When populists deliver on their promises: the electoral effects of a large cash transfer program in Poland*

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Abstract

We estimate the effects of the introduction of a large cash transfer program on support for the ruling populist party in Poland. We exploit the variation at the municipal level in the annual cash transfer amount received per capita, and use a difference-in-differences research design to study the electoral effects of the transfer. Our results show that a cash transfer amount of $100 per capita translated into an increase in the vote share for the ruling party of nearly two percentage points. We also find that these effects were largely due to the recruitment of previously non-voting individuals. We conclude that without the transfer program, all else being equal, the populist party would not have remained in power.

Keywords: Elections, Voting Behavior, Populism, Unconditional Cash Transfer

JEL Codes: D72, H23, H53, I38, J18

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1 Introduction

From the US to Brazil, from Italy to Turkey, populist movements have enjoyed a number of surprising successes in recent years. While in some countries populists have lost power relatively quickly, in others they have held on to it for a long time – long enough to profoundly transform their political systems. Some of the most spectacular cases of populist backlash are in the post-communist countries of Eastern Europe. For many years, one such country, Poland, was seen as a textbook example of a country that underwent a successful transition from socialist authoritarianism to liberal democracy. This changed in 2015, when the right-wing populist Law and Justice party (Prawo i Sprawiedliwość, hereafter 'PiS') took power and, within its first two years in office, implemented reforms that severely limited the independence of the judiciary, politicized the governance of public companies and the media, and weakened checks on the executive. Why was PiS able to gain and retain such strong support despite massive street protests against violations of the rule of law and liberal democratic backsliding under its rule? The introduction of a large child benefit program is often mentioned as a factor in the populists' success, but whether it actually played a role has not previously been studied.

Do voters reward political parties for implementing social welfare programs? Are populist parties able to win elections and retain political power by promising and introducing generous cash transfers? In our paper, we seek to answer the question of how the introduction of cash transfers affects the electoral performance of the ruling party. We also analyze whether the promise of social transfers helps the opposition party win elections. To do so, we investigate the impact of the introduction of a large child benefit program in Poland on the electoral performance of PiS using a difference-in-differences research design.

The proposal for a large child benefit program was the flagship issue of PiS' successful campaign leading up to the parliamentary elections in October 2015. After the party achieved a surprising landslide victory, PiS quickly delivered on its promise, and parents began receiving monthly checks as early as April 2016. The child benefit program had two components: an unconditional monthly cash transfer of $125 for the second child and for each subsequent child under age 18 in a family, and a means-tested monthly transfer of $125 for the first child in

a family.[1] We exploit municipal-level variation in the intensity of treatment (the per capita child benefit amount) to study the effects of the cash transfer on changes in levels of support for PiS. Our main results show that a cash transfer amount of $100 per capita translated into an increase in the vote share for PiS of nearly two percentage points in the parliamentary elections of October 2019.

Figure 1 illustrates our empirical strategy. In the treatment period, we observe a strong positive correlation between the change in the support for PiS and the per capita cash transfer amount received (see Figure 1a). This relationship was not observed before the introduction of the child benefit (Figure 1b). In our paper, we show that these descriptive results hold even after controlling for a set of geographic, demographic, political, and economic variables, and for region fixed effects. We also find a significant positive impact on voter turnout. Hence, we conclude that the ruling party made gains largely because they won the votes of people who had not previously voted. We observe strong effects across all types of the elections, and show that electoral gains attributable to the child benefit were particularly large for the politicians who were responsible for introducing the child benefit program. These findings suggest that the effects were not driven solely by instrumentalist motives, but were, rather, attributable at least in part to the mechanism of voter reciprocity. We corroborate our main results with an analysis of individual survey data. Finally, we address challenges to identification by showing that our results cannot be explained by differences in deep-rooted social norms, political polarization, cultural change, pre-treatment trends in economic and demographic characteristics, other government policies, or the mobilization of childless voters.

