Financial Times, 2020). In the Brexit vote of 2016, young British voters were in favor of remaining in the EU, but were outvoted by older voters (Norris, 2018).

Will the interests of the young or those of the old ultimately prevail in the political arena? It is to be expected that the interests of the young receive an ever diminishing weight in politics in ageing societies. Yet, the young's interests could be undervalued even at a more fundamental level given the age profile of policymakers, who tend to be much older than their constituents. For example, only 17.5% of national parliamentarians across the globe were below 40 years in 2021 (Inter-Parliamentary Union, 2021) whereas the global median age was 30 years.[1]

In this paper, we study whether the overwhelmingly old political class might disregard the preferences of the young (irrespective of whether or not the underlying electorate is old or young). In other words, would replacing an older politician by a younger (but otherwise similar) colleague result in different policy choices?

On the one hand, it seems plausible that such a replacement would have substantive effects in view of the theoretical literature on political selection, which argues that in a world with imperfect electoral accountability, politicians have the ability to steer policies towards their own preferences and away from those of their electorate (Besley, 2005). In turn, voters should take the characteristics of candidates into account when they cast their vote, thereby indirectly influencing policy choices. This link between candidate selection and policy choices is modeled explicitly in citizen-candidate models (Besley and Coate, 1997; Osborne and Slivinski, 1996).

On the other hand, the age of politicians might be irrelevant for policy choices. Even older politicians might consider the welfare of the young because they are altruistic towards

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[1] https://ourworldindata.org/age-structure

younger generations (or because they are concerned about the welfare of their own children and grandchildren). Also, older politicians may invest in the future of younger generations because they, too, benefit from such investments. Various theoretical models are consistent with this perspective. Poutvaara (2004) develops a model in which investing in the education of the young makes fixed factors owned by the old (such as land) more valuable. Monten and Thum (2010) argue that (fiscal) competition for young inhabitants between jurisdictions might force old politicians to take the policy preferences of the young into account.

Furthermore, office-motivated old politicians might target young voters if they are more likely to be swing voters (Cox and McCubbins, 1986; Lindbeck and Weibull, 1987).[2] Finally, it is unclear whether the selection of young politicians is representative of the broader population of young citizens – young politicians might have characteristics and preferences that differ from those of the typical young voter.

Given this theoretical ambiguity about the substantive implications of the underrepresentation of the young in politics, we study in this paper whether local councils in Bavaria with a higher share of young councilors – which we define to be candidates below or equal to 40 years – spend more on policy areas that are important to the young.[3] We hypothesize that the underrepresentation of the young among local politicians shifts budget allocations away from items valued by young voters. One key budget item valued by the young in Bavaria is arguably social protection (referred to as "social spending" in the following). If young politicians are more likely to represent the interests of young residents, social spending should increase in councils with more young politicians, particularly due to an increase in child care spending.[4]

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[2]Empirical evidence indeed suggests that the young are more flexible in their voting decisions (Jennings and Markus, 1984; Rekker, 2022).

[3]Of course, to make definite normative claims, one would need to rule out that younger citizens make suboptimal choices and that, therefore, older politicians act paternalistically.

[4]Social spending at the municipal level includes spending on families, social work, or municipal retirement homes. It usually does not include welfare payments for which the counties are responsible. While some subcomponents are negligible or only assume non-zero values in a small fraction of municipalities, the largest and most

Social spending will be higher (i) if young councilors share the same interests as the broader young electorate and (ii) if they are effective in the council once they are elected. Based on survey data from Schmid (2019), we find suggestive evidence for age-specific differences in stated priorities of councilors in Bavaria. Senior citizens and their interests are less important for young councilors than the preferences of the young.[5] As such, it appears that young councilors indeed share the interests of young residents, and thus should cause social spending to rise once they enter the council. What is less clear, however, is whether young councilors can be effective in tilting budget policies in councils dominated by older politicians.

We combine unique hand-collected data on candidates for local council elections with highly detailed administrative data on local fiscal policy in the German state of Bavaria.[6] The hand-collected data includes information on list, name, birth year, occupation, votes, initial list rank, and final list rank for candidates running in elections over the period 1996-2020. This data allows us to implement a credible identification strategy and to disentangle the effect of age on fiscal policy from other councilor characteristics. The administrative data on fiscal outcomes was obtained by the Bavarian Statistical Office, which – besides data on total spending and revenues – also provides local spending data on various fine-grained spending items. Thus, we can examine fiscal priorities across different policy domains. Another major advantage of the Bavarian setting is the large number of municipalities, which ensures that we have sufficient statistical power although we implement a quasi-experimental empirical design via close elections. Furthermore, councils are relatively small, so that one or a few more young councilors who win a close election can significantly shift the age profile of a council.

One important concern is endogeneity: E.g. councils with many young members may be located in municipalities with younger populations. Any effect of the council's age composition

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widespread subcomponent of social spending refers to public child care. Due to this heterogeneity and variation in target groups, we focus on such subcomponents in the main estimations.

[5]See in Figure A.5 in the online appendix.

[6]We hand-collect municipal election data as there is no official source that centrally collects this data. Baskaran and Hessami (2023) describe in detail how the data was collected for the 2002, 2008, and 2014 election. We extended this data collection effort for the 2020 election using the same procedure.

on policy choices may be due to councils pandering to younger electorates rather than due to the age of the councilors. To address such endogeneity concerns, we implement an IV design based on candidate-level races for marginal council seats, i e. seats that were closely contested.

More specifically, the Bavarian local electoral system combines a party-level proportionality rule with candidate-level preferential voting. Parties receive council seats roughly equivalent to their vote share. Which candidates receive the seats won by a party depends on how many preferential votes each candidate has obtained. Those candidates with a large number of preferential votes are typically clear winners while those with a particularly small number of preferential votes are clear losers. But some candidates win their seat only barely because their number of preferential votes was only marginally higher than the number of preferential votes of candidates who did not win a seat. Similarly, some losers only lost barely. We refer to these candidates and the seats over which they compete as *marginal*. If candidates who compete for marginal seats are above and below 40 years old (our baseline threshold to delineate "young" and "old" councilors), the share of young councilors will vary for quasi-exogenous reasons, depending on the share of candidates below 40 who win a marginal seat.

In other words, races for marginal seats resemble random draws from an urn (Hyytinen et al., 2018; Meriläinen, 2022). Thus, we can calculate the expected number of young winners of races for marginal seats within a party. If races are fair, the expected number of young winners will be proportional to the number of young candidates contesting in marginal races. However, in reality there will be deviations from the expected number of young councilors due to randomness. We use the sum of these deviations – i. e. the difference between the expected number of young winners and their actual number – as an instrument for the share of young councilors in a municipality. In essence, the instrument can be interpreted as the seat share of young councilors who unexpectedly win a marginal seat.

We find that an exogenous increase of 10 ppts in the share of young councilors (corresponding to 1.6 additional young councilors in a median-sized council with 16 seats) causes an

increase in the share of social spending (relative to total local spending) by 0.7 ppts.[7] Further analysis indicates that this effect is driven by spending on child care, which accounts for about half of social spending in Bavarian local budgets.

This result is robust across a range of sensitivity analyses. We obtain an expected pattern for the results when we use age thresholds other than 40 years to define young councilors: Coefficient estimates remain positive and significant for ages close to 40 and turn insignificant for particularly small or high age cutoffs. The results are also similar to the baseline when we focus on increasingly closer elections. They are also robust to using spending per capita instead of spending shares as dependent variable. The results are further confirmed by placebo regressions as well as a set of additional robustness tests.

We also rule out that important councilor characteristics correlated with age – rather than age itself – are responsible for the results. First, we show that the instrument is not systematically related to the share of women councilors, ruling out gender as a confounding characteristic. We also find that the effect is unlikely to be confounded by differences in educational attainment between young and old councilors. Differences in political affiliations between young and old councilors can also not explain the baseline findings.

Regarding mechanisms, we do not find that a higher share of young councilors causes more social – and in particular child care – spending because the voting power of young councilors increases. An additional young councilor is not more effective in councils that already have a high share of young councilors. Instead, this result suggests that young councilors promote social and child care spending in council meetings indirectly. We also find further evidence consistent with the notion that young councilors affect policy indirectly: young councilors are most effective in small councils, in councils with few parties, and when they belong to the largest party in the council. These findings indicate that young councilors influence policy choices through between- and within-party bargaining.

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[7]Given an average social spending share of 8.5%, this represents an increase by 8.2%. Note that 22.5% of councilors are at most 40 years old in our sample.

In addition, we find that a young councilor is particularly effective when few other councilors with a plausible preference for higher social / child care spending are in the council. More specifically, the marginal effect of an additional young councilor is higher in municipalities where there are few women in the council and in municipalities with relatively old mayors.

This paper contributes to various strands of the literature. First, it directly contributes to the literature on politicians' age and policy choices. Despite the growing importance of intergenerational conflicts, the effect of politicians' age on policy choices has received little attention.[8] Early contributions include Alesina et al. (2018), who find that young mayors induce stronger political budget cycles in total spending than old mayors in Italy. Curry and Haydon (2018) find that older members of the U.S. House of Representatives introduce more bills on issues that are relevant for the elderly. More recently, Dahis et al. (2022) show that young mayors in Brazil reduce deforestation and greenhouse emissions.

The study most closely related to ours is arguably McClean (2023) which explores how the composition of local spending differs between municipalities with old and young mayors in Japan. He finds that municipalities with young mayors spend more on welfare for young families and on investments. One key difference between our paper and McClean (2023) is that we focus on local councils. Unlike mayors who hold a singular powerful office and typically enjoy wide executive autonomy, councilors are members of a deliberative body where they have to convince fellow councilors.[9] Whether and how young politicians can influence policy in deliberative bodies where they are typically a minority is unclear.

Our paper is also related to studies on age-specific differences in policy preferences. Sørensen (2013) shows that preferences for spending on pensions, education, and health care vary with the age of voters. Andor et al. (2018) find that the old are less concerned about climate change and allocate fewer resources to environmental policies. Ahlfeldt et al. (2021) find

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[8]Reasons for the underrepresentation of the young in politics have been studied more extensively. For example, Stockemer and Sundström (2018) find that electoral systems and rules play a role. In particular, proportional representation and lower entry age thresholds lead to more young members of parliament.

[9]Also, while mayors propose and draft budgets, local councils ultimately approve budgets.

that young Swiss voters are more likely to support initiatives related to environmental issues and other initiatives that benefit their generation. Busemeyer and Lober (2019) find that the elderly are less likely to support spending on education when this implies pension cuts. Similarly, Cattaneo and Wolter (2009) find that senior citizens are less willing to allocate spending to education using Swiss survey data.[10] Overall, the literature suggests that intergenerational differences in spending priorities indeed exist.[11]

Finally, our paper also contributes to the broader literature on political selection which has hitherto focused on the effect of candidate characteristics other than age on policy choices (Besley, 2005).[12] From this literature, the closest related paper is Baskaran and Hessami (2023) which studies the effect of female councilors on the local provision of child care in Bavaria. The paper finds that municipalities with a higher share of women in the council expand child care spots more quickly. Given that our paper is situated in the same setting, this finding raises the concern that the effect of young councilors on social spending (of which child care spending is an important component) is confounded by gender, i. e. that younger councilors are more likely to be women and that, in turn, it is their gender rather than their age which drives the increase in child care spending. However, as mentioned above, robustness tests provide no evidence for this: A higher share of young councilors who win close elections – our instrument – is not significantly related to the share of female councilors in a municipality.[13]

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[10]Descriptive evidence indeed suggests that an older population is associated with lower spending on universities in German states (Oberndorfer and Steiner, 2007).

[11]Fiva et al. (2023) also show that young politicians in the Norwegian parliament raise other issues in legislative speeches (childcare, schools) than old politicians (health care) within the same party. It thus appears that politicians' policy priorities are shaped by their personal circumstances and preferences.

[12]E.g. gender (Hessami and Lopes da Fonseca, 2020), occupation (Hyytinen et al., 2018), education (Sørensen, 2023), ethnicity (Franck and Rainer, 2012), caste (Pande, 2003), regional origin (Hodler and Raschky, 2014).

[13]Note that there is also a more loosely related literature that focuses on the composition of corporate executive boards and company performance, e.g. the share of women in boards (see Baltrunaite et al. (2023)).

2 Background

2.1 Local governments in Bavaria

2.1.1 Tasks and responsibilities

There are 2,056 municipalities in Bavaria: mostly villages and small towns and a handful of large cities. Municipal self-governance is a key trait of state organization in Germany. While there are state-level mandates, municipalities enjoy wide autonomy in their fiscal policy. Each municipality decides on its local tax rates (notably for local property and business taxes) and the allocation of spending. The state government provides grants and distributes a share of income and sales tax revenues to municipalities (Hopp-Wiel and Dülk, 2016).

Every year municipalities prepare a budget draft which includes all spending and revenues, as well as business and property tax multipliers. The process is typically initiated by the mayor and prepared by the finance department of the municipality (*Kämmerei*). The decision on how much to spend on each item is reached after several rounds of discussions in either the municipal council or in a subcommittee. The final decision is taken by the council in a public meeting (Hopp-Wiel and Dülk, 2016).

2.1.2 Local political institutions

The council is the main political body (*Hauptorgan*) of a municipality setting the broad objectives for the local administration. Municipal councils in Bavaria are elected every six years. The size of a council is a function of municipal population size. Most Bavarian councils are small. As Figure A.6 shows, councils range from 8 seats in small villages to 80 seats in Munich, the state capital. Both large national parties (notably CSU, SPD, and Greens) as well as local voter initiatives participate in local elections.[14] Voter initiatives typically have local agendas

[14]Table A.5 of the online appendix shows that among the national-level parties, the largest share of candidates runs for the CSU.

8

and often focus on single neighborhoods within a given municipality or to specific candidate characteristics such as gender or age.[15]

Besides the council, the other important local office is the mayorship. Mayors are elected on the same election day as councilors. They run in a personalized campaign but are supported by one or several lists.[16] The position of the mayor in Bavaria is relatively strong, compared to other states, such as Hesse (Hessami, 2018): a Bavarian mayor is the head of the administration and has a veto on council decisions.[17]

2.1.3 Open-list elections of councils

Municipal councils are elected via an open-list system, sometimes referred to as preferential voting. Before the election, parties decide on a list of candidates. Each candidate receives an initial rank on the list. Voters have as many votes as there are seats in the council. It is possible to split votes across several lists (*Panaschieren*) and to cast as many as three votes on a single candidate (*Kumulieren*).

Parties receive seats in the council roughly proportional to their overall share of votes. Candidates are then ranked according to their personalized votes. Candidates with a rank smaller or equal to the number of seats won by their parties receive a seat in the council (Baskaran and Hessami, 2023).[18] This within-party seat distribution rule provides the core of our identification strategy (see Section 4 for further details).

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[15]For example, *Junge Liste* (Young list) or *Frauenliste* (Women's list).

[16]Candidates can run for large supraregional parties or local lists. We use the terms party and list interchangeably in the following.

[17]Due to the importance of the mayor for local decision making, we examine the interaction of young councilors and young mayors explicitly in Section 6.

