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ABSTRACT

Women in Political Bodies as Policymakers*

We investigate how female representation impacts policymaking using the example of child care and new hand-collected data on local council elections in Bavaria. RDD estimations (mixed-gender races for last party-specific council seats) show that an additional female councilor accelerates the expansion of public child care by 40%. We also document an important nonlinearity: an additional woman accelerates the expansion of child care only in councils with few women. Council meeting minutes reveal that women can be effective in councils despite being a non-pivotal minority because they change "the conversation".

JEL Classification: D72, D78, H70, J13, J16

Keywords: gender composition, political selection, local councils, child care

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1 Introduction

One striking development in contemporary politics is the rising number of women elected to political offices: the worldwide average for the share of women in national parliaments, for instance, has doubled from 12% in 1997 to 24% in 2019.[1] In the United States, 2018 was even hailed as the "Year of the Woman" as a record number of women were elected to Congress.[2]

Even though evidence suggests that men and women have different policy preferences (Bhalotra and Clots-Figueras, 2014; Edlund and Pande, 2001; Funk and Gathmann, 2015; Lott and Kenny, 1999; Miller, 2008), it does not automatically follow that higher female representation will affect policy choices. In standard median voter models, electoral incentives will push all politicians towards policies preferred by the median voter (Downs, 1957), which implies that the gender of a politician may be irrelevant for policy choices.

A more recent literature on political selection argues that elections not only serve to choose policy platforms but also to select individuals for public office (Besley, 2005). If electoral accountability is imperfect and politicians are able to inject their own preferences into public policies, the identity of a politician (including gender) may matter for policy choices. However, various features of the political process might diminish the substantive impact of increased female representation. For example, individual policy preferences must be aggregated to collective outcomes within many decision-making bodies such as local councils or ministerial cabinets. Hence, the substantive effect of additional women might be severely diluted (Ranehill and Weber, 2017). On the other hand, an additional woman could have a disproportionate effect on policy choices in such political bodies through indirect channels. For example, she can "change the conversation" by promoting (gendered) policy issues that were previously neglected.

In this paper, we address this theoretical ambiguity and study empirically whether women who are elected into a political body – thereby affecting its gender composition – have a causal

[1] See Women in Politics database (http://archive.ipu.org/wmn-e/arc/world010219.htm).

[2] 101 women entered the House of Representatives (23.2%) and 25 the Senate (25%). In 2022, these shares amount to 28.3% (House) and 24% (Senate).

impact on policy choices. To study this question, we focus on public child care provision. Since benefits and costs of most local public goods are shared by both genders, it is usually difficult to identify gender differences in policy preferences at the local level.[3] For child care, however, survey evidence from Germany indicates that it is clearly a higher priority for women than for men (Wippermann, 2016).[4] Such evidence is in line with the fact that in Germany (as in most other countries) women continue to be the primary caregivers and thus are typically unable to participate in the labor market without adequate child care. As professional careers have become more important for women, demand for public child care has grown (BMFSFJ, 2005). In line with this, recent evidence from Germany confirms that the availability of affordable child care has a significant impact on female labor supply (Gathmann and Sass, 2018). While men may also benefit from child care, both directly and indirectly (if e. g their spouse consequently earns a (higher) salary), they arguably do so to a lesser degree.

Another key contribution of the paper is to explore nonlinearities in the relationship between councils' gender composition and policies. Even with the secular upward trend in female representation described before, women remain almost everywhere a substantial minority in politics. Can one woman or a handful of women in office make a difference if the overall political environment is still dominated by men? That is, does a move from an extreme minority status of women in politics to a slightly weaker gender imbalance affect policy choices? And if women do affect policies, how do these changes come about?

We study these questions in the context of Bavarian municipalities which are a promising setting for at least three reasons. First, Bavaria encompasses 2,056 municipalities which hold council elections every six years, thus offering a potentially large source of variation and statistical power to yield precise estimates. Second, Bavarian municipalities use an open-list procedure for council elections which allows us to implement an identification strategy cen-

[3]Another reason why we do not use social, education or health care policy as outcomes is that in Germany, these policies are largely determined by higher tiers of government.

[4]Similarly, Slegten and Heyndels (2020) report survey results for Belgium: within parties female representatives self-report stronger preferences for child care than male representatives.

tered around unpredictable races for contested council seats.[5] Third, Bavarian councils are typically small.[6] Thus, the gender of a single councilor substantially affects the overall share of female councilors.

We hand-collect data for 224,448 council candidates that participated in 3,172 local council elections in 2002, 2008 and 2014 in 1,634 Bavarian municipalities. This data is not available from any centralized official sources. Our data is thus unique and includes candidates' names, gender, party affiliation, initial list rank, final list rank, and number of votes received. For a large subset, we also have information on candidates' employment, education and age.

We obtain administrative data on the number of available child care spots in Bavarian municipalities from 2006 to 2017.[7] Child care provision is an important responsibility of local governments and is a frequent topic of discussions in council meetings. As there is virtually no private market for child care in Germany, there is a persistent shortage of child care spots across the country, indicating that demand has outpaced supply.[8] A fast expansion of public child care was thus of high importance for women during the period of our study.

[5]In open-list systems, voters cast preferential votes for individual candidates and thereby determine not only which parties but also which candidates receive a seat. There are potentially as many instances where a woman competes against a man (i.e. mixed-gender races) for the last seat per party as there are parties that obtain council seats. Closed lists (used in some other German states) would also induce such mixed-gender races. Yet, the degree to which the winner of such races is predictable is higher in closed-list systems (see Section 3.2.4).

[6]53.1% of Bavarian municipalities have 8 to 14 council seats and 89% at most 20 seats.

[7]Our sample period is solely determined by the availability of data on child care provision.

[8]See Figure A.3 in the online appendix for survey evidence on child care shortages in Germany by Alt, Gedon, Hubert, Huesken, and Lippert (2018). In 2017, the share of parents who report a lack of child care for children below 3 years ranges from 17% to 36%, for children aged 3 to 6 from 6% to 18%, and for children older than 6 from 6% to 20%. Thus, in none of the 16 states is available child care sufficient for any age bracket.

Our results suggest that municipalities in which a woman rather than a man entered the council (by winning a party-specific mixed-gender race for the last seat) expand child care by 0.37 spots per 1000 inhabitants more in a given year than municipalities in which the winner of the mixed-gender race was a man. This effect is substantial[9] given that during the sample period, the average expansion rate of child care provision per year was 0.8 spots per 1000 inhabitants in Bavaria (increase from 37.5 in 2006 to 46.7 spots per 1000 inhabitants in 2017).[10]

Having established the substantive effect of female councilors on the expansion of public child care, we turn to the question of how female councilors affect policies. For this, we hand-collect, code and analyze the official minutes of monthly council meetings. The minutes provide little evidence that a higher share of women tilts contested votes on specific matters. Most decisions are reached unanimously (or with overwhelming majorities) and hence an additional female councilor is non-pivotal for the outcomes of council votes.

Another potentially important channel is that one additional woman in the council influences policies by changing the dynamics of council meetings and by changing "the conversation" as she diminishes the (at times substantial) minority status of women in Bavarian local councils. By counting on more support from fellow women each female councilor may feel more confident to voice her opinion on (potentially controversial and gender-specific) issues (Karpowitz and Meldelberg, 2014). This may, in turn, steer the council towards different decisions. Likewise, recent experimental evidence indicates that women are less confident and

[9]The effect size is comparable to those reported in other contexts. The findings in Chattopadhyay and Duflo (2004) suggest that women politicians in India expand the number of drinking facilities by about 60%. Beaman, Duflo, Pande, and Topalova (2007) find that women politicians increase the likelihood that Indian children attend child care by 2 ppts.

[10]A female victory in a mixed-gender race increases the female councilor share by 6.1 percentage points. Thus, a 1 ppt increase in the share of women accelerates the expansion of child care spots by 0.06 spots per 1000 inhabitants. Put differently, child care spots on average increased by 9 spots per year across Bavarian municipalities during the sample period. An additional woman thus speeds up the expansion of child care by about 3.6 spots per year.

more easily swayed in group decisions in heavily male-dominated group settings (Born, Ranehill, and Sandberg, 2021).

We confirm the importance of this channel by making use of 7,721 council meeting minutes from 176 municipalities. We find that in response to a woman winning a mixed-gender race average speaking rates of women in council meetings rise by 11.8 percentage points and the share of council meetings in which child care is discussed rises by 7.8 percentage points.[11]

We explore this channel further by studying whether the effect of an additional female councilor varies with the number of other women in the council, allowing for nonlinearities in this relationship. Our results suggest that if this additional woman is only one among few other female councilors, she has a strong effect on the expansion of child care. This underlines the importance of having a seat at the table for one woman to push for pro-female policies.[12]

This paper primarily relates to the literature on women as policymakers.[13] Various studies show that female politicians invest more into children and prefer higher welfare spending (Andersen, Bulte, Gneezy, and List, 2008; Chattopadhyay and Duflo, 2004; Clots-Figueras, 2011, 2012).[14] This literature, however, exhibits important gaps.

[11]Section 6.2 explores the effect of a female victory on 52 other topics and shows that none are discussed less often. Thus, attention to child care does not crowd out other topics. Churches, utilities, road security, sewage disposal and street cleaning are also discussed more often.

[12]The importance of a seat at the table has been confirmed in other contexts: Pildes and Donoghue (1995) describe how in Chilton County, AL the election of the first black County Commissioner led to an objective and transparent decision-making procedure for road pavements. As a consequence, the share of roads in black communities that were paved increased.

[13]This paper also contributes to the broader literature on political selection. Studies have found that characteristics as diverse as caste (Pande, 2003), ethnicity (Franck and Rainer, 2012), employment (Hyytinen, Meriläinen, Saarimaa, Toivanen, and Tukiainen, 2018), regional origin (Hodler and Raschky, 2014) are significant predictors of policy choices.

[14]For a more detailed overview of the literature, see Hessami and Lopes da Fonseca (2020). For a general discussion of substantive representation by women, see Celis (2009).

A first gap stems from the fact that much of the literature focuses on one-person executive offices, e. g. mayors or village heads. Evidence on women's impact within political bodies is rare. This is an important omission for at least two reasons. First, prominent executive offices such as mayorships are powerful and allow wide autonomy in shaping policy. It is unclear whether female politicians are able to influence policies only in such positions or whether they can be also effective in collegial political bodies (e.g. councils or cabinets) where they have to contend with and convince fellow (male) politicians, especially given that they are typically a substantial minority in such bodies.[15] Second, there is almost no evidence on how women affect policies in collegial political bodies and how their effectiveness varies with the broader characteristics of the body, notably the overall female representation therein.

A second gap arises from the fact that most studies focus on developing countries. For example, Beaman, Duflo, Pande, and Topalova (2007) and Chattopadhyay and Duflo (2004) find that female village heads provide more public goods preferred by women. In turn, children in female-led villages are healthier and gender gaps in education diminish. However, these studies explore politicians with relatively wide executive powers. In contrast, Clots-Figueras (2011, 2012) focus on legislators and analyze the impact of female representation in Indian legislatures on various spending items such as education and social policy. These studies find no systematic effects of female representation, and it appears that the impact of women is conditional on caste background.

It is not clear whether these results can be transferred to developed countries. Attitudes toward gender equality and thus the efficacy of female politicians may differ in more developed settings. More importantly, while legislators are technically free to vote as they deem fit, party leaderships often wield strong influence over legislative careers, causing the members of legislative bodies to vote mainly along party lines. As a consequence, the gender composition of legislatures may have negligible importance for roll-call votes and resulting policy choices.

[15]Gagliarducci and Paserman (2012) show that gender is an important determinant of cooperation between politicians: female mayors are least likely to complete their terms in Italy in municipalities with all-male councils.

The few studies set in developed countries rely on women who enter political bodies via quotas or similar government interventions. Bagues and Campa (2021) find that quotas increase female representation in Spanish municipalities, but that this has no effect on policy choices. Yet, while women entering political bodies via quotas must still compete and succeed against opponents (at least when aiming to obtain list placements against other women), their effect on policy choices might nonetheless differ from those women who win elections not subject to quotas. For example, women entering via quotas might be considered as "token" politicians by their (male) peers, diminishing their effectiveness. Quotas might also increase the salience of gender, causing men to block policies preferred by women. Finally, quotas can also affect the quality of the candidate pool, resulting in a different selection of male and female politicians (Besley, Folke, Persson, and Rickne, 2017). Indeed, in contrast to Bagues and Campa (2021), our results suggest that a woman who enters office through an election without a quota can have substantive effects on policies, primarily by reducing women's minority status in councils and thus changing "the conversation". As such, our work illuminates a previously undocumented mechanism through which women can affect policies.

While a related literature in political science studies female politicians behavior in political bodies, it focuses on higher-level political bodies such as parliaments and usually does not tie women's effects on parliamentary proceedings to policy outcomes (Blumenau, 2019; Heath, Schwindt-Bayer, and Taylor-Robinson, 2005; Bäck, Debus, and Müller, 2014). One advantage of our local government context is that we can study the effect of women on policies through their influence on council proceedings in a unified framework.[16]

[16]Our paper also relates to the literature on reasons for female underrepresentation which finds female candidates to be less successful in voting systems centered around persons rather than parties (Profeta and Woodhouse, 2018) likely due to anti-female voter biases (Baskaran and Hessami, 2018; Le Barbanchon and Sauvagnat, 2021).

2 Background

2.1 Public child care in Germany and Bavaria

2.1.1 Official regulations

Child care in Germany is characterized by strong public involvement with virtually no private market (Spieß, Kreyenfeld, and Wagner, 2001). Typically this means that local governments run their own facilities. In addition, local governments heavily subsidize private or semi-public institutions (churches, firms, student unions, other welfare associations) that operate government-recognized facilities.[17]

Parental child care fees fall well short of the full costs of a child care spot and the gap is covered by subsidies from the county government (in a few German states child care is free of charge). Officially, the number of child care spots in a municipality is required to satisfy demand. Therefore, Bavarian municipalities have to assess the number of "necessary" child care spots (*örtliche Bedarfsplanung*) as per Article 7 of Bavarian Child Care legislation (*Bayerisches Kinderbildungs- und -betreuungsgesetz*). Yet, as there is no codified procedure to determine this number, local officials have significant leeway. The planning committees may also evaluate independently to what extent they succeed in matching assessed demand.[18]

[17]Local governments negotiate contracts with such non-public institutions that specify the amount of subsidies. Generally, local governments should operate facilities by themselves only if insufficient spots from non-public providers are available (*subsidiarity principle*), but they are always involved in planning and financing child care, specifically the overall number of spots and facilities, and their specific locations. Planning of child care is overseen by committees that include representatives from local governments and the semi-public institutions.

[18]County governments mainly coordinate and plan child care provision (both by local governments as well as other institutions) across the municipalities within a county.

Since 2013, parents in Germany have a statutory right to public (and hence subsidized) child care for children older than one.[19] In practice, however, there are severe supply constraints (see Figure A.3 in the online appendix). Many municipalities ostensibly struggle to satisfy demand due to difficulties in fulfilling regulatory requirements set by the state and federal governments, lack of building spaces and trained personnel, and funding constraints.[20]

This undersupply implies significant room for local governments to increase child care provision through appropriate policy measures. Such an expansion of supply would not only increase the overall number of spots but would also increase the likelihood that parents have choices for child care close to their home/workplace and would raise the quality of child care if the additional spots are not filled (higher effective child-staff-ratio and more space per child).

2.1.2 Provision and use of child care

Our sample period was characterized by an expansion of public child care in Germany and specifically in Bavaria. Spots per 1000 inhabitants increased on average from about 37.5 in 2006 (the first year for which we have data on child care provision) to 46.7 (i.e. by 24.5%) in 2017 across Bavarian municipalities (see Figure 1). The evolution in terms of places per 1000 children below 14 years is even more pronounced (from 226.3 to 341.7 spots). Due to newly approved federal- and state-level programs (BMFSFJ, 2021), funding constraints were eased during the sample period and the creation of additional child care spots was mostly a matter of how much urgency local politicians ascribed to child care expansion.

[Figure 1 goes here]

[19] As of 1996, parents were entitled to a child care spot for children older than three years.

[20] Parents may sue authorities if they receive no child care spot. However, parents have only the right to *some* spot, and they may receive a spot in a facility that is at the other end of town or has insufficient opening hours. Even when such lawsuits are successful, courts award compensation payments to parents, but are still unable to grant actual child care spots. In rare cases, courts obligate municipalities to cover expenses for private child care.

The age of children in child care facilities ranges from 6 months to 14 years. Important administrative cutoffs are at age 3 (kindergarten entry) and age 6 (school entry). Different regulations (e. g. regarding child-staff-ratios) apply at each of these cutoffs.

Figure A.4 in the online appendix shows the rate at which children in different age brackets attend child care facilities across Bavaria. Attendance has generally increased for all children below 11 years. In 2017, the attendance rate was 26% for children below 3 years (9% in 2006), 95% for children between 3 and 6 (85% in 2006), 25% for children between 6 and 11 years (16% in 2006), and 0.8% for children above 11 years (0.9% in 2006).

The low attendance rate for children below 3 reflects both the lack of supply as well as low demand. The high attendance rate for children above 3 indicates that demand for child care is practically universal for older children. While supply of such places is substantially larger than for places for children below 3, it is still insufficient to cover all children in this age bracket even in 2017 (see also Figure A.3). The low attendance rates for children in primary school again likely reflects a lack of supply (see Figure A.3). The low attendance rate for children above 11, in contrast, is likely to due low demand, as older children require less care.

2.2 Local governments in Bavaria

2.2.1 Tasks and responsibilities

2,056 municipalities in Bavaria decide on various regulations (e.g. closing hours, speed limits) and provide a broad range of public goods (e.g child care, civil protection, social services). While there are federal and state mandates, municipalities enjoy wide autonomy: they can independently determine the type and amount of local public goods as long as minimum amounts of key services (as defined by federal and state legislation) are guaranteed.

Municipal expenditures are mainly financed by local taxes, fees, and grants from state governments. Municipalities set local tax rates as well as fees independently. Grants can be either rule-based or discretionary. Discretionary grants are typically awarded for specific projects or tasks while rule-based grants tend to be unconditional.

2.2.2 Mayors and local councils

Mayors are the head of the administration, draw up the annual budget, and are directly elected by the inhabitants of their municipality. Mayor elections are personalized campaigns, even though the candidates are usually supported by one or several parties. Mayors participate in council meetings as well as votes and have a veto over council decisions.[21]

The council is constitutionally classified as part of the executive branch and is the political counterpart to the mayor. While the mayor is responsible for the daily business of her municipality, the council decides on policy issues with fundamental and long-term implications. In particular, the council approves the budget.

Councilors are elected in regular elections (every six years in March). Council size is defined by state law and increases with the population of a municipality. Specifically, council size (excluding the mayor) varies from 8 (small village) to 80 (large city). In 2014, 53.1% of municipalities had at most 14 seats and about 89% had at most 20 seats (see Table A.21).

Various parties compete in local council elections. In most municipalities, the major national parties (SPD (center-left), CSU (center-right), Greens, etc.) field lists of candidates. In addition, several citizens' initiatives and smaller parties participate in the election.

2.2.3 Open-list elections of councils

Local councilors in Bavaria are elected based on open lists (also sometimes called preference or preferential voting). Parties field lists of candidates where each candidate has an initial rank (as determined by the party organization and notably the leaders). Voters can change this list ordering by casting preferential votes for individual candidates. They have as many votes as there are seats in the council and they can freely distribute their votes to candidates across different lists (*Panaschieren*) and give up to three votes to a single candidate (*Kumulieren*).

[21] Note that the mayor's role in political decision-making is more important in Bavaria than in other German states such as Hesse (Hessami, 2018).

Seats are allocated to lists according to the total number of votes that all candidates on the list have received. For example, if a list receives 25% of votes, it is entitled to about 25% of the council seats. Candidates are ranked according to their preferential votes and all candidates with a post-election rank that is lower or equal to the number of seats to which a party is entitled receive a seat (the pre-election rank is not decisive for seat allocations).

Preferential voting gives rise to candidate-level races for the last seat that accrues to a party. The candidate with a final list rank just below the number of seats to which a party is entitled barely fails to get elected to the council while the candidate with a final list rank equal to the party's number of seats is barely elected. When these two candidates are of different genders, the gender of the winner is plausibly unpredictable and thus quasi-random. Our identification strategy relies on this feature of open-list elections (see Section 3.2).[22]

2.2.4 Women in Bavarian local councils

Women are underrepresented in local councils in Bavaria. Only about 18.4% of council members are female as of 2014, up from 15.7% in 2002 (see Subfigure (a) of Figure 2). Subfigure (b) illustrates that the majority of councils has a female share that is lower than 20%. 457 councils (7.4%) even have no women and only three councils have a female majority.[23]

[Figure 2 goes here]

[22] An additional source of exogenous variation for the female councilor share exists at the party level: the seat allocation according to the vote distribution (Folke, 2014; Curto-Grau, Solé-Ollé, and Sorribas-Navarro, 2018; Kotakorpi, Poutvaara, and Terviö, 2017). However, parties form electoral alliances in order to take advantage of the d'Hondt method for seat allocations which are not indicated in the official data. As such, it is unclear how close parties were to winning a seat according to the proportional seat allocation formula.

[23] The female share for the mayor's office is even lower with less than 10%. Although the lack of women in German politics is widely considered as problematic (Lukoschat and Belschner, 2014), no effective measures have yet been taken, e.g. no mandatory quotas exist. While several parties have self-imposed quotas, the CSU as the largest Bavarian party has no quota.

3 Data and empirical model

3.1 Data

3.1.1 Candidate-level data

We collect data on 224,448 candidates who participated in Bavarian local council elections in 2002, 2008 and 2014. Figure 3 details the number of municipalities on which we have data. As we hand-collect the candidate-level data, coverage is incomplete and declines the further we go into the past. We have complete candidate-level data on 1,581 of all 2,056 Bavarian municipalities for 2014 (76.9%), 1,009 for 2008 (49.1%), and 582 (28.3%) for 2002 (Subfigure a). For 1,632 municipalities (79.4%) we have data for at least one election. The coverage with respect to the number of candidates per election exhibits a similar pattern (Subfigure b).