This article is related to the previous literature that has investigated the impact of various government welfare and spending programs introduced by incumbent parties on the citizens' support for these parties. Most of this research has examined the impact of conditional cash transfers (CCT) on voting behaviour in middle- and low-income countries (e.g., Conover et al., 2020; De La O, 2013; Zucco Jr, 2013). A meta-analysis by Araújo (2021) using a sample of 10 experimental and quasi-experimental studies found a positive effect of CCTs on voter support for the incumbent parties. Other studies have shown that voters in rich countries re-

[1] In 2016, $125 was equivalent to 34% of monthly per capita disposable income in Poland.

ward government spending on a variety of programs, including spending on post-disaster relief (Bechtel and Hainmueller, 2011), trade-related job training, employment assistance (Margalit, 2011), tax-cuts (Healy, Persson, and Snowberg, 2017), stimulus transfers (Vannutelli, 2020), and means-tested welfare benefits (Kogan, 2021). On the other hand, some authors have reached the opposite conclusion about the effects of government spending on voting behavior, especially for developing countries. For instance, Blattman, Emeriau, and Fiala (2018) found that the introduction anti-poverty programs hurt the electoral outcomes of the ruling party in Uganda, while Zimmermann (2021) showed that prolonged exposure to an anti-poverty program in India reduced electoral support for the government.

Our paper contributes to the literature on the electoral impact of social transfers by providing causal evidence on the electoral effects of a large state-wide program in a developed country. Most existing studies on this topic have focused on developing countries, and their results have been based on small experiments. The child benefit amounts provided by the program introduced by PiS have been very generous, as the benefit payments for one child were equivalent to one-third of the per capita disposable income in Poland in 2016. The overall redistributive size of the program has also been large, costing about 1.2% of GDP. By comparison, the average budget of the CCTs in Latin America represents around 0.3-0.4% GDP (Paes-Sousa, Regalia, and Stampini, 2013). After the introduction of the child allowance program, Poland went from being a country where most families received no family cash benefits to being the developed country with the highest family benefit levels[2]. Such a rapid implementation of a bold policy change is very rare in developed countries, as in most cases, the introduction of such policies is preceded by consultations, impact studies, and small experiments. This was not the case in Poland. Finally, while the existing literature on this topic mostly analyzed the impact of conditional cash transfers, the Polish child benefit program was largely unconditional, and was therefore less closely linked to local economic circumstances.[3] Moreover, an innovative aspect of our study is that, in addition to investigating the impact of the cash transfer program on support for the ruling party, we show that its electoral effects were mainly due to new voters

[2]In 2019, Poland was the country with highest family benefits in relation to average wages among the OECD countries (see Figure D.9)

[3]Between 2016 and 2019 the benefit was means-tested for the first child in a family; while from 2019 onward, all children have been eligible. See the detailed description of the program design in Section 2 and Appendix D.

coming off the sidelines, and not due to shifts in the preferences of voters who had previously voted for other parties.

This paper also contributes to the literature on the recent rise of populism (Guriev and Papaioannou, 2021). Funke, Schularick, and Trebesch (2020) showed that the share of countries with a populist government increased from less than 10% at the turn of the 21st century to more than 25% in 2018.[4] There is relatively little research on the role of social transfers and redistribution in the increase in support for populists. Some studies have suggested that the implementation of redistributive policies can prevent the rise of political radicalism or reduce the populist vote (Albanese, Barone, and de Blasio, 2022; Caprettini, Casaburi, and Venturini, 2021). In the absence of redistributive policies, populist parties may fill in the void by introducing large cash transfer programs. Poland is a good setting to explore this issue. After the country's transition to a market economy, income inequality in Poland increased sharply, reaching the levels of high-inequality countries such as Germany and the UK (Bukowski and Novokmet, 2021). The increase in inequality was accompanied by declining levels of redistribution. These trends have been reversed to some extent by the populist government. We provide evidence that redistributive policies boosted the support for populists, allowing them to stay in power. We believe that our findings can be extended to other countries with low levels of redistribution and high levels of income inequality.

The remainder of the paper is organized as follows. Section 2 describes the design of the Family 500+ child benefit program and recent political developments in Poland. Section 3 describes the data. Section 4 lays out our empirical strategy. Section 5 presents the results. Section 6 concludes.

[4]PiS is classified as a populist party according to each major classification scheme of political parties – see, e.g., (Norris, 2020).

2 Institutional background

Recent political developments in Poland

Since 2005, following the collapse of a post-communist party that was racked by corruption scandals, Polish politics has been dominated by two right-wing parties: the socially conservative populist PiS (in power from 2005 to 2007 and since 2015) and the liberal Civic Platform (in power from 2007 to 2015).[5] Both parties have roots in the anti-communist Solidarity movement, but differ in their assessment of Poland's transition from communism to democracy. While the Civic Platform was enthusiastic about the economic transformation of the 1990s, PiS emphasized the social costs of the structural adjustments, and criticized the accumulation of privatized wealth by post-communist elites and foreign businesses. Between 2005 and 2007, PiS ruled in a coalition of nationalist and agrarian populist parties. But in 2007, PiS broke up the coalition, discredited the leaders of its partner parties, and persuaded some of their members to join PiS. Around the same time, it started promoting forms of nationalism and populism based on a vision of illiberal democracy that defends conservative family values against the influence of Western liberalism. While it started out as a party of mainly urban voters, by 2007, PiS had become a party of the rural and small-town electorate. Since 2007, the policy positions of PiS have remained stable (see Figure C.8).