[18]The initial list rank of a candidate thus has no direct impact on whether she receives a seat in the council. Naturally, there are indirect effects of greater visibility at the top of the list. In addition, the initial rank might signal candidate quality and motivation for office.

3 Data

3.1 Candidate-level data

To estimate the effect of young councilors on municipal spending, we rely on a unique hand-collected dataset on local election results for the German state of Bavaria for 1996, 2002, 2008, 2014, and 2020. Information on candidates is not available from a centralized source. As such, we assembled this data by hand using various sources, notably by contacting municipalities individually, by relying on official (online) publications, and information provided in local newspapers. As Figure 1 shows, the coverage of the data varies across election years and is generally sparser for elections further in the past.

[Figure 1 goes here]

Our data includes candidates' name, list, initial list rank, final list rank, and number of votes received. For a subset of candidates, we have information on occupation and birth year. We infer gender and education from candidates' names and occupation, respectively. In total, the dataset includes information on 402,955 candidates for 1996-2020. We calculate candidates' age as election year minus birth year.[19] Candidates who run more than once are matched within municipalities across years to recover missing information on birth years. The matching is based on first name, last name, and list. Due to minor misspellings and small deviations in candidate or party names, we use a fuzzy match.[20] Especially for 2008 and 2014, the fuzzy match increases the coverage of candidates' age substantially.[21] After the matching, data on age is available for 203,142 candidates, or 50.4% of the full sample.

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[19]Since information on exact birthdays (i.e. day and month) is not available, this results in measurement error for small age differences of competing candidates. A candidate born in December is of basically the same age as a candidate born in January of the following year. In our calculation the age difference would be one year, however.

[20]For details on the matching procedure see Section A.4 of the online appendix.

[21]Note, however, that with regard to the final IV sample the effect is limited. Age was identified for only 0.6% of the candidates in the IV sample through the matching procedure (540 out of 88,000 candidates).

Figure 2 displays the age structure of Bavarian councils and contrasts it with that of the overall Bavarian population. From 1996 to 2020, the average age of councilors in our sample has increased from 47 years to 50 years, as subfigure (a) shows. About 22.5% of councilors are at most 40 years old (see subfigure (b)). Subfigure (c) illustrates the age structure of Bavarian councils based on our hand-collected sample compared to the age structure of the Bavarian population in 2014. Councilors are on average almost 50 years old and thus noticeably older than the general Bavarian population with an average age of 42 years. The age distribution shows a strong overrepresentation of citizens in their forties, fifties, and sixties.

[Figure 2 goes here]

3.2 Municipality-level data

We obtain annual data on municipal finances from the Bavarian Statistical Office, i.e. total spending, total revenue, total tax revenue, and total debt of municipalities.[22] In addition, we use detailed spending data on e.g. schools, construction and traffic, or culture. These categories are subdivided further so that we can zoom in on e.g. spending on different types of social policies (child care, asylum funding, family support, etc.). Data is available for 1996 to 2021, and thus covers all years of the four six-year legislative periods between 1996 and 2014. For the 2020 election, we have two years of outcome data on municipal spending.

Considering all Bavarian municipalities, the largest municipal spending category is general finance, accounting for 45.4%.[23] Other large categories are the promotion of economic activities (12.3%) and infrastructure (10.5%). In our analysis, we focus on social spending (see Table A.6 for a description of the major outcome variables on municipal spending). It ac-

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[22]We also obtain information on municipality demographics (population, population ≤ 14 years, population 15 - 65 years, population ≥ 65 years) and other characteristics such as the area in square km.

[23]General finance (*Allgemeine Finanzwirtschaft*) includes e.g. transfers to other levels of administration, interest on debt, or the accumulation of reserves.

11

counts for 7.8% of municipal spending. Social spending includes e.g. spending on child care, spending on youth facilities, spending on retirement homes, or support for families.[24]

4 Empirical model

4.1 Structural relationship

Using municipality-year data, the structural relationship we want to estimate is:

$$y_{i,t} = \alpha + \beta \, Young \; councilor \; share_{i,t} + \lambda_i + \gamma_t + \varepsilon_{i,t}. \tag{1}$$

$y_{i,t}$ is one spending category (as % of total municipal spending) in municipality i in year t. First, we explore the share of social spending in total spending. Second, we divide social spending in spending for child care – the main individual component of social spending – and all other types of social spending. *Young councilor share* is the share of councilors below or equal to 40 years of age.[25] In Section 5.3.2, we provide details on why this is our preferred age threshold and investigate whether our results are robust to alternative age thresholds.

To account for time-invariant municipality characteristics and year-specific effects, we include municipality fixed effects λ_i and year fixed effects γ_t. Standard errors are clustered at the municipality level. While we have annual information on outcomes, the share of young councilors is constant over legislative periods.[26] We combine these two dimensions and obtain a dataset in which outcomes vary annually and the treatment varies every six years.

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[24]Summary statistics on these variables for municipalities in the estimation sample are provided in Table A.7 in the online appendix.

[25]Alternatively, we use the median and average age to capture the age composition of the council. Results are qualitatively similar, albeit less precisely estimated.

[26]We calculate the share of young councilors at the beginning of the legislative period.

4.2 IV design

4.2.1 Endogeneity concerns

One key concern with Equation (1) is that unobserved municipality characteristics affect both the share of young councilors and local fiscal policy. For example, councils with many young councilors might be more common in smaller or more rural municipalities where barriers to entry into local politics are lower. Alternatively, councils with many young councilors could be located in more urban areas where the electorate is more open towards younger politicians. In addition, rural municipalities might provide different public goods than urban municipalities.

Reverse causality may also play a role. Voters might be more likely to elect younger councilors specifically in those municipalities where social or child care spending is particularly low to begin with and where there is more room for spending increases on these items.

4.2.2 Instrument and first stage

To address the potential endogeneity of the share of councilors below or equal to 40, we use an IV approach in the spirit of Hyytinen et al. (2018) and Meriläinen (2022). In an open-list system, candidates of different ages compete for the council seats won by their list based on the number of the preferential votes obtained. Some of these candidates have won a seat only barely (since their number of preferential votes was only marginally higher than for competitors who did not win a seat) while others have barely failed to win a seat (since their number of preferential votes was only marginally smaller than for competitors who won a seat).

How many young councilors will win marginal seats depends on the number of young councilors competing in such races. In expectation, the number of young winners should be proportional to the number of young candidates competing in marginal races. In practice, however, there will be random deviations between the expected and the actual number of young winners. As such, we can use the deviations as a quasi-exogenous instrument for the overall share of young councilors. This identification strategy is similar to strategies that use close races for the last seat per list (Clots-Figueras, 2011, 2012; Bhalotra and Clots-Figueras, 2014).

13

However, instead of considering only one last seat, our strategy takes into account that there could be more than one closely contested seat per list and more than two candidates competing for such seats. We show in Section 5.3.4 that this strategy improves the precision of our estimates and provides a stronger first stage relative to using only the last seat per list.

The instrument is calculated in three steps.[27] First, we identify candidates competing for marginal seats within each list. We define the pivotal number of votes to enter the council by taking the average of votes between the last candidate to enter and the first candidate to not enter the council. We then calculate all candidates' vote distances to this threshold. In our baseline, candidates compete in close races if their absolute vote distance is less than or equal to 0.3% of total list votes, i.e. three out of a thousand votes.[28] Subfigure (a) of Figure 3 shows the number of candidates competing in close races. Conditional on having a close race, in most cases close races involve two candidates. But, as mentioned, there are also cases in which three, four, or even more candidates compete in close races.

Second, we calculate the within-list deviation of the number of young councilors from its expected value. We can calculate the expected number of young councilors because close races for marginal seats are akin to draws from an urn.[29] Consider a list where two seats are marginal, i.e. were won with a close margin, and where two young and two old candidates compete for the two marginal seats (i.e. had a number of preferential votes close to the seat threshold). The expected number of young candidates entering the council on the two marginal

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[27]We provide an example on how to calculate the instrument in Appendix A.2. Additional details on its construction are described in Hyytinen et al. (2018) and Meriläinen (2022).

[28]This corresponds to an average absolute distance of 115 votes. The average close candidate receives 2,370 votes. That is, the distance to the election threshold for the average close candidate is 4.85% of her votes. The average list receives 30,840 votes. The most extreme case of closeness is a tie between two or more candidates where the decision is reached by drawing lots. In our sample, this is rare and only occurs in 20 cases.

[29]The expected number of young councilors stems from a hypergeometric distribution. This distribution is used to determine the number of draws of young councilors without replacement. The expected number of young councilors is given by $\left(\frac{Y}{T}\right) \times n$ where Y is the number of young candidates in close races, T is the number of total candidates in close races, and n is the number of close seats.

seats is one. In reality, there are quasi-random deviations from the expected number of young councilors. If both of the above young candidates obtain a seat, this unexpectedly increases the number of young councilors. We calculate the difference between the expected and the actual number of young councilor for each list that had closely contested marginal seats.

Third, we aggregate the list-level deviations to the municipality level. The sum of deviations is normalized by council size. Thus, the instrument can be interpreted as the seat share of young councilors who unexpectedly won in close races. In the example above, one young candidate unexpectedly enters the council on one of the lists. Suppose the council has six seats. Since there are no unexpected deviations on other lists, the instrument takes on the value 16.67, i.e. one out of six councilors is a young councilor obtaining her seat purely by chance.

The distribution of the instrument is roughly symmetric and centered around zero (see Subfigure (b) of Figure 3). Negative values indicate that fewer than expected young candidates entered the council on marginal seats. Positive values indicate that more than expected young candidates entered the council. The symmetrical distribution of the instrument shows that young candidates are not more or less likely to win or lose in close races.[30]

What if candidates in such close elections are of similar age? This would attenuate the extent of the age treatment since those candidates likely share similar policy preferences. Subfigure (c) of Figure 3 shows the distribution of age differences between candidates in close races. There is substantial variation in age differences between the youngest and the oldest candidate in close races. The average age difference is 16 years. Thus, close races seem to take place between candidates of considerably different age.

[Figure 3 goes here]

The first-stage specification for our IV design is as follows:

$$Young\ councilor\ share_{i,t} = \alpha + \beta\ Unexpected\ young\ councilor\ share_{i,t} + \lambda_i + \gamma_t + \upsilon_{i,t} \quad (2)$$

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[30]Among the lists of major parties, variation in the instrument stems mostly from CSU and SPD. The distribution of the instrument is depicted separately for each major list in Figure A.7 of the online appendix.

where *Young councilor share$_{i,t}$* is the share of young councilors in municipality i in year t. *Unexpected young councilor share$_{i,t}$* is the seat share of young councilors who unexpectedly won in close races in municipality i in year t. λ_i and γ_t are municipality and year fixed effects.[31] A higher seat share of young councilors who unexpectedly won in close races results in a higher young councilor share (see first-stage results in Section 5.1).

4.2.3 IV sample

Our IV design relies on the availability of age information for all councilors and for non-elected competing candidates. As we do not know the age of all candidates, we can only use a subset of municipality-election pairs for identification. Furthermore, we include municipality fixed effects in our regressions. As we have full coverage of municipalities only for 2020 this excludes the municipalities with data only for this election. In total, we use data from 1,145 council elections in 355 municipalities. The local councils in our IV sample are typically small.[32] Figure A.8 of the online appendix shows that municipalities in our IV sample are located all over Bavaria and are not geographically clustered.

4.2.4 Instrument validity

The second core assumption regarding the instrument is that it must affect the outcome only through the share of young councilors, i.e. it must be unrelated to the error term of the second stage. The seat share of young councilors who unexpectedly won in close races is plausibly

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[31]We include municipality fixed effects due to the persistence of social spending and the relatively small size of the IV sample. As such, the relative impact of young councilors would be difficult to detect if we do not account for persistent differences between municipalities. That is, including municipality fixed effects results in more precise estimates. To test the robustness of our results, we replace municipality fixed effects with county fixed effects and obtain qualitatively similar findings. Results are collected in Table A.9 of the online appendix.

[32]One exception is Regensburg which is included in the sample. Munich, Nuremberg, and Augsburg, the three largest cities in Bavaria, are not in the IV sample. The main reason is the unavailability of information on councilors' age in these cities. In addition, we exclude all larger cities (*Kreisfreie Städte*) to ensure that our results are not driven by agglomerations. Results are qualitatively similar.

quasi-random. That is, the age of candidates who end up competing for the marginal seats of their party is plausibly unrelated to municipal spending patterns. Moreover, in open-list elections the number of seats obtained by a party and the identity of the councilors winning close elections are unknown when the list is assembled. In line with this, we show in Online Appendix A.1, that the instrument is neither systematically related to lagged values of the outcome variables nor to lagged municipality characteristics.

Using seat shares of young councilors who unexpectedly won in close races as an instrument is conceptually related to regression discontinuity designs with close elections. Marshall (2022) shows that such designs capture not only the effect of the specific characteristic in question (in our case age) but potentially also the effect of other candidate characteristics. We show further below that personal characteristics other than age, notably gender and educational attainment, are not systematically related to our instrument. Yet, we naturally cannot rule out imbalances in all (unobservable) characteristics. As a consequence, we interpret our findings below as the joint effect of councilors' age and all other characteristics correlated with age.

5 Results

5.1 Share of young councilors and local social spending

Model (1) in Table 1 reports the first-stage IV results. There is a strong and statistically significant relationship between the instrument and the young councilor share. An increase in the gap between the expected and actual seat share of young councilors by 10 ppts raises the young councilor share by 10 ppts. Given an average young councilor share of 22%, this is substantial.

Model (2) in Table 1 collects the second-stage results for social spending.[33] There is a significantly positive effect of the (instrumented) young councilor share on the share of social spending. An increase by 10 ppts in the young councilor share – corresponding to roughly one

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[33]Results for the other major spending categories are collected in Table A.11 of the online appendix. Coefficients are insignificant for almost all spending categories. We find a significantly positive effect only for law & order, a quantitatively small spending category.

standard deviation – increases the share of social spending by 0.7 ppts. At the mean share of social spending (8.5%), this corresponds to an increase by 8.2%.[34] Results are similar when estimating the reduced form of our IV approach (see Table A.8 of the online appendix).

[Table 1 goes here]

The depth of the spending data allows us to examine the effect on social spending in more detail. Among the subcategories of social spending, the quantitatively most important category is spending on child care. It accounts for more than half of all social spending (56.3%). Model (3) in Table 1 indicates that the effect of young councilors on social spending is driven by an increase in the share of child care spending. The coefficient is similar in size and statistically significant at the 5% level. There is no effect of the young councilor share on the aggregate of all other subcategories of social spending.[35]

5.2 Share of young councilors and the provision of child care

In the baseline specification, we use municipal spending shares as our main outcomes and find that child care spending increases in councils with many young councilors. We now examine whether and how higher spending on child care affects actual child care provision. Results for non-fiscal outcomes are collected in Models (4) and (5) in Table 1.[36]

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[34]To assess the extent to which our IV design addresses endogeneity, we also estimate Equation (1) with OLS (see Table A.8). We find that the IV and OLS results are qualitatively similar although the IV estimates are larger than the OLS estimates. Hence, OLS appears to underestimate the effect of young councilors on social spending and spending on child care. One reason could be reverse causality: voters might vote for younger councilors if they perceive social spending as too low.