[Figure 3 goes here]

The data includes candidates' name, gender, party, initial list rank, final rank (based on number of preferential votes), and the number of preferential votes. For a subset of candidates, we also have information on employment, education and age.[24] This data also allows us to identify, based on final list ranks, those candidates who barely entered and barely failed to enter the council. We discuss this data in Section A.2 (online appendix) in more detail.

One concern is that we do not have data on the universe of Bavarian municipalities. Table A.4 compares the characteristics of the 1,632 municipalities for which we have candidate-level data with those of the 424 municipalities not in our sample. While there are a few significant differences, these are relatively small. The main difference is that included municipalities have 28% more inhabitants. Other differences appear to be a direct consequence of population size differences: the larger seat share of the major parties (CSU and SPD) can be explained by the fact that municipality-specific citizen groups (*Wählervereinigungen*) are more popular in smaller municipalities. As we have data on almost 80% of municipalities for at least one legislative period, our sample nevertheless covers large parts of Bavaria. Also note that OLS regressions in Table A.24 indicate that the bivariate correlation between the share of women

[24] See Table A.22 for summary statistics on the characteristics of female and male candidates.

in the council and the expansion of child care in a sample covering the universe of Bavarian municipalities and our hand-collected sample is very similar (see Section A.2 for more on this).

3.1.2 Outcome variable

We obtain data on the number of approved child care spots for all 2,056 Bavarian municipalities for 2006-2017 from the Bavarian State Statistical Office. We rely in our main estimations on the change in child care spots per 1000 inhabitants rather than its growth rate for two reasons. First, we avoid losing observations for municipalities that have zero child care spots (typically at the beginning of the sample period). Second, given that many municipalities have only very few child care spots, small absolute changes may lead to large swings in growth rates.

3.1.3 Further variables

We collect further municipality-level variables for robustness and validity tests. Notably, we obtain a wide range of data on municipality characteristics from the Bavarian State Statistical Office, on demographic (total population, population below 15 years, between 15 and 65 years, above 65 years) and fiscal characteristics (total revenues and transfer receipts).

3.2 Empirical design

3.2.1 Specification

The structural relationship we want to estimate is:

$$y_{i,t} = \alpha + \beta \textit{Female councilor share}_{i,t} + \delta \mathbf{X_{i,t}} + \varepsilon_{i,t}. \quad (1)$$

$y_{i,t}$ is the change in the number of child care spots per 1000 inhabitants in municipality i in year t, *Female councilor share* is the share of women in the council (same value for all years of a given legislative period), and $\mathbf{X_{i,t}}$ are further potential determinants of child care provision.

OLS estimation of β may be biased because municipalities with a higher share of female councilors may also differ in other dimensions. More urbanized municipalities may have more female councilors and at the same time find it harder to provide additional child care spots

because of a scarcity of space or their inhabitants may prefer other public goods. It is unlikely that all relevant determinants of child care provision can be observed and included in $\mathbf{X_{i,t}}$.

Therefore, we implement RD estimations for unpredictable mixed-gender races for a party's last seat. In open-list elections, seats are awarded to candidates based on their preferential votes. Thus, for each list with at least one council seat, there will be one candidate who has a final rank that is exactly equal to the total number of seats that a list receives according to its vote share (and hence barely enters the council), while another candidate will have a rank that is just one rank below the threshold (and thus barely fails to enter the council).[25]

It is plausible that the identity (and hence gender) of the candidate who wins a mixed-gender race for the last seat is quasi-random as a victory depends on small differences in the number of preferential votes. Thus, among municipalities with the same share of candidates elected in mixed-gender races, some will coincidentally end up with more female councilors.

Using a sample that includes municipality-year pairs that in the last election had at least one mixed-gender race for the last seat (see Section 3.2.2 for more details on this sample), we estimate the following sharp RD specification:

$$y_{i,t} = \alpha + \beta \textit{female winner}_{i,t} + f(\textit{vote margin})_{i,t} + \textit{female winner}_{i,t} \times g(\textit{vote margin})_{i,t} + \varepsilon_{i,t}, \tag{2}$$

with $y_{i,t}$ as the change in child care spots per 1000 inhabitants. *female winner* is 1 when a woman wins in a mixed-gender race the last seat for her party. *vote margin* is the female candidate's margin of victory, i.e. the difference between the number of the votes of the marginal female and male candidate divided by the sum of votes for both marginal candidates. $f()$ and $g()$ are linear or quadratic functions of *vote margin* whose slope may vary at the RDD threshold (where vote margin = 0). We estimate this specification for different bandwidths and polynomials. All models use heteroscedasticity-robust and municipality-level clustered standard errors.

The above specification has the following noteworthy features. First, while the outcome variable varies every year, the female winner dummy and the vote margin remains constant

[25] "Election" refers to the entire election held in a municipality at the beginning of a given legislative period. "Race" refers to contests between two candidates for the last seat per party.

during a legislative period. Our sample runs from 2006-2017 and hence covers three legislative periods. It covers two years for the legislative period 2002-2007, six years for the legislative period 2008-2013, and four years for the legislative period 2014-2019.

Second, we estimate with Equation (2) the reduced-form effect of a female winner for a last seat by means of a sharp RD design while the structural relationship as specified in Equation (1) relates the overall share of female councilors to the change in child care spots. We opt for a sharp rather than a fuzzy design due its simplicity and transparency. However, we will scale the reduced form effect on child care provision by the impact of a woman winning a mixed-gender race on overall female representation in the council in the spirit of a fuzzy design.[26]

Finally, note that there can be several mixed-gender races in an election given that they take place within parties and several parties typically enter a council (see Section 3.2.2). Hence, for municipality-year pairs that had several mixed-gender races in the last election, we include in the RD regressions as many observations as there were mixed-gender races. These observations have the same value for the outcome variable but different values for the independent variables (female winner dummy and vote margin), depending on the vote margin of the female candidate in a given party with a mixed-gender race for the last seat. Given that the same municipality-year pairs can appear several times in the estimation sample, we weight each observation by the inverse of the total number of observations from that municipality-year pair.[27] [28]

[26] We also report in Table A.27 in the online appendix results for fuzzy RDD estimations. The results are qualitatively similar to the sharp RDD results in Section 5.

[27] In elections with e. g. two races, one can be won by the male and one by the female candidate. In these cases, male and female victories cancel each other out in terms of counterfactuals, as the same municipality appears once to the left and once to the right of the RD threshold.

[28] Another noteworthy feature of the RD specification above is that it focuses on the two candidates closest to the seat threshold. Given that technically all candidates compete for all seats in local elections, more than two candidates could be similarly close to the seat threshold. In Section A.6.3, we report results using an alternative framework that accounts for the multi-

3.2.2 RD sample

The sample with which we estimate Equation (2) includes all municipality-year pairs where in the last election at least one party had a mixed-gender race for the last seat (RD sample). There are altogether 3,756 such races in our sample, originating from 2,173 individual elections (424 in 2002, 687 in 2008, 1062 in 2014) in 1,287 municipalities (see Figure A.5). Table 1 provides summary statistics on local elections with at least one mixed-gender race.

[Table 1 goes here]

1,102 elections had exactly one mixed-gender race. These are ostensibly held in relatively small towns (on average less than 5,000 inhabitants) with small councils and few parties (recall that the number of parties is directly related to the likelihood of observing a mixed-gender race for the last seat that accrues to a party). Since these towns have small councils, the relative impact of one woman winning a mixed-gender race is large. One additional woman increases the share of female councilors on average by 6.3 percentage points or, alternatively, by 36%.

3.2.3 Discontinuity in density

Is the gender of the winners in mixed-gender races indeed quasi-random?[29] If the outcomes of these races were not random, we would expect that, on average, either men or women would be more likely to win a close race. Subfigure (a) of Figure A.6 shows the distribution of the winning margin of female candidates in mixed-gender races. This figure shows that women and men are equally likely to win close races. Subfigure (b) presents more formal evidence for this by means of a McCrary plot, which also shows no discontinuity.[30]

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candidate nature of local elections. The results using this approach are in line with the RD results reported below.

[29] In Section A.1 (online appendix), we provide results for additional RDD validity tests.

[30] Of the 3,756 mixed-gender races in the RD sample, 1,745 were won by women (46.5% winning rate). Of the 1,686 mixed-gender races where the margin of victory of the winning candidate was within 5%, 823 races were won by women (48.8% female winning rate).

3.2.4 Unpredictability of final ranks

The RD design relies on the assumption that the winner of a mixed-gender race for the last seat in open-list elections is unpredictable. A natural concern is that party leaders can predict how many seats their party will win and place female candidates accordingly.

Predictability of final seat distributions, however, is more of a concern in closed-list systems, where there are no preferential votes and hence the rank of a candidate is determined by the leadership only.[31] In the Bavarian open-list system, the popularity of individual candidates determines party-level seat allocations since the number of votes that accrues to a party is the aggregate of all preferential votes. It is arguably more difficult for party leaders to accurately forecast the relative popularity of a large number of candidates placed on several party lists.

Second, while the party leadership determines candidates' initial list rank, it cannot accurately predict the candidates' final rank. Even though there is a positive correlation between initial and final list ranks even in open-list systems, it is far from perfect.[32] Even if party leaders could accurately predict how many seats their party will receive, they cannot ensure that a particular candidate receives the last seat by manipulating the initial ranking.[33] Figure A.7 in the online appendix confirms this by showing the distribution of rank changes for all candidates for which we have data on both initial and final list ranks. About 86% of these 175,632 candidates end up with a final rank different from their initial rank. About 47% of these candidates even witness a change of at least three ranks. There is no meaningful difference in the rank change propensity between women (subfigure a) and men (subfigure b).

[31] In closed-list systems, voters essentially elect parties. As voters' preferences for parties change only slowly, it may be feasible for party leaders to predict the council's seat distribution.

[32] Voters appear to cast more preferential votes for candidates with higher pre-election ranks for "psychological" reasons (Chen, Simonovits, Krosnick, and Pasek, 2014).

[33] For the same reason, strategic voting on part of voters for candidates is likely irrelevant.

4 OLS results

Before presenting the RD results, we estimate Equation (1) using OLS. Comparing the OLS estimates to the RD estimates allows us to assess how unobservable characteristics of municipalities might bias estimates for the effect of female representation on child care provision. Panel A of Table A.24 reports OLS estimates (without controls) for the universe of Bavarian municipalities, the full hand-collected sample, and the RD sample: a rise in female representation increases the annual expansion rate by 0.01 spots per 1000 inhabitants.

We next explore whether confounders lead to a downward or upward bias in the OLS estimates. Given that we study the expansion of child care in response to an increase in female representation (rather than its stock), potential sources of bias probably cause a downward bias. In particular, municipalities with higher female representation are plausibly less attached to traditional views about the role of women in society. They may thus have had more child care facilities to begin with and, in turn, face less urgency to expand its provision. Indeed, we find a significantly positive association between the share of women in the council and child care spots per capita, i. e. municipalities with one percentage point higher share of women in the council have about 0.2 more child care spots per 1000 inhabitants (Table A.23).

Panel B of Table A.24 shows that the raw OLS estimate increases by 50% when we control for lagged child care spots per capita. It is plausible that other systematic yet unobservable differences regarding the role of women in society in general and child care in particular exist between municipalities with a high and a low share of female councilors. This is reaffirmed by Panel C of Table A.24, where we additionally control for the change in population density and the share of the population below 14 years: the OLS estimate for the share of women in the council increases by another 50%. While there are likely other relevant confounders, it is difficult to explicitly account for such differences in a selection-on-observables framework.

5 RDD results

5.1 Female victories and share of female councilors

In this section, we collect the RD results. We first validate within the RD framework that a female victory in a mixed-gender race significantly increases the share of female councilors by estimating a variant of Equation (2). Table 2 collects the regression results for the impact of a female victory on overall female representation. Female representation is on average 6.14 percentage points (or 30%) higher in councils where a woman has won a mixed-gender race.[34]

[Table 2 goes here]

5.2 Female victories and child care provision

5.2.1 RD plot

We next report the baseline results for the effect of female councilors on child care provision. Specifically, we compare the change in aggregate child care spots per 1000 inhabitants in municipalities where a woman rather than a man won a close mixed-gender race. In Figure 4, we observe a visible discontinuity at the threshold for a female victory.

[Figure 4 goes here]

Note that the discontinuity emerges mainly due to a change in the shape of the polynomial smooth close to the threshold, i.e. within 5% of the RD threshold. The smooth is relatively flat for men and women who win relatively comfortably, but is declining in the margin of victory of the female candidate once we focus on relatively close races.

One reason for this pattern might be the selection of municipalities that have close mixed-gender races for the last seat. According to Model (1) of Appendix Table A.25, municipalities in which mixed-gender races are decided with a margin smaller than 5% have a larger population size than municipalities where these races are not close. Why should these differences between municipalities with close and non-close mixed-gender races affect the shape of the polynomial

[34]The corresponding RD plot can be found in Figure A.8 in the online appendix.

smooth? For example, municipalities with close races – presumably because they are larger and more urban – also have a higher number of existing child care spots and face less urgency to expand child care (See Model (3) of Table A.25). Thus, the change in child care spots may on average be smaller in municipalities with close elections (see also Table A.23 which shows that a large stock of spots correlates negatively with the expansion rate).[35]

Another reason for the slope might be a different selection of councilors. For example, we find that the propensity that a councilor is from the conservative CSU is 15 percentage points higher for close than for non-close races (see Appendix Table A.26). It is possible that CSU councilors value public child care less and thus are slower to expand the number of spots.[36]

Such differences between close and non-close races may point towards selection issues, potentially limiting the external validity of our results. However, note that almost 50% of all mixed-gender races for the last seat in our sample are won with a margin of victory smaller than 5% (see Figure A.6). That is, while the discontinuity appears to emerge mainly locally around the threshold, it is calculated using a significant fraction of the sample.

[35]Furthermore, the negative slope of the smooth can be explained by the fact that, among the municipalities with close races, those where women win comfortably have a higher number of existing child care spots. In Models (4)-(6) of Table A.25, we relate the female candidate's margin of victory to population size, council size, and the existing number of child care spots. While the margin of victory does not display a clear association with municipality or council size, there is a clear positive relationship with the number of existing child care spots. In Figure A.14, we also relate the margin of victory to the three covariates explored in Panel C of Table A.24. We observe for all covariates a change in the slope of the RD smooth for close vs. non-close races, again indicating that the selection of municipalities differs.

[36]A related explanation for the slope is that the final list rank with which a seat is won is larger for close than for non-close elections (see Figure A.15). This suggests that non-close races are more common in smaller parties (i. e. parties with fewer seats); and councilors from smaller parties might be inconsequential for child care expansion irrespective of their gender.

5.2.2 RD regressions

The RD regression results corresponding to Figure 4 are collected in Table 3. According to the estimates for the optimal CCT bandwidth (Model 1), treated municipalities expand child care spots per 1000 inhabitants by 0.37 units more than control municipalities. This result is robust to increasing the degree of the polynomial to quadratic as well as varying the bandwidth.[37]

[Table 3 goes here]

To assess the magnitude of this estimate, we report at the bottom of Table 3 the average change in child care spots in the estimation sample (as well as the standard deviation). In Model (1), the average change per 1000 inhabitants is 0.90 spots. One additional woman thus increases the expansion rate of child care spots by about 40% above the average growth rate. To put this estimate into perspective, note that child care spots increased on average by 9 spots per year across Bavarian municipalities during the sample period. Thus, an additional woman would increase the growth of child care spots by about 3.6 spots per year (40% $\times$ 9).

Second, we can also compare the estimate of 0.37 to the 6.14 ppt increase in the share of female councilors due to the female candidate winning a close mixed-gender race. This suggests that a 1 ppt increase in female representation increases the expansion rate of child care by slightly more than 0.06 spots per 1000 inhabitants.[38] This effect corresponds to the fuzzy-RDD estimate for female representation reported in Table A.27 in the online appendix.

[37] We also ran alternative regressions to study the impact of female councilors on the stock (rather than the change) of child care spots. We find a positive but statistically insignificant effect, which ostensibly reflects the fact that stocks are strongly determined by past decisions and exhibit significant variability across municipalities.

[38] Since we rely on hand-collected data, we do not observe the universe of Bavarian municipalities. Would our results generalize to the municipalities not included in our sample? The main difference is that municipalities omitted from our (RD) sample are smaller (see Section A.2 and Table A.32 in the online appendix). In view of our finding in Section A.5.4 that the effect of female winner is stronger in municipalities with smaller councils (recall that coun-

5.3 Robustness

This section briefly describes the results for five robustness tests. The full results as well as a more comprehensive discussion can be found in Section A.4 in the online appendix.

First, we study whether the results are robust to different scalings of the dependent variable: the growth rate of child care spots per 1000 inhabitants and the change in child care spots per 1000 children. We find that the results are qualitatively the same.

Second, in the baseline estimations, the same municipality-year pair can appear several times in the RD sample and may also find itself both to the left and the right of the RD threshold, depending on the gender of the winner of a given party-level contest.[39] To explore whether our results are robust to this, we re-estimate the baseline specification with a sample of elections where there was exactly one mixed-gender race. In this sample, a municipality-year pair cannot be both to the left and the right of the RD threshold. We find that the results are qualitatively similar to the baseline estimates with a larger coefficient of 0.47.[40]

Third, gender might be correlated with other traits of councilors. Thus, it may be one of these other traits rather than gender that is responsible for the faster expansion of child care in municipalities where women win a mixed-gender race. To explore whether our results are robust to this concern, we re-estimate the baseline specification after controlling for various other characteristics of candidates. However, we obtain similar results.

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cil size is a function of population size), it is plausible that our main results generalize to the omitted municipalities.

[39]Recall that in the baseline, we address this issue by weighting municipality-year pairs with several mixed-gender races with the inverse of the number of mixed-gender races.

[40]We consider only mixed-gender races for the last seat even though there may be infra-marginal male and female candidates who are nonetheless close to the RD threshold. We therefore implement an alternative RD design where the running variable is defined as the vote distance between the male and female candidates who are closest to the RD threshold (irrespective of being marginal candidates). This allows us to consider infra-marginal mixed-gender races. The results are virtually identical to our main approach (available upon request).

Fourth, we explore whether the results are robust to outliers close to the threshold. For this, we estimate donut specifications where we successively drop all observations around 0.5%, 1%, 1.5%, 2%, 2.5% and 5% of the RD threshold. We find that the RD coefficient has the same order of magnitude as the baseline RD coefficient, even if it is generally less significant. In RD plots where we drop potential outliers, we obtain similar results as in the baseline.

Fifth, we re-estimate the baseline specification using term-averaged rather than annual data since, electoral outcomes only vary over legislative terms, even if the change in child care spots varies annually. We find that the results are in line with the baseline estimates.[41]

6 Mechanisms

6.1 Voting power of female councilors

One possible mechanism is that an additional woman increases overall female voting power in the council. Thus, if there are contested votes on gendered policy choices, female councilors may be more likely to tilt the outcome in their favor if they hold one additional vote.

To explore this channel, we collect and analyze the minutes of council meetings for as many municipalities included in our RD sample as possible (and corresponding meetings).[42] Council minutes were easier to obtain for more recent years. Our sample covers three municipalities with (at least some) minutes for the legislative period 2002-2007, 36 municipalities for the legislative period 2008-2013, and 166 municipalities for the legislative period 2014-2019.[43] Meetings are held at least once per month and our sample includes 136 individual minutes for 2002-2007, 1,772 minutes for 2008-2013, and 5,813 minutes for 2014-2019 (see Figure A.9).

[41] Section A.5 in the online appendix provides additional results for a number of extensions of the main RD specification.

[42] See Section A.3 in the online appendix for more details on how we collect the minutes.

[43] Table A.30 compares municipalities for which we were able to obtain minutes with the other municipalities included in our sample. While there are differences, these are relatively small. For example, the share of women in the council in municipalities with available minutes

The minutes indicate that the voting power channel is likely irrelevant. Going through the minutes, we found that council decisions are mostly reached by unanimity (or an overwhelming majority). Rather than relying on contested votes over controversial issues, councilors tend to discuss any topic that needs to be decided and attempt to reach a consensus before the vote. This is feasible as Bavarian councils tend to be small. This observation is in line with anecdotal evidence that German local politics is largely cooperative and devoid of ideological divisions.

Another reason why this potential mechanism is unlikely to matter in our context is that even if a woman wins a mixed-gender race, the overall share of women would still tend to be too small to sway majorities in Bavarian local councils given the general underrepresentation of women in Bavarian councils. That is, it is unlikely that any additional woman winning a mixed-gender race would be pivotal in contested votes over gender-specific issues.

To rule out this channel further, we estimate a model where we interact the female councilor share with the female winner dummy. If an additional woman is effective because she increases the voting power of women in the council, we should observe a positive interaction effect, i. e., an additional woman should lead to a quicker expansion of child care if she is more likely to be pivotal for votes on gendered policy issues. We report the results in Table A.31 and plot the marginal effect in Figure A.12. The coefficient for the interaction effect is consistently insignificant, again suggesting that the voting power channel is likely not relevant.

In fact, Figure A.12 suggests that the marginal effect of a female winner is significantly positive when the female councilor share is low. This non-linear effect suggests an alternative channel, whereby an additional female councilor is particularly effective if there are few other women in the council. We explore one such alternative channel in the next section.

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is 20.1% and 18.6% in municipalities without minutes. The main difference between these two groups appears to be that municipalities with available minutes have a larger population size.

6.2 Behavior of (female) councilors in council meetings

Another possible mechanism is that having one more woman in the council affects the behavior of all other women. Experimental evidence suggests that women are less confident and less likely to assume leadership positions in group settings if they are a minority (Born, Ranehill, and Sandberg, 2021). In Bavarian councils, women are generally in an overwhelming minority position. One additional woman may thus make all women more confident by adjusting their expectations about receiving support by fellow councilors if they speak up on a particular issue.