Figure 2 shows the simplified timeline of events related to the introduction of the child benefit program in Poland. In early 2014, PiS, which was then Poland's largest opposition party, announced plans to introduce a monthly child allowance for the second and each subsequent child under the age of 18 in a family. The program was given the catchy name *Family 500+*, and became a major theme of the 2015 election campaigns, along with pension age reform and the refugee crisis. While the ruling liberal party argued that the program would be too expensive to implement, PiS attacked the government's *impossibilism*, and declared that *all you have to do is not steal*. In June 2015, a PiS candidate won the presidential election. Then, in a surprise outcome, PiS won a majority of seats in the parliamentary elections in October 2015. This was the first time in the history of modern Poland that a single party had

[5]See Haggard and Kaufman (2021) and Lindner et al. (2020) for an in-depth discussion of the recent evolution of Polish political and party systems.

won a majority of seats in parliament. The implementation of the child benefit program was a priority for the new government, and parents received their first checks as early as April 2016.

All households were entitled to a monthly cash transfer of approximately $125 (500 PLN) per child for their secondchild and for each subsequent child under age 18. In addition, the child benefit program had a means-tested component, whereby households with a per person monthly income below $205 were also entitled to receive a child benefit of the same amount for their first child under age 18.[6] The amount of the transfer per child was relatively large, as it was equal to 34% of the per capita disposable income in Poland. Local authorities (municipalities) received targeted grants directly from the central budget, and were responsible for distributing the child allowance. The design of the program underwent another change in July 2019, when it was extended to all children under the age of 18.

In the 2019 parliamentary election campaign, all parties pledged to maintain the child benefit program. Nevertheless, the ruling party claimed that if it lost power, the opposition parties would abolish the child allowance program, citing their declarations from the previous election campaign. In 2019, PiS again won a majority of seats in parliament; and in 2020, the PiS candidate in the presidential election was re-elected.

While the Polish democratic regime is semi-presidential, the president's constitutional powers are very limited. In practice, the Polish model of government is close to the German-style chancellor model and the British parliamentary-cabinet system. For this reason, in our baseline regressions, we investigate the impact of the child benefit on the changes in the vote shares the parties received in national elections for the (more powerful) lower chamber (the Sejm) of the Polish parliament. However, in the sensitivity analysis, we study the program's effects on the results of the presidential and European elections as well.

Both the parliamentary and European elections in Poland are based on a party-list proportional representation system with multi-seat constituencies. Political parties make ranked

[6] See Appendix D for a detailed description of the Family 500+ program.

lists of the candidates to be elected. Citizens vote by marking exactly one candidate from the party of their choice. Seats are allocated to each party in proportion to the number of votes it receives (using the D'Hondt method). The number of votes received by an individual candidate from the party list is then used to select future members of the parliament from a pool of seats allocated to that party. In the baseline analysis, we study the sum of votes for the candidates on the PiS list divided by the number of eligible voters. In a supplementary analysis, we also investigate the electoral performance of individual candidates.

Economic impact of the Family 500+ program

The introduction of the Family 500+ child benefit has substantially improved the financial situations of families with children in Poland. In 2016, the program reached 2.7 million families, and increased the total level of government cash support for families with children by as much as 140% (Myck and Trzciński, 2019). Absolute and relative child poverty have fallen in Poland between 2015 and 2019 from 9.0% to 4.5% and from 20.6% to 16.2%, respectively (Statistics Poland, 2020). The child benefit certainly contributed significantly to these reductions in child poverty (Brzeziński and Najsztub, 2017; Gromadzki, 2021). In the years immediately after its introduction, the child benefit program had some negative effects on maternal labor supply (Magda, Kiełczewska, and Brandt, 2020). While the fertility effects of the program have not been rigorously studied, there were no substantial changes in the birth rate after the introduction of the transfer.

3 Data

We combine municipality-level data from multiple sources (see a detailed description of all variables in Table A.1). The election results comes from the Electoral Commission which has published the results of all types of elections at the municipal level since 2005. Our treatment variable and most of control variables are calculated based on data from Statistics Poland. Additionally, we calculate geographic variables using GIS software. Finally, we use data on par-

ticipation in Catholic masses and communion from the Institute for Catholic Church Statistics.