[35]Social spending consists of 42 subcategories. Spending on child care is relevant in all municipalities in the estimation sample. For many other subcategories spending is zero in most municipalities, however. For example, there is non-zero spending on retirement homes in only 51 out of 355 municipalities in the estimation sample. Thus, we examine the aggregate of other subcategories rather than individual subcategories.

[36]While information on spending outcomes is available until 2021, data on detailed aspects of child care is only available from 2006 to 2019. As a consequence, this specification excludes the election of 2020. The corresponding first stage is collected in Table A.10 of the online appendix.

First, we relate the young councilor share to available child care spots per 1,000 inhabitants. The effect is positive and significant at the 10% level. An increase by one standard deviation in the young councilor share results in 1.5 more spots per 1,000 inhabitants. This is a moderate increase relative to an average of 43 spots per 1,000 inhabitants. Second, we relate the young councilor share to the number of child care employees per 1,000 inhabitants.[37] More staff is typically associated with more reliable child care and a higher quality of care. It is also the precondition for extending the opening hours of facilities. We find no significant relationship between the share of young councilors and the number of employees.

Taken together, our results are in line with previous findings on policymaker's age and public spending. McClean (2023) shows that young Japanese policymakers increase spending on child welfare. He examines mayors, who are arguably more powerful than councilors. There is previous evidence, however, showing that also local councilors can affect policy. Baskaran and Hessami (2023) show that female councilors in Bavarian local councils expand the provision of child care spots. They do not find a significant effect of female councilors on spending for child care, however. Standardized coefficients of our main findings are similar, albeit somewhat smaller relative to studies using the same empirical setup (Hyytinen et al., 2018; Meriläinen, 2022).

5.3 Robustness

5.3.1 Alternative age thresholds

In our baseline, we define young councilors using an age threshold of 40. We use 40 years as the threshold because it provides a reasonable trade-off between young age and a sufficient number of young councilors. More specifically, according to Subfigure (b) of Figure 2 about 22.5% of councilors are 40 years or younger. In this robustness test, we study whether our results are

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[37]We scale both outcomes by inhabitants rather than children as the latter are endogenous to the provision of child care. Note, however, that our results are robust to using child care spots and child care staff per 1,000 children (see Table A.10 in the online appendix).

robust to the choice of the age threshold. We rerun our baseline specifications varying the age threshold between 30 and 55. The results are collected in Figure 4.

[Figure 4 goes here]

The two subfigures – for social spending and child care spending – show a similar pattern. With an age threshold in the 30s (i.e. below our threshold of 40 years), the confidence intervals are largest as there are few candidates in general that are this young. With an age threshold of 39 up to 52 (for social spending) and 51 (for child care spending) the estimates are robust and comparable to those of the baseline estimations. As expected, the effect converges towards zero and turns insignificant when using thresholds above 50. We conclude that our previous results are robust to the choice of the age threshold.[38]

5.3.2 Closeness of marginal seats

We use quasi-random variation in the share of young councilors due to close races for marginal seats to identify the effect on local spending. We measure electoral closeness using the vote distance of candidates to the cut-off number of votes necessary to enter the council. In our baseline, candidates are closely elected if their absolute vote distance is smaller than 0.3% of total list votes. Figure 5 shows coefficient plots for regressions where we relate the young councilor share to the share of social and child care spending using increasingly closer races for identification. We start with a vote distance of 0.4% and gradually move towards 0.1%.

[Figure 5 goes here]

The effect for social and child care spending is robust to using 0.4% as an alternative threshold for closeness. The coefficients remain positive, but turn insignificant when using

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[38]Figure A.9 of the online appendix shows the average age of young and old councilors that were elected in a close election. Mechanically, the average age is increasing when using higher age thresholds. The difference in average age between young and old councilors is about 20 years. The difference remains approximately constant across age thresholds.

closer races. Note that there is less variation in the deviation between expected and actual share of young councilors when focusing on increasingly closer races.[39]

5.3.3 Alternative treatment specification

First, we use placebo cut-offs for getting elected to ensure the validity of the IV design. In Figure 6, we arbitrarily shift the cut-off by adding and subtracting votes and recalculate the instrument and the share of young councilors. Reassuringly, we do not find any significant effect for social spending or spending on child care when using these placebos.

[Figure 6 goes here]

Second, we show the robustness of our findings to different specifications of the standard errors. In the baseline, we cluster standard errors at the municipality level. We use yearly spending outcomes in all specifications. Thus, standard errors may be clustered within time periods. In an alternative specification, we include two-way clustered standard errors at the municipality-legislative period level. In addition, we cluster standard errors at the municipality-year level. Results are collected in Table A.2 in the online appendix. Using different levels of clustering does not change the significance of our findings.

Third, we construct the municipality-level instrument using the share of young victories in close races only for the last seat per list. In these races, candidates below or equal to 40 compete with candidates above 40. We now additionally control for the average within party margins of victory (following Clots-Figueras (2011, 2012) and Bhalotra and Clots-Figueras (2014)). Results are collected in Models (3) and (6) of Table A.2. The effect is significant and

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[39]A further reason why the coefficients converge towards zero is the particular local average treatment effect (LATE) in these specifications. Municipalities that still have races when using increasingly smaller bandwidths tend to be larger (see Figure A.11 of the online appendix). We show in Section 6.2 that young councilors are more effective in smaller councils. Thus, it is to be expected that we do not observe an effect when we use very small bandwidths.

quantitatively similar to the baseline estimates, both for social and child care spending. The coefficients are less precisely estimated, however.[40]

Fourth, we examine whether the effect is robust to a different specification of the outcome. In our baseline estimations, we use spending shares as outcomes. This captures the spending priorities of young councilors. In Models (1) and (4) in Table A.3, we use per capita spending instead. The coefficients for social and child care spending per capita are positive but insignificant. The coefficients are quantitatively meaningful, but imprecisely estimated. An increase by 10 ppts in the young councilor share increases per capita social spending by about 11 Euros and per capita child care spending by 8 Euros. Relative to the average per capita social spending of 227 Euros this is an increase by 4.8%. For child care, 8 Euros correspond to an increase by 4.0% (average: 202 Euros).

5.3.4 Alternative outcome scaling and sample periods

Next, we examine whether the results are driven by imbalances in available data across legislative terms. The spending data are available for all six years for most legislative periods. However, for the election in 2020, we have spending data only for 2020 and 2021. In estimations that exclude these years (Models (2) and (5) in Table A.3), the results are similar to the baseline.

Finally, another concern is the year in which the elections take place. For election years, spending is in principle determined by two different councils. While the actual implementation of the budget is under the purview of the new council, the initial budget is determined by the outgoing council. As such, it can be questioned if local spending should be (exclusively) attributed to the new council in the year of the election, i.e. its first year in power. To check whether our results are robust to this, we re-estimate our baseline specification dropping the election years from the sample (see Models (3) and (6) in Table A.3). We find that the results hardly change.

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[40]Note that the F-statistic is smaller than in our baseline (see Table 1). Thus, our preferred approach provides a stronger first stage.

5.3.5 Other candidate characteristics correlated with age

One further concern is that younger councilors are more likely to be women or to have higher education levels. These personal characteristics other than age might be important for policy choices as well (Besley, 2005; Baskaran and Hessami, 2023), causing the treatment effect on age to be confounded. That is, a higher share of young councilors may effectively be a bundled treatment. In this section, we study whether the effect of young councilors observed in the baseline is ultimately due to other personal characteristics that are merely correlated with age.

From the hand-collected data we have information on various councilor characteristics such as gender, education, or list affiliation. Since our data is at the municipality level, we aggregate individual characteristics to the level of municipalities by calculating the share of the councilors with a certain characteristic. We use these shares as dependent variables and regress them on the instrument. Hence, we rule out that the exogenous increase in the young councilor share affects the composition of councils along other councilor characteristics.

First, we examine whether a higher share of young councilors who won in close races results in more female councilors. Bavarian councils are dominated by male councilors. In our IV sample, the female councilor share is 17.6%. Results are collected in Model (1) in Table A.4. There is no significant effect of the instrument on the female councilor share. Thus, the effect of young councilors is not confounded by more female councilors.

Second, we examine if the effect is confounded by councilors' education. In our IV sample, about 26.8% of councilors have a university degree. Results are collected in Model (2) in Table A.4. We find that a higher share of young councilors who won in close races increases the share of councilors with a university degree. The effect is significant at the 10% level. A one standard deviation increase in the instrument results in a 0.5 ppt increase in the share of councilors with a university degree. Thus, an exogenous increase of the young councilor share results in only slightly better educated councilors.

Third, the political orientation of young councilors might in reality determine their spending preferences.[41] That is, young councilors might be more likely to run for left-wing parties because they view left-wing parties as more progressive. Left-wing parties, in turn, tend to prefer higher social spending. Thus, we examine the effect of the instrument on the seat share of CSU and SPD, as well as aggregate seat shares of right-wing and left-wing parties.[42] Results are collected in Models (3) to (6) in Table A.4. There is no significant effect of the instrument on any of the respective seat shares.

6 Mechanisms

In this section, we study how young councilors influence fiscal policy. On the one hand, an increase in the young councilor share might cause more social spending as they have more voting power. On the other hand, young councilors might affect council decisions by bargaining and by gathering support from other councilors. Also, younger councilors might influence fiscal policies through more subtle channels, notably by putting topics on the council agenda that would be ignored in their absence. This might be the case if the council is comprised of councilors with policy preferences that significantly deviate from those of younger councilors.[43]

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[41]While affiliation with a party is a useful proxy for political leanings, true political orientation and its interaction with spending preferences is unobserved. It is likely that young councilors have different spending preferences than the old candidates on their list, but agree on other issues with them.

[42]We code CSU, Freie Waehler, BP, and AfD as right-wing. We code SPD, Gruene, Linke, and OEDP as left-wing. Some councilors run for local lists for which the ideological placement is unclear.

[43]There are other potential mechanisms that we cannot examine directly due to a lack of data. First, young councilors may have an information advantage over older councilors about child care. Young councilors are more likely to have young children while in office than older councilors. This provides them with more accurate information about the status quo of child care in the municipality. Second, young councilors may act out of self-interest because they have children eligible for child care themselves. Unfortunately, we do not have information on councilors' number of children. The large number of councilors and their limited salience in media and other online sources renders hand-collection of this information unfeasible.

6.1 Voting power of young councilors

A higher share of young councilors might make the young pivotal in the council and thus enable them to tilt decisions on social spending and child care. We examine this mechanism empirically by limiting the sample to councils with few young councilors. We then re-estimate our specification for councils with increasingly more young councilors.

Results for spending on child care are collected in Table 2.[44] There is no significant effect for councils with less than or equal to two young councilors. For councils with less than or equal to four young councilors, the effect is significant and larger than the baseline effect. The coefficients are significant also for councils with less than or equal to six, eight, and ten young councilors.[45] In this case, the size of the coefficient converges towards the baseline. Thus, having more young councilors does not, in general, result in a stronger effect on spending on child care. If anything, the effect is larger in councils with fewer young councilors.

[Table 2 goes here]

In addition, we explicitly model a nonlinear relationship between the share of young councilors and child care spending using the squared share of young councilors and the squared instrument. Results are collected in Model (6) in Table 2. We find no evidence for a nonlinear relationship of the share of young councilors and spending on child care.

Taken together, a shift in majorities due to a higher young councilor share does not seem to be a relevant mechanism. This is in line with general observations from Bavarian local council minutes. Typically, decisions in councils are taken unanimously (Baskaran and Hessami, 2023).

6.2 Bargaining in the council

Rather than tilting council majorities through their voting power, young councilors might influence council decisions indirectly through their informal influence on council deliberations and political bargaining in two ways. First, councilors can bargain with councilors from other

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[44]Estimates are virtually identical for social spending (see Table A.12 in the online appendix).

[45]Recall that councils are typically small. The median council size in our sample is 16.

parties (between-party bargaining). Second, councilors can bargain within their own party to gather support for their preferred policies (within-party bargaining).

Hyytinen et al. (2018) suggest a simple test for the importance of bargaining in the council which is based on the argument that bargaining is more feasible in smaller councils. Thus, the identity of an individual councilor should be more relevant for policy choices in smaller councils. In line with their approach, we explore the effect of young councilors on child care spending in smaller vs. larger councils in Models (1) and (2) of Table 3. We find that young councilors are indeed more effective in smaller councils. If the number of seats is above the median, young councilors have no significant effect on child care spending.

[Table 3 goes here]

While this set of results indicates that young councilors affect child care spending through their indirect influence on political bargaining, it does not reveal whether between-party or within-party bargaining is likely taking place. In an attempt to disentangle these two channels, we estimate models where we study whether the effect of young councilors varies with (i) the number of parties in the council and (ii) the size of the young councilors' parties.

With more parties in the council, it becomes harder to strike between-party bargains. Thus, if young councilors affect child care spending primarily because of their influence on between-party bargains, they should be particularly effective in councils with few parties. Models (3) and (4) in Table 3 show that the effect of young councilors is only significant in councils with fewer than four parties. As such, between-party bargaining indeed appears to be a relevant channel.

Next, we explore the importance of within-party bargaining by estimating models where we focus on young councilors from the largest and second-largest party, respectively.[46] The idea is that within-party bargains will be more consequential for a council's policy choices if

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[46]In most cases, the largest party in the council is the CSU. Yet, in about half of the councils another party or a local list occupies most seats in the council (see Figure A.12 in the online appendix). In those cases where two parties have the same (largest) number of seats, we take the average of the share of young councilors and the instrument across parties with the same number of seats.

the party in question is politically powerful. If within-party bargaining is indeed a relevant channel, a young councilor should cause a large increase in child care spending if she belongs to the largest party in the council. The corresponding results are collected in Models (5) and (6) in Table 3. We find that young councilors increase child care spending only when they belong to the largest party in the council, but not when they belong to the second-largest party. As discussed above, this result is consistent with within-party bargaining being another important channel through which young councilors affect child care spending.

6.3 Other councilors with similar policy preferences

Another possible mechanism is the influence of young councilors on the agenda of local councils. Young councilors may draw attention to topics that previously have not been covered in council debates. To study this mechanism, we examine how the baseline effect varies with the presence of other councilors with arguably similar policy preferences. In councils with fewer councilors sharing similar policy preferences, young councilors may be more likely to place child care higher on the agenda. Conversely, in councils with many other councilors with similar preferences, an additional young councilor matters less because child care is already a priority.[47]

In particular, we consider female councilors, left-wing/liberal councilors, and young mayors as natural allies of young councilors. There is suggestive evidence consistent with the idea that young, female, and left-wing politicians focus on similar policy areas.[48] Fiva et al. (2023) find that young, female, and left-wing politicians in Norway mention the term "children" more often in parliamentary speeches than old, male, and right-wing politicians. Also, female councilors affect the provision of public goods, especially child care (Svaleryd, 2009; Baskaran and

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[47]Again, estimates are virtually identical for social spending (see Table A.14 in the online appendix).