To explore this channel, we code the minutes of council meetings and calculate average attendance rates of women (the share of meetings with minutes data in which a given women was not missing). Second, we study the average rate at which female councilors rise to speak about any issue (we code up to 53 topics, including child care). That is, we calculate for each municipality-legislative term pair the share of meetings with available minutes in which a given woman is noted in the minutes as making at least once a significant remark.[44] Since this ratio is only based on the speaking rates of each individual female councilor (and hence the number of male councilors does not matter), an additional woman does not mechanically increase this ratio. For councils with no women, the speaking rate ratio is set to missing (i.e. they are not included in the regressions). Third, we also calculate the share of meetings in which child care was discussed. Using these indicators, we implement RD estimations in line with Equation (2).

We may expect women's average attendance rates to increase if having more fellow women in the council motivates any single councilor to attend council meetings.[45] However, note that absenteeism is low for both genders according to our data (on average almost 90% of male and female councilors are present at any meeting) since councilors are by law obligated to participate in council meetings. Table 4 shows no differences in attendance rates (Panel A). Subfigure

[44] More specifically, we calculate for each woman the share of meetings where she rises at least once to speak, and then take the average of this share over all women in a given council.

[45] A woman may also more likely skip meetings if she expects enough other women to attend.

(a) of Figure 5 also does not suggest a discontinuity at the threshold. This can be explained by the fact that attendance rates are high to begin with.

In contrast, Panel B of Table 4 shows that women are more likely to speak up in councils where a woman has won a mixed-gender race. The coefficient is positive and significant in most specifications and quantitatively large: average speaking rates increase by 11.8 percentage points (see Model (1)). This indicates that any given female councilor is on average 11-12 ppts more likely to speak up in a given meeting in municipalities where one additional woman enters the council.[46] Subfigure (b) of Figure 5 also shows a clear discontinuity at the threshold.

[Figure 5 goes here]
[Table 4 goes here]

In Panel C of Table 4, we find that the likelihood that child care is discussed in a council meeting increases in response to a woman winning a mixed-gender race. On average, the likelihood that child care is discussed increases by 7.8 percentage points. The corresponding RD plot in subfigure (c) of Figure 5 confirms a visible discontinuity.[47]

We also investigate the likelihood that in response to a female victory, any of the additional 52 topics which we have coded besides child care, is discussed more or less often. We find that

[46] As outlined above, the speaking rate variable does not mechanically increase if an additional women enters the councils since it is essentially calculated for each female councilor individually (i. e., it is based on how often a councilor is noted as speaking relative to the number of available minutes per term). The results in Table A.17, which explore the effect of a female winner on female speaking rates using individual-level data, can also be used to gauge to what extent the above estimates are due to the mechanical effect of an additional woman. Panel B of Table A.17 shows that the "other" female councilors speak more when a woman wins a mixed-gender race for the last seat.

[47] Table A.18 studies heterogeneity with individual-level data, i. e. which women speak up more often. The results indicate no heterogeneity along the ideological spectrum. Female councilors placed on the top spots of their list or who performed well in the election are also not more likely to speak than other female councilors. Table A.19 also reports no heterogeneity in terms of which women are more likely to mention child care in a council meeting.

none of the other topics is discussed less often. This indicates that the increased focus on child care does not come at the expense of other topics. A few other topics are discussed more often, however. We report the results for the most notable topics in Table A.29: an additional female councilor leads to more discussions on churches, utilities, road security (traffic lights, zebra crossings, speed limits, etc.), sewage disposal, and street cleaning. While we have no survey evidence on these specific items for Germany, it is plausible that women care about these issues.

Overall, our results indicate that female winners of mixed-gender races influence policy choices by affecting council deliberations. A female victory in a mixed-gender race appears to make all female councilors more assertive and increases the likelihood that topics that particularly concern women are brought up. This interpretation is supported by the results in Appendix Table A.17: a female victory increases speaking rates of "other" women.[48]

6.3 Dynamic effects due to fellow female councilors

We now study whether women who win mixed-gender races are more effective in increasing child care provision if the absolute number of women in the council is bigger or smaller.

On the one hand, the marginal impact of an additional woman who enters the council on the last seat of a party may be small if there are already many women who were elected on safe seats. On the other hand, if a woman who enters the council in a mixed-gender race is the only woman, she may lack the self-confidence or the support to push for pro-female policies. Experimental evidence indicates that women are less self-confident in male-dominated environments (Born, Ranehill, and Sandberg, 2021). Thus, the relative impact of one additional woman is likely nonlinear in the number of other female councilors.

The results are collected in Table 5. In Model (1), we compare municipalities with mixed-gender races where the male candidate won and the overall number of women in the council

[48]Using the sample of municipalities with available minutes produces similar results for the effect of the female councilor share on child care spots (see Table A.28) as in Table 3. The coefficients are, however, less significant, presumably because of the smaller sample size.

was zero with municipalities where the female candidate won and the number of women was one (i. e. where no woman other than the female winner of the mixed-gender race managed to enter the council). In Model (2), we compare municipalities with one woman in the council and a male winner of a mixed-gender race with municipalities with two women in the council of which at least one was the winner of a mixed-gender race. We specify similar models for councils with two other women (Model 3), and three other women (Model 4), and four other women (Model 5). In Model (6), we aggregate all municipalities with at most three other women. In Model (7), we aggregate all municipalities with more than three women.

[Table 5 goes here]

Note that the number of other women is likely correlated with other characteristics of municipalities, in particular with population size. Larger municipalities might be more progressive, have a higher female representation *and* be more likely to implement female-friendly polices. To account for this source of omitted variable bias, we estimate the specifications described above without (Panel A) and with (Panel B) population size as a covariate.[49]

The results in both panels suggest that the marginal impact of a woman winning a mixed-gender race is larger in councils with at most three other women. The coefficient also has a similar size in Models (1)-(4), even though it is insignificant in Models (1) and (2), presumably due to the small sample size. The coefficient is insignificant and negative in Model (5). These results are reaffirmed by Models (6) and (7), where we obtain a significant effect only for municipalities with up to three other women. Note that three women imply a female share of 18.5% for the median council size in the RD sample (16 seats), which is far from gender parity.

These results suggest that an additional woman has the largest impact when there are few other women in the council. While the number of "other" women is not random and thus this finding might be to some degree due to unobserved characteristics of municipalities with few women in the council, it is also consistent with two related ideas regarding mechanisms. First,

[49]We discuss in Section A.6.1 (online appendix) the results from an alternative approach to account for the endogeneity of the number of other women. These results are largely consistent with the findings reported above.

there have to be women in the council in the first place to raise certain topics that are in the interest of women. Second, additional women are particularly effective if they significantly reduce the minority status of the other women who are already in the council.

7 Conclusion

We study the effect of female councilors on policy choices, notably on child care provision. Our results, based on a close election RD design for open-list elections, indicate that a female victory in a mixed-gender race for the last seat increases the share of women and leads to a stronger expansion of child care spots. Exploring mechanisms, we find that additional women influence policy by changing "the conversation". Consistent with this, our results suggest that the effect of female representation is non-linear. An additional women politician has a larger effect in political bodies when there are few other women present.

These results indicate that the rising share of women in political offices is not merely symbolic but has substantive consequences. Female representation ostensibly helps ensure that women's preferences are adequately reflected by policies, and thus may raise women's welfare.[50]

However, the normative implications of our findings are not unambiguously positive as they could be interpreted as evidence that policymaking is subject to gender stereotypes. Coffman (2014) shows with laboratory experiments that in group settings, women are more willing to contribute their ideas on topics that are traditionally perceived as belonging to their gender's domain.[51] Thus, the result that female councilors expand child care may in part imply that

[50]One caveat is that some findings require further investigation. For example, possible differences between close and non-close races, as evidenced by the different slopes of the main RD plot, could limit the internal or external validity of our estimates.

[51]Coffman (2014) also shows that actions inducing women to contribute to other topics improve group performance. Bordalo, Coffman, Gennaioli, and Shleifer (2019) derive a theory linking self-assessed ability of men and women in different domains to gender stereotypes.

they (feel compelled to) conform to traditional stereotypes. Such stereotyping can have adverse consequences for their political standing and future career progression as policy domains related to women's interests (and the associated policy committees) are often perceived as less prestigious (Fouirnaies, Hall, and Payson, 2019).

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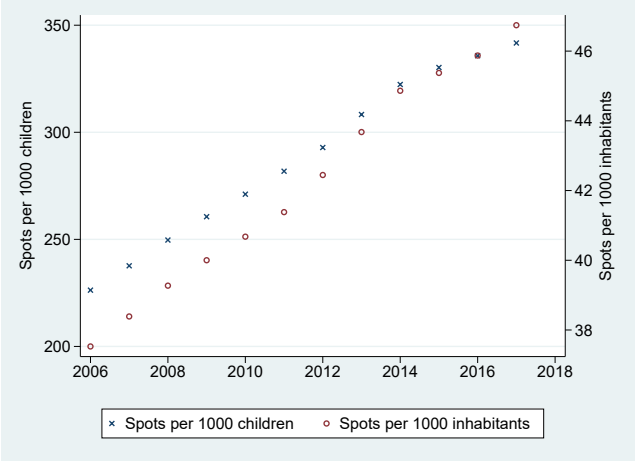
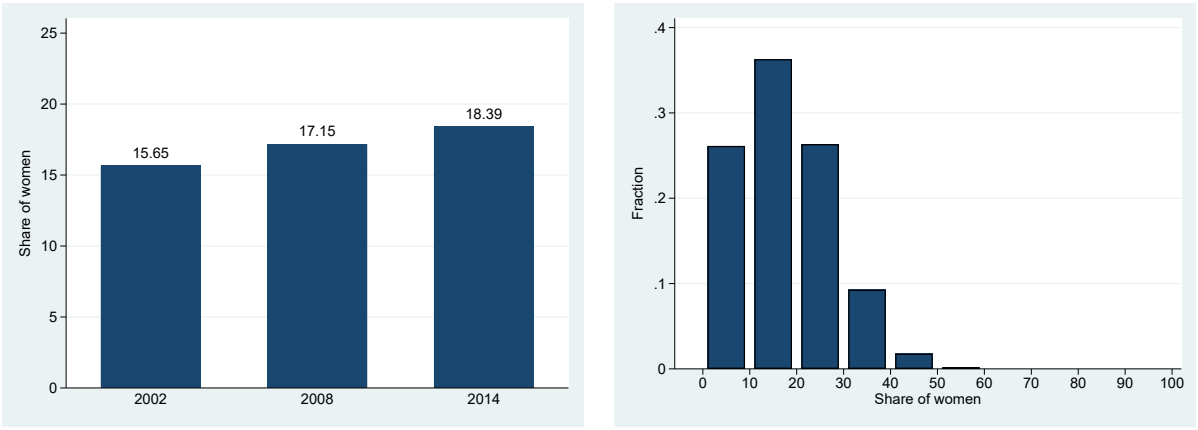


Figure 1: CHILD CARE SPOTS OVER TIME IN BAVARIA, 2006-2017

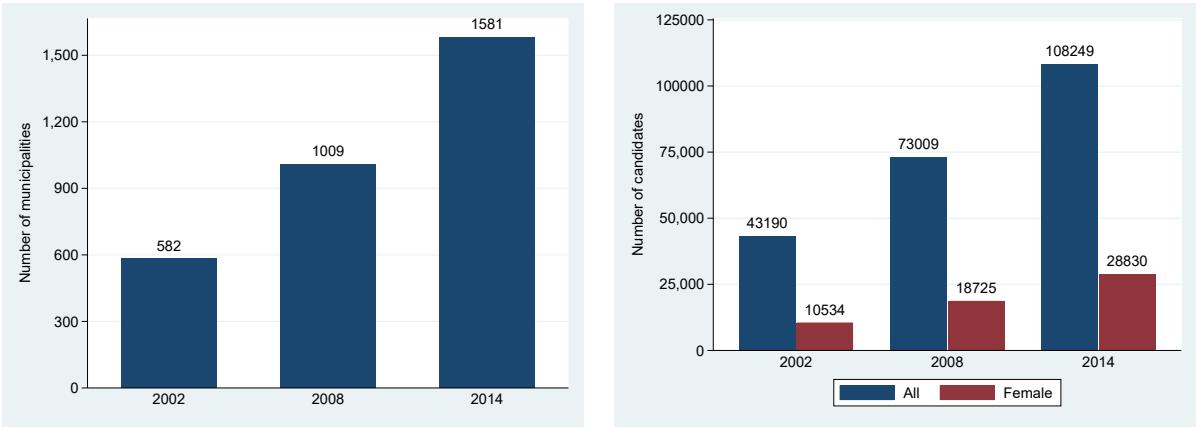
Notes: This figure shows the development of child care spots in Bavaria over the period 2006-2017, scaled by either 1000 inhabitants (right y-axis) or by 1000 children under 14 years (left y-axis). The annual values are based on averages across all Bavarian municipalities for data on municipal population and the number of public child care spots.



(a) Development over time **(b)** Distribution across councils

Figure 2: WOMEN'S SHARE IN BAVARIAN LOCAL COUNCILS, THREE LEGISLATIVE TERMS

Notes: This figure illustrates that the share of women in Bavarian local councils has increased slightly over time, while there is substantial variation across councils. Subfigure (a) depicts a bar chart on the average share of women in Bavarian municipalities during each of the three legislative periods. Subfigure (b) shows in a histogram the distribution for the share of women in Bavarian councils during all three legislative periods.



(a) Municipalities **(b)** Candidates

Figure 3: DATA COVERAGE ON COUNCIL ELECTIONS AND CANDIDATES

Notes: The bar charts show the coverage of our dataset in terms of municipalities and candidates. Subfigure (a) shows the number of municipalities included in our sample in each legislative period (which corresponds with the number of elections for which we have data). Subfigure (b) shows the total number of (female) candidates included in our sample per legislative period.

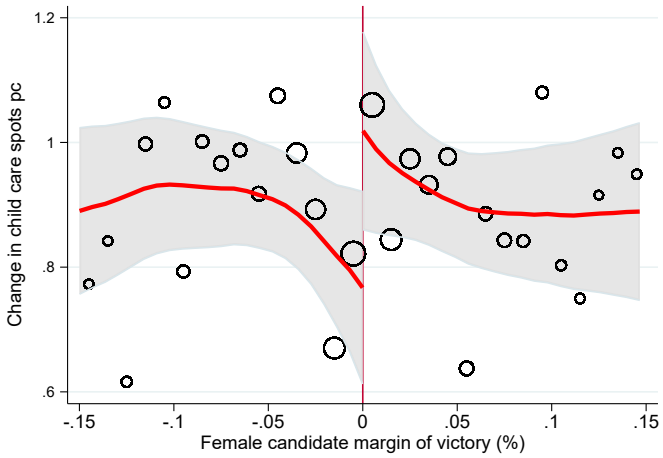
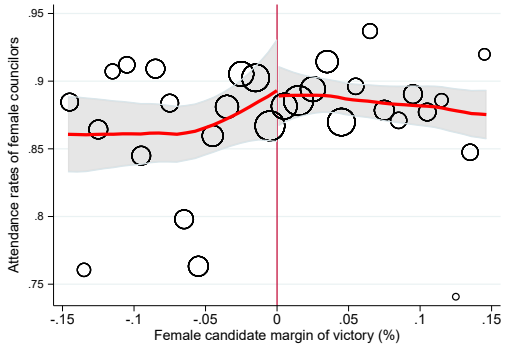
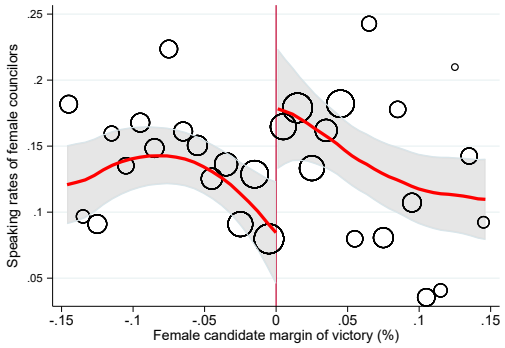


Figure 4: RDD PLOT: FEMALE VICTORIES IN MIXED-GENDER RACES AND CHANGE IN CHILD CARE SPOTS PER 1000 INHABITANTS

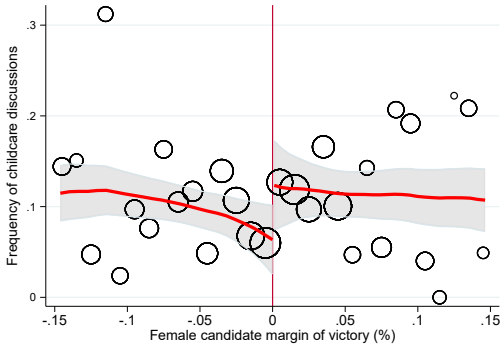
Notes: This RDD plot analyzes whether the annual increase in child care spots per 1000 inhabitants is stronger if the female candidate wins a mixed-gender race. The running variable is the margin of victory of a female candidate in mixed-gender races. Observations to the right of the threshold relate to a female winner. Each dot is the local average of the share of women in the council in bins of one percent for the margin of victory. The size of the dots indicates the number of observations in each bin. The solid lines are from a local linear smooth of the underlying observations. The gray-shaded areas represent the 90 percent confidence intervals.



(a) Attendance rate



(b) Speaking rate



(c) Child care

Figure 5: MECHANISMS: FEMALE VICTORIES IN MIXED-GENDER RACES AND BEHAVIOR IN COUNCIL MEETINGS

Notes: These RDD plots analyze whether the behavior of female councilors or the type of topics discussed in council meetings changes if the female candidate wins a mixed-gender race. Subfigure (a) plots the average attendance rates of women, subfigure (b) the average speaking rates (the share of meetings with available minutes in which a given woman rises to speak), and subfigure (c) whether child care was discussed in a particular council meeting. The running variable is the margin of victory of a female candidate in mixed-gender races. Observations to the right of the threshold relate to a female winner. Each dot is the local average of the share of women in the council in bins of one percent for the margin of victory. The size of the dots indicates the number of observations in each bin. The solid lines are from a local linear smooth of the underlying observations. The gray-shaded areas represent the 90 percent confidence intervals.

Table 1: DESCRIPTIVE STATISTICS: MIXED-GENDER RACES FOR THE LAST SEAT OF A PARTY

Races	Elections	Population	Council size	Parties	% Women	Δ % Women	% Effect female victory
1	1102	4830.54	15.83	3.61	17.33	6.32	36.46
2	698	7021.13	17.65	4.38	19.78	5.67	28.64
3	269	14146.30	21.01	5.38	21.56	4.76	22.08
4	79	50876.16	26.95	6.30	26.00	3.71	14.27
5	17	195266.86	35.12	8.15	28.46	2.85	10.00
6	6	65005.57	36.29	9.71	29.14	2.76	9.46
7	2	128453.30	50.00	9.40	38.80	2.00	5.15

Notes: This table shows summary statistics for the 2,173 local elections with mixed-gender races for last seats, differentiated by the number of mixed-gender races within a single local election (overall there are 3,756 such mixed-gender races). Column (1) indicates the number of (party-level) mixed-gender races for the last seat per election. Column (2) shows how many elections have 1,2,..,7 mixed-gender races for the last seat. Columns (3) to (6) report average population sizes, council sizes, numbers of parties and shares of women in the council for elections with a given number of mixed-gender races. Column (7) shows the average ppt change in the share of women if one additional woman enters the council. Column (8) reports the percentage increase in the share of women if an additional woman enters the council (i. e. $\frac{\Delta \%Women}{\%Women}$).