The map in Figure 3 displays our treatment variable: i.e., the child benefit amounts received by Polish municipalities in 2016. The map shows clear spatial patterns in the distribution of the treatment variable. Thus, we account for spatial correlation by using Conley standard errors in robustness checks.

We complement our main analysis with a survey data analysis in which we look at the individual political choices of respondents. For this analysis, we use data collected by the Public Opinion Research Center (CBOS). Every month, the CBOS surveys a new sample of around 700-1,100 people, asking for their opinions on current political and social issues in Poland. Our outcome variables are based on the respondents' answers about how they voted in the last several elections. The parliamentary elections took place in October 2007, 2011, 2015, and 2019. We use data from the first three months following a given election: November 2007 - January 2008 (data on the 2007 parliamentary elections), January - March 2013 (data on the 2011 parliamentary elections), November 2015 - January 2016 (data on the 2015 parliamentary elections), and November 2019 - January 2020 (data on the 2019 parliamentary elections).[7]

4 Empirical strategy

Municipality-level analysis

We exploit municipal-level variation in the intensity of treatment to study the effects of cash transfers on the electoral performance of PiS. We construct a measure of treatment intensity at the municipality level, measured as the annual child benefit amount in US dollars in 2016 over the municipality population:

$$CT_{m,2016} = \frac{ChildBenefitAmount_{m,2016}}{Population_{m,2016}} \tag{1}$$

[7]Between November 2011 and December 2012, the surveys did not include information about the number of children in the household, which is necessary for the construction of the treatment variable. This is why we used the surveys from the beginning of 2013 to study the 2011 elections.

Next, we estimate the following difference-in-differences equation:

$$\Delta Y_{m,2011-2019} = \gamma + \beta CT_{m,2016} + X'_m\kappa + \epsilon_m \tag{2}$$

where $\Delta Y_{m,2011-2019}$ denotes the change in support for PiS (100 * votes for PiS divided by eligible voters), and X'_m is the set of controls measured in 2011. Our continuous treatment variable is measured in the year the child benefit program was introduced. The per capita child benefit after 2016 may be partially endogenous if households adjusted their fertility decisions based on the child benefit program. In 2016, the number of children in a family was still the result of fertility decisions made in the pre-treatment period[8]. Depending on the specification, we control for latitude, longitude, urbanization rate, log population density, femininity ratio, average age, share of 13-17-year-olds in the 2011 population, fraction of the population above retirement age, personal income tax revenue, unemployment rate, support for PiS in the 2011 elections, support for the EU in the 2003 accession referendum, support for populist parties in 2005, incidence of out-of-wedlock births, and electoral district fixed effects.

Additionally, we estimate the same equation for two alternative outcomes: $\Delta Y_{m,2011-2015}$ and $\Delta Y_{m,2007-2011}$. We use the first outcome to estimate the effects of the promise of a cash transfer as opposed to the effect of its introduction. The second outcome serves as a placebo to verify the parallel trends assumption. We begin our analysis in 2007 due to the shift in the PiS' political positions in the run-up to the elections in 2007. Nevertheless, we also show results that include the outcomes of the 2005 elections in the appendix. Our baseline outcome variable is the difference in the level of support for PiS between the 2011 and 2019 elections, and not between the 2015 and 2019 elections, because the 2015 election results may be endogenous to the promise of the introduction of the child benefit that was a flagship issue of PiS' electoral campaign. Nevertheless, we also show the results for the 2015-2019 election outcomes in the appendix.

[8]As the child benefit was introduced in April 2016, the first "child benefit" children would have been born in January 2017.

Challenges to identification

Several factors could violate the identifying assumptions of our difference-in-difference strategy. First, variation in the child benefit amounts received is largely driven by differences in the number of children in the municipality. High fertility may be correlated with conservative social norms, which may, in turn, have an impact on increases in the vote share for the conservative party. We conduct an event study analysis to show that treatment intensity does not explain changes in the support for PiS before the introduction of the child benefit. However, it is possible that for some conservative voters, simply declaring a conservative ideology was not enough. The introduction of the child benefit program may have made the conservative values of PiS more salient to these voters, and convinced them that PiS would defend traditional family values. We control for the share of 13-17-year-olds in the municipality's population in 2011 to address this issue. Although this variable measures people's preferences for having children, the parents of these children were not eligible to receive the child benefit because their children were already 18 years old in 2016. Thus, our identifying variation is not derived from municipality-specific deep-rooted fertility preferences, but from temporary fertility patterns. We also control for other proxies of social norms (incidence of out-of-wedlock births, support for the EU). In additional checks, we control for revealed measures of religiosity to isolate the influence of the Catholic church. Finally, we use a LASSO double-selection procedure (Belloni, Chernozhukov, and Hansen, 2014) with a large number of additional covariates to address the issue of the incorrect selection of control variables.