[48]This is similar for voters. During the time frame of our data, young and female voters in Germany disproportionately supported left-wing and liberal/progressive parties. In the German federal election of 2021, for example, the Green party and the liberal FDP were the strongest parties among voters between 18 and 24. The support for the Green party was particularly pronounced among young women (Bundeswahlleiter, 2022).

Hessami, 2023). Busemeyer and Seitzl (2018) provide descriptive evidence that left-wing parties in Germany are associated with higher spending on early childhood education. Thus, there is a higher chance that child care is on the agenda in councils with many women and left-wing councilors.

[Table 4 goes here]

First, we examine the role of female councilors. We split the sample at the median number of female councilors (three female councilors) (see Models (1) and (2) in Table 4). We find a significant and sizable effect for councils with less than or equal to three female councilors. Conversely, there is no significant effect of young councilors in councils with more than three female councilors. Importantly, the coefficient is also substantially smaller.

Second, we examine the effect of young councilors in councils with a higher share of left or liberal parties. The provision of child care is typically supported by left-wing (SPD, Gruene, Linke) and liberal parties (FDP). We split the sample at the median joint seat share of these parties. Results are collected in Models (3) and (4) in Table 4. The effect does not vary substantially between councils with a higher or lower share of left-wing/liberal parties.

Third, we examine the role of young mayors. Bavarian mayors have a strong position in local politics. They are the head of the administration and have a veto on council decisions. Also, they set the agenda for each meeting of the council. We obtain data on the age of mayors for all Bavarian municipalities from the Bavarian Statistical Office. We split the sample into councils with a mayor below or equal to 40 and councils with a mayor above 40. About 10% of mayors in the estimation sample are below or equal to 40. Results are collected in Models (5) and (6) in Table 4. The effect is significant and quantitatively meaningful in councils with old mayors. The effect is insignificant and substantially smaller in councils with young mayors.

In sum, the effect of young councilors on child care spending is visible in councils with fewer other councilors with shared policy preferences. This suggests that young councilors affect spending priorities indirectly by promoting topics that other councilors might not be interested in and which would therefore not be raised otherwise.

7 Electoral incentives and political selection

Politicians typically seek to be re-elected implying that they need to align their policies with the preferences of their electorate. On the other hand, our results so far indicate that the age of councilors – a personal characteristic ostensibly unrelated to the policy stance of voters – is a key determinant of municipalities' fiscal policy. Does this finding imply that councilors ignore the electorates' preferences and that, in turn, electoral incentives are irrelevant for fiscal policy?

To study this question, we estimate a model where we interact the share of young councilors with the share of inhabitants between 18 and 39 years of age (see Table 5).[49] This corresponds to the population above voting age but below our age threshold to define young councilors. If young councilors respond to the relative size of this group, we should expect a positive coefficient for the interaction term.

[Table 5 goes here]

In Models (1) and (2), we find a positive coefficient for the interaction terms for social spending and spending on child care. The coefficients are insignificant, however. Note that the base effect of the young councilor share is significant and similar in size to the baseline in both specifications. In Models (3) and (4) of Table 5, we repeat this exercise using the share of citizens that are 50 and older. The coefficient of the interaction term is negative, but just falls short of significance for social spending. The coefficient of the interaction term is negative and significant at the 10% level for spending on child care. Thus, the effect of young councilors on spending on child care is weaker in municipalities with a higher share of older citizens.[50]

We conclude that young councilors partially respond to the electorate's age structure. While political selection influences policy choices, politicians do not ignore their electorate's preferences and electoral incentives continue to be important.

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[49]We center all variables at their mean to provide meaningful interpretation of the effect of young councilors within the interaction framework.

[50]The corresponding marginal effects are depicted in Figure A.13 in the online appendix.

8 Downstream welfare effects

In this section, we discuss the likely welfare consequences of higher child care spending and the associated expansion of childcare spots. This includes various dimensions such as the quality-quantity-tradeoff of childcare, waiting times of parents for a spot, fiscal costs, and cuts in other policy areas. Most of these variables in turn affect fertility and female labor force participation which are typically emphasized by policymakers.

The increasing number of spots without a commensurable increase in employees (see Section 5.2) appears to indicate that the additional resources are used to expand the quantity rather than the quality of child care. However, this is not obvious as many child care employees work part-time. It is possible that total working hours increase while the number of employees remains constant. In fact, as child care regulations require specific ratios between the number of (full-time equivalent) employees and open spots, it is likely that the increase in spots is at least in part due to an expansion in working hours by employees and thus, in effect, improves the quality of care (as long as not all new spots are filled). Unfortunately, there is no data available on working hours to further explore a possible quantity vs. quality tradeoff.

There is also no official data available on waiting times for obtaining a child care spot, especially since applications for spots and their allocation are highly decentralized. The procedure in Germany typically works as follows: children are usually admitted to child care facilities in August/September. Admittance at other dates is rare and tends to happen only by chance (e.g. if a spot has become available because parents have moved to another municipality). Since there is in practice in each year this fixed admittance date, parents must apply for a spot well in advance. If they do not receive a spot during the initial allocation, they are unlikely to get a child care spot for the remainder of the year, irrespective of their waiting time. Some parents might benefit from the additional spots due to young councilors by getting a spot in year t rather than having to apply again in the next year to get a spot in year t+1. On average, this should lower "waiting times" but, as said above, we are not able to investigate this empirically.

An expansion of childcare likely involves sacrifices in other policy domains. Strictly speaking, increased spending on child care cannot be a Pareto improvement as it has to be financed either through cuts or tax hikes, i. e. at the expense of other groups. Yet, we find that the expansion in child care does not cause a significant cut in other spending items (see Table A.11 in the online appendix). It appears to be financed by relatively small readjustments in the budget. While it thus seems that these sacrifices are not large or concentrated on specific items, they might have negative effects on welfare, at least for specific groups.

More public childcare likely has a positive effect on demographic, educational, or labor market outcomes. Previous evidence indicates that an expansion in child care can have many benefits, notably an expansion in female labor supply, higher fertility, and improvements in educational attainment (Bauernschuster et al., 2016; Bauernschuster and Schlotter, 2015; Gathmann and Sass, 2018). As such, it seems appropriate to conclude that young councilors, by expanding child care, also lead to broader welfare improvements in their municipalities.

9 Conclusion

We use data from local elections in Bavaria to examine the causal effect of young councilors on municipal budget allocation. We instrument the share of young councilors (below or equal to 40 years) with the share of young candidates who unexpectedly won in close races within their list. We find that a higher share of young councilors causes an increase in the share of social spending. We also find that the increase in social spending is driven by more spending on child care – the largest subcategory of social spending.

We examine potential confoundedness and effect heterogeneity along various dimensions. These additional estimations show that the effect of councilors' age on fiscal policy is not substantially confounded by gender, ideology, or education. We find that young councilors are not shifting majorities but instead indirectly influence council decisions by between- and within-party bargaining. In addition, the effect of young councilors is stronger in councils where spending on child care was arguably not high on the agenda. We also find that despite the im-

portance of politicians' own preferences for policy outcomes, electoral incentives still matter: the effect on child care is smaller in municipalities with a higher share of old inhabitants.

Overall, our results show that politicians' age shapes policy outcomes. Yet, while many countries have adopted measures to ensure a balanced representation of women or ethnic and social minorities in political bodies (notably quotas), the imbalance in representation with respect to age has received far less attention.[51] But in an era where key policy decisions must be made that will have disproportionate and irreversible effects across generations, the age distribution of policymakers should be an important concern. Our results suggest that policy measures aimed at increasing the share of young politicians might be necessary to prevent the adoption of policies that are systematically biased against the young. Age quotas might be one way to increase the share of young politicians in legislative bodies. Yet, only few countries have introduced such quotas so far (Stockemer and Sundström, 2018).

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[51]Some attempts are made to increase the voice of the young among the electorate: E.g. in some German states, the voting age has been lowered to 16 years for local elections. The 2021 elected German federal government plans to lower the voting age for federal elections to 16. A recent study from Norway finds that this type of reform can be effective in getting more young councilors elected (Belschner et al., 2023). An alternative idea frequently discussed is to allow parents to vote on behalf of their children until they become adults (Braml and Fuest, 2019).

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(a) Candidates   **(b)** Municipalities
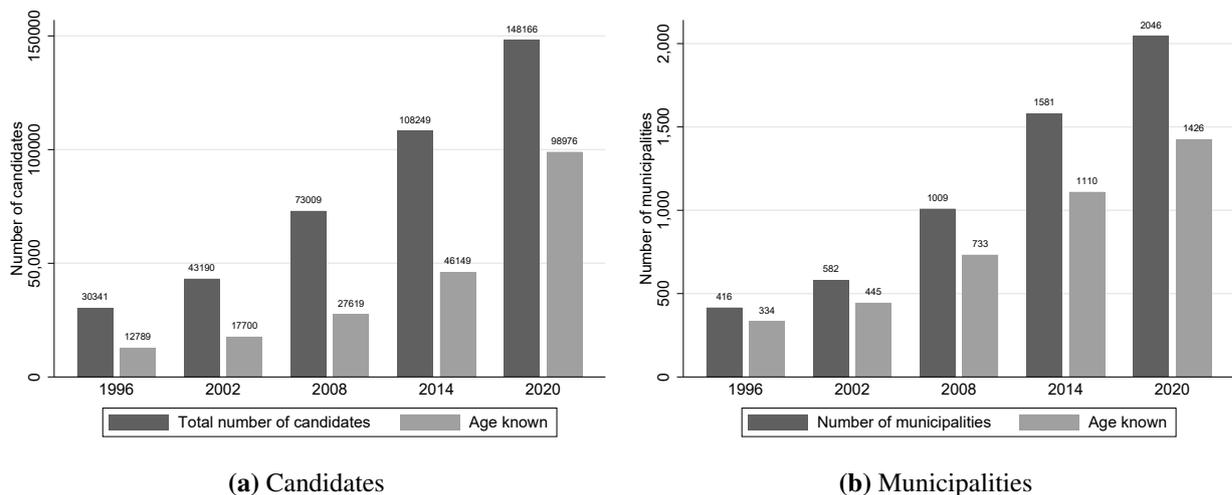
**Figure 1:** Data coverage: candidate age. The bars indicate the coverage of candidate age in each election year. Subfigure (a) shows the number of candidates in our sample and the coverage for age among those candidates. Subfigure (b) shows for how many municipalities we have data on council elections. The category "Age known" applies in subfigure (b) when age is known for any positive number of candidates.
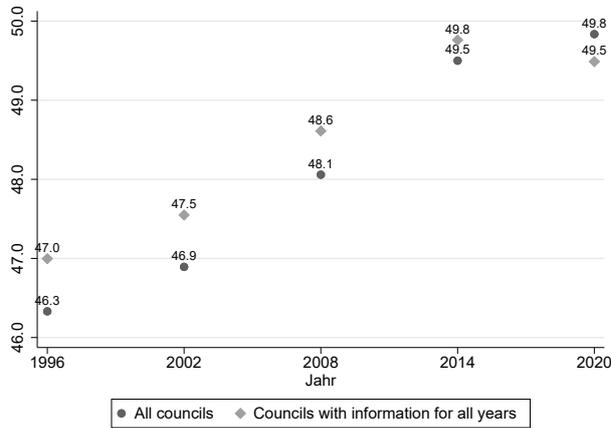
(a) Mean councilor age per election
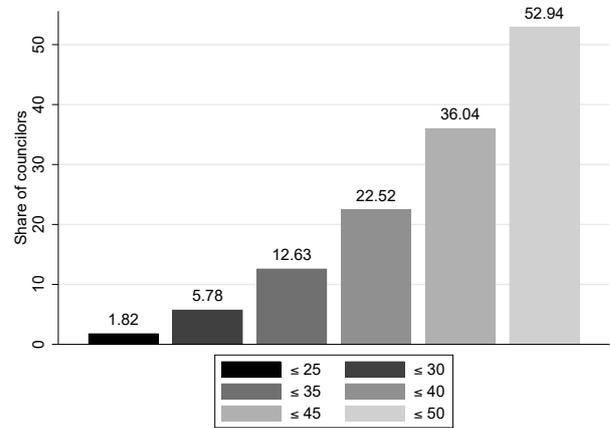
(b) Share of councilors below or equal to age X
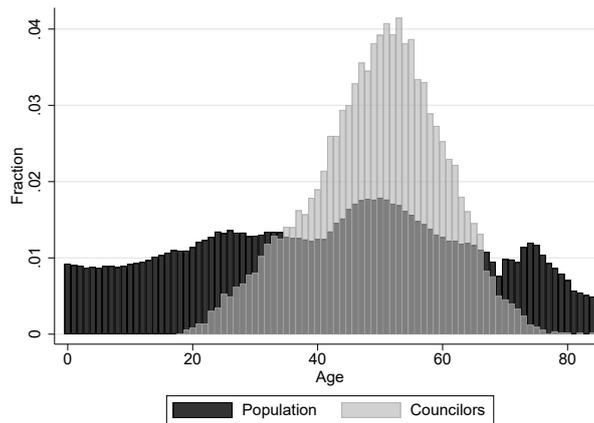
(c) Age structure of councilors vs. population

Figure 2: Descriptive statistics: councilor age and population age structure. Subfigure (a) shows the development of the average age in local councils across election years. The dots indicate the average age for all municipalities where we know the age of all councilors in a given year. The diamonds indicate the average age in local councils for the 74 municipalities for which we have full coverage on councilor age in all election years. Subfigure (b) shows the share of councilors below or equal to 25, 30, 35, 40, 45, and 50 years. Subfigure (c) shows the age distribution of the population across all Bavarian municipalities as of 2014 and the age distribution of all councilors for which age is available. The graph is truncated at age 85.
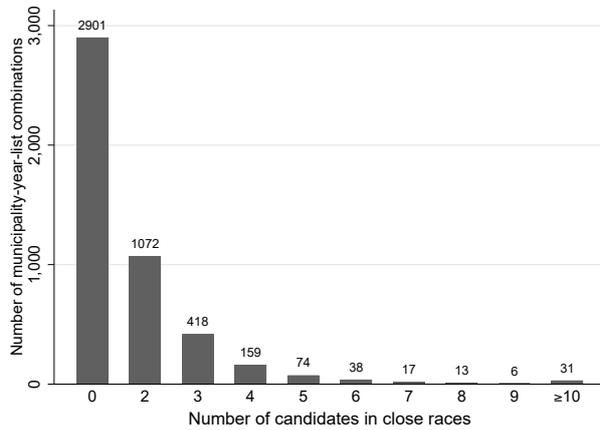
(a) Number of candidates in close races
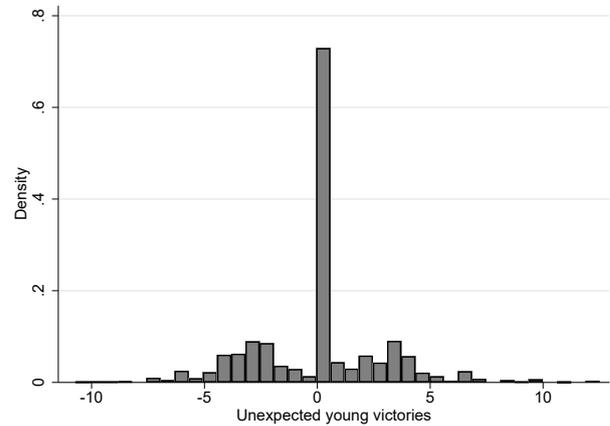
(b) Distribution of the instrument
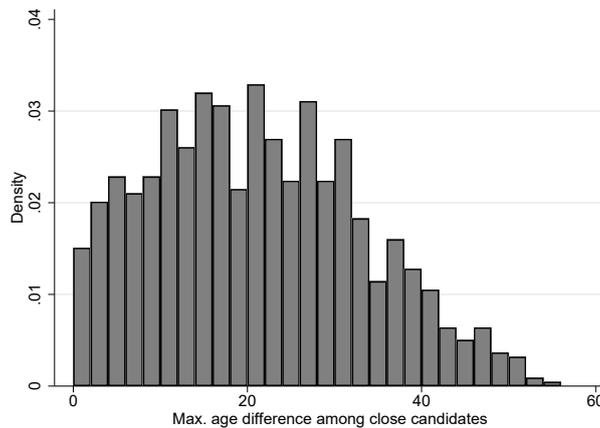
(c) Age difference in close races