Table 2: FEMALE VICTORIES IN MIXED-GENDER RACES AND SHARE OF WOMEN IN LOCAL COUNCIL

	(1)	(2)	(3)	(4)	(5)
Female victory	6.142***	6.488***	6.061***	6.488***	5.832***
	(0.834)	(1.070)	(0.650)	(1.070)	(0.871)
Bandwidth type	CCT	CCT/2	2CCT	IK	CCT
Bandwidth size	0.08	0.04	0.16	0.04	0.17
Polynomial	Linear	Linear	Linear	Linear	Quadratic
N	13104	8790	17760	8790	18168
Municipalities	1072	847	1207	847	1215
Mean (SD)	20.90 (10.10)	21.21 (10.04)	20.71 (10.15)	21.21 (10.04)	20.70 (10.17)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race that accrues to a party in open-list local council elections to the total share of women in the council. We report results for various bandwidths: optimal CCT (Model 1, 5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table 3: BASELINE RESULTS: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION

	(1)	(2)	(3)	(4)	(5)
Female victory	0.369***	0.403**	0.231**	0.396**	0.433**
	(0.142)	(0.174)	(0.115)	(0.166)	(0.173)
Bandwidth type	CCT	CCT/2	2CCT	IK	CCT
Bandwidth size	0.09	0.05	0.18	0.06	0.13
Polynomial	Linear	Linear	Linear	Linear	Quadratic
N	9489	6956	12665	7649	11215
Municipalities	1092	927	1222	979	1175
Mean (SD)	0.90 (3.80)	0.91 (3.81)	0.91 (3.76)	0.90 (3.78)	0.90 (3.78)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the annual change of child care spots per 1000 inhabitants over the legislative term. We report results for various bandwidths: optimal CCT (Model 1, 5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table 4: MECHANISMS I: FEMALE VICTORIES IN MIXED-GENDER RACES AND (FEMALE) COUNCILOR BEHAVIOR IN MEETINGS

	(1)	(2)	(3)	(4)	(5)
Panel A: Female attendance rates					
Female victory	0.001	0.016	0.010	0.003	-0.002
	(0.022)	(0.028)	(0.019)	(0.021)	(0.032)
Panel B: Female speaking rates					
Female victory	0.118***	0.106**	0.112***	0.120***	0.123**
	(0.041)	(0.052)	(0.033)	(0.040)	(0.049)
Panel C: Child care discussions					
Female victory	0.078**	0.101***	0.075**	0.085**	0.084**
	(0.037)	(0.039)	(0.031)	(0.037)	(0.042)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to (female) councilors' behavior. Panel A explores whether women's meeting attendance rates differ in councils where a woman rather than a man won the mixed-gender race. Panel B explores whether women are more likely to speak up in council meetings (dependent variable = share of meetings with available minutes during a legislative term in which a given women speaks about any topic in a council meeting, averaged over all women in the council; councils with zero women have a missing value for this ratio). Panel C explores whether child care is discussed more often (dependent variable = share of council meetings over a legislative term where child care was discussed). We use various bandwidths: optimal CCT (Model 1, 5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table 5: MECHANISMS II: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, BY NUMBER OF WOMEN OTHERWISE IN COUNCIL

	(1) 0 women	(2) 1 woman	(3) 2 women	(4) 3 women	(5) 4 women	(6) $\leq$ 3 women	(7) $>$ 3 women
Panel A: without covariates							
Female victory	0.871	0.452	0.797**	0.516*	-0.355	0.587***	0.054
	(0.620)	(0.398)	(0.386)	(0.288)	(0.366)	(0.205)	(0.171)
Bandwidth type	CCT	CCT	CCT	CCT	CCT	CCT	CCT
Bandwidth size	0.12	0.08	0.08	0.07	0.08	0.08	0.10
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear	Linear
N	678	1484	1738	1445	1059	5302	4035
Municipalities	141	297	325	264	203	789	413
Mean (SD)	0.87 (4.87)	0.81 (4.57)	0.81 (4.24)	0.89 (3.72)	0.95 (3.53)	0.85 (4.28)	0.99 (2.99)
Panel B: with population as covariate							
Female victory	0.857	0.445	0.811**	0.518*	-0.425	0.591***	0.038
	(0.614)	(0.395)	(0.382)	(0.286)	(0.371)	(0.204)	(0.170)
Log(Population)	-0.187	0.124	0.131	0.028	-0.390	0.065	-0.124
	(0.350)	(0.198)	(0.168)	(0.136)	(0.272)	(0.087)	(0.084)
Bandwidth type	CCT	CCT	CCT	CCT	CCT	CCT	CCT
Bandwidth size	0.12	0.08	0.08	0.07	0.08	0.08	0.10
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear	Linear
N	678	1484	1738	1445	1059	5302	4035
Municipalities	141	297	325	264	203	789	413
Mean (SD)	0.87 (4.87)	0.81 (4.57)	0.81 (4.24)	0.89 (3.72)	0.95 (3.53)	0.85 (4.28)	0.99 (2.99)

Notes: This table reports results from local linear regressions (Model 1-5) that relate the gender of the winner of a mixed-gender race for the last seat per party in open-list local council elections to the annual change of child care spots per 1000 inhabitants over the legislative term. We explore whether the impact of a female winner varies with the number of women that have also been elected to the council using subsamples. Model (1) compares municipalities that would have had 0 women in the council *if* the female candidate would not have won a mixed-gender race with those that have 0 women in the council and where the male candidate has won a mixed-gender race (i. e. we compare RD municipalities with 0 women in the council with those where the only woman in the council is a mixed-gender race winner). Model (2) compares municipalities with exactly 1 woman with those where 2 women are in the council and where at least one is a mixed-gender race winner. Models (3)-(5) are specified accordingly. Models (6) and (7) aggregate all municipalities with up to 3 women or at least 4 women. Panel A reports results without controls. In Panel B, we control for population size to account for the possibility that the number of other women is larger in more populous (i.e. likely more progressive) municipalities. All estimations use optimal CCT bandwidths. 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Online appendix

A.1 Validity of the RD design

A.1.1 Balance in pre-treatment characteristics

A key identifying assumption is that the reliance on close elections ensures that in treated and control municipalities, the dependent variable (child care provision) would evolve similarly in the absence of treatment. This assumption can be validated by exploring whether treated and control municipalities are balanced with respect to observable pre-treatment municipal characteristics. We hence estimate a variant of Equation (2) where we relate the victory margin of the female candidate in legislative period p to municipality-level variables in the years during the previous legislative period $p-1$.[52] The results are collected in Tables A.1 and A.2.

Table A.1 collects results for variables that change per year while Table A.2 focuses on (council-level) variables that change per legislative term. Table A.1 displays no imbalance in the pre-treatment period for the change of child care spots per 1000 inhabitants (which is the dependent variable in our RD regressions). There is also no imbalance in the stock of child care spots or in municipality characteristics such as population size, inhabitants below 14 years, inhabitants above 65 years, inhabitants between 14 and 65 years, local government revenues, and local government transfer receipts. We obtain similar results for the variables explored in Table A.2: there are no imbalances in council size, the seat share of women, and the seat share of the two major parties.

[52] That is, we lag all observations by six years such that the female winner dummy in year t is matched with the value of the outcome in year t-6. For outcomes that do not vary over the term (the council level variables such as council size or the seat share of women and the various parties), we use the value in the previous legislative period and run the regression with legislative period rather than individual years.

Table A.1: VALIDITY TEST I: FEMALE VICTORIES IN MIXED-GENDER RACES AND LAGGED MUNICIPALITY CHARACTERISTICS

	(1) ΔChild care spots pc	(2) Child care spots pc	(3) Population	(4) Pop $\leq$ 14	(5) Pop $\geq$ 65	(6) 14 $<$ Pop $<$ 65	(7) Revenues	(8) Transfers
Female victory	-0.109	-0.437	-0.094	-0.122	-0.078	-0.091	-0.018	0.022
	(0.209)	(1.013)	(0.102)	(0.100)	(0.100)	(0.102)	(0.031)	(0.051)
Bandwidth type	CCT	CCT	CCT	CCT	CCT	CCT	CCT	CCT
Bandwidth size	0.09	0.09	0.08	0.08	0.09	0.08	0.07	0.10
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear	Linear	Linear
N	7596	8346	10716	10716	11346	10716	9906	11976
Municipalities	1028	1028	1007	1007	1028	1007	962	1060
Mean (SD)	1.00 (3.61)	40.86 (10.57)	8.56 (1.14)	6.68 (1.10)	6.83 (1.18)	8.14 (1.14)	7.61 (0.33)	5.29 (0.61)

Notes: This table reports results from local linear regressions that relate the gender of the winner of a mixed-gender race that accrues to a party in open-list local council elections to lagged characteristics of municipalities. We lag all outcomes by six years such that an observation matched to a given year to the female victory dummy in a given legislative period is from the corresponding year of the previous legislative period (for example, the female winner dummy for the second year of the legislative period after the election in 2014 – 2016 – is matched to the value of an outcome in 2010, the second year of the previous legislative period). We report results for the following dependent variables: change in total child care spots per capita (Model 1), total child care spots per capita (Model 2), (log of) total inhabitants (Model 3), (log of) inhabitants below 14 years (Model 4), (log of) inhabitants above 65 (Model 5), (log of) inhabitants above 14 and below 65 (Model 6), (log of) total revenues per capita (Model 7), (log of) transfer receipts per capita (Model 8). All results are for optimal bandwidths. 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.2: VALIDITY TEST II: FEMALE VICTORIES IN MIXED-GENDER RACES AND LAGGED COUNCIL CHARACTERISTICS

	(1) Council size	(2) Share of women	(3) CSU	(4) SPD
Female victory	-0.892	1.095	1.079	1.667
	(0.644)	(0.838)	(1.956)	(1.353)
Bandwidth type	CCT	CCT	CCT	CCT
Bandwidth size	0.10	0.12	0.10	0.09
Polynomial	Linear	Linear	Linear	Linear
N	1996	2177	1996	1891
Municipalities	1060	1110	1060	1028
Mean (SD)	21.07 (10.57)	19.21 (10.32)	30.68 (19.66)	15.57 (13.74)

Notes: This table reports results from local linear regressions that relate the gender of the winner of a mixed-gender race that accrues to a party in open-list local council elections to lagged council characteristics. We lag all outcomes by six years such that an observation matched to a given year to the female victory dummy in a given legislative period is from the corresponding year of the previous legislative period (e.g. the female winner dummy for the second year of the legislative period after the 2014 election – 2016 – is matched to the value of an outcome in 2010, the second year of the previous legislative period). We use the following dependent variables: council size (Model 1), share of women in the council (Model 2), seat share of the main conservative party CSU (Model 3), and seat share of the main left-wing party SPD (Model 4). All estimations use optimal bandwidths. 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 are in parentheses. The unit of clustering is the municipality of the candidate.

A.1.2 Confoundedness of gender with ideology

A second concern is that female winners of mixed-gender races may be more concentrated within certain parties. Thus, the effect of women could not be separately identified from the effect of ideology. Given that in our within-party design, winners and losers of a mixed-gender race are from the same party, the ideological composition of the council should in theory not be affected by the gender of the winner. However, in finite samples this may still be the case. We hence explore explicitly the impact of a female victory on the contemporaneous seat shares of the major Bavarian parties in Table A.3 (we ignore the independents since they do not run in all of Bavaria and are named differently across municipalities).

We find no imbalances in seat distribution of the CSU, the SPD and the Greens in municipalities with a female winner compared to municipalities with a male winner. The estimates are insignificant and numerically small.[53]

[53]Figure A.13 in fact shows that mixed-gender races for the last seat occur across all major parties in Bavaria.

Table A.3: VALIDITY TEST III: FEMALE VICTORIES IN MIXED-GENDER RACES AND PARTY COMPOSITION OF COUNCIL

	(1) CSU	(2) SPD	(3) Greens
Female victory	1.104	0.520	-0.590
	(1.736)	(1.080)	(0.486)
Bandwidth type	CCT	CCT	CCT
Bandwidth size	0.10	0.11	0.07
Polynomial	Linear	Linear	Linear
N	2446	2546	2022
Municipalities	1123	1146	1026
Mean (SD)	29.31 (18.81)	14.68 (13.30)	2.75 (5.19)

Notes: This table reports results from local linear regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the total seat share of the CSU (Model 1), the SPD (Model 2) and the Greens (Model 3). We report results for the optimal CCT bandwidth. 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 are in parentheses. The unit of clustering is the municipality of the candidate.

A.2 Details on the collection of the council election data

Our research assistants browsed the official websites of all 2,056 municipalities for candidate lists and election results. Several municipalities have posted this information for some or even all local elections during the period 2002-2014 (in pdf, word, html or other formats) on their websites. Party lists include information on the name of a candidate (from which we infer gender), the list rank, the date or year of birth (from which we infer age) as well as the current occupation (from which we infer education). Our research assistants downloaded the information and copy-pasted or entered the data by hand into Excel files.

In a second step, we sent preformatted Excel files (one Excel file per election) to all municipalities (specifically the mayor's office or a high-ranking official in the local administration) for which the relevant information was not posted online for all or some elections. We asked that mayors or high-ranking officials in the local administration (more specifically their staff) fill in the information in the Excel files and return them to us. In many cases, they indeed entered the data into the Excel files. In other cases, the municipalities sent us PDF or Word files or scans of paper documents, which we or our research assistants then copy-pasted or entered into the preformatted Excel files.

In a final step, we merged all of these Excel files (by municipal codes and election years) into one datafile. We also invested a significant amount of time – given that much of the data had been entered by hand – in checking the plausibility of numerical variables (whether candidate lists were consecutively numbered and complete, whether those candidates with the lowest final ranks were indeed those that entered the council, etc.) and accounted for any errors. We corrected errors whenever possible and if not set the data point to missing.

Our goal was collect data for all municipalities and elections and hence the reason for any missing data is that data was not made available to us. We could not obtain the data for various reasons: smaller municipalities were less likely to post election results or candidate lists online or send us any information (either by not responding to our email(s) at all or telling us that they did not have the staff / time to work on our request). Information on elections further in the past was also more difficult to obtain (for example because the papers were already archived and thus not easily accessible or even shredded).[54]

Table A.4 compares the characteristics of the 1,632 municipalities for which we have candidate-level data for at least one election with those of the 424 municipalities not in our sample. Specifically, we compare demographic variables, local revenues and transfers averaged over 2002-2017, as well as various council characteristics (council size, seat share of women, seat share of the two major parties).[55] As suggested above, municipalities that are not included in our sample tend to have fewer inhabitants (about 28%). While the number of inhabitants in municipalities not included in our sample is smaller across all age brackets, there are some minor differences in the relative shares of the age groups, i. e. municipalities not

[54]The data collection procedure for Bavarian municipalities is similar to the one described in Baskaran and Hessami (2018) for another German state (Hesse).

[55]The Bavarian Statistical Office provides administrative data on the seat share of various parties and the seat share of women for all Bavarian municipalities. Hence, we have this information for the municipalities and legislative periods that are not included in our hand-collected sample.

included in our sample tend to have a disproportionately lower number of older (25.2%) and a disproportionately higher number of younger (30.9%) inhabitants.

Table A.4: SAMPLE ATTRITION: CHARACTERISTICS OF MUNICIPALITIES WITH AND WITHOUT DATA ON LOCAL ELECTIONS

	Not in sample	In sample	Diff.	Std. Error	Obs.
Log(Population)	7.821	8.102	-0.280***	0.049	2056
Log(Population $<$ 14)	5.976	6.228	-0.252***	0.048	2056
Log(Population $>$ 65)	6.079	6.388	-0.309***	0.052	2056
Log(Population $>$14 & $<$ 65)	7.410	7.690	-0.279***	0.049	2056
Log(Revenues p.c.)	7.678	7.692	-0.014	0.014	2056
Log(Transfers p.c.)	5.564	5.490	0.074***	0.028	2056
Council size	14.538	16.278	-1.740***	0.321	2056
% Women	16.105	17.311	-1.207***	0.438	2056
% CSU	21.543	26.512	-4.969***	1.107	2056
% SPD	8.349	11.769	-3.420***	0.698	2056

Notes: This table compares the characteristics (averaged over 2002-2017) of the 1,632 municipalities for which we were able to collect candidate-level data for at least one election and the 424 municipalities that are missing in our hand-collected sample.

We observe no differences in total revenues per capita, but find that municipalities not included in the sample receive higher transfers per capita. This suggests that they are slightly poorer than municipalities included in our sample. With respect to council characteristics, municipalities not included in the sample have smaller councils and a smaller seat share of women. They also have a smaller seat share of the CSU and the SPD (recall that independents are particularly strong in smaller municipalities). Overall, these differences are again fairly small. For example, the share of women in municipalities included in our sample is 17.3% while it is 16.1% in the missing sample.

A.3 Details on the collection of the council meetings data

Our research assistants searched the official websites of the municipalities included in our RD sample for downloadable minutes (in pdf, word, html or other formats). Municipalities often post at least the minutes of the most recent meetings, but some make them available for several years in the past. Council meetings typically take place once a month.

We have downloaded all available minutes of the municipalities in our RD sample. The minutes are not standardized and hence are formatted differently in each municipality. Therefore, we had to code the minutes by hand (rather than for instance by using machine learning algorithms for probabilistic topic modeling such as LDA (see Hansen, McMahon, and Prat (2018)). We first instructed our research assistants to note for each available council meeting of a municipality whether a particular councilor was present. This is feasible because the minutes typically list which councilors participated in a particular meeting. Next, the research assistants coded which topics were brought up in a meeting by a particular councilor. Specifically, we provided the research assistants with a list of topics and tasked them to group all comments or requests to speak of a councilor into these groups.[56] Of course, a councilor may speak on several topics in a single council meeting. The coding of the topics at the candidate-level proved to very be time-consuming as each page of each minutes had to be read carefully to identify all speech requests and comments of councilors.

Once the coding was complete, we aggregated all information to each legislative period as follows. First, we calculated attendance rates of female councilors in council meetings, i. e. the share of meetings with available minutes in which a given female councilor was present. Second, we calculated speaking rates, i. e. the share of meetings in which a given female councilor made significant comments or rose to speak on any topic. Third, we noted whether a particular topic (e. g. child care) was brought up at least once in a given council meeting.

[56]Overall, our research assistants coded 53 individual topics: adult education, agriculture, animals and pets, billboards, budget cuts, bus stops, churches, culture, child care, digital infrastructure, doctors and hospitals, elections, fire station, flags, floods, garbage disposal, lakes and rivers, local business, local debt, local taxes, morgues and cemeteries, municipal homepage, naming of streets, parks and recreation, playgrounds, police, private residences, public areas, public buildings, public parking, public pools, public toilets, refugees, road construction, road repairs, road security, schools, security, senior homes, sewage disposal, sidewalks and bike lanes, social housing, solar panels, sports events, sports grounds, street cleaning, street lighting, street signs, traffic noise, transportation, trees and plants, utilities and wind energy.

Next, we calculated averages of these indicators for women. That is, we calculated (i) the average attendance rate of all women in the council and (ii) the average speaking rate of all women. We also calculate the share of council meetings during a legislative period in which child care was discussed by at least one council member.

A.4 Robustness

A.4.1 Scaling of the dependent variable

We use the change in child care spots per 1000 inhabitants as our main dependent variable. There are reasons to suspect that the effect of female legislators on child care provision varies with alternative definitions of the dependent variable, notably that they affect the growth rate rather than the absolute change, or that policymakers try to match child care spots to the number of children in a locality rather than the number of inhabitants.

However, note that using growth rates as well as a scaling child care spots by the number of children rather than inhabitants may be problematic. Given that the number of child care spots in Bavarian municipalities tends to be relatively low to begin with (some even have at the beginning of the sample period no child care spots at all), even small absolute changes may lead to large swings in growth rates. On the other hand, the number of children in a locality may be endogenous to child care spots if the supply of child care influences fertility or mobility of parents (Bauernschuster, Hener, and Rainer, 2016; García-Morán and Kuehn, 2017).

Panel A of Table A.5 collects results for RD estimations of Equation 2 where we use the growth rate in child care spots per 1000 inhabitants as dependent variable. In line with the baseline estimates, we observe a positive and significant effect. On average, municipalities that elected a woman rather than a man in a mixed-gender race witness an 0.8 percentage point higher growth rate in available child care spots per year.

Panel B collects results where we scale the number of available child care spots by the number of children below 14 years. We find a positive and significant effect, which, however,

Table A.5: ROBUSTNESS TEST I: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, ALTERNATIVE SCALINGS OF OUTCOME VARIABLE

	(1)	(2)	(3)	(4)	(5)
Panel A: Growth in child care spots per 1000 inhabitants					
Female victory	0.008**	0.007*	0.005*	0.008**	0.009**
	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)
Panel B: Change in child care spots per 1000 children					
Female victory	2.455**	2.931**	1.514*	2.848**	2.821**
	(1.141)	(1.410)	(0.883)	(1.334)	(1.314)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the annual change of child care spots per 1000 inhabitants over the legislative term. We explore the robustness of the baseline results by using as dependent variable the growth rate of child care spots per capita (Panel A) and the change in child care spots per children in a municipality (Panel B). We report results for various bandwidths: optimal CCT (Model 1 ,5), one half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

is slightly less significant than in the baseline specification. On average, treated municipalities increase child care spots per 1000 children by 2.455 more units than control municipalities.

A.4.2 Elections with exactly one mixed-gender race

There can be several (in our RD sample up to seven as per Table 1) mixed-gender races per election in a municipality. In our baseline estimations, we address this issue by including as many observations for a municipality-year pair as there are mixed-gender races and then weighting each observation by the inverse of the total number of such races in a municipality. To explore whether our results are sensitive to this approach, we limit the sample to only those municipality-year pairs with exactly one mixed-gender race.

In addition, note that this sample restriction also provides an implicit robustness test for the fact that in elections with multiple mixed-gender races, there can be both male and female winners (in different parties). Given that women are underrepresented in Bavarian councils, any female winner will increase overall female representation but municipalities can be both

considered to be treated and control units in our baseline specification and hence simultaneously appear to the left and right of the threshold.

We report results from estimating Equation 2 with a restricted sample of those municipalities that had exactly one mixed-gender race in Figure A.1 and Table A.6. We observe an effect that is slightly larger than the baseline effect. On average, municipalities in which the woman has won the one mixed-gender race increase their child care spots by about 0.47 units more than municipalities in which the man has won. The effect of a female victory in these races is hence larger than in the full RD sample. One explanation is that municipalities with only one race tend to be smaller than the average municipality in the RD sample. The relative impact of a female winner is plausibly stronger in small municipalities with fewer council members.

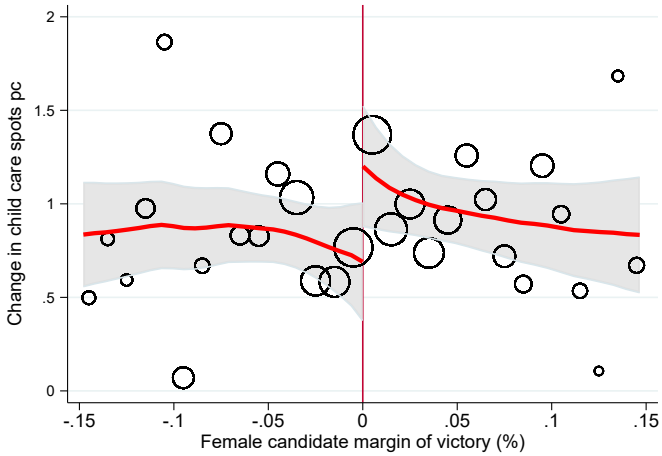


Figure A.1: RDD plot: female victories in a mixed-gender race and change in child care spots per 1000 inhabitants, only elections with exactly one mixed-gender race for the last seat of a party. This RDD plot analyzes whether the annual increase in child care spots per 1000 inhabitants is stronger if the female candidate wins a mixed-gender race when the sample is restricted to municipalities that had exactly one mixed-gender race. The running variable is the margin of victory of a female candidate in mixed-gender races. Observations to the right of the threshold relate to a female winner. Each dot is the local average of the share of women in the council in bins of one percent for the margin of victory. The size of the dots indicates the number of observations in each bin. The solid lines are from a local linear smooth of the underlying observations. The gray-shaded areas represent the 90 percent confidence intervals.