Second, the effects may be biased by political and ideological polarization. We control for the initial PiS vote shares to address the issue of political polarization, and we control for other proxies of social norms mentioned above to address the issue of cultural change. We also test whether changes in social norms affect our results by controlling for changes in the incidence of out-of-wedlock births and marriage rates between 2011 and 2014. One additional concern is that PiS may have altered its ideology in response to the ideological polarization of the society. However, there was no substantial change in the political positions of PiS during the study period (Figure C.8). Finally, we investigate heterogeneity in the effects depending on voters' support for the EU and initial support for PiS to address the issue of political and

ideological polarization.

Local economic conditions may also be correlated with our treatment variable. While the null pre-treatment effects are reassuring, we control for pre-treatment levels of personal income tax revenue and the unemployment rate to further address this issue. Pre-treatment levels do not capture pre-treatment trends in economic outcomes. Hence, we additionally present results controlling for changes in the economic and demographic variables between 2011 and 2014. We also explore the impact of the child benefit program on economic outcomes to test whether the demand shock to local markets can explain the results. Finally, a part of the variation in the treatment variable is due to the conditional child benefit for the first child. Thus, it is possible that our effects reflect changes in the voting preferences of low-income households, irrespective of the introduction of the child benefit program. We address this concern by controlling for a proxy for average income (personal income tax revenue), and by analyzing the effects of the 2019 expansion of the program (replacing the conditional child benefit with an unconditional transfer). The expansion of the child benefit program affected the eligibility of middle- and high-income families only, as low-income families were already receiving the conditional transfer. Therefore, the treatment variable in the analysis of the effects of the expansion is negatively correlated with the share of low-income families, and we should expect to observe a negative effect of the expansion if the effects were due to changes in the preferences of low-income families.

Our results could be biased if the government had provided other grants specifically to high-fertility municipalities. As we have access to complete information on municipal finances, we can analyze the impact of the child benefit program on increases in the investment grant amounts municipalities received from the government, as well as on increases in the financial support municipalities received from the government through European Union investment programs. Another potential issue is that municipalities could have changed their spending decisions in response to the child benefit program. On the one hand, the benefits the program provided may have crowded out the support for families provided by municipal authorities. On the other hand, the child benefit program might have made social assistance more popular, and thus lead to an increase in municipal spending on families, crowding out spending in

other areas. We test whether the child benefit program affected the allocation of municipal spending to rule out this potential channel. We also check whether the child benefit program affected access to kindergartens and nurseries.

Our difference-in-differences estimation relies on the assumption that there were no contemporary shocks that differentially affected municipalities with low vs. high treatment intensities. The PiS government introduced several other reforms that could confound our results. First, it lowered the retirement age, and distributed extra pension payments to the elderly starting in 2019. To address this issue, we control for the share of the population above retirement age. Since extra pensions were distributed in the form of lump-sum payments, the fraction of the population above retirement age should entirely capture the impact of extra transfers to the elderly. Second, the government reduced the independence of the courts, which led the European Commission to launch an infringement procedure against Poland. Unlike the pension reform, the government's judiciary reforms were rather unpopular, and sparked large protests. It is also not clear whether voters' views on the judiciary reforms were correlated with the child benefit intensity. Importantly, we control for voters' attitudes toward the EU, which may approximate their perceptions regarding the importance of an independent judiciary. Finally, the government introduced an education reform. As a result of this reform, the age at which school attendance is compulsory was raised from six to seven years, and lower secondary schools were gradually phased out, which reduced the period of compulsory education by one year. While this education reform affected only a small share of the child benefit recipients (parents of three birth cohorts), the reform would likely bias our results toward zero, as these institutional changes were associated with chaos and overcrowding in schools. To further address this concern, we also estimate the effects of the child benefit program on support for the Minister of Education in the 2019 European elections.

Finally, we consider potential violations of the Stable Unit Treatment Value Assumption (SUTVA). Positive estimates do not necessarily imply that the child benefit program affected the electoral preferences of the recipients. It is possible that childless individuals punished the government for redistributing income from them to families with children. In this case, the SUTVA assumption would be violated. We study the effects of the child benefit program on

voter turnout to mitigate this concern. If the observed effects were due to the mobilization of childless individuals, we should find a negative effect of benefit intensity on voter turnout; whereas a positive effect on turnout would be inconsistent with the childless mobilization hypothesis.