Figure 3: Descriptive statistics: instrumental variable. Subfigure (a) shows the distribution of the number of close candidates competing for seats on a list. The maximum is 32 (SPD, Fuerth, 2014, not shown). Subfigure (b) shows the distribution of the instrument. The instrument is the seat share of young councilors who unexpectedly won in close races. Subfigure (c) shows the distribution of the age difference between the oldest and the youngest candidate among the close candidates (threshold: 0.3%). Age difference is calculated only if at least one candidate is below or equal to 40. For all Subfigures we use the estimation sample.
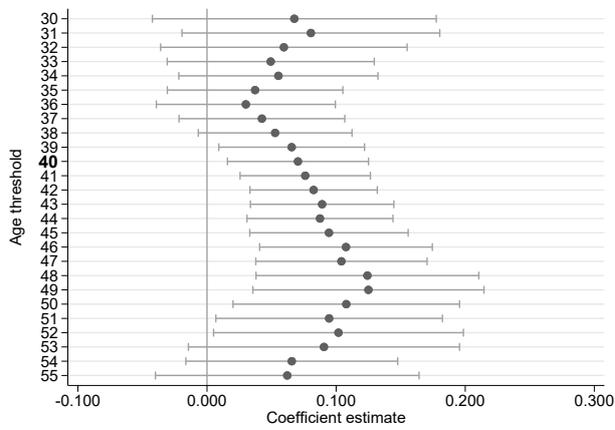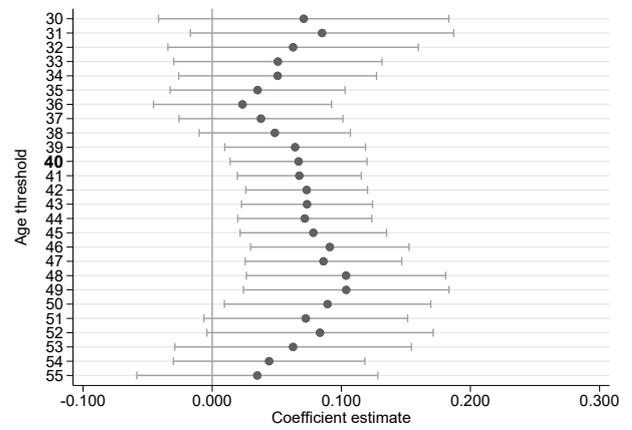
(a) Social spending   **(b)** Child care spending

Figure 4: Robustness – alternative age thresholds. This figure shows coefficient estimates for IV models that relate the share of young councilors to the indicated spending share (following the specification in Equations 1 and 2). To explore whether the baseline results are an artifact of choosing 40 years as the threshold for a young councilor, we vary the threshold for young councilors in one-year steps between 30 and 55 years. 95% confidence intervals are indicated in the graph.
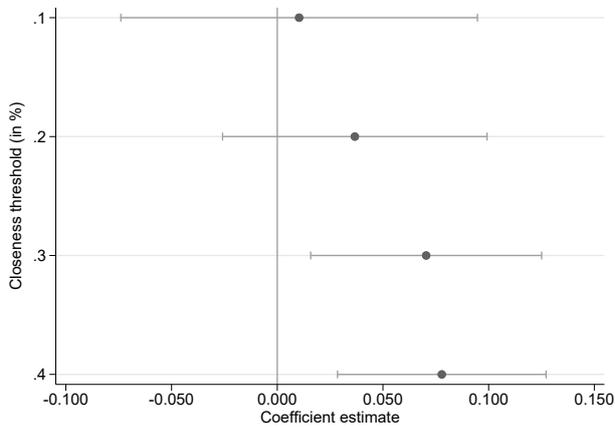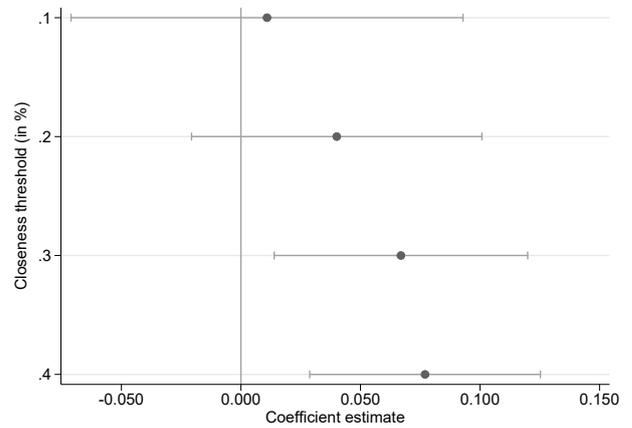
(a) Social spending   **(b)** Child care spending

Figure 5: Robustness – varying degrees of closeness. This figure shows coefficient estimates for IV models that relate the share of young councilors to social spending and spending on child care (following Equations (1) and (2)). To explore whether the baseline results are robust to different thresholds of closeness we vary closeness between 0.4% and 0.1%. 95% confidence intervals are indicated in the graph.

40

(a) Social spending   **(b)** Child care spending
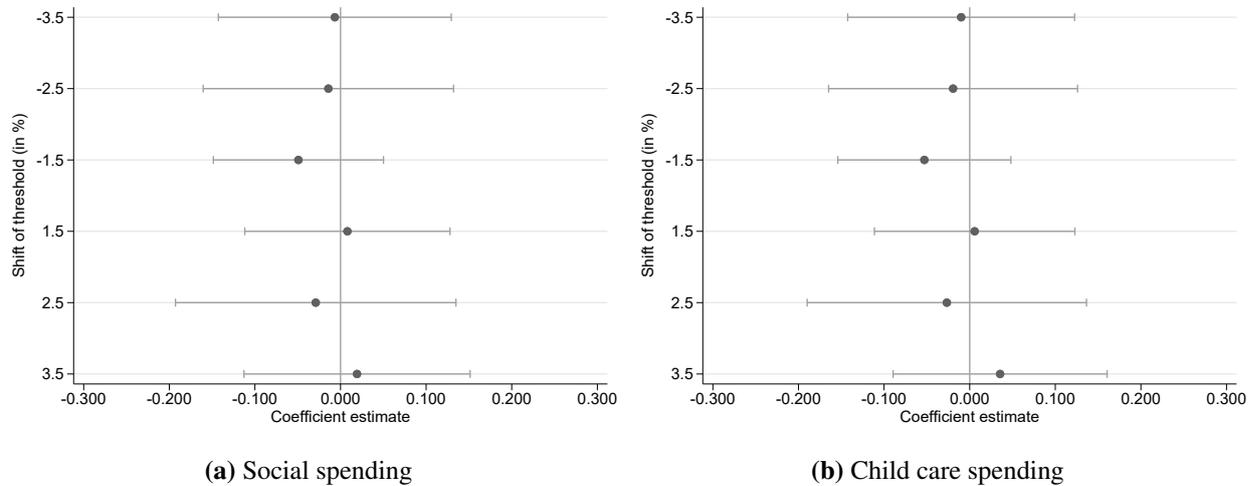
Figure 6: Robustness – placebo thresholds. This figure shows coefficient estimates for IV models that relate the share of young councilors to social spending and spending on child care (following Equations (1) and (2)). We arbitrarily shift the cut-off by the respective percentage of party votes and recalculate placebo versions of the instrument and the share of young councilors. Results using the placebo only on the first stage are collected in Figure A.10 of the online appendix. 95% confidence intervals are indicated in the graph.

Table 1: IV Results – Young councilors and municipal spending

	First Stage	Second Stage				
Dep. var.:	(1) Share of young councilors	(2) Social spending	(3) Child care spending	(4) Other social spending	(5) Child care spots	(6) Child care staff
Unexpected young	0.010***					
councilor share	(0.001)					
Share of young councilors		0.070**	0.067**	0.004	13.156*	2.389
		(0.028)	(0.027)	(0.006)	(7.291)	(1.552)
Mean (SD)	0.22 (0.12)	0.08 (0.05)	0.08 (0.05)	0.01 (0.02)	43.75 (13.65)	6.68 (2.70)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F		61.74	61.74	61.74	44.83	44.83
N	5810	5810	5810	5810	3942	3942
Councils	1145	1145	1145	1145	999	999
Municipalities	355	355	355	355	352	352

Notes: This table collects results from IV regressions that relate spending shares to the share of young councilors (≤ 40 years). Model (1) shows first-stage results. We estimate separate models for social spending (model 2), spending on child care (model 3), social spending other than child care (model 4), number of child care spots per 1,000 inhabitants (model 5), number of child employees per 1,000 inhabitants (model 6). Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the number of young candidates who unexpectedly win in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table 2: MECHANISMS − VOTING POWER OF YOUNG COUNCILORS

	Number of young councilors					Squared term
	(1) ≤ 2	(2) ≤ 4	(3) ≤ 6	(4) ≤ 8	(5) ≤ 10	(6)
Share of young councilors	0.454	0.174**	0.080**	0.072**	0.070**	-0.129
	(0.379)	(0.073)	(0.032)	(0.029)	(0.028)	(0.284)
Share of young councilors ^{2}						0.389
						(0.560)
Mean (SD)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F	2.21	14.03	50.54	57.47	59.82	1.36
N	1848	4236	5384	5708	5770	5810
Councils	352	816	1052	1120	1135	1145
Municipalities	223	329	350	353	354	355

Notes: This table collects results from IV regressions that relate the share of spending on child care to the share of young councilors (≤ 40 years). In models (1) to (5), we split the sample according to the number of young councilors. In model (6), we include squared terms of the share of young councilors and the instrument. Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the seat share of young councilors who unexpectedly win close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table 3: MECHANISMS − WITHIN- AND BETWEEN-PARTY BARGAINING

	Council size		Number of parties		Party size	
	(1) ≥ 16 seats	(2) < 16 seats	(3) $<$ four parties	(4) $\geq$ four parties	(5) Largest	(6) 2nd largest
Share of young councilors	0.012	0.092**	0.089**	0.057	0.058***	-0.012
	(0.030)	(0.044)	(0.041)	(0.035)	(0.020)	(0.015)
Mean (SD)	0.08 (0.05)	0.07 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F	47.22	23.10	25.71	44.28	79.51	66.25
N	3106	2704	2730	3080	5804	5280
Councils	629	516	517	628	1144	1042
Municipalities	205	156	184	230	355	341

Notes: This table collects results from IV regressions that relate child care spending shares to the share of young councilors (≤ 40 years). We estimate separate models for councils with above or equal the median number of seats (model 1) and councils with below median number of seats (model 2). We estimate separate models for councils with below median number of parties (model 3) and above or equal the median number of parties (model 4). We estimate separate models using only variation due to young councilors in the largest (model 5) and second largest (model 6) party in the council. Results for social spending are collected in Table A.13 of the online appendix. Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the number of young candidates who unexpectedly win in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table 4: MECHANISMS – COUNCILORS WITH SIMILAR POLICY PREFERENCES

	Number of female councilors		Share of left-wing councilors		Mayor's age	
	(1) ≤ 3	(2) > 3	(3) ≤ 15%	(4) > 15%	(5) ≤ 40 years	(6) > 40 years
Share of young councilors	0.072**	0.016	0.097**	0.076**	0.025	0.063**
	(0.034)	(0.059)	(0.044)	(0.037)	(0.040)	(0.032)
Mean (SD)	0.07 (0.05)	0.09 (0.05)	0.08 (0.05)	0.08 (0.05)	0.07 (0.05)	0.08 (0.05)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F	35.16	17.04	21.24	29.24	9.90	51.50
N	3866	1944	2962	2848	560	5250
Councils	723	422	597	548	114	1031
Municipalities	266	204	232	202	91	350

Notes: This table collects results from IV regressions that relate the share of spending on child care to the share of young councilors (≤ 40 years). We limit the sample to councils with at most (model 1) and more than three female councilors (model 2). We limit the sample to councils with at most 15% share of left/liberal lists (model 3) and more than 15% (model 4). We limit the sample to councils with a mayor at most 40 (model 5) and above 40 years of age (model 6). Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the seat share of young councilors who unexpectedly won in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table 5: EXTENSION – ELECTORAL INCENTIVES

	Young electorate		Old electorate	
Dep. var.:	(1) Social spending	(2) Child care spending	(3) Social spending	(4) Child care spending
Share of young councilors	0.071**	0.066**	0.072***	0.069**
	(0.029)	(0.028)	(0.028)	(0.028)
Share of young electorate	0.154*	0.106		
	(0.080)	(0.076)		
Share of young councilors × Share of young electorate	0.045	0.472		
	(0.844)	(0.825)		
Share of old electorate			-0.220***	-0.193***
			(0.066)	(0.065)
Share of young councilors × Share of old electorate			-0.641	-0.684*
			(0.413)	(0.410)
Mean (SD)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)
Municipality FE	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F	10.36	10.36	14.58	14.58
N	5810	5810	5810	5810
Councils	1145	1145	1145	1145
Municipalities	355	355	355	355

Notes: This table collects results from IV regressions that relate spending shares to the share of young councilors (≤ 40 years). We interact the share of young councilors and the instrument with the share of the electorate between 18 and 39 (models 1 and 2) and the share of the electorate that is 50 and older (models 3 and 4). Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the seat share of young councilors who unexpectedly won in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Online appendix

A.1 Validity of the instrument

As stated in the main text, the instrument must not affect the outcome via channels other than the instrumented variable. Specifically, the instrument must not be related to observed municipality characteristics. Most importantly, it should not be related to demographic characteristics. Figure A.1 shows that the instrument is associated neither with six-year lags of total population, nor with the lags of population in any of the specified age groups or the area of municipalities. Also, it is not associated with the number of employees working in a municipality which we use as a proxy for local economic activity.