Table A.6: ROBUSTNESS TEST II: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, ONLY ELECTIONS WITH EXACTLY ONE CLOSE MIXED-GENDER RACE

	(1)	(2)	(3)	(4)	(5)
Female victory	0.470**	0.639**	0.359*	0.583**	0.646**
	(0.225)	(0.286)	(0.191)	(0.264)	(0.290)
Bandwidth type	CCT	CCT/2	2CCT	IK	CCT
Bandwidth size	0.11	0.05	0.21	0.07	0.13
Polynomial	Linear	Linear	Linear	Linear	Quadratic
N	3181	2174	3883	2546	3351
Municipalities	638	460	765	535	668
Mean (SD)	0.92 (4.33)	0.91 (4.36)	0.90 (4.19)	0.93 (4.38)	0.91 (4.26)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open list local council elections to the annual change of child care spots per 1000 inhabitants over the legislative term. The sample is restricted to those elections where exactly one mixed-gender race occurred. We report results for various bandwidths: optimal CCT (Model 1, 5), one half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

A.4.3 Confoundedness of gender with individual characteristics

One concern with our RD design is that the increase in the expansion rate of child care spots after a female victory is not due to gender per se, but emerges because female councilors systematically differ in other dimensions from male councilors. For instance, younger councilors in general might expand child care spots more quickly, and female councilors might be on average younger than male councilors.

It is expected that female and male councilors differ along several other characteristics besides gender. From the summary statistics in Table A.22, for example, it is apparent that there are practically no househusbands among male council candidates while about 8.5% of female candidates are housewives. It is thus conceptually not clear to what extent gender can be separated from other candidate characteristics, i.e. to what extent differences in candidate characteristics between female and male councilors are a consequence of their gender given societal norms or innate differences in gender preferences. To explore the sensitivity of our results to

possible individual-level confounders, we reestimate the baseline specifications controlling for candidate characteristics. The results are collected in Table A.7.

In Panel A, we control for candidates' parties using dummies for the three major parties in Bavaria (CSU, SPD, Greens), for their education level, for their employment status (employed, self-employed, student, retired), and for their age. As we have information on these characteristics only for a subset of candidates, sample sizes vary. Thus, to assess how the inclusion of these covariates affects the coefficient estimates, we estimate in Panel B the baseline specification (i.e. without any individual-level covariates besides gender) while using the same respective samples as in Panel A.

The female councilor coefficient is positive and of the same order of magnitude as in the baseline specification in all estimations in panel A. It is insignificant in Model (2) and (3), but as can be seen from the corresponding models in Panel B, this is only due to smaller sample sizes. Overall, the coefficients in the models with covariates are similar to the coefficients in the models without covariates.

Table A.7: ROBUSTNESS TEST III: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, CONTROLLING FOR CONFOUNDERS AT CANDIDATE LEVEL

	(1) Party	(2) Higher degree	(3) Employment status	(4) Age
Panel A: with controls				
Female victory	0.375***	0.263	0.274	0.455*
	(0.143)	(0.182)	(0.173)	(0.259)
CSU	0.170*			
	(0.100)			
SPD	0.093			
	(0.120)			
Greens	0.207			
	(0.141)			
Higher degree		-0.094		
		(0.120)		
Self-employed			-0.020	
			(0.165)	
Student			0.290	
			(0.289)	
Retired			-0.268	
			(0.370)	
Age				0.005
				(0.007)
Panel B: without controls, constant sample				
Female victory	0.369***	0.252	0.273	0.455*
	(0.142)	(0.181)	(0.173)	(0.259)
Bandwidth type	CCT	CCT	CCT	CCT
Bandwidth size	0.09	0.09	0.09	0.09
Polynomial	Linear	Linear	Linear	Linear
N	9489	6044	6296	2377
Municipalities	1092	742	747	290
Mean (SD)	0.90 (3.80)	0.92 (3.86)	0.92 (3.84)	0.86 (3.45)

Notes: This table reports results from local linear regressions that relate the gender of the winner of a mixed-gender race that accrues to a party in open-list local council elections to the annual change in child care spots per 1000 inhabitants over the legislative term. The specifications in Panel A control for various candidate-level characteristics: dummies for party affiliation (CSU, SPD, Greens - minor parties and voter associations are thus the reference group) in Model (1), a dummy for a higher education degree (PhD or University degree) in Model (2), dummies for the employment status of candidates (employed, self-employed, student, retired) in Model (3), and the age of a candidate in Model (4). In Panel B, we re-estimate the baseline specifications with the same sample as the corresponding model with individual-level covariates (as we only have individual-level covariates for a subset of candidates). 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 of the candidate.

A.4.4 Donut specifications and outliers

A further concern with our RD design is that the RD coefficient is due to only a few (potentially outlier) observations close to the threshold. To explore the robustness of the baseline results to this concern, we estimate donut specifications where we omit observations close to the threshold (i. e. all observations within a bandwidth of 0.5%, 1%, 1.5%, 2%, 2.5% and 5%) and re-estimate the baseline model using the optimal CCT bandwidth.

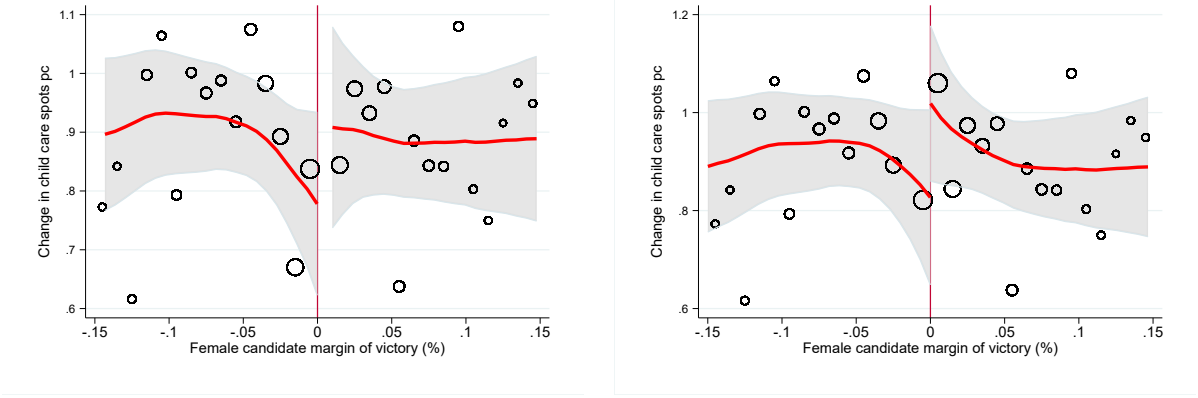
The results are collected in Table A.8. We find that the RD coefficient is in the same ballpark as in the baseline specification. The RD coefficient is significant at the 10% level in the specification where observations with a margin of victory of 0.5% are dropped. Beginning with the specification where observations with a margin of victory lower than 1% are dropped, the RD coefficient turns insignificant. Note that this is expected given that 20% of all observations have a margin of victory of less than 1%.

Table A.8: ROBUSTNESS TEST IV: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, DONUT RD SPECIFICATIONS

	(1) 0.5%	(2) 1%	(3) 1.5%	(4) 2%	(5) 2.5%	(6) 5%
Female victory	0.315*	0.304	0.356	0.277	0.246	0.156
	(0.178)	(0.212)	(0.240)	(0.296)	(0.365)	(1.376)
Bandwidth type	CCT	CCT	CCT	CCT	CCT	CCT
Bandwidth size	0.09	0.09	0.09	0.09	0.09	0.09
Polynomial	Linear	Linear	Linear	Linear	Linear	Linear
N	8446	7484	6636	5940	5232	2533
Municipalities	1047	987	925	885	816	481
Mean (SD)	0.90 (3.82)	0.89 (3.77)	0.90 (3.80)	0.93 (3.83)	0.93 (3.88)	0.88 (3.78)

Notes: This table reports results from local linear regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the annual change of child care spots per 1000 inhabitants over the legislative term. We report donut specifications that omit all observations where the margin of victory was below 0.5% (Model 1), 1% (Model 2), 1.5% (Model 3), 2% (Model 4), 2.5% (Model 5), and 5% (Model 6). Apart from the omission of observations close to the threshold, all specifications use the optimal CCT bandwith. 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 are in parentheses. The unit of clustering is the municipality of the candidate.

We also construct RD plots where observations within the bins [0.00,0.01] and [-0.02,-0.01] are dropped (see Figure A.2 below). According to Figure 4, the average values for the change in child care spots in these bins are potential outliers. We find that dropping the observations within these bins does not substantially affect the shape of the RD smooths.



(a) Without 0% to 1%

(b) Without -2% to -1%

Figure A.2: RDD plots: female victories in mixed-gender races and change in child care spots per 1000 inhabitants, without bin averages that are potentially outliers. This RDD plot analyzes whether the annual increase in child care spots per 1000 inhabitants is stronger if the female candidate wins a mixed-gender race. The running variable is the margin of victory of a female candidate in mixed-gender races. Observations to the right of the threshold relate to a female winner. Each dot is the local average of the share of women in the council in bins of one percent for the margin of victory. The solid lines are from a local linear smooth of the underlying observations. The gray-shaded areas represent the 90 percent confidence intervals. We omit all observations with a margin of victory between 0% and 1% (Subfigure a) and between -2% and -1% (Subfigure b) to check for the robustness of the baseline results to outliers.

A.4.5 Child care expansion over the entire legislative term

In our baseline specification, we use annual data. However, while the dependent variable varies annually, the independent variable (whether or not a woman wins a mixed-gender race) varies only once per legislative term. In this section, we therefore report results where we use child care expansion over the entire legislative term in a municipality as the dependent variable, i. e. we have only one observation per legislative term and municipality in this specification.

The results are collected in Table A.9. We find that the results are in line with the baseline estimates. That is, child care spots expand by 1.85 spots over the legislative term when a woman wins a mixed-gender race as per Model (1). Since a term has five years, this estimate translates to an annual effect of 0.37 and is thus in the same ballpark as the RD coefficients reported in Table 3.

Table A.9: ROBUSTNESS TEST V: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, EXPANSION OVER THE LEGISLATIVE TERM

	(1)	(2)	(3)	(4)	(5)
Female victory	1.853***	1.965**	1.285**	1.915**	2.087**
	(0.713)	(0.874)	(0.569)	(0.789)	(0.863)
Bandwidth type	CCT	CCT/2	2CCT	IK	CCT
Bandwidth size	0.09	0.05	0.18	0.07	0.13
Polynomial	Linear	Linear	Linear	Linear	Quadratic
N	1891	1390	2528	1651	2244
Municipalities	1028	859	1178	962	1118
Mean (SD)	4.27 (7.31)	4.27 (7.36)	4.26 (7.43)	4.25 (7.30)	4.23 (7.34)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the change of child care spots per 1000 inhabitants over the entire legislative term. We report results for various bandwidths: optimal CCT (Model 1, 5), one half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

A.5 Extensions of main estimations

In this section, we collect the results for various extensions of our main regressions.

A.5.1 Type of child care spots

The baseline results provide evidence on the expansion rate of the aggregate number of child care spots. As discussed in Section 2.1, public child care covers children ranging from 6 months to 14 years. In this section, we explore whether female councilors expand spots across all age-ranges or whether they prioritize spots for younger or older children.

Spots are not explicitly earmarked for specific age ranges, preventing us from studying the intentions of female councilors directly. However, we have information on the age range of the children who are looked after in child care institutions. By relating the age of the children for a given age range to the share of female councilors, we can infer whether spots for older or younger children are expanded.

We report the results in Table A.10. Panel A reports the results for the change in the number of children below 3 years, Panel B for children aged 3 to 6, Panel C for children aged 6 to 11, and Panel D for children aged 11 to 14 years.

Table A.10: EXTENSION I: FEMALE VICTORIES IN MIXED-GENDER RACES AND ANNUAL CHANGE OF CHILDREN IN CHILD CARE, BY AGE GROUPS

	(1)	(2)	(3)	(4)	(5)
Panel A: Below 3 years					
Female victory	-0.056	-0.086	-0.056	-0.056	-0.069
	(0.052)	(0.070)	(0.042)	(0.052)	(0.060)
Panel B: Between 3-6 years					
Female victory	0.141	0.193*	0.095	0.137	0.168*
	(0.090)	(0.114)	(0.072)	(0.095)	(0.097)
Panel C: Between 6-11 years					
Female victory	0.209**	0.257**	0.142**	0.257**	0.241**
	(0.084)	(0.107)	(0.067)	(0.107)	(0.098)
Panel D: Between 11-14 years					
Female victory	0.005	0.005	0.005	0.005	0.005
	(0.005)	(0.007)	(0.005)	(0.005)	(0.007)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the annual change of the number of children in different age groups that are in child care per 1000 inhabitants. We use various bandwidths: optimal CCT (Model 1, 5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

We find no effect of female councilors for children below 3 years. The estimates for children between 3 and 6 years are moderately significant in at least some specifications. The estimates for children between 6 and 11 year highly significant across all specifications. Finally, we find no effect for children between 11 and 14 years.

Overall, these results suggest that female councilors emphasize facilities for older children. Even if a mother were to secure a full-time spot in kindergarten for her child and then re-enters the labor market, she must anticipate that once her child enters school, she will have

to cease working or switch to part-time if no afternoon-care is available.[57] In the long run, afternoon care may thus be more important for women than kindergarten or nursery spots.

A further explanation for the strong effect on child care for older children is that the female councilors in our sample are on average about 46 years old (see Table A.22). It is possible that women who are in this age prioritize child care for older children.

A.5.2 Expansion of child care facilities

Table A.11: EXTENSION II: FEMALE VICTORIES IN MIXED-GENDER RACES AND ANNUAL CHANGE IN THE NUMBER OF (AGE-SPECIFIC) CHILD CARE FACILITIES

	(1)	(2)	(3)	(4)	(5)
Panel A: Below 2 years					
Female victory	-0.002	-0.000	-0.001	-0.002	-0.002
	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)
Panel B: Between 2-8 years					
Female victory	0.000	-0.002	0.001	-0.002	-0.001
	(0.005)	(0.006)	(0.004)	(0.005)	(0.006)
Panel B: Between 5-14 years					
Female victory	0.003***	0.004**	0.002**	0.004**	0.004**
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)
Panel B: All ages					
Female victory	0.002	0.004	0.000	0.004	0.002
	(0.005)	(0.006)	(0.004)	(0.005)	(0.005)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the annual change of the number of child care facilities per 1000 inhabitants for children of different ages. We use various bandwidths: optimal CCT (Model 1, 5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

In this section, we explore whether having more female councilors leads to the expansion of the number of spots within existing facilities or to the opening of new facilities. To do so, we relate female victories to the change in the number of child care facilities per 1000 inhabitants.

[57] Note that in Germany elementary school classes typically end at noon, while secondary school classes typically end between noon and 1pm.

In our administrative data, facilities are classified according to the age range of the children in care: 0-2, 2-8, 5-14, and all ages.

The results are collected in Table A.11. We find that female councilors expand the number of facilities that are intended for children between 5 and 14 years. There is no effect on facilities in the other age ranges. Overall, these results are consistent with the results in Section A.5.1 (regarding the age ranges of children in care) and confirm that female councilors focus on the provision of child care for relatively older children.

A.5.3 Spending on child care facilities

As discussed, local governments can influence child care provision through various channels, such as providing building spaces, adjusting regulations, paying subsidies, and by providing child care themselves. Particularly the latter two measures likely have fiscal consequences for municipalities. We hence explore next whether the impact of female councilors on child care expansion is accompanied by an increase in local spending for child care.

It should be noted, however, that local fiscal data for specific spending items is difficult to interpret. While official regulations define broad categories according to which local governments can classify their spending, local officials face difficult choices about how to classify specific expenses. For example, subsidies for the construction of a child care facility that is in the same building as a school could be classified as a child care expense, an expense for schools, or divided between these two categories. In addition, in the cameral accounting system that was used in Bavaria during our sample period, expenses are booked when they are paid, not when they are contracted, making it thus harder to identify the effect of female representation.

With such caveats in mind, Table A.12 relates female victories to the log of local spending per capita for child care facilities. We find a positive but statistically insignificant effect. This may indicate that female councilors influence child care provision primarily through non-fiscal policies. However, as discussed, this result should be viewed only as suggestive given the aforementioned limitations of the local fiscal data.

Table A.12: EXTENSION III: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE SPENDING (LOG OF ANNUAL SPENDING FOR CHILD CARE FACILITIES PER CAPITA)

	(1)	(2)	(3)	(4)	(5)
Female victory	0.062	0.039	0.041	0.058	0.055
	(0.057)	(0.075)	(0.044)	(0.060)	(0.063)
Bandwidth type	CCT	CCT/2	2CCT	IK	CCT
Bandwidth size	0.08	0.04	0.17	0.07	0.15
Polynomial	Linear	Linear	Linear	Linear	Quadratic
N	9851	6588	13650	9107	13047
Municipalities	1072	847	1215	1026	1199
Mean (SD)	5.03 (0.66)	5.05 (0.66)	5.02 (0.67)	5.03 (0.66)	5.03 (0.67)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the log of annual spending for child care facilities per 1000 inhabitants over the legislative term. We use various bandwidths: optimal CCT (Model 1, 5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

A.5.4 Interactions with mayor gender and council characteristics

In this section, we study whether the treatment effect of female winners varies with specific characteristics of municipalities by including interaction terms. In Panel A of Table A.13, we explore whether the impact of female winners is larger or smaller when there is a female mayor in the municipality. Given that the mayor is a powerful office in Bavaria and that mayors have by default a seat in the council, it is possible that the impact of an additional woman in the council is relatively stronger if the mayor is a woman. On the other hand, it is also possible that municipalities with female mayors already emphasize child care sufficiently. In line with this ambiguity, the estimation results indicate no significant interaction between the gender of the mayor and female winners of mixed-gender races.

In Panel B, we interact the female winner dummy with the share of seats for left-wing parties (Social Democrats and Greens) in the council. It is possible that councilors of left-wing parties favor public child care more strongly than those of conservative parties and thus

invest more in expanding child care facilities for ideological reasons. An additional woman, irrespective of her partisan affiliation, may hence be relatively less effective in councils with a higher share of left-wing councilors. Indeed, we find a negative and significant interaction effect in these regressions.

In Panel C, we interact the female winner dummy with the share of the CSU in the council, the major right-wing party in Bavaria. We find an insignificant interaction effect, indicating that the share of CSU councilors does not influence the effectiveness of an additional female councilor. Note that a low seat share of the CSU may either imply a higher seat share of the two parties classified as left-wing or of the independents. Since, the independents in Bavaria tend to be conservative, it may not be surprising that there are no differences across municipalities with high and low seat shares for the CSU regarding the effect of an additional woman.

In Panel D, we interact the female winner dummy with the number of council seats. One additional woman may be more effective in smaller councils as her impact on the overall share of women would be relatively larger.[58] Indeed, we find a negative and significant coefficient for the interaction term. Women appear to have a positive impact on the expansion rate of child care only in relatively small municipalities with small councils (see Figure A.11 for a plot of the marginal effect of a female winner for different council sizes).

[58]There are further reasons why women may be more effective in smaller councils. For example, municipalities with smaller councils tend to be more rural (and less populated). This may imply that these municipalities are also more conservative. The relative impact of a woman may thus be stronger. However, such alternative explanations are less compelling than the simple fact that the relative increase in the share of seats held by women when a woman wins a mixed-gender race is larger in smaller councils.

Table A.13: EXTENSION IV: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, INTERACTIONS WITH MAYOR GENDER AND COUNCIL CHARACTERISTICS

	(1)	(2)	(3)	(4)	(5)
Panel A: Female mayor					
Female victory	0.330**	0.340*	0.200*	0.346**	0.380**
	(0.147)	(0.181)	(0.118)	(0.172)	(0.178)
Female mayor	-0.720*	-1.038**	-0.520	-0.999**	-0.959**
	(0.391)	(0.486)	(0.317)	(0.461)	(0.469)
Female victory × Female mayor	0.302	0.528	0.303	0.385	0.401
	(0.516)	(0.626)	(0.460)	(0.606)	(0.641)
Panel B: Share of left-wing parties					
Female victory	0.696***	0.754**	0.450**	0.744**	0.813***
	(0.251)	(0.300)	(0.204)	(0.290)	(0.301)
Share SPD & Greens	0.020***	0.017***	0.016***	0.019***	0.021***
	(0.006)	(0.006)	(0.005)	(0.006)	(0.007)
Female victory × Share SPD & Greens	-0.019*	-0.020	-0.013*	-0.020*	-0.022*
	(0.010)	(0.013)	(0.008)	(0.012)	(0.012)
Panel C: Share of right-wing parties					
Female victory	0.685**	0.780**	0.490*	0.729*	0.773**
	(0.326)	(0.386)	(0.263)	(0.376)	(0.393)
Share CSU	0.012**	0.009	0.011**	0.010*	0.011*
	(0.005)	(0.006)	(0.005)	(0.006)	(0.006)
Female victory × Share CSU	-0.011	-0.013	-0.009	-0.012	-0.012
	(0.008)	(0.010)	(0.007)	(0.010)	(0.010)
Panel D: Council size					
Female victory	0.788**	0.987**	0.429	0.916**	0.995**
	(0.342)	(0.403)	(0.283)	(0.393)	(0.414)
Council size	0.016**	0.018**	0.008	0.018**	0.019**
	(0.008)	(0.008)	(0.007)	(0.008)	(0.008)
Female victory × Council size	-0.022*	-0.030**	-0.011	-0.027*	-0.029**
	(0.012)	(0.014)	(0.010)	(0.014)	(0.015)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open list local council elections to the annual change of child care spots per 1000 inhabitants over the legislative term. Panel A interacts the gender of the winner for the last seat with the gender of the mayor; Panel B interacts the gender of the winner with the share of councilors from left-wing parties (the share is calculated with councilors elected in mixed-gender races included); Panel C interacts the gender of the winner with the share of councilors from the right-wing CSU party (the share is calculated with councilors elected in mixed-gender races included) ; and Panel D interacts the gender of the winner with the number of seats in the council. We use various bandwidths: optimal CCT (Model 1 ,5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

A.5.5 Interactions with councilor characteristics

In this section, we study interactions of the female winner dummy with other councilor characteristics. Besides gender, councilors also vary in for example their age, educational attainment, employment status, as well as partisan affiliation. Table A.14 explores whether these characteristics interact with the impact of gender.