5 Results

Our results indicate that the introduction of the child benefit program had a significant positive impact on the changes in the vote share for the ruling party (see Table 1). We find that an annual transfer of $100 per capita increases the ruling party's vote share by 1.8 percentage points. Controlling for measures of social norms decreases the magnitude of the effect, but it remains statistically significant and economically large. The gains from the cash transfers in the average municipality are equal to a 2.7 pp. increase in the vote share for the ruling party: i.e., to 17% of the average increase in the vote share for the governing party. Our back-of-envelope calculations suggest that PiS would not have retained its majority in parliament after the 2019 elections without the introduction of the child benefit program (see Appendix E for detailed calculations).

Figure 4 suggests that the parallel trends assumption is satisfied, as the child benefit payments received in 2016 do not help explain the changes in the vote shares for PiS before 2015. The effects of the promise of child benefit payments in the electoral campaign before the 2015 elections are very small and statistically insignificant. Thus, voters rewarded PiS for introducing the cash transfers only after they were paid, and not in advance.

We find no significant variation of the size of the effect depending on the level of the initial support for PiS (Figure C.2) or for European Union membership (Figure C.3). We observe strong variation depending on the municipality size, with small rural municipalities responding much more strongly than large towns (Figure C.4). Similarly, we find that the effects are particularly large in municipalities with less-educated populations (Figure C.5). Finally, we observe that the effects are strongest in low-income municipalities, and are statistically insignificant in the richest municipalities (Figure B.5). This may reflect the variation in the

impact of the child benefit payments on the financial situations of families, which would have been larger for low-income families than for high-income families.

We also analyze the impact of the 2019 expansion of the child benefit program. Starting in July 2019, the eligibility for the transfer for the first child was no longer restricted to low-income families, as the program was made fully universal. We study the effect of the child benefit expansion by analyzing the difference in the support for PiS between the 2019 European Parliament elections held just before the reform (May 2019), and support for PiS in the parliamentary elections held in October 2019. Our treatment variable measures the 2018-2019 increase in the per capita child benefit amount received. While we find some positive effects of the expansion, they are smaller than the effects of the 2016 introduction of the child benefit (Table B.5). There are two potential explanations for this result. First, only middle- and high-income families who were not previously eligible for the conditional transfer benefited from the expansion. For these families, the effects should have been smaller due to the smaller relative impact of the child benefit on their financial well-being. Second, as plans to expand the child benefit program were announced before the mid-term elections, the outcomes of those elections may have already been affected by the program expansion. This is, however, rather unlikely, as we did not observe a similar effect in the 2015 election.

Voter turnout

We investigate the impact of the child benefit program on voter turnout to test whether the electoral gains of PiS were due to the party attracting the voters of other parties, or to new voters coming off the sidelines. We see a significant positive effect of the child benefit program on election turnout (see Table 2). These results show that the ruling party's electoral gains attributable to the introduction of the child benefit program were based largely on the recruitment of previously non-voting individuals, and only partly on the recruitment of individuals who had previously voted for other parties. Indeed, we find only very small negative effects of the program on the support for other parties (see Table B.11). The positive effects on turnout rule out the hypothesis of the mobilization of childless voters. If that had

occurred, we would have observed a negative relationship between child benefit intensity and voter turnout. There is, however, one remaining potential violation of SUTVA that we cannot rule out completely. It is possible that the child benefit program discouraged childless citizens from participating in elections, and this assumption would be consistent with the voter turnout levels. Nevertheless, it seems rather unlikely that the discouragement of childless voters drives our results, since we observe a substantial increase in voter turnout after the introduction of the transfers.

Mechanisms

Theoretical studies have suggested two possible channels through which cash transfers affect the support for incumbent parties. First, voters may vote for the ruling party because they are interested in continuing the cash transfer programs. Second, recipients of the transfers may vote for the ruling party in order to reward the party for providing the transfers. Additional evidence shows that the introduction of the child benefit program had very similar effects on the support for PiS in the European Parliament elections (Figure C.1). This suggests that instrumental clientelism cannot fully explain our results, as the European Parliament has no impact on the design of welfare programs in EU member states[9]. Thus, it seems that the mechanism of voters' reciprocity at least partly explains the estimated results; i.e., that the implementation of the cash transfer program led to a deeper feeling of identification with the ruling party among the transfer recipients.