In addition, the instrument should not be correlated with pretreatment outcomes. That is, before the instrument in a given legislative period leads to an increase in the share of young councilors, outcomes should not be related to this variable. Would we nevertheless observe a correlation, this would be indicative of unobserved factors driving the results. Thus, we relate the instrument to outcomes lagged by six years, i.e. one legislative period.[52] Figure A.1 collects the results of this falsification exercise. There is no significant association of the instrument with the shares of different spending categories.

Our argument in favor of the instrument relies on the randomness of the victory of young candidates in close races. Young candidates must not be more or less likely to win in close elections. Indeed, in our sample the chances of winning in close races is very similar for young and old candidates (44.9% and 47.1%, respectively).

A further concern is that during the process of assembling the list, party leaders might influence initial list ranks of young candidates, such that they are less likely to enter the council. If younger candidates are placed on the list in a way that they less likely win races for last seats in municipalities that, for instance, differ in their spending patterns, our estimates would be no longer causal. While the initial list rank is deterministic in closed-list elections, in Bavaria an open-list system is used. Thus, the preferential vote of the electorate determines the

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[52]That is, the share of young victories in the election of 2014 is related to the different outcomes in 2008.
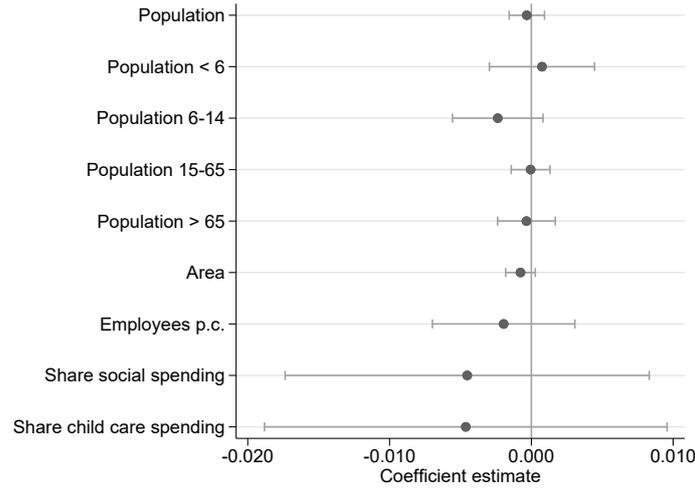
Figure A.1: Balance checks. This figure shows coefficient estimates of regressions relating the instrument to standardized (log) municipal characteristics and spending shares of the main outcomes. Outcomes are lagged by six years, which corresponds to the duration of a legislative term. 95% confidence intervals are indicated in the graph.

final rank of a candidate, not strategic decisions of party leaders. Still, leaders might use their experience to assess the potential performance of candidates and place them on the list accordingly. Reassuringly, Figure A.2 of the online appendix shows that there is a substantial spread in the difference between initial and final ranks of all candidates in our IV sample. 46.1% of candidates see a change in their list rank of at least three ranks. The preferential vote does matter and assures the quasi-randomness of close elections.[53] In addition, the number of seats a list obtains must not be fully predictable by party leaders. We thus compute the difference in seats between two elections for the lists in the IV-sample. There is substantial change in seats obtained: More than half of the lists saw a non-zero difference in seats (Figure A.2).

A final concern is that the last candidate of a list entering the council might not be as influential as other councilors. Not only the councils themselves, but also the number of seats

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[53]Our IV sample is limited to a subset of municipalities due to the availability of councilor age. A natural concern is the external validity of our results. Table A.15 compares the 355 municipalities of our baseline regression with the 1,701 municipalities that are not included. We examine whether municipalities differ in their population – total and by age group – and different municipal spending outcomes. Municipalities included in the IV sample are significantly smaller in terms of their area in square km. Most fiscal characteristics do not significantly differ. Notable exceptions are administration, as well as the relatively small categories health, culture, and law & order. By and large, we argue that the sample we use in our analysis is comparable in observed municipality characteristics.

(a) Rank change of candidates

(b) Difference in seats obtained
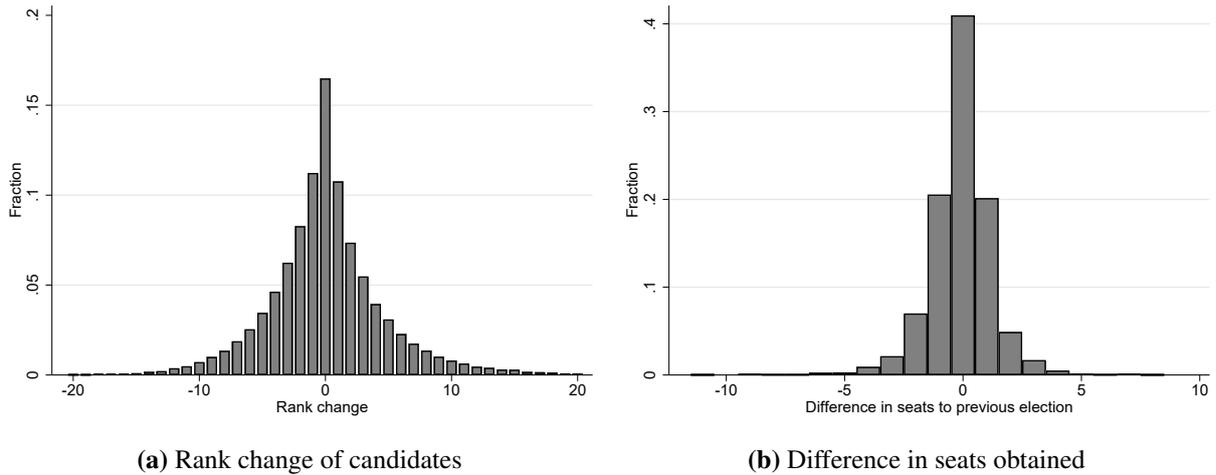
Figure A.2: Unpredictability of races for last seats. Subfigure (a) shows a histogram of the distribution of the absolute rank change of candidates in the IV-sample. For the sake of exposition extreme changes are omitted. Subfigure (b) shows the change in seats a list obtained between two elections in the IV-sample.

a list obtains is typically small. Figure A.3 shows that almost half of the closely elected candidates in our IV sample are on a list rank lower or equal to five. It is conceivable that small fractions require the active participation of all councilors to reach political goals. In addition, small fractions create an environment where speaking up and convincing fellow councilors is relatively easy. Thus, councilor effectiveness is likely not related to final list rank.
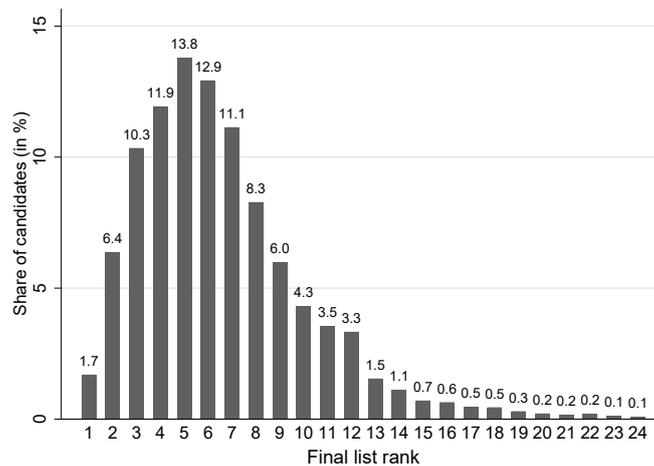
Figure A.3: Final rank of winners in last-seat races. This histogram shows the distribution for the share of winners in a close races across their final list ranks. The number of seats a list typically obtains is small: about 44% of winners have a final list rank of at most five. Thus, candidates who enter the council by winning close races are likely ordinary members of the fraction.

3

A.2 Example for the construction of the instrument

Consider the following example to illustrate the construction of the instrument (Table A.1). On list A, four candidates compete for the two closely contested last seats the list obtains (close candidates in bold). Two of them are below or equal to 40 and two are above 40 years of age. The expected number of young councilors can be calculated using $\left(\frac{Y}{T}\right) \times n$ where Y is the number of young candidates in close elections, T is the number of total candidates in close elections, and n is the number of close seats. Thus, the expected number of young candidates entering the council on list A is one. The actual number is two. The deviation between expected and actual number of young candidates on list A is one.

Table A.1: Example for the construction of the instrument

List A					List B			
Candidate	Age	Elected	Close		Candidate	Age	Elected	Close
1	53	Yes	No		1	55	Yes	No
2	**24**	**Yes**	**Yes**		2	27	Yes	No
3	**39**	**Yes**	**Yes**		**3**	**54**	**Yes**	**Yes**
4	**42**	**No**	**Yes**		**4**	**67**	**No**	**Yes**
5	**65**	**No**	**Yes**		**5**	**44**	**No**	**Yes**
6	49	No	No		6	34	No	No
7	76	No	No		7	79	No	No

On list B, three candidates compete for one closely contested last seat. All three candidates are above 40. Thus, both expected and actual number of young candidates are zero. Also the deviation between expected and actual number of young candidates on list B is zero. In the municipality, only list A and B are taking part in the election. There are six seats in council. Consequently, the municipality level instrument takes the value $\left(\frac{1+0}{6}\right) \times 100 = 16.67$.

A.3 Details on collection of council election data

The process of data collection is described in Baskaran and Hessami (2023). In line with this approach, the most recent election of March 2020 was added to the dataset. Our research assistants downloaded information on election results from the homepages of municipalities, typically in pdf format. Then, data was transferred into standardized Excel-sheets by hand. The

Excel files were then merged into one dataset using municipal code and year. Since collecting the data by hand is error-prone, plausibility checks were conducted to ensure data quality. Whenever mistakes were found they were corrected or set to missing.

A.4   Details on fuzzy matching of councilors

Data availability varies across election years and is most complete for the election in March 2020. To obtain additional information on birth year and occupation for previous years, candidates are identified using a fuzzy match approach.[54] To identify candidates, but at the same time avoid identifying different candidates who have the same name, both the full name and the list is used as input for the match. First and surname are combined together with list in one string and the string is stripped off all special characters.

To ensure that candidates are correctly matched, the names of lists and parties need to be harmonized, such that different abbreviations in different years do result in matches. For the known large parties this can be done automatically. For lists that exist only at the local level, this task has to be done manually: two research assistants went through all municipalities and compared list names. If two similar sounding list names appear in distinct years only, then the name is unified. Consider the example of Pliening, where in one year there is a list called "nf" and in another year there is a list called "Neues Forum". These names very likely refer to the same list. While this to some extent relies on eyeballing, we believe that errors are scarce, since also the name needs to be similar and the list alone typically does not suffice for a (wrong) match.

Matches occur within municipalities only. The tolerance of the fuzzy match ensures that spelling mistakes and minor deviations are not in the way of identifying candidates. This approach has limitations, however. It cannot identify candidates who moved to other municipalities or who changed lists between years. In addition, changes of names in case of marriage are also undetectable. Finally, one cannot fully exclude the possibility of candidates in the same

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[54]In Stata the command *strgroup* by Julian Reif (University of Chicago) is used.

municipality and on the same list having the exact same name. Nevertheless, we believe that these errors are unrelated to outcomes or the treatment and thus no source of concern.

Figure A.4 illustrates the age coverage for candidates before and after the fuzzy match. The coverage of the candidate age variable increases substantially by matching councilors across election years.
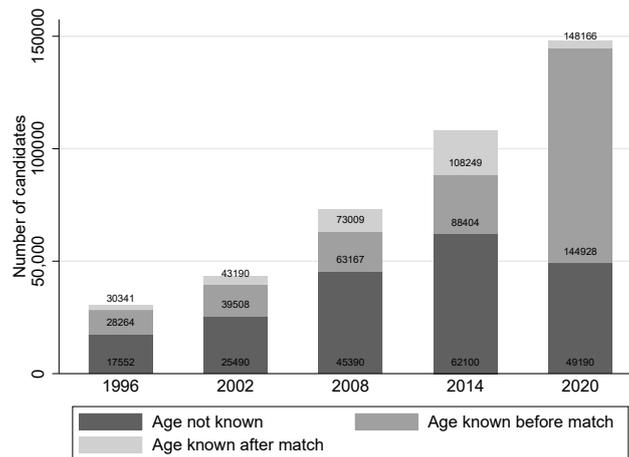

Figure A.4: Candidate age before and after the fuzzy match. The bars indicate the coverage of candidate age for each election year before and after the fuzzy match. Labels are cumulative, that is the number at the top indicates the total number of candidates.

A.5 Robustness tests

Table A.2: ROBUSTNESS – ALTERNATIVE SPECIFICATIONS

	Dep. var.: Share of social spending			*Dep. var.:* Share of child care spending		
	(1) Legis. period	(2) Year	(3) Last seat	(4) Legis. period	(5) Year	(6) Last seat
Share of young councilors	0.070***	0.070***	0.072**	0.067***	0.067***	0.073***
	(0.021)	(0.025)	(0.030)	(0.018)	(0.025)	(0.028)
Mean (SD)	0.08 (0.05)	0.08 (0.05)	0.09 (0.06)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	5%	0.3%	0.3%	5%
Kleibergen-Paap Wald F	71.41	63.59	47.13	71.41	63.59	47.13
N	5810	5810	2374	5810	5810	2374
Councils	1145	1145	461	1145	1145	461
Municipalities	355	355	184	355	355	184

Notes: This table collects results from IV regressions that relate spending shares to the share of young councilors ($\leq$ 40 years). We estimate separate models for social spending (models 1 to 3) and spending on child care (models 4 to 6). We use two-way clustered standard errors on municipality and legislative period level (models 1 and 3) as well as municipality and year level (model 2 and 4). We use races only for the last seat in models (3) and (6). In these models, we control for the average margin of victory. Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the number of young councilors who unexpectedly win in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. In models (3) and (6), the unit of clustering is the municipality.