In Panel A, we interact the female winner dummy with a councilor's age in year t. On the one hand, younger women may have stronger incentives to push for an expansion of child care as they would directly benefit from improved provision. On the other hand, older women may have more authority and thus be more influential in the council. We find that the interaction effect is consistently insignificant, indicating no significant differences in the impact of older and younger women.

In Panel B, we interact the female winner dummy with a dummy for educational attainment. This dummy is 1 if the winner has at least a university Master's degree. The interaction effect is consistently insignificant.

In Panel C, we explore whether female councilors who are employed are more effective when it comes to the expansion of child care. Women who are working should be more in favor of expanding child care as they are more likely to rely on public child care (or alternatively to have relied on it in the past or expect to rely on it in the future). We indeed observe a positive interaction effect that is significant in at least some specifications. One interpretation is that women who are working emphasize child care provision more strongly.

Table A.14: EXTENSION V: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, INTERACTIONS WITH CHARACTERISTICS OF COUNCILORS BESIDE GENDER

	(1)	(2)	(3)	(4)	(5)
Panel A: Age					
Female victory	-0.569	-0.855	-0.144	-0.898	-0.768
	(0.929)	(1.056)	(0.817)	(1.014)	(1.144)
Age	-0.011	-0.021	0.004	-0.019	-0.022
	(0.012)	(0.014)	(0.011)	(0.013)	(0.015)
Female victory × Age	0.021	0.027	0.008	0.028	0.027
	(0.019)	(0.021)	(0.017)	(0.021)	(0.023)
Panel B: Education					
Female victory	0.221	0.235	0.094	0.251	0.288
	(0.227)	(0.274)	(0.179)	(0.262)	(0.271)
Higher degree	-0.019	0.110	-0.156	0.097	0.099
	(0.260)	(0.304)	(0.208)	(0.292)	(0.301)
Female victory × Higher degree	0.092	0.082	0.164	0.067	0.047
	(0.388)	(0.475)	(0.318)	(0.447)	(0.461)
Panel C: Employees					
Female victory	-0.142	-0.637*	-0.074	-0.421	-0.324
	(0.338)	(0.366)	(0.290)	(0.354)	(0.384)
Employed	-0.252	-0.524*	-0.121	-0.457	-0.405
	(0.288)	(0.312)	(0.238)	(0.302)	(0.325)
Female victory × Employed	0.505	1.073**	0.268	0.854**	0.781*
	(0.391)	(0.448)	(0.329)	(0.428)	(0.455)
Panel D: Left-wing					
Female victory	0.438***	0.485**	0.274**	0.476**	0.523***
	(0.167)	(0.205)	(0.138)	(0.196)	(0.203)
SPD or Greens	0.143	0.144	0.088	0.154	0.156
	(0.227)	(0.238)	(0.189)	(0.239)	(0.251)
Female victory × SPD or Greens	-0.289	-0.344	-0.142	-0.324	-0.380
	(0.326)	(0.377)	(0.265)	(0.363)	(0.380)
Panel E: Right-wing					
Female victory	0.572***	0.614***	0.418***	0.580***	0.638***
	(0.183)	(0.224)	(0.143)	(0.212)	(0.221)
CSU	0.381**	0.338	0.470***	0.300	0.334
	(0.189)	(0.222)	(0.159)	(0.216)	(0.227)
Female victory × CSU	-0.616**	-0.640*	-0.618**	-0.554*	-0.608*
	(0.284)	(0.347)	(0.242)	(0.330)	(0.346)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the annual change of child care spots per 1000 inhabitants over the legislative term. Panel A interacts the gender of the winner for the last seat with the age of the winner; Panel B interacts the gender of the winner with a dummy for whether the winner has a higher degree (university masters or Ph.D.); Panel C interacts the gender of the winner with a dummy for whether the councilor works as an employee; Panel D and E interact the female winner dummy with dummies for the party of the councilor (right-wing is 1 if the councilor is from the CSU and left-wing is 1 if the councilor is from the SPD or the Greens). We use various bandwidths: optimal CCT (Model 1, 5), one half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Panel D and E explore whether the partisan affiliation of councilors interacts with their gender. We find that Social Democratic and Green partisanship are irrelevant. However, female councilors from the right-wing CSU are significantly less effective than those from other parties. Specifically, the estimated interaction coefficient is as large as the base coefficient for female winners, i.e. a female victory in a mixed-gender race for the last seat that accrues to the CSU has no effect on the expansion of child care. This may indicate that female councilors from the CSU are particularly conservative and do not differ much in their attitudes toward public child care from generic men.

A.5.6 Effect of female winner on broader fiscal policy outcomes

One reason why we focus on the expansion of child care provision is that preferences for this specific local public good likely differ between genders. Much of the previous literature instead has focused on broad fiscal items such as public expenditures or revenues (Baltrunaite, Casarico, Profeta, and Savio, 2019; Bagues and Campa, 2021). In order to connect this paper to this literature and also to assess whether the choice of outcome matters for any conclusions regarding the substantive impact of female politicians, both in our context as well as more generally, we explore in this section how a female winner of a mixed-gender races affects broad fiscal variables.

The results are collected in Table A.15. Panel A reports the results for the log of total local expenditures, Panel B for total local revenues, and Panel C for the log of total debt. Panel D and E focus on local taxes. Specifically, Panel D uses the log of the tax multiplier (which effectively determines the rate) of the local business tax. Panel E uses the log of the tax multiplier for the local property tax on residential properties (*Grundsteuer B*). We find that female winners have no significant effect on any of these fiscal outcomes. This result underlines the importance of focusing on specific public goods like child care where presumably clear differences in preferences between genders.

Table A.15: EXTENSION VI: FEMALE VICTORIES IN MIXED-GENDER RACES AND FISCAL POLICY CHOICES

	(1)	(2)	(3)	(4)	(5)
Panel A: Total expenditures					
Female victory	0.023	0.017	0.027	0.022	0.020
	(0.028)	(0.034)	(0.021)	(0.029)	(0.032)
Panel B: Total revenues					
Female victory	0.019	0.018	0.023	0.019	0.018
	(0.028)	(0.034)	(0.021)	(0.030)	(0.032)
Panel C: Total debt					
Female victory	0.140	0.165	0.093	0.169	0.183
	(0.126)	(0.163)	(0.097)	(0.140)	(0.140)
Panel D: Business tax multiplier					
Female victory	0.010	0.012	0.006	0.013	0.015*
	(0.007)	(0.009)	(0.005)	(0.008)	(0.008)
Panel E: Property tax multiplier					
Female victory	0.005	0.008	0.003	0.005	0.008
	(0.013)	(0.016)	(0.010)	(0.013)	(0.015)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to various fiscal policy outcomes. We collect results for the log of total expenditures p.c. (Panel A), log of total revenues p.c. (Panel B), log of total debt p.c. (Panel C), log of the multiplier for the business tax (Panel D), and log of the multiplier for the property tax on residential properties (Panel E). We report results for various bandwidths: optimal CCT (Model 1, 5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

A.6 Further results

A.6.1 Number of other women

To complement the results in Section 6.3, we explore the effect of an additional woman using an approach that attempts to account for the endogeneity in the number of other women not by a selection-on-observable approach (i. e. controlling for population size), but by making use of the fact that several municipalities have more than one mixed-gender race.

For each municipality with more than one mixed-gender race, we determine the number of women who won in "other" close mixed-gender races within the same municipality. To define close elections, we use a margin of victory of 5%. We then divide the sample in a set of municipalities with at least two mixed-gender races where no other woman who had won in a close mixed-gender race and a set of municipalities with at least two mixed-gender races where at least one other woman had won a close mixed-gender race.

Using this sample division, we explore the effect of a female victory conditional on the number of other female victories in close mixed-gender races (see Table A.16). Note that the number of municipalities with more than one mixed-gender race is limited. While the estimated coefficients are insignificant, their sign suggests that a female victory is more effective for child care expansion in the subsample where no other woman had won a close mixed-gender race.

Table A.16: MECHANISISM II: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, BY NUMBER OF OTHER WOMEN ELECTED IN A CLOSE MIXED-GENDER RACE

	(1) 0 other women	(2) more than 1 other woman	(3) Interaction, more than 1 other woman
Female victory	0.211	-0.126	0.122
	(0.250)	(0.257)	(0.236)
Other women			0.101
			(0.192)
Female × Other women			-0.200
			(0.256)
Bandwidth type	CCT	CCT	CCT
Bandwidth size	0.07	0.07	0.07
Polynomial	Linear	Linear	Linear
N	2092	1027	3119
Municipalities	206	88	278
Mean (SD)	0.94 (3.34)	0.94 (3.02)	0.94 (3.24)

Notes: This table reports results from local linear regressions that relate the gender of the winner of a mixed-gender race that accrues to a party in open list local council elections to the annual change of child care spots per 1000 inhabitants over the legislative term. We explore in this table whether the impact of a female winner of a mixed-gender race is stronger when other female councilors have also been elected in close (i. e. victory margin less than 5%) mixed-gender races to the council by means of subsample regressions (Models 1-2) and an interaction model (Model 3). More specifically, in Model (1), the sample consists of municipalities with female and male winners of mixed-gender races that have had 0 other women elected in a close mixed-gender race. In Model (2), the sample consists of municipalities with female and male winners of mixed-gender races where at least one other women was also elected to the council in a close mixed-gender race. In Model (3), we interact a dummy for whether there was at least one other women elected in a close mixed-gender race with the female winner dummy. All results are for optimal CCT bandwidths. 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 of the candidate.

A.6.2 Heterogeneity in female speaking rates

To complement the results in Section 6.2, we analyze whether certain types of female councilors are more likely to speak or to mention child care after a female victory in a mixed-gender race. To explore such councilor-specific heterogeneity in the response to a female victory in a mixed-gender race, we rely on individual-level (rather than municipality-level) data. That is, we match information from the electoral lists (party affiliation as well initial and final list ranks) to councilors and then implement a RD design with mixed-gender races at the level of individual councilors.[59]

One limitation with the results reported in Panel B of Table 4 is that it is unclear whether the increase in female speaking rates emerges because the female winner of a mixed-gender race or because the "other" women in the council speak more in response to an additional female councilor. It is, for example, possible that (female) councilors who only barely entered the council feel compelled to be particularly active in council meetings to justify their seat. We explore this in Table A.17.

In Panel A, we relate the speaking rate (the share of meetings where a female councilor spoke at least once) of all female councilors to the gender of the winner of a mixed-gender race. Consistent with the results in Panel A of Table 4, we observe a positive effect. The speaking rate increases by about 11 percentage points. In Panel B, we replicate this specification after dropping the winners of each mixed-gender race. The coefficient estimates remain essentially the same. Accordingly, we conclude that the increase in female speaking rates is not exclusively due to the female winners of mixed-gender races.

Next, we explore whether left-wing (SPD or Greens) or right-wing (CSU) female councilors are more likely to speak or to mention child care in a meeting than female councilors from other parties after a female victory in a mixed-gender race. Female councilors from right-

[59]Note that in municipalities with more than one mixed-gender race, each councilor appears more than once in the RD regressions.

wing parties could be more intimidated by a male-dominated council than those from left-wing parties and thus be more likely to respond to a rise in the number of other women.

We also explore whether female councilors who were placed on one of the top-3 spots of her party were more likely to speak or mention child care, and (iii) whether female councilors who received a top-3 list rank after the election were more likely to speak or mention daycare. Female councilors who had top initial spot ostensibly have strong support from their parties and thus could be less dependent on the support of other women. Similarly, councilors who received a top final rank ostensibly (also) enjoy strong support from voters and thus may respond less to the presence of additional women and any support they might provide.

The results for speaking rates in Table A.18 show no significant interaction effect in Panels A-D, indicating no heterogeneity in speaking rate responses by female councilor characteristics. The results for the share of meetings where a female councilor mentions child care are reported in Table A.19. Note first that the share of meetings where a female councilor mentions child care is on average higher in municipalities where the female candidate wins a mixed-gender race. However, we again find no consistently significant interaction effects.

Table A.17: FEMALE VICTORIES IN MIXED-GENDER RACES AND (FEMALE) SPEAKING RATES, WITH AND WITHOUT THE WINNER OF A RESPECTIVE MIXED-GENDER RACE

	(1)	(2)	(3)	(4)	(5)
Panel A: female speaking rates with winners					
Female victory	0.112**	0.134**	0.094***	0.116**	0.119**
	(0.046)	(0.057)	(0.035)	(0.051)	(0.053)
Bandwidth type	CCT	CCT/2	2CCT	IK	CCT
Bandwidth size	0.09	0.04	0.17	0.06	0.14
Polynomial	Linear	Linear	Linear	Linear	Quadratic
N	1074	712	1564	909	1409
Municipalities	124	86	153	105	146
Mean (SD)	0.15 (0.20)	0.15 (0.20)	0.15 (0.19)	0.15 (0.19)	0.15 (0.19)
Panel B: female speaking rates without winners					
Female victory	0.124**	0.144**	0.099***	0.140**	0.142**
	(0.049)	(0.060)	(0.037)	(0.057)	(0.061)
Bandwidth type	CCT	CCT/2	2CCT	IK	CCT
Bandwidth size	0.10	0.05	0.19	0.06	0.13
Polynomial	Linear	Linear	Linear	Linear	Quadratic
N	1047	785	1480	837	1255
Municipalities	133	97	158	104	141
Mean (SD)	0.15 (0.20)	0.15 (0.20)	0.15 (0.19)	0.15 (0.19)	0.15 (0.20)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to (female) councilors' speaking rates during the term using individual-level data. The resutls in Panel A rely on a sample that includes all women in the council, including the female winners of mixed-geder races. In Panel B, we use a sample that drops the female winner for each mixed-gender race to isolate the effect of a female victory in a given race on the speaking rates of "other" women. We use various bandwidths: optimal CCT (Model 1, 5), one half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.18: FEMALE VICTORIES IN MIXED-GENDER RACES AND SPEAKING RATE, INDIVIDUAL-LEVEL ANALYSIS OF THE FEMALE VICTORIES ON SPEAKING RATES OF WOMEN IN GENERAL, BY POLITICAL CHARACTERISTICS

	(1)	(2)	(3)	(4)	(5)
Panel A: Left					
Female victory	0.095**	0.114*	0.086**	0.103**	0.099*
	(0.045)	(0.059)	(0.035)	(0.051)	(0.053)
SPD or Greens	0.009	-0.010	0.027	0.006	-0.002
	(0.023)	(0.035)	(0.020)	(0.027)	(0.027)
Female victory × SPD or Greens	0.060	0.070	0.028	0.051	0.071
	(0.040)	(0.058)	(0.031)	(0.045)	(0.048)
Panel B: Right					
Female victory	0.123**	0.132**	0.116***	0.120**	0.122**
	(0.050)	(0.058)	(0.039)	(0.055)	(0.057)
CSU	-0.037	-0.079***	-0.015	-0.058**	-0.051*
	(0.024)	(0.029)	(0.022)	(0.025)	(0.026)
Female victory × CSU	-0.029	0.010	-0.065*	-0.010	-0.004
	(0.045)	(0.064)	(0.036)	(0.051)	(0.053)
Panel C: Top intital list rank					
Female victory	0.107**	0.135**	0.076**	0.109**	0.118**
	(0.044)	(0.061)	(0.034)	(0.052)	(0.053)
Top initial list rank	0.046*	0.057*	0.019	0.062**	0.060**
	(0.024)	(0.030)	(0.023)	(0.025)	(0.027)
Female victory × Top initial list rank	0.002	-0.011	0.038	0.005	-0.012
	(0.074)	(0.092)	(0.055)	(0.081)	(0.086)
Panel D: Top final list rank					
Female victory	0.110*	0.138*	0.082**	0.113*	0.120*
	(0.056)	(0.083)	(0.040)	(0.068)	(0.069)
Top final list rank	0.022	0.055**	0.007	0.034	0.030
	(0.024)	(0.027)	(0.025)	(0.027)	(0.026)
Female victory × Top final list rank	0.007	-0.008	0.026	0.005	-0.001
	(0.072)	(0.094)	(0.053)	(0.081)	(0.084)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the speaking rate of individual female councilors during the legislative period (the share of meetings where she was noted as speaking in the minutes). Panel A interacts the gender of the winner for the last seat with a dummy for whether a female councilor is member of one of the two left-wing parties (SPD or Greens); Panel B interacts the gender of the winner with a dummy for whether the female councilor is a member of the right-wing CSU; Panel C interacts the gender of the winner with a dummy for whether a female councilor was placed on a top spot (1, 2, or 3) on her party's list; Panel D interacts the gender of the winner with a dummy for whether the female councilor was placed on a top spot (1, 2, or 3) in the final list (after the election) of her party. We use various bandwidths: optimal CCT (Model 1, 5), one half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.19: FEMALE VICTORIES IN MIXED-GENDER RACES AND CHILD CARE DISCUSSION RATE, INDIVIDUAL-LEVEL ANALYSIS OF THE FEMALE VICTORIES ON SHARE OF MEETINGS WHERE CHILD CARE WAS MENTIONED BY FEMALE COUNCILORS, BY POLITICAL CHARACTERISTICS

	(1)	(2)	(3)	(4)	(5)
Panel A: Left					
Female victory	0.016*	0.024*	0.004	0.016*	0.020*
	(0.009)	(0.013)	(0.004)	(0.009)	(0.011)
SPD or Greens	0.001	-0.003	-0.002	0.001	0.002
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Female victory × SPD or Greens	-0.012	-0.027	0.009	-0.012	-0.022
	(0.011)	(0.018)	(0.009)	(0.011)	(0.014)
Panel B: Right					
Female victory	0.012	0.017	0.008	0.012	0.013
	(0.009)	(0.015)	(0.006)	(0.009)	(0.011)
CSU	0.001	0.003	0.000	0.001	-0.000
	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)
Female victory × CSU	-0.001	-0.003	-0.005	-0.001	0.003
	(0.009)	(0.015)	(0.007)	(0.009)	(0.011)
Panel C: Top intital list rank					
Female victory	0.011**	0.010*	0.005	0.011**	0.013**
	(0.005)	(0.006)	(0.004)	(0.005)	(0.006)
Top initial list rank	0.005**	0.002	-0.001	0.005**	0.007**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
Female victory × Top initial list rank	0.001	0.016	0.004	0.001	0.002
	(0.009)	(0.016)	(0.006)	(0.009)	(0.011)
Panel D: Top final list rank					
Female victory	0.009	0.010*	0.003	0.009	0.010
	(0.005)	(0.006)	(0.003)	(0.005)	(0.007)
Top final list rank	0.004	0.006**	-0.003	0.004	0.008**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Female victory × Top final list rank	0.006	0.012	0.007	0.006	0.006
	(0.009)	(0.017)	(0.009)	(0.009)	(0.011)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the share of meetings where a female councilor mentions child care during the legislative period. Panel A interacts the gender of the winner for the last seat with a dummy for whether a female councilor is member of one of the two left-wing parties (SPD or Greens); Panel B interacts the gender of the winner with a dummy for whether the female councilor is a member of the right-wing CSU; Panel C interacts the gender of the winner with a dummy for whether a female councilor was placed on a top spot (1, 2, or 3) on her party's list; Panel D interacts the gender of the winner with a dummy for whether the female councilor was placed on a top spot (1, 2, or 3) in the final list (after the election) of her party. We use various bandwidths: optimal CCT (Model 1, 5), one half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

A.6.3 Simulation-based identification strategy

One concern with our RD approach is that, technically, all candidates compete jointly for all seats. As such, more than two candidates could in principle compete for the last seat of any given party. While the RD framework, by focusing on the two candidates closest to the last seat won by their party, identifies the treatment effect transparently, it does not reflect the multi-candidate nature of local council elections. It is therefore useful to compare the RD results with results from an alternative empirical framework that accounts for the fact that more than two candidates could be effectively competing for the last seat of a party.

To develop such a framework, we first identify all candidates who were close to winning or losing a seat, respectively. For this, we follow Kotakorpi, Poutvaara, and Terviö (2017) and implement a simulation-based approach to construct for each candidate an individual measure for how close they were to the seat threshold. In a second step, we calculate the number of female winners among all candidates close to the seat threshold of their party. Finally, in the spirit of Hyytinen, Meriläinen, Saarimaa, Toivanen, and Tukiainen (2018), we use the number of close female winners in a municipality as an instrument for the share of female councilors.

We construct the simulation-based candidate-specific closeness measure as follows. We add to each candidate's number of votes a random number drawn from a uniform distribution with support over +/- 10% of the median number votes of the candidate's party (rounded down to the nearest integer). We then reassign final list ranks based on the perturbed vote vector and record for each candidate whether they have won a seat given the original number of seats of their party.

We then run n=10,000 simulations and calculate for each candidate the share of simulations $p \in [0,1]$ in which they win a seat. Candidates with $p = 1$, i. e who win a seat in all simulations, can be considered "safe winners", while candidates with $p = 0$ are "no hopers". All other candidates (i. e. those with $0 < p < 1$) switch from winning to losing or losing to winning at least in one simulation.

Next, we identify close winners and losers (i. e. winners who barely won a seat or losers who were close to winning a seat) by constructing for each candidate a "margin of victory"

$$m = p - T, \tag{A.1}$$

with $T = \frac{(p_L + p_H)}{2}$ as the average of the lowest p among the candidates who were elected in the actual election (p_L) and the highest p among those candidates who were not elected (p_H).