To further investigate the mechanisms behind the estimated effects, we study the impact of the child benefit program on the electoral performance in the 2019 European elections of the two major politicians responsible for the implementation of the program: former Prime Minister Beata Szydło and former Minister of Family, Labor, and Social Policy Elżbieta Rafalska. These two politicians were the ruling party's candidates in the 2019 European Parliament elections (more on the duo's role in implementing and promoting the program in Appendix D). The candidates ran in different electoral districts and had different positions on the ruling party's lists. Our empirical strategy analyzes their electoral performance in comparison

[9]The consistently much lower turnout in the European Parliament elections shows that voters seem to be aware of very limited power of the European Parliament.

with that of other PiS candidates. According to the instrumental clientelism mechanism, the electoral gains from the program should be distributed evenly among the candidates of the ruling party, regardless of their role in its implementation. This is especially likely to be the case in European elections, as whether the candidates in these elections signal support for the program should not matter, given that the European Parliament members have no impact on the program's design. By contrast, the voter reciprocity mechanism predicts that the politicians responsible for the implementation of the program should benefit from it more than other candidates of the ruling party in all types of elections.

We estimate the following equation to study the impact of the introduction of the child benefit program on the support for the former prime minister:

$$\Delta Y^{PiS,1}_{m,2009-2019} - \Delta Y^{PiS,other}_{m,2009-2019} = \gamma + \beta CT_{m,2016} + \theta CT_{m,2016} \times d^{10}_m + X'_m\kappa + \eta_m + \epsilon_m \tag{3}$$

The outcome variable is the difference in differences in support for candidates running from the first and remaining positions on the PiS lists in the 2009-2019 European Parliament elections. It measures how the support for the leading candidates of the ruling party changed in relation to the support for the candidates in lower positions on the list. Since the former prime minister ran in the 10th electoral district, the coefficient θ identifies the effect of the introduction of the child benefit program on her electoral support. Our results are not affected by the regional variation in the impact of the child benefit program on the support for the ruling party because we analyze the support for PiS candidates only. The effects of the transfer may vary depending on the candidate's position on the party list (e.g., if the additional voters predominantly vote for the top candidate), and this is captured by the β coefficient. Finally, we control for electoral district fixed effects, η_m, to account for district-specific changes in the distribution of votes on the ruling party's list (e.g., the party placed a more popular candidate as the top candidate in a given district in 2019 than in 2009). We identify the impact of the child benefit program on the support for the former minister of family in a similar way (in this case, our outcome variable measures the difference in differences in support for candidates running from the third and remaining positions on the PiS lists in the 2009-2019 European

Parliament elections).

We find that the additional votes for the ruling party due to the introduction of the child benefit were not evenly distributed, with the former Prime Minister and the former Minister of Family receiving a large additional premium (Table 3). This is further evidence in favor of the voter reciprocity mechanism. As we discussed above, clientelist motives should not matter in European elections, and instrumental voters should be indifferent about particular candidates as long as they are from the ruling party. We conducted additional placebo tests to show that the effects are not observed for the ministers of ministries unrelated to family policy (Table B.21), and are not specific to the municipalities in the districts where the two politicians ran (Table B.22).

Alternative explanations

We address empirically the challenges to identification mentioned above. First, we show that the results remain unchanged when we additionally control for measures of religiosity (Table B.6)[10]. The results are also robust to the LASSO double-selection procedure (Belloni, Chernozhukov, and Hansen, 2014) with a large number of additional covariates (Table B.7). Thus, it seems that the effects we observe are not affected by differences in pre-treatment social norms. The lack of variation based on proxies for social norms and political preferences shows that our results are not driven by ideological or cultural polarization (see Figures C.2-C.3). Our finding that the size of the effect does not depend on support for the EU and initial support for PiS suggests that the effects of the child benefit program are strong even in municipalities that are unlikely to support the judiciary reforms of the PiS government. In addition, there is no evidence of a differential evolution of social norms in municipalities with low vs. high treatment intensity during the treatment period (see Panel A of Figure 5).

We control for pre-treatment trends in economic and demographic outcomes, and the effects remain statistically significant (Table B.18). The demand shock associated with the introduc-

[10]We do not control for religiosity in the baseline version because data are missing for some small municipalities (mostly municipalities without a Catholic parish).

tion of the child benefit program had no impact on municipal-level variation in unemployment rates and firm profits (Panel B of Figure 5). This is not surprising because we control for electoral district fixed effects. If anything, the demand shock likely affected whole local markets, and not differences in economic outcomes within small regions.