Table A.3: ROBUSTNESS – OUTCOME AND SAMPLE

	Dep. var.: Share of social spending			*Dep. var.:* Share of child care spending		
	(1) per capita	(2) excl. 2020/21	(3) excl. first year	(4) per capita	(5) excl. 2020/21	(6) excl. first year
Share of young councilors	107.390	0.087***	0.071**	81.749	0.079**	0.062**
	(86.562)	(0.033)	(0.032)	(80.820)	(0.032)	(0.031)
Mean (SD)	227.04 (196.19)	0.08 (0.05)	0.08 (0.05)	202.33 (170.14)	0.07 (0.05)	0.08 (0.05)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F	61.53	41.04	55.82	61.74	41.04	55.82
N	5808	5280	4665	5810	5280	4665
Councils	1145	880	1145	1145	880	1145
Municipalities	355	355	355	355	355	355

Notes: This table collects results from IV regressions that relate spending shares to the share of young councilors ($\leq$ 40 years). We estimate separate models for social spending (models 1 to 3) and spending on child care (models 4 to 6). We use the per capita specification in models (1) and (4). We exclude the election of 2020 and thus the years 2020 and 2021 in models (2) and (5). We exclude the first year of every election period in models (3) and (6). Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the number of young candidates who unexpectedly win in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.4: ROBUSTNESS – OTHER PERSONAL CHARACTERISTICS

Dep. var.:	(1) Female	(2) Higher education	(3) CSU	(4) SPD	(5) Right	(6) Left
Unexpected young	-0.042	0.194*	0.028	-0.099	0.026	-0.037
councilor share	(0.102)	(0.111)	(0.110)	(0.081)	(0.153)	(0.087)
Mean (SD)	17.64 (9.89)	26.75 (15.13)	29.47 (20.46)	13.75 (13.97)	36.23 (25.50)	16.24 (15.58)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
N	5810	5810	5810	5810	5810	5810
Councils	1145	1145	1145	1145	1145	1145
Municipalities	355	355	355	355	355	355

Notes: This table collects results from regressions that relate shares of councilor characteristics to the instrument (i.e. the seat share of young councilors who unexpectedly won in close races). We estimate separate models for the share of female councilors (model 1), the share of councilors with a university degree (model 2), the share of CSU (model 3), the share of SPD (model 4), the share of right-wing lists (model 5), and the share of left-wing lists (model 6). Regressions include municipality and year fixed effects. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

A.6 Additional figures
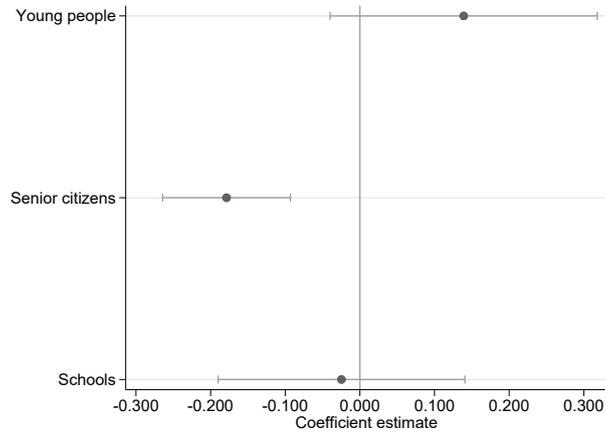
Figure A.5: Survey evidence on councilor preferences. This figure shows the coefficient for a linear regression of an indicator variable for councilors below or equal to 40 on three indicators referring to members of the municipality that are particularly relevant to them (several answers were possible). Standard errors are adjusted for small samples. We control for gender, education, list, and employment. Data taken from Schmid (2019) was collected from about 200 Bavarian municipal councilors in 2017. 90% confidence intervals are indicated in the graph.
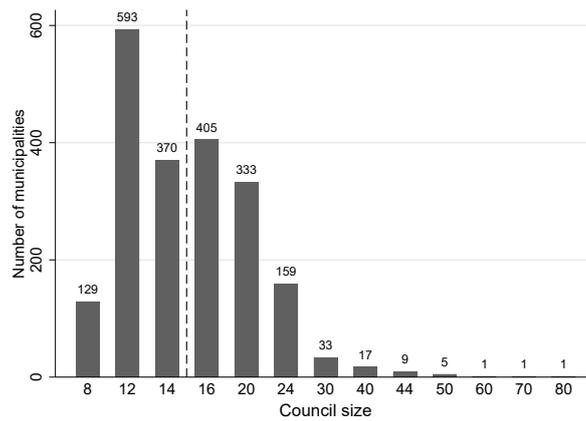
Figure A.6: Distribution of council size across Bavarian municipalities. This figure shows the distribution of the number of seats in local councils across 2,056 Bavarian municipalities as of 2014. 53.1% of municipalities have at most 14 council seats (indicated by dashed vertical line).

9
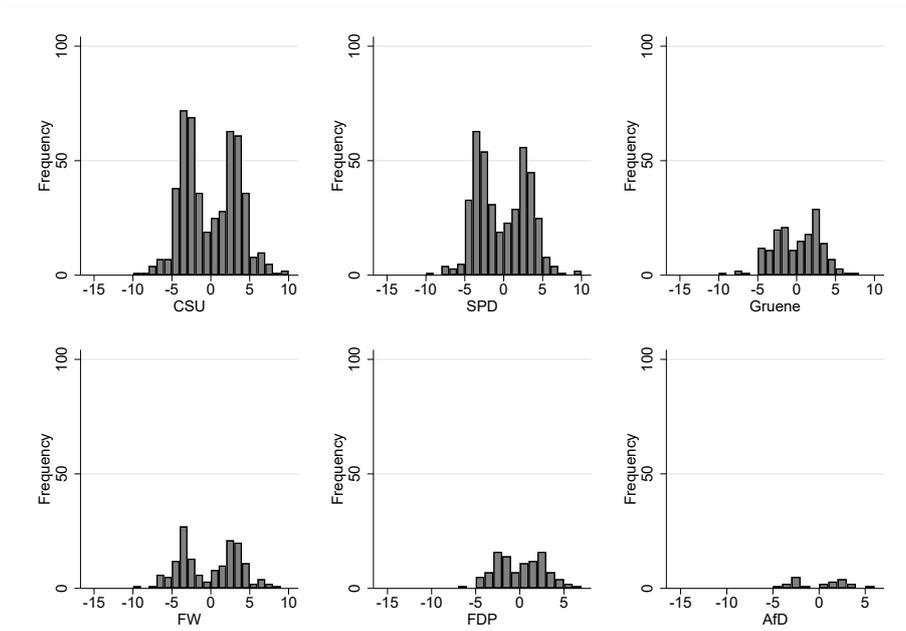
Figure A.7: Instrumental variable across party lists. This figure shows the distribution of the instrumental variable before aggregation to the municipality level separately for major party lists. The mass point at zero is excluded for readability.
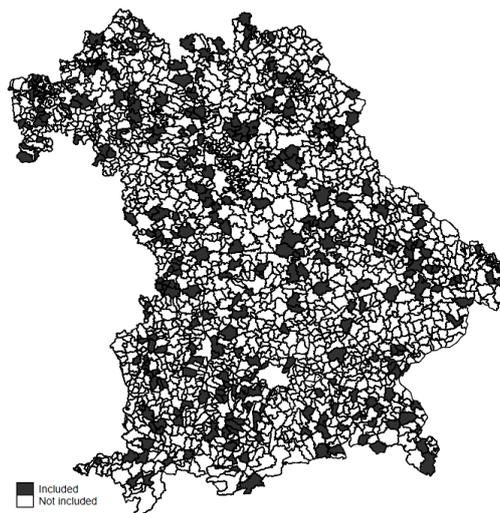
Figure A.8: Bavarian municipalities included in IV sample. The map indicates the location of the 355 municipalities included in the IV sample.
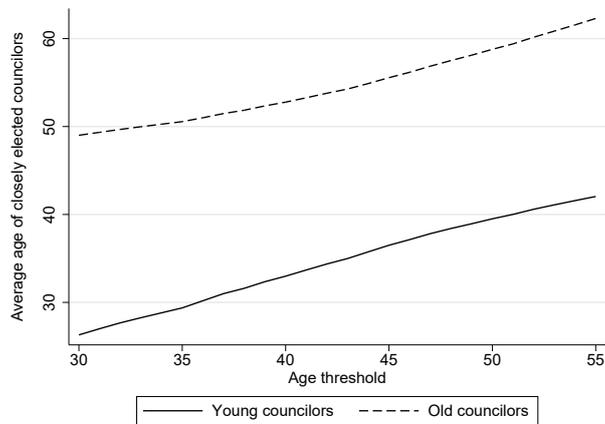
Figure A.9: Average age of closely elected councilors. The graph shows the average age of closely elected young and old councilors for different age thresholds. Mechanically, the average age of young and old councilors increases for higher age thresholds. The difference in the average age between young and old councilors remains roughly constant.

(a) Social spending

(b) Child care spending
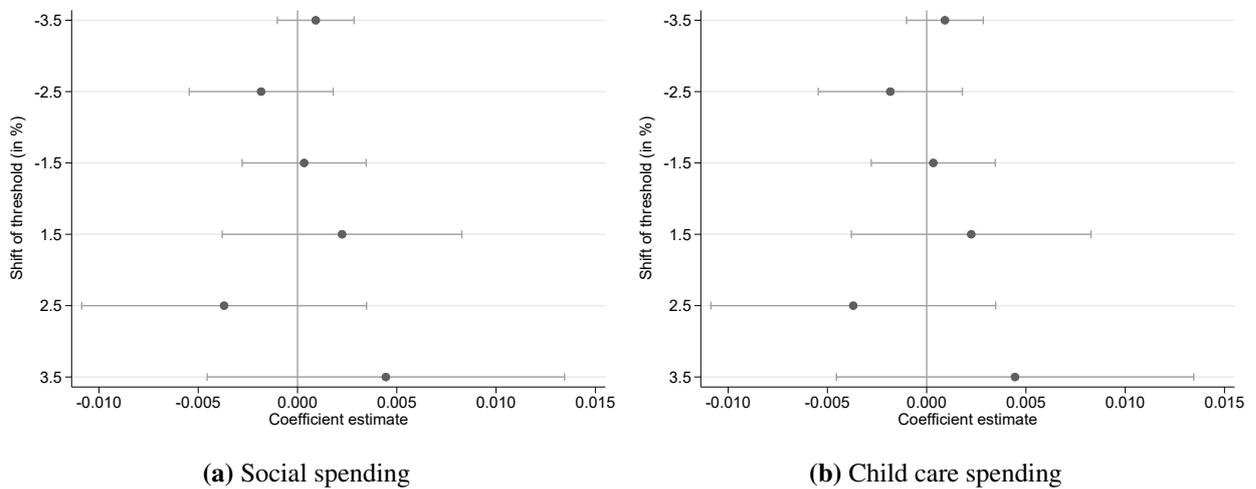
**Figure A.10:** Robustness – first stage placebo thresholds. This figure shows coefficient estimates for IV models that relate the share of young councilors to social spending and spending on child care (following Equations (1) and (2)). We arbitrarily shift the cut-off by the respective percentage of party votes and recalculate placebo versions of the instrument. When then relate the placebo instrument to the actual share of young councilors. 95% confidence intervals are indicated in the graph.
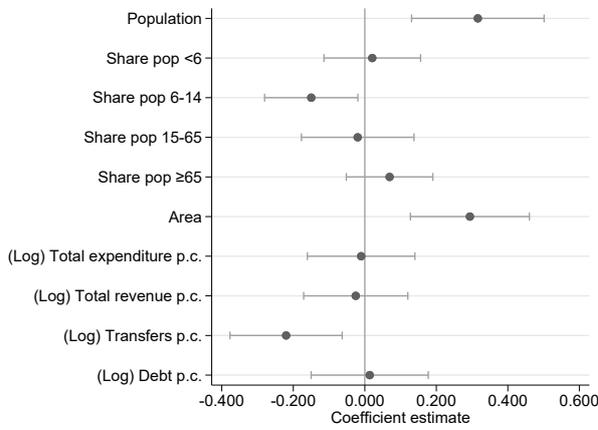
(a) Bandwidth: 0.1%
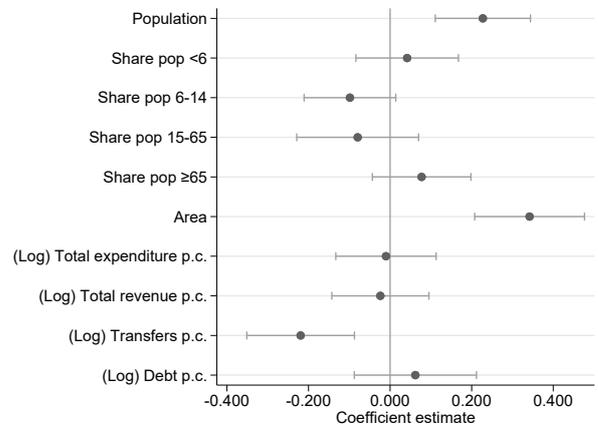
(b) Bandwidth: 0.2%

Figure A.11: Robustness – Balance for different bandwidths. This figure shows coefficient estimates for regressions that compare relevant municipality-election pairs for different bandwidths to municipality-election pairs in the baseline IV sample. That is, we define an indicator that is one if the unexpected share of young councilors is not zero in the municipality-year pair. We relate this indicator to the respective dependent variables. All outcomes are standardized. Regressions are at the council level and include time fixed effects. Standard errors are clustered at the municipality level. 95% confidence intervals are indicated in the graph.
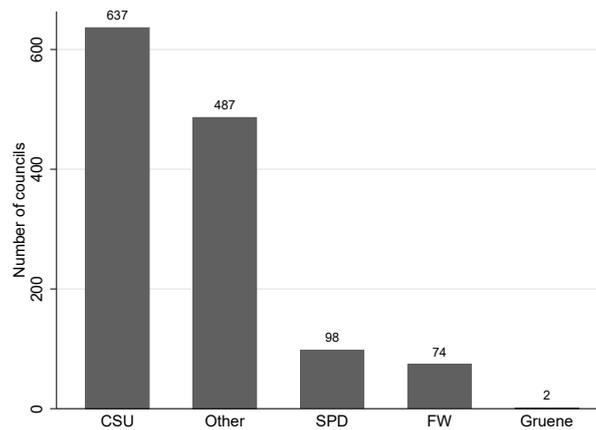
Figure A.12: Largest parties in the council. This figure shows the number of councils in which the indicated party occupies most seats in the council. Numbers refer to the estimation sample of Model (3) in Table 3. Note that several parties can have the same number of seats and be the largest party. Thus, the total number in the graph is not identical to the number of councils we report in the regression table.
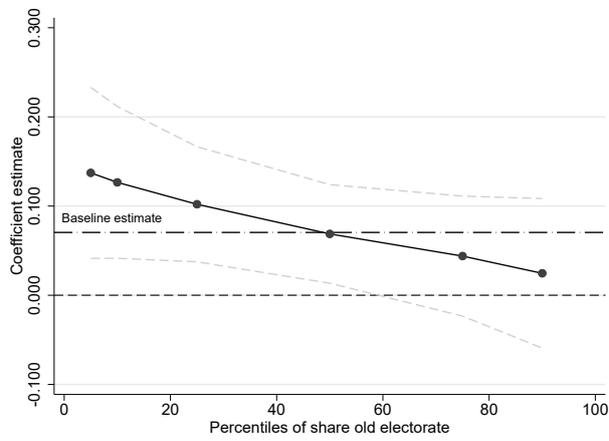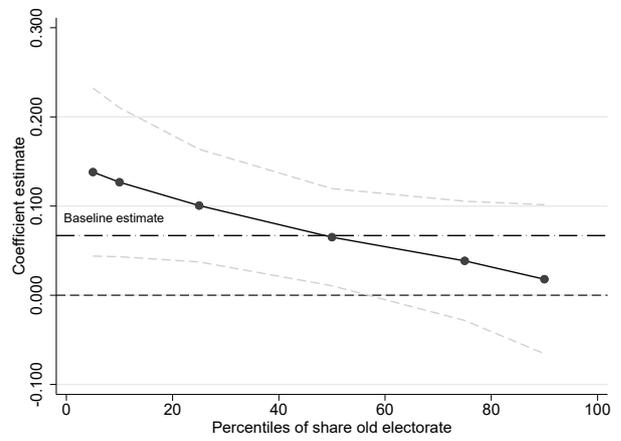
(a) Social spending   **(b)** Child care

Figure A.13: Marginal effects – Old electorate. The graph shows the total effect of the share of young councilors on social spending (a) and child care (b). The total effect is evaluated at different values of the share of electorate above 50 as indicated by the points. Corresponding regression results are shown in Table 5. Baseline estimates from Table 1 are depicted for reference. 95% confidence intervals are indicated in the graph.