We consider all candidates with $|m| < 0.1$ as close. We focus on all within-party races where there was at least one close woman and one close man (i. e., this is our definition of mixed-gender close elections in this framework). For these races, we calculate the number of close female winners. We then use the number of close female winners as an instrument for the share of women in the council in a model that relates the share of women to our main outcome variable, i. e. the annual change in child care spots per 1,000 inhabitants. Specifically, the specification that we are ultimately interested in is:

$$y_{i,t} = \alpha + \beta \textit{Female councilor share}_{i,t} + \varepsilon_{i,t}. \tag{A.2}$$

Since *Female councilor share*$_{i,t}$ is endogenous, we instrument it with the number of close female winners per municipality. We also relate the number of close female winners to the overall share of women in the council (essentially the first stage of model A.2) and to the annual change in child care spots per 1,000 inhabitants (essentially the reduced-form of model A.2)

Table A.20: SIMULATION-BASED RESULTS: FEMALE COUNCILOR SHARE AND PUBLIC CHILD CARE PROVISION (ANNUAL CHANGE IN CHILD CARE SPOTS PER 1000 INHABITANTS)

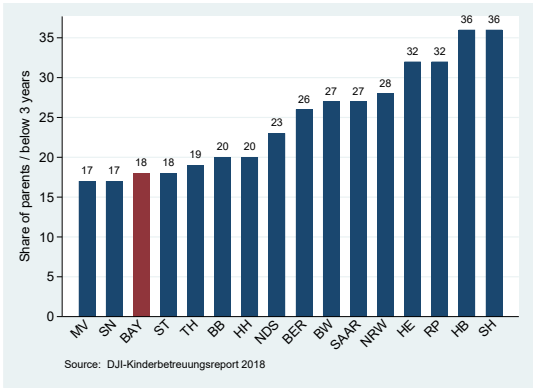
	(1) Share of women	(2) Change in child care spots	(3) Change in child care spots
No. of women elected in close races	4.510***	0.113*	
	(0.944)	(0.065)	
Share of women			0.023*
			(0.014)
N	431	1821	1821
Municipalities	365	365	365
Mean (SD)	22.62 (10.39)	0.90 (3.55)	0.90 (3.55)

Notes: This table reports results from OLS and IV regressions that relate the number of "close" female winners as per simulated elections to the annual change in child care spots per 1000 inhabitants share of women in the council (model 1) and to the annual change in the number of child care spots per 1000 inhabitants (model 2 and 3). Model 1 and 2 are estimated with OLS. Model 3 is an IV specification where the share of women in the council is instrumented with the number of close female winners. 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 are in parentheses. The unit of clustering is the municipality of the candidate.

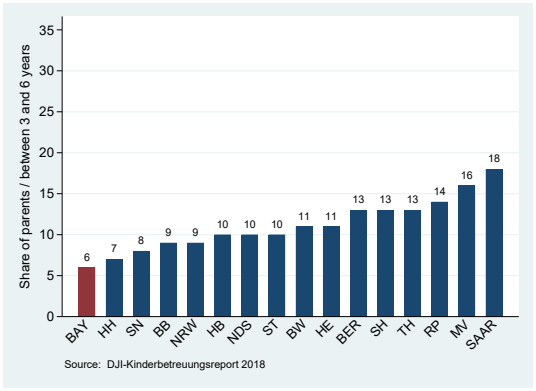
The results are collected in Table A.20. Column (1) shows that in the simulation-based approach, one close female winner increases the overall share of women in the council on average by about 4.5ppt. Column (2) shows that one close female winner increases the expansion of child care spots by 0.113 spots per year. While the magnitude of the effect is smaller than the effect in the RD framework, it points in the same direction.

In column (3), we then report the IV results where we instrument the share of women with the number of close female winners. We find that a 1ppt increase in the share of women increases the child care expansion rate by 0.023 spots per year. This number is qualitatively in line with the fuzzy RD estimates reported in Table A.27.

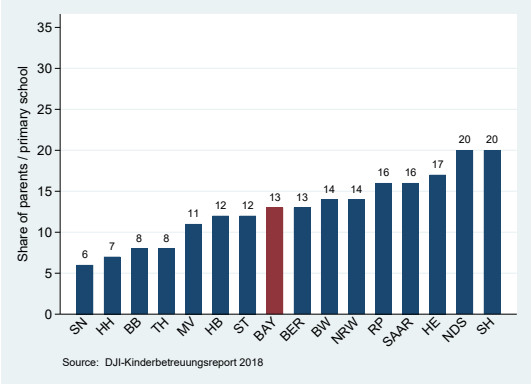
A.7 Additional figures



(a) Below 3

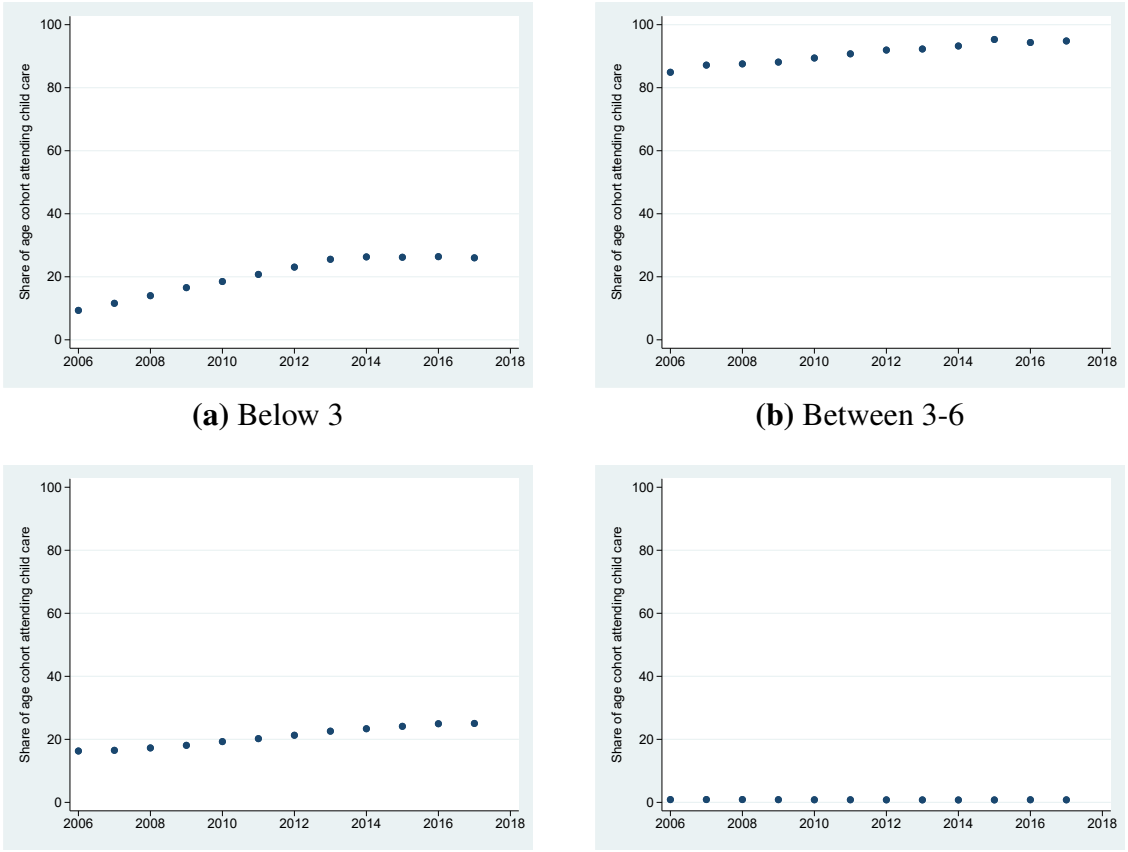


(b) Between 3-6



(c) Between 6-11

Figure A.3: Child care shortages across Germany in 2017. This figure shows the share of parents reporting shortages (i. e. insufficient hours or no child care at all) in child care provision across German states in 2017 based on survey data (BAY - Bavaria, the other acronyms are as follows: MV - Mecklenburg-Western Pomerania, SN - Saxonia, ST - Saxony-Anhalt, TH - Thuringia, BB - Brandenburg, HH - Hamburg, NDS - Lower Saxony, BER - Berlin, BW - Baden-Wuerttemberg, SAAR - Saarland, NRW - North Rhine-Westphalia, HE - Hesse, RP - Rhineland-Palatinate, HB - Bremen, SH - Schleswig-Holstein). Subfigure (a) pertains to parents with children younger than 3, subfigures (b) to parents with children between 3 and 6, and subfigure (c) to parents with children attending primary school. Data source: Alt, Gedon, Hubert, Huesken, and Lippert (2018).



(a) Below 3 **(b)** Between 3-6

(c) Between 6-11 **(d)** Between 11-14

Figure A.4: Share of children attending child care facilities in Bavaria, 2006-2017. This figure shows the share of children in various age cohorts attending any type of child care facility in Bavaria over 2006-2017. Subfigure (a) plots the number of child below 3 years in child care divided by the number of children below 3. Subfigures (b)-(d) plot the corresponding ratios for the other age cohorts.

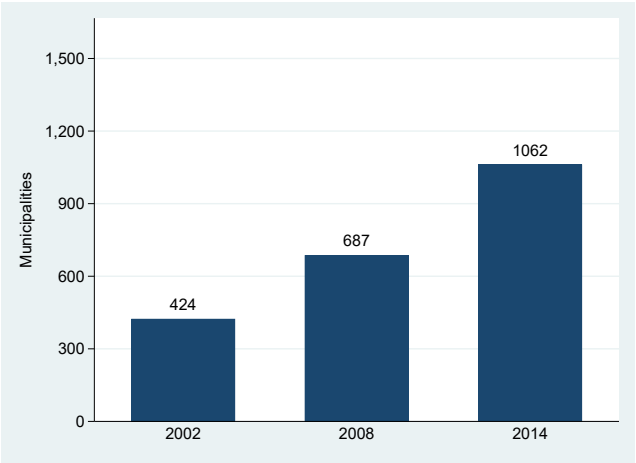
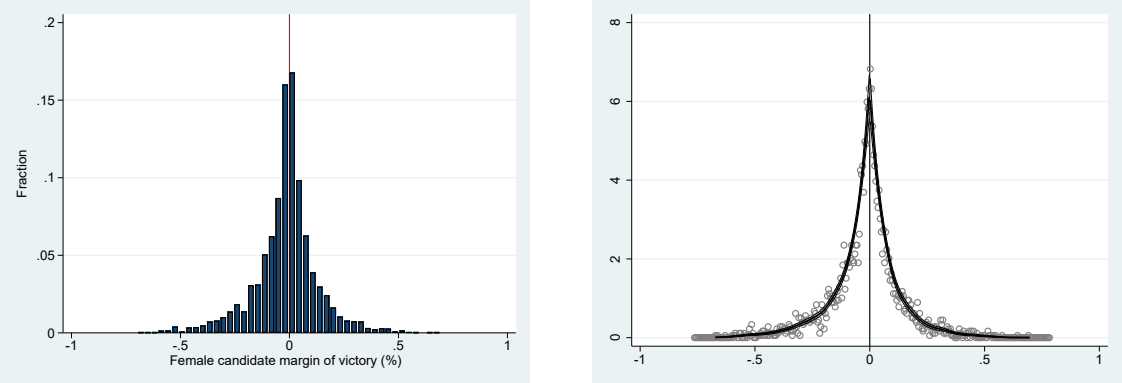
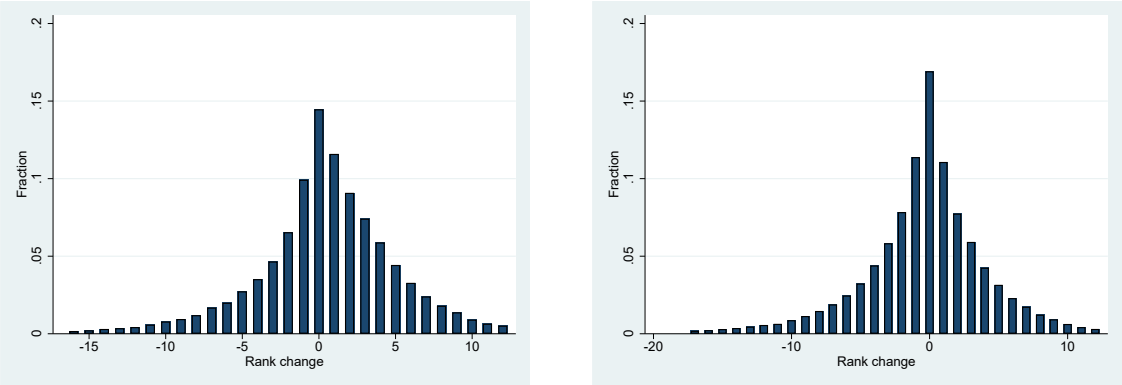


Figure A.5: Number of municipalities with at least one mixed-gender race for the last seat. This figure shows the number of municipalities per legislative period included in our sample in which at least one party had a mixed-gender race for the last seat.



(a) Histogram **(b)** McCrary plot

Figure A.6: RDD validity: discontinuity in density in female candidate's margin of victory. This figure shows that women are not more or less likely to win close races. Subfigure (a) shows a histogram of the distribution of the female candidates margin of victory (difference between the number of the votes of the marginal female and male candidate divided by the sum of votes for these two marginal candidates. Subfigure (b) shows a McCrary plot to test whether there is a discontinuity in the margin of victory at zero.



(a) Women **(b)** Men

Figure A.7: Rank changes of council candidates. This figure shows the distribution in rank changes (the deviation between initial list placement and final list rank) of council candidates, separately for women (subfigure a) and men (subfigure b). For expositional purposes, we omit rank changes below the 1st and above the 99th percentile. This figure confirms that voters make considerable use of preferential voting and that preferential voting changes the list ordering of candidates, both for women and men.

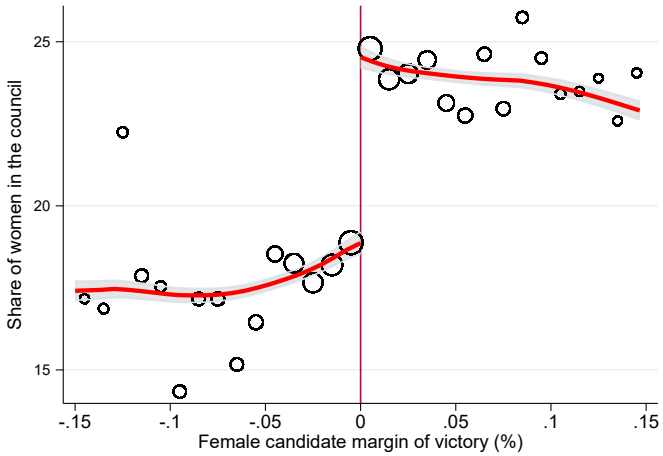
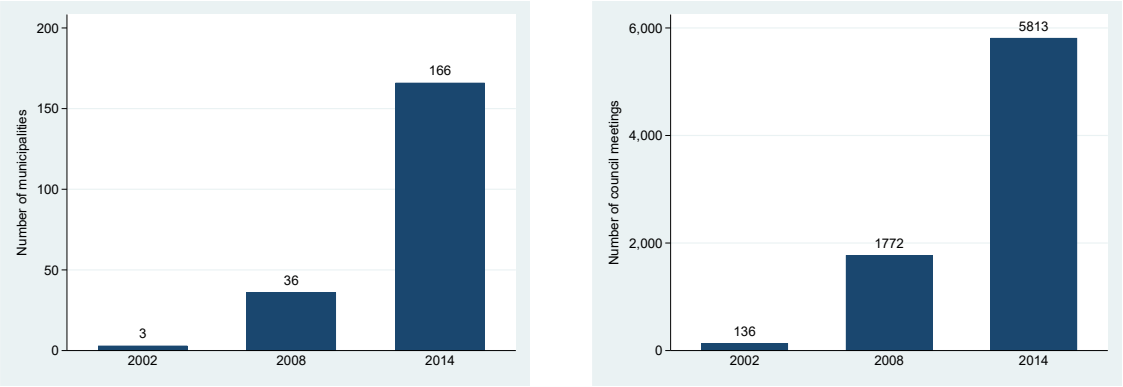


Figure A.8: RDD plot: female victories in mixed-gender races and share of women in the council. This figure shows a RDD plot on how the overall share of women in the council increases if the female candidate wins a mixed-gender race. The running variable is the margin of victory of a female candidate in mixed-gender races. Observations to the right of the threshold relate to a female winner. Each dot is the local average of the share of women in the council in bins of one percent for the margin of victory. The size of the dots indicates the number of observations in each bin. The solid lines are from a local linear smooth of the underlying observations. The gray-shaded areas represent the 90 percent confidence intervals.



(a) Municipalities **(b)** Meetings

Figure A.9: Data coverage for council meeting minutes. The bar charts show the coverage of our dataset in terms of municipalities and individual meetings for the council meeting regressions. Subfigure (a) shows the number of municipalities included in the sample in each legislative period for these regressions. Subfigure (b) shows the total number of council meetings that were coded for each legislative period (note that each municipality holds at least one council meeting each month).

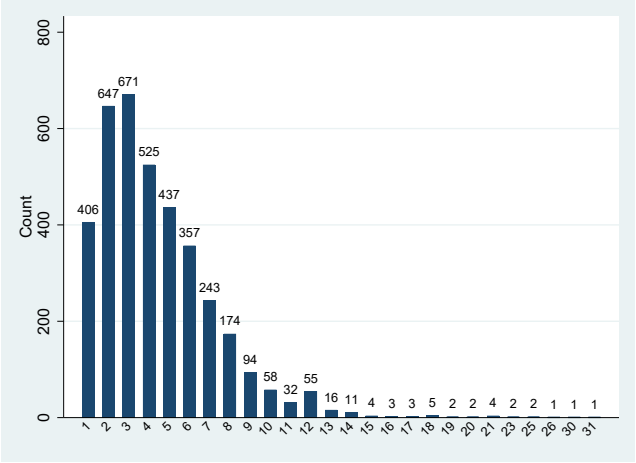


Figure A.10: Final list ranks of winners in mixed-gender races. This figure shows the distribution in final list ranks of the winners in mixed-gender races for the last seat that accrues to a party.

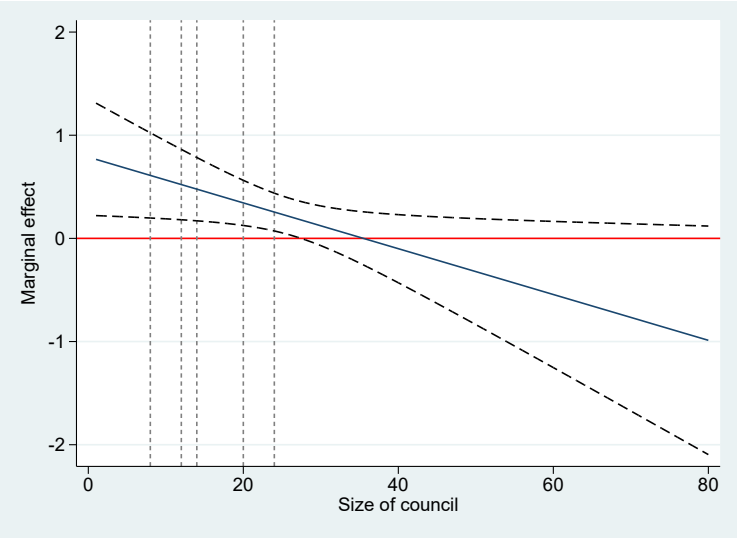


Figure A.11: Marginal effect of an additional woman – conditional on council size. This figure shows a plot of the marginal effect of a woman winning a mixed-gender race conditional on the number of seats in the council. The dashed lines indicate 90% confidence intervals. The marginal effect is calculated based on Model (1) in Panel D of Table A.13. The dotted lines indicate the 5th, 25th, 50th, 75th, and 95th percentiles of the distribution of council size in Bavarian municipalities during the sample period.

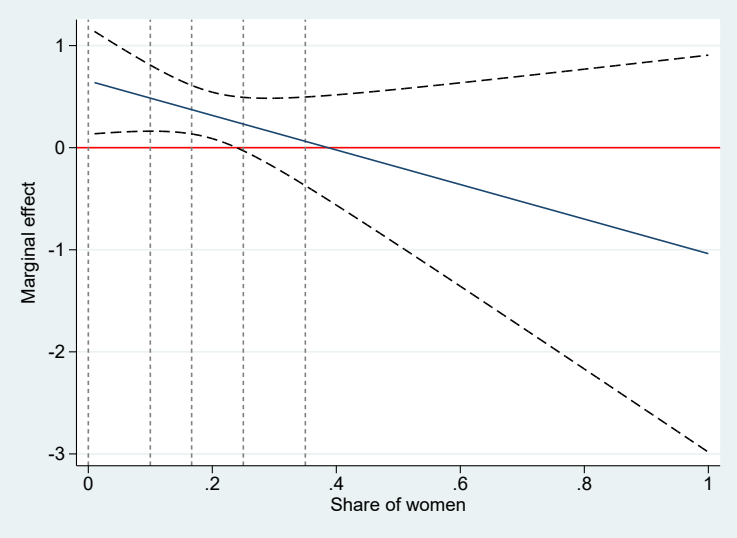


Figure A.12: Marginal effect of an additional woman – conditional on share of fellow women in the council. This figure shows a plot of the marginal effect of a woman winning a mixed-gender race conditional on the share of other women in the council. The dashed lines indicate 90% confidence intervals. The marginal effect is calculated based on Model (1) in Table A.31. The dotted lines indicate the 5th, 25th, 50th, 75th, and 95th percentiles of the distribution of the share of women in Bavarian municipalities during the sample period.

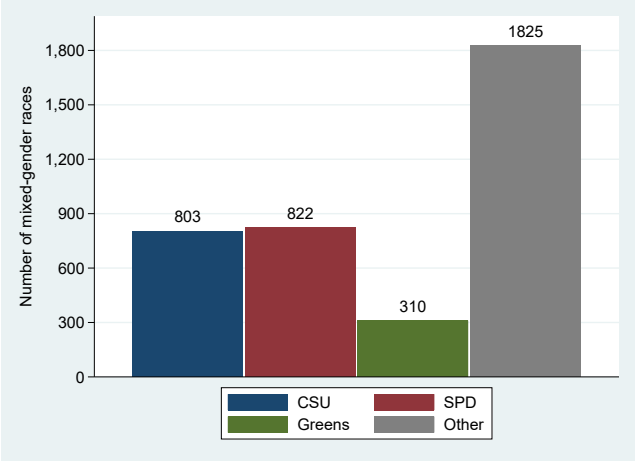
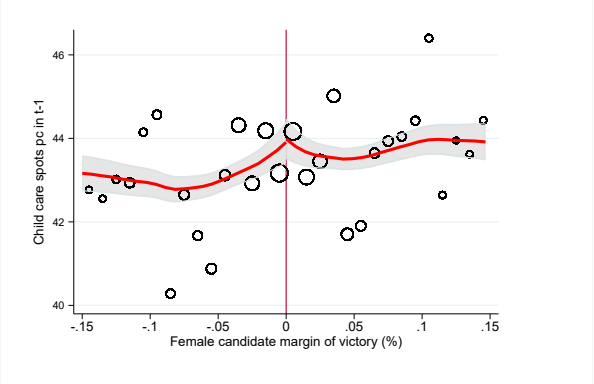
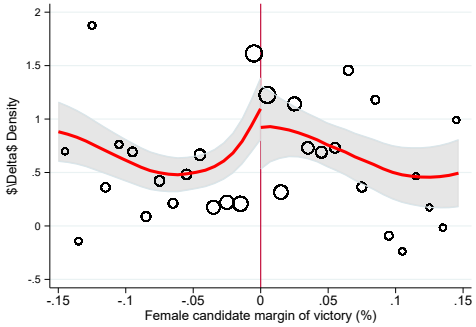


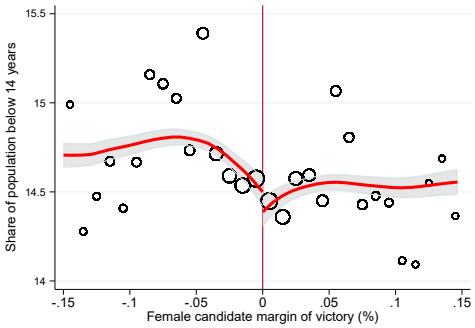
Figure A.13: Distribution of mixed-gender races across parties. This figure shows the number of mixed gender races for the last seat occurring in the three major parties in Bavaria (CSU, SPD, Greens) and in all other parties. Note that some races are double-counted if parties run with joint lists (e. g., the SPD and the Greens may have a shared list in some elections). We aggregate all smaller parties and voter associations into "others". This figure suggests that mixed-gender races occur across the entire political spectrum (CSU 21%, SPD 21%, Greens 8%, and others 49%.).



(a) Child care spots pc_{t-1}

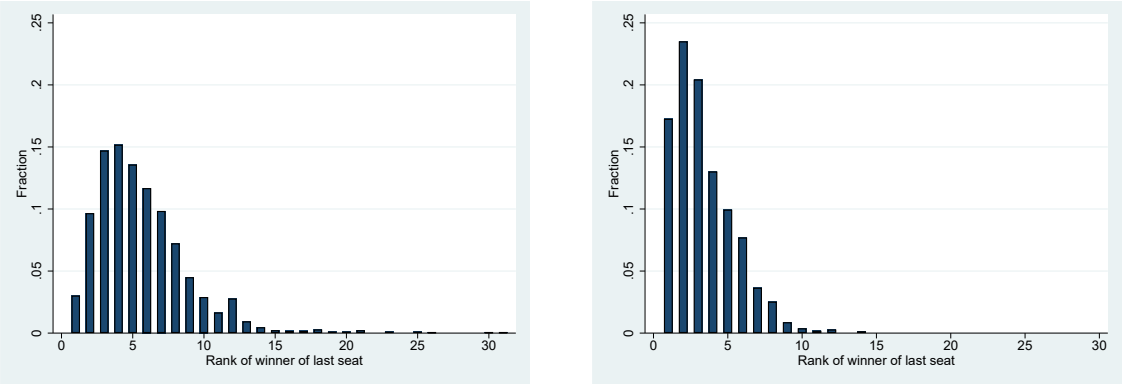


(b) Change in density



(c) Share of population below 14

Figure A.14: Municipality characteristics and margin of victory. The bar charts show how characteristics of municipalities vary with the margin of victory in the RD sample. We focus on the characteristics included in the OLS specification reported in Panel C of Table A.24: existing child care spots pc (subfigure a), change in population density (subfigure b), and share of the population below 14 years (subfigure c). None of the figures show a discontinuity at the RD threshold. However, as the change in child care spots plotted in Figure 4, all subfigures in this plot show a change in the slope when the margin of victory is close to the threshold.



(a) Close races **(b)** Non-close races

Figure A.15: Distribution of the list ranks of winners of mixed-gender races for the last seat of a party. This figure shows the distribution of final list ranks with which a seat could be won in a party, separately for close (victory margin of less than 5%) and non-close (victory margin of more than 5%) mixed gender races.

A.8 Additional tables

Table A.21: DISTRIBUTION OF COUNCIL SIZES ACROSS BAVARIAN MUNICIPALITIES

Council size	Municipalities	Cumulative share
8	129	6.27
12	593	35.12
14	370	53.11
16	405	72.81
20	333	89.01
24	159	96.74
30	33	98.35
40	17	99.17
44	9	99.61
50	5	99.85
60	1	99.90
70	1	99.95
80	1	100.00

Notes: This table reports the distribution for the number of seats in Bavarian local councils as of 2014. Column (1) states the number of seats per council. Column (2) indicates how many of the 2,056 Bavarian municipalities have that many council seats, respectively. Column (3) reports cumulative shares for council size.

Table A.22: SUMMARY STATISTICS ON CANDIDATE CHARACTERISTICS, BY GENDER

Variable	Count	Mean	SD	Min	Max
Panel A: female candidates					
CSU	58089	0.193	0.395	0	1
SPD	58089	0.206	0.404	0	1
Greens	58089	0.105	0.306	0	1
Higher degree	58089	0.131	0.337	0	1
Employed	38041	0.819	0.385	0	1
Self-employed	38041	0.035	0.183	0	1
Student	38041	0.032	0.175	0	1
Retired	38041	0.029	0.168	0	1
Housewife	38041	0.085	0.279	0	1
Age	15118	46.261	11.870	18	89
Panel B: male candidates					
CSU	166359	0.251	0.434	0	1
SPD	166359	0.155	0.362	0	1
Greens	166359	0.040	0.195	0	1
Higher degree	166359	0.136	0.343	0	1
Employed	108268	0.836	0.370	0	1
Self-employed	108268	0.089	0.284	0	1
Student	108268	0.026	0.161	0	1
Retired	108268	0.047	0.212	0	1
Househusband	108268	0.001	0.031	0	1
Age	42973	46.026	12.297	18	93

Notes: This table reports summary statistics on the characteristics of female and male council candidates. Higher degree is coded as 1 if a candidate has a university degree.

Table A.23: OLS RESULTS: FEMALE COUNCILOR SHARE AND EXISTING PUBLIC CHILD CARE PROVISION (CHILD CARE SPOTS PER 1000 INHABITANTS)

	(1) Full sample	(2) Hand-collected sample	(3) RD sample
Share of women	0.179***	0.203***	0.190***
	(0.024)	(0.027)	(0.028)
N	24672	19584	15444
Municipalities	2056	1632	1287
Mean (SD)	42.19 (13.44)	42.12 (13.08)	42.54 (12.58)

Notes: This table reports results from OLS regressions that relate the share of women in the council to the number of child care spots per 1000 inhabitants. We report (using official data provided by the Bavarian statistical office) results for the full sample of Bavarian municipalities, our hand-collected sample, and the RD sample (i.e. that includes all municipality-year pairs with mixed-gender elections). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.24: OLS RESULTS: FEMALE COUNCILOR SHARE AND PUBLIC CHILD CARE PROVISION (ANNUAL CHANGE IN CHILD CARE SPOTS PER 1000 INHABITANTS), CONTROLS INCLUDED

	(1) Full sample	(2) Hand-collected sample	(3) RD sample
Panel A: OLS without covariates			
Share of women	0.010***	0.013***	0.011***
	(0.002)	(0.003)	(0.003)
N	22616	17952	14157
Municipalities	2056	1632	1287
Mean (SD)	0.84 (4.19)	0.84 (4.09)	0.89 (4.06)
Panel B: OLS controlling for child care spots			
Share of women	0.015***	0.018***	0.016***
	(0.003)	(0.003)	(0.003)
Child care spots pc $_{t-1}$	-0.029***	-0.029***	-0.028***
	(0.003)	(0.004)	(0.004)
N	22616	17952	14157
Municipalities	2056	1632	1287
Mean (SD)	0.84 (4.19)	0.84 (4.09)	0.89 (4.06)
Panel C: OLS controlling for further covariates			
Share of women	0.021***	0.024***	0.022***
	(0.003)	(0.003)	(0.004)
Child care spots pc $_{t-1}$	-0.033***	-0.033***	-0.030***
	(0.004)	(0.005)	(0.005)
Δ Density	-0.014***	-0.011**	-0.011**
	(0.005)	(0.005)	(0.005)
Share below 14 years	0.043***	0.044**	0.035*
	(0.016)	(0.018)	(0.020)
N	18504	14688	11583
Municipalities	2056	1632	1287
Mean (SD)	0.87 (4.28)	0.88 (4.15)	0.93 (4.08)

Notes: This table reports results from OLS regressions that relate the share of women in the council to the annual change of child care spots per 1000 inhabitants over the legislative term. Panel A reports results from raw OLS regressions without any controls. Panel B reports results from OLS regressions that control for the lagged child care spots per capita in a given municipality. Panel C controls additionally for the change in population density in a municipality and the share of the population that is below 14 years. We report (using official data provided by the Bavarian statistical office) results for the full sample of Bavarian municipalities, our hand-collected sample, and the RD sample (i. e. that includes all municipality-year pairs with mixed-gender elections). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.25: MUNICIPALITY CHARACTERISTICS AND WINNER'S MARGIN OF VICTORY

	(1) Population	(2) Council size	(3) Child care spots	(4) Population	(5) Council seats	(6) Child care spots
Close male winner	0.140***	1.339***	0.937*			
	(0.052)	(0.408)	(0.517)			
Close female winner	0.138**	1.234***	1.257**			
	(0.055)	(0.427)	(0.548)			
Non-close female winner	-0.008	-0.048	1.210**			
	(0.045)	(0.324)	(0.533)			
Margin of victory of female candidate				0.047	0.709	3.161**
				(0.119)	(0.863)	(1.246)
N	18684	18684	15876	18684	18684	15876
Municipalities	1278	1278	1278	1278	1278	1278
Mean (SD)	8.54 (1.13)	19.31 (9.19)	43.40 (12.23)	8.54 (1.13)	19.31 (9.19)	43.40 (12.23)

Notes: This table reports results from OLS regressions. Models (1)-(3) relate dummies for close male winners and close and non-close female winners of mixed-gender races for the last seat to the (log) population size of a municipality, the number of council seats, and the number of child care spots per 1000 inhabitants. Close male winners are those male candidates for whom the victory margin is between -5%–0%, close female winners are those female candidates for whom the victory margin is between 0-5%, non-close female winners are those female candidates for whom the victory margin is higher than 5%. The baseline are non-close male winners (i.e. the coefficients for close male winners, and close and non-close female winners should be interpreted relative to non-close male winners). Models (4)-(6) relate the margin of victory of the female winner in a mixed-gender race to each of the three dependent variables. 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.26: COUNCILOR CHARACTERISTICS AND WINNERS' MARGIN OF VICTORY

	(1) CSU	(2) SPD	(3) Greens	(4) Higher degree	(5) Employed	(6) Self-employed	(7) Student	(8) Retired	(9) Age
Panel A: Close vs. non-close dummies									
Close male winner	0.150***	-0.019	-0.034***	-0.011	0.035*	-0.019	0.005	-0.021**	-3.240***
	(0.019)	(0.020)	(0.012)	(0.018)	(0.021)	(0.018)	(0.007)	(0.011)	(0.968)
Close female winner	0.148***	0.010	-0.038***	0.003	-0.007	-0.059***	0.010	-0.037***	-2.202**
	(0.019)	(0.019)	(0.013)	(0.018)	(0.023)	(0.015)	(0.008)	(0.009)	(0.984)
Non-close female winner	0.014	0.009	0.020	-0.020	0.009	-0.070***	-0.004	-0.034***	-0.213
	(0.016)	(0.019)	(0.014)	(0.018)	(0.021)	(0.014)	(0.006)	(0.010)	(0.899)
N	18684	18684	18684	18684	12562	12562	12562	12562	4982
Municipalities	1278	1278	1278	1278	897	897	897	897	347
Mean (SD)	0.22 (0.41)	0.22 (0.41)	0.08 (0.27)	0.18 (0.38)	0.83 (0.37)	0.08 (0.27)	0.02 (0.12)	0.03 (0.17)	48.97 (10.61)
Panel B: Margin of victory									
Margin of victory of female candidate	0.097***	0.064	-0.048	-0.070	-0.049	-0.146***	-0.002	-0.049**	-3.208
	(0.033)	(0.046)	(0.048)	(0.049)	(0.056)	(0.036)	(0.011)	(0.025)	(2.556)
N	18684	18684	18684	18684	12562	12562	12562	12562	4982
Municipalities	1278	1278	1278	1278	897	897	897	897	347
Mean (SD)	0.22 (0.41)	0.22 (0.41)	0.08 (0.27)	0.18 (0.38)	0.83 (0.37)	0.08 (0.27)	0.02 (0.12)	0.03 (0.17)	48.97 (10.61)

Notes: This table reports results from OLS regressions. Models (1)-(9) relate dummies for close male winners and close and non-close female winners of mixed-gender races for the last seat to whether a candidate belongs to the CSU (model 1), the SPD (model 2), the Greens (model 3), whether she has a university degree or higher (model 4), whehter she is employed (model 5), whether she is self-employed (model 6), whether she is a student (model 7), whether she is retired (model 8), and her age (model 9). Close male winners are those male candidates for whom the victory margin is between -5%–0%, close female winners are those female candidates for whom the victory margin is between 0-5%, non-close female winners are those female candidates for whom the victory margin is higher than 5%. The baseline are non-close male winners (i.e. the coefficients for close male winners, and close and non-close female winners should be interpreted relative to non-close male winners). Models (4)-(6) relate the margin of victory of the female winner in a mixed-gender race to each of the three dependent variables. 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.27: FUZZY RDD RESULTS: FEMALE COUNCILOR SHARE AND PUBLIC CHILD CARE PROVISION

	(1)	(2)	(3)	(4)	(5)
Share of women	0.058**	0.060**	0.036**	0.059**	0.066**
	(0.023)	(0.026)	(0.018)	(0.025)	(0.027)
Bandwidth type	CCT	CCT/2	2CCT	IK	CCT
Bandwidth size	0.09	0.05	0.18	0.06	0.13
Polynomial	Linear	Linear	Linear	Linear	Quadratic
N	9489	6956	12665	7649	11215
Municipalities	1092	927	1222	979	1175
Mean (SD)	0.90 (3.80)	0.91 (3.81)	0.91 (3.76)	0.90 (3.78)	0.90 (3.78)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the share of women in the council to the annual change of child care spots per 1000 inhabitants over the legislative term. We estimate a fuzzy-RDD model and instrument the share of women in the council with a dummy for whether the winner of a mixed-gender race for the last seat of a party was a women. We report results for various bandwidths: optimal CCT (Model 1, 5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.28: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, ONLY MUNICIPALITIES WITH DATA ON COUNCIL MINUTES

	(1)	(2)	(3)	(4)	(5)
Female victory	0.593	0.790	0.460	0.674	0.886
	(0.415)	(0.528)	(0.321)	(0.439)	(0.552)
Bandwidth type	CCT	CCT/2	2CCT	IK	CCT
Bandwidth size	0.12	0.06	0.24	0.10	0.13
Polynomial	Linear	Linear	Linear	Linear	Quadratic
N	1074	721	1417	987	1112
Municipalities	145	108	168	137	146
Mean (SD)	1.00 (3.86)	1.00 (3.63)	1.00 (3.81)	1.03 (3.75)	0.99 (3.80)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the annual change of child care spots per 1000 inhabitants over the legislative term. These results are a replication of the baseline results in Table 3 with a sample that only includes municipalities for which we have data on council minutes. We report results for various bandwidths: optimal CCT (Model 1, 5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.29: FEMALE VICTORIES IN MIXED-GENDER RACES AND MORE FREQUENTLY DISCUSSED TOPICS IN COUNCIL MEETINGS BESIDES CHILD CARE

	(1) Churches	(2) Utilities	(3) Road security	(4) Sewage disposal	(5) Street cleaning
Female victory	0.023**	0.039*	0.091***	0.085***	0.043***
	(0.010)	(0.022)	(0.033)	(0.028)	(0.016)
Bandwidth type	CCT	CCT	CCT	CCT	CCT
Bandwidth size	0.07	0.11	0.11	0.10	0.11
Polynomial	Linear	Linear	Linear	Linear	Linear
N	181	240	240	227	240
Municipalities	114	143	143	137	143
Mean (SD)	0.02 (0.05)	0.09 (0.12)	0.13 (0.15)	0.04 (0.09)	0.03 (0.07)

Notes: This table reports results from local linear regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to various topics that are discussed in council meetings, specifically: churches (Model 1), utilities (Model 2), road security (Model 3), sewage disposal (Model 4), street cleaning (Model 5). The results for the 47 other topics (apart from child care) were insignificant. We report results for the optimal CCT bandwidth. 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.30: MUNICIPALITY CHARACTERISTICS, COUNCIL MEETINGS SAMPLE VS. RDD SAMPLE

	Not in sample	In sample	Diff.	Std. Error	Obs.
Log(Population)	8.169	8.424	-0.255***	0.077	1287
Log(Population $<$ 14)	6.238	6.464	-0.226***	0.076	1287
Log(Population $>$ 65)	6.494	6.778	-0.285***	0.081	1287
Log(Population $>$14 & $<$ 65)	7.759	8.012	-0.253***	0.077	1287
Log(Revenues p.c.)	7.783	7.853	-0.070***	0.024	1287
Log(Transfers p.c.)	5.545	5.474	0.070	0.045	1287
Council size	16.689	18.334	-1.645***	0.532	1287
% Women	18.607	20.125	-1.518**	0.743	1287
% CSU	26.493	30.154	-3.661**	1.571	1287
% SPD	12.173	14.601	-2.428**	1.074	1287

Notes: This table compares the characteristics (averaged over 2002-2017) of the 176 municipalities that are included at least once in the sample used in the council meeting RD regressions and the other 1111 municipalities included in the full RD sample.

Table A.31: FEMALE VICTORIES IN MIXED-GENDER RACES AND PUBLIC CHILD CARE PROVISION, INTERACTION WITH SHARE OF WOMEN IN COUNCIL

	(1)	(2)	(3)	(4)	(5)
Female victory	0.655**	0.589	0.367	0.626*	0.752**
	(0.317)	(0.385)	(0.255)	(0.366)	(0.379)
Share of women	2.445**	1.893*	1.828**	2.142**	2.531**
	(0.994)	(1.029)	(0.855)	(1.026)	(1.092)
Female victory × Share of women	-1.693	-1.106	-0.808	-1.357	-1.878
	(1.456)	(1.723)	(1.189)	(1.640)	(1.708)
Bandwidth type	CCT	CCT/2	2CCT	IK	CCT
Bandwidth size	0.09	0.05	0.18	0.06	0.13
Polynomial	Linear	Linear	Linear	Linear	Quadratic
N	9489	6956	12665	7649	11215
Municipalities	1092	927	1222	979	1175
Mean (SD)	0.90 (3.80)	0.91 (3.81)	0.91 (3.76)	0.90 (3.78)	0.90 (3.78)

Notes: This table reports results from local linear (Model 1-4) and quadratic (Model 5) regressions that relate the gender of the winner of a mixed-gender race for the last seat that accrues to a party in open-list local council elections to the annual change of child care spots per 1000 inhabitants over the legislative term. In these specifications, we interact the female winner dummy with the share of women in the council. We report results for various bandwidths: optimal CCT (Model 1, 5), half of the optimal CCT (Model 2), twice the optimal CCT (Model 3), and optimal IK (Model 4). 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 are in parentheses. The unit of clustering is the municipality of the candidate.

Table A.32: MUNICIPALITY CHARACTERISTICS, FULL VS. RDD SAMPLE

	Not in sample	In sample	Diff.	Std. Error	Obs.
Log(Population)	7.721	8.204	-0.483***	0.055	1632
Log(Population $<$ 14)	5.869	6.324	-0.455***	0.054	1632
Log(Population $>$ 65)	5.985	6.497	-0.512***	0.058	1632
Log(Population $>$14 & $<$ 65)	7.311	7.792	-0.481***	0.055	1632
Log(Revenues p.c.)	7.691	7.693	-0.002	0.015	1632
Log(Transfers p.c.)	5.598	5.461	0.137***	0.032	1632
Council size	13.969	16.911	-2.942***	0.371	1632
% Women	15.652	18.675	-3.022***	0.548	1632
% CSU	22.278	27.647	-5.369***	1.208	1632
% SPD	7.680	12.865	-5.185***	0.779	1632

Notes: This table compares the characteristics (averaged over 2002-2017) of the 1,287 municipalities that are included at least once in the RDD sample (i. e. municipalities that had at least once a mixed-gender race for the last seat during the sample period) and the 345 municipalities for which we have candidate-level data but which had no mixed-gender race for the last seat and thus are not included in the RDD sample.