We find no evidence that would suggest that the government provided other grants specifically to high-fertility municipalities. We also find no significant relationship between the child benefit intensity and municipal revenues from government investment grants, EU funds, or government contributions to EU-funded projects (Panel C of Figure 5). Moreover, we observe no effects on access to kindergartens and nurseries following the introduction of the program (Panel D of Figure 5). Finally, we find no evidence that municipalities changed their spending on other areas in response to the child benefit program (Figure B.6).

Robustness

Our results are robust to the various robustness checks shown in the appendix. The regressions using municipality population weights yield similar results (Table B.13). The results remain unchanged when alternative outcome variable definitions (share of valid votes, see Table B.12) or alternative treatment measures are applied (Tables B.14-B.16). The leads and lags of the effects obtained from a panel fixed effect estimator are virtually the same as our baseline estimates (Figure B.1). We use dummy treatment variables to apply a doubly robust difference-in-differences estimator by Sant'Anna and Zhao (2020), and the results remain significant (Table B.17). The results also remain significant when alternative standard errors (Table B.19) and alternative choices of region fixed effects are used (Table B.20). Randomization inference confirms the p-value of the main effect (Figure B.2). We compute the Approximate Maximum Influence Perturbation following Broderick, Giordano, and Meager (2021), and show that our results are also robust to the removal of a small fraction of the sample. Finally, the parallel trends also hold when the 2005 election is included (Figure B.4).

Survey data evidence

We supplement our study with the analysis of individual-level survey data. Although stated preferences can differ from their revealed preferences (exit polls consistently underestimated the support for PiS), survey data allow us to overcome the issue of ecological fallacy, and to provide more insights into the mechanisms of the effects of the child benefit program. We construct two treatment variables. First, we impute the annual unconditional child benefit amount received by the family of a respondent after the introduction of the program to compare the estimates from the municipal-level data with those obtained using survey data. Since the unconditional child benefit was paid for the second and each subsequent child under age 18 in the family, the imputed annual child benefit amount equals zero for families with no children and families with one child, \$1,500 for families with two children, \$3,000 for families with three children, etc.[11] Our second treatment variable is a dummy variable that equals zero for families with a zero imputed child benefit amount, and one for families with a non-zero imputed child benefit amount (families with two or more children).

We estimate the following difference-in-differences equation:

$$y_{it} = \gamma + \beta_1 CT_i \cdot Post_t + \beta_2 CT_i + \beta_3 Post_t + X'_{it}\kappa + \lambda_t + \epsilon_{it}, \tag{4}$$

where y_{it} is an outcome variable (Voted for PiS or Turnout) for respondent i in election year t, CT_i is our treatment variable (continuous imputed child benefit amount or a binary treatment group variable), $Post_t$ takes the value of zero for the 2007 and 2011 elections and the value of one for the 2019 elections, and X_{it} is a set of individual characteristics (gender, age, urban/rural area). We also control for election year fixed effects, λ_t. Coefficient β_1 measures the impact of the child benefit program on a given outcome. We restrict our sample to respondents aged 25-49 so that the treatment and control group are similar in terms of age distribution.

The survey data estimates confirm the results from the municipality-level analysis (Table 4). The effect of the transfer on voting for PiS is sizeable and statistically significant for both

[11] Since we have no reliable data on household income, we cannot impute the conditional cash benefit amount for the first child. See Table F.1 for the details of the construction of the child benefit amount variable.

treatment variables: an annual transfer of $100 increases the probability of voting for PiS by 0.8 percentage points, and the support for PiS among treated families increases by almost nine percentage points compared to that of the control group. In addition, we find that the child benefit amount had a positive impact on turnout in the parliamentary elections (Table 5). Although statistically significant, the point estimates of the effects of the child benefit amount on the support for PiS and turnout are smaller than in the municipal-level analysis. This may be caused by misreporting of voting preferences in the survey, spillovers of the effects to other family members or imprecise imputation of the amount of child benefit received.

We find that differences in the support for PiS and turnout were constant in the pre-treatment period, which suggests that the parallel trends assumption is satisfied (Figures F.1-F.2). This can be also seen in the event study graphs (Figures F.3-F.6). Although families with one child were not eligible for the unconditional transfer, they could receive a means-tested transfer for the first child. We show that including one-child households in the treatment group or excluding them from the sample does not affect our results (Tables F.3-F.4).

6 Conclusions

The rise of illiberal populism in Poland since 2015 has been a surprising