A.7   Additional tables

Table A.5: SUMMARY STATISTICS - CANDIDATE CHARACTERISTICS

Variable	Mean	SD	Min	Max	Count
Age	46.65	12.88	18	99	203142
Female	0.27	0.44	0	1	402955
CSU	0.20	0.40	0	1	402955
SPD	0.14	0.35	0	1	402955
FW	0.07	0.25	0	1	402955
Greens	0.05	0.21	0	1	402955
Higher Degree	0.23	0.42	0	1	299310
Employed	0.83	0.38	0	1	311009
Selfemployed	0.07	0.26	0	1	311009
Student	0.03	0.17	0	1	311009
Retired	0.05	0.22	0	1	311009
Housewife-/husband	0.02	0.13	0	1	311009

Notes: This table reports summary statistics on the characteristics of council candidates between 1996 and 2020. Higher degree is coded as 1 if a candidate has a university degree. The full candidate sample is used.

Table A.6: DATA DESCRIPTION - SPENDING VARIABLES

Variable	Definition	Availability	Share relative to total spending
General finance	Transfers to other levels of administration, interest on debt, accumulation of reserves	1996-2021	45.40%
Economic promotion	Wastewater, waste removal, markets, funeral service, economic promotion, promotion of public transportation	1996-2021	12.29%
Infrastructure spending	Construction administration, city planning, municipal roads, street cleaning, street lighting, parks, and rivers	1996-2021	10.47%
Social spending	Social security administration, social security BSGH, asylum funding, social facilities, support for the youth, youth facilities, child care, maternal care, municipal retirement homes, and family support	1996-2021	7.81%
Municipal firms	Municipal utilities (gas, water, electricity, heat), public transportation, other municipal firms	1996-2021	7.06%
Administration	Financial administration, municipal buildings, public relations, procurement, archive, statistics	1996-2021	6.05%
School spending	Spending on all school types (i.e. local primary schools as well as secondary and vocational schools)	1996-2021	5.66%
Health care spending	Health administration, hospitals, sport funding, sport facilities, swimming pools, and parks	1996-2021	2.17%
Law & order	Municipal public order agency, environmental protection office, firefighters, ambulance, civil protection	1996-2021	1.98%
Culture spending	Culture administration, science, museums, exhibitions, zoos, theaters, community collages, environmental protection, historical sites, church related expenditure	1996-2021	1.10%

Notes: This table collects details for the variables on municipal finances. All variables are provided by the Bavarian Statistical Office. The column *Share relative to total spending* displays the composition of spending for the 2,056 Bavarian municipalities across all years. Note that mean values for the expenditure shares differ between Table A.6 and A.7 because the former refers to the full sample while the latter refers to the IV sample used in the estimation analysis.

Table A.7: SUMMARY STATISTICS - SPENDING VARIABLES

Variable	Mean	SD	Min	Max	Obs
Share of exp. on general finance	0.44	0.11	0.00	0.92	5810
Share of social spending	0.08	0.05	0.01	0.51	5810
Share of exp. on economic promotion	0.12	0.07	0.00	0.61	5810
Share of exp. on infrastructure	0.10	0.06	0.00	0.60	5810
Share of exp. on schools	0.06	0.04	0.00	0.54	5810
Share of exp. on administration	0.07	0.04	0.00	0.56	5810
Share of exp. on municipal firms	0.07	0.06	0.00	0.56	5810
Share of exp. on health care	0.02	0.03	0.00	0.42	5810
Share of exp. on culture	0.01	0.02	0.00	0.48	5810
Share of exp. on law & order	0.02	0.02	0.00	0.24	5810
Share of exp. on child care	0.08	0.05	0.00	0.50	5810
Childcare spots per 1,000 inhabitants	43.75	13.65	0.00	109.12	3945
Childcare staff per 1,000 inhabitants	6.68	2.70	0.00	20.73	3945

Notes: This table reports summary statistics on all spending variables. Note that mean values for the expenditure shares differ from Table A.6 because in this table only municipalities in the IV sample are included.

Table A.8: OLS AND REDUCED FORM – YOUNG COUNCILORS AND MUNICIPAL POLICY

	Spending shares		Childcare provision		Reduced Form	
Dep. var.:	(1) Social	(2) Child care	(3) Spots	(4) Staff	(5) Social	(6) Child care
Share of young councilors	0.012	0.012	2.877	0.827*		
	(0.008)	(0.008)	(2.464)	(0.439)		
Unexpected young councilor share					0.001***	0.001**
					(0.000)	(0.000)
Mean (SD)	0.08 (0.05)	0.08 (0.05)	43.76 (13.65)	6.68 (2.70)	0.08 (0.05)	0.08 (0.05)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness					0.3%	0.3%
N	5812	5812	3943	3943	5810	5810
Councils	1146	1146	1000	1000	1145	1145
Municipalities	355	355	352	352	355	355

Notes: This table collects results from regressions that relate spending shares to the share of young councilors (councilors below or equal to 40 years) in models (1) to (4). Models (5) and (6) present reduced form estimates that relate spending shares to the instrument (i.e. the seat share of young councilors who unexpectedly won in close races). We estimate separate models for the share of social spending (model 1 and 5), the share of spending on child care (model 2 and 6), the number of child care spots per 1,000 inhabitants (model 3), and the number of child employees per 1,000 inhabitants (model 4). Regressions include municipality and year fixed effects. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.9: IV RESULTS – YOUNG COUNCILORS AND MUNICIPAL SPENDING (COUNTY FE)

Dep. var.:	First Stage	Second Stage				
	(1) Share of young councilors	(2) Social spending	(3) Child care spending	(4) Other social spending	(5) Child care spots	(6) Child care staff
Unexpected young councilor share	0.011***					
	(0.001)					
Share of young councilors		0.052*	0.048*	0.003	4.543	-1.135
		(0.029)	(0.029)	(0.006)	(15.704)	(2.344)
Mean (SD)	0.22 (0.12)	0.08 (0.05)	0.08 (0.05)	0.01 (0.02)	43.75 (13.65)	6.68 (2.70)
County FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F		88.55	88.55	88.55	61.60	61.60
N	3944	5810	5810	5810	3944	3944
Councils	1145	1145	1145	1145	998	998
Municipalities	354	355	355	355	354	354

Notes: This table collects results from IV regressions that relate spending shares to the share of young councilors (≤ 40 years). Model (1) shows first-stage results. We estimate separate models for social spending (model 2), spending on child care (model 3), social spending other than child care (model 4), number of child care spots per 1,000 inhabitants (model 5), number of child employees per 1,000 inhabitants (model 6). Regressions include county and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the number of young candidates who unexpectedly win in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.10: ROBUSTNESS – YOUNG COUNCILORS AND CHILD CARE OUTCOMES PER 1,000 CHILDREN

Dep. var.:	First Stage	Second Stage	
	(1) Share of young councilors	(2) Child care spots	(3) Child care staff
Unexpected young councilor share	0.010***		
	(0.002)		
Share of young councilors		104.630*	17.781
		(61.468)	(11.106)
Mean (SD)	0.21 (0.12)	311.24 (100.33)	47.85 (20.12)
Municipality FE	✓	✓	✓
Year FE	✓	✓	✓
Closeness	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F		44.83	44.83
N	3942	3942	3942
Councils	999	999	999
Municipalities	352	352	352

Notes: This table collects results from IV regressions that relate child care outcomes to the share of young councilors (≤ 40 years). Model (1) shows first-stage results. We estimate separate models for child care spots per 1,000 children (model 2) and child care staff per 1,000 children (model 3). Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition , we instrument the share of young councilors with the number of young candidates who unexpectedly win in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.11: IV RESULTS – YOUNG COUNCILORS AND ALL MUNICIPAL SPENDING SHARES

Dep. var.:	(1) General finance	(2) Social	(3) Economic promotion	(4) Infrastructure	(5) Schools
Share of young councilors	-0.034	0.070**	-0.035	-0.063	0.048
	(0.086)	(0.028)	(0.052)	(0.049)	(0.031)
Municipality FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F	61.74	61.74	61.74	61.74	61.74
N	5810	5810	5810	5810	5810
Councils	1145	1145	1145	1145	1145
Municipalities	355	355	355	355	355

Dep. var.:	(6) Administration	(7) Municipal firms	(8) Health	(9) Culture	(10) Law & order
Share of young councilors	0.037	-0.036	-0.018	-0.002	0.032**
	(0.023)	(0.045)	(0.024)	(0.009)	(0.016)
Municipality FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F	61.74	61.74	61.74	61.74	61.74
N	5810	5810	5810	5810	5810
Councils	1145	1145	1145	1145	1145
Municipalities	355	355	355	355	355

Notes: This table collects results from IV regressions that relate spending shares to the share of young councilors (councilors below or equal to 40 years). The dependent variable is the share of the indicated spending category. Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the seat share of young councilors who unexpectedly won in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.12: MECHANISMS – YOUNG COUNCILORS AND SOCIAL SPENDING, VOTING POWER OF YOUNG COUNCILORS

	Number of young councilors					Squared term
	(1) ≤ 2	(2) ≤ 4	(3) ≤ 6	(4) ≤ 8	(5) ≤ 10	(6)
Share of young councilors	0.476	0.180**	0.080**	0.074**	0.074***	-0.169
	(0.391)	(0.074)	(0.033)	(0.029)	(0.028)	(0.299)
Share of young councilors²						0.477
						(0.592)
Mean (SD)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)	0.08 (0.05)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F	2.21	14.03	50.54	57.47	59.82	1.36
N	1848	4236	5384	5708	5770	5810
Councils	352	816	1052	1120	1135	1145
Municipalities	223	329	350	353	354	355

Notes: This table collects results from IV regressions that relate the share of social spending to the share of young councilors (≤ 40 years). In models (1) to (5), we split the sample into councils with the indicated number of young councilors. In model (6), we include square terms of the share of young councilors and the instrument. Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the seat share of young councilors who unexpectedly won in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.13: MECHANISMS – YOUNG COUNCILORS AND SOCIAL SPENDING, BETWEEN- AND WITHIN-PARTY BARGAINING

	Council size		Number of parties		Party size	
	(1) ≥ 16 seats	(2) < 16 seats	(3) < four parties	(4) ≥ four parties	(5) Largest	(6) 2nd largest
Share of young councilors	0.012	0.097**	0.100**	0.054	0.064***	-0.012
	(0.031)	(0.044)	(0.042)	(0.035)	(0.021)	(0.015)
Mean (SD)	0.09 (0.06)	0.08 (0.05)	0.08 (0.05)	0.09 (0.06)	0.08 (0.05)	0.08 (0.06)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F	47.22	23.10	25.71	44.28	79.51	66.25
N	3106	2704	2730	3080	5804	5280
Councils	629	516	517	628	1144	1042
Municipalities	205	156	184	230	355	341

Notes: This table collects results from IV regressions that relate social spending shares to the share of young councilors (≤ 40 years). We estimate separate models for councils with above or equal the median number of seats (model 1) and councils with below median number of seats (model 2). We estimate separate models for councils with below median number of parties (model 3) and above or equal the median number of parties (model 4). We estimate separate models using only variation due to young councilors in the largest (model 5) and second largest (model 6) party in the council. Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the number of young candidates who unexpectedly win in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.14: MECHANISMS – YOUNG COUNCILORS AND SOCIAL SPENDING, COUNCILORS WITH SIMILAR POLICY PREFERENCES

	Number of female councilors		Share of left-wing councilors		Mayor's age	
	(1) ≤ 3	(2) > 3	(3) ≤ 15%	(4) > 15%	(5) ≤ 40 years	(6) > 40 years
Share of young councilors	0.076**	0.012	0.106**	0.079**	0.018	0.063*
	(0.034)	(0.060)	(0.045)	(0.040)	(0.042)	(0.032)
Mean (SD)	0.07 (0.05)	0.11 (0.06)	0.08 (0.05)	0.09 (0.06)	0.08 (0.05)	0.09 (0.06)
Municipality FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Closeness	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Kleibergen-Paap Wald F	35.16	17.04	21.24	29.24	9.90	51.50
N	3866	1944	2962	2848	560	5250
Councils	723	422	597	548	114	1031
Municipalities	266	204	232	202	91	350

Notes: This table collects results from IV regressions that relate the share of social spending to the share of young councilors (councilors below or equal to 40 years). We limit the sample to councils with less or equal to three female councilors (model 2) and more than three female councilors (model 2). We limit the sample to councils with less or equal to 15% share of left/liberal lists (model 3) and more than 15% (model 4). We limit the sample to councils with a mayor below or equal to 40 (model 5) and above 40 (model 6). Regressions include municipality and year fixed effects. To account for the endogeneity of the council's age composition, we instrument the share of young councilors with the seat share of young councilors who unexpectedly won in close races. The row entitled Mean (SD) reports the mean and standard deviation of the dependent variable for each regression. Stars indicate significance levels at 10%(*), 5%(**) and 1%(***). Heteroscedasticity and cluster-robust standard errors in parentheses. The unit of clustering is the municipality.

Table A.15: CHARACTERISTICS OF MUNICIPALITIES IN SAMPLE VS. NOT IN SAMPLE

Variable	Not in sample	In sample	Difference	Std. errors	Obs.
Population	7034.47	5907.94	-1126.537	1925.419	2056
Pop < 6	393.25	336.82	-56.439	107.586	2056
Pop 6 − 14	642.40	534.19	-108.215	137.298	2056
Pop 15 − 65	4655.79	3938.00	-717.798	1328.779	2056
Pop ≥ 65	1317.99	1075.38	-242.607	337.381	2056
Area	35.45	32.59	-2.857*	1.487	2056
(Log) Total expenditure p.c.	7.76	7.77	0.001	0.014	2056
(Log) Total revenue p.c.	7.73	7.73	0.001	0.014	2056
(Log) Transfers p.c.	5.46	5.52	0.060**	0.027	2056
(Log) Debt p.c.	6.20	6.14	-0.063	0.061	2056
General finance	0.44	0.46	0.012***	0.004	2056
Social	0.08	0.08	-0.001	0.002	2056
Economic promotion	0.12	0.12	0.001	0.003	2056
Infrastructure	0.10	0.10	0.001	0.002	2056
Schools	0.05	0.05	-0.001	0.001	2056
Administration	0.06	0.06	-0.007***	0.002	2056
Municipal firms	0.07	0.07	0.001	0.003	2056
Health	0.02	0.02	-0.003***	0.001	2056
Culture	0.01	0.01	-0.002***	0.001	2056
Law & order	0.02	0.02	-0.001***	0.001	2056

Notes: In this table, the characteristics of the 355 municipalities in the IV sample are compared with the 1701 municipalities, which are not included. Characteristics are averaged for the time period between 1996 and the last year for which the data was available. The ten variables at the bottom refer to municipal spending shares. Stars indicate significance levels at 10%(*), 5%(**), and 1%(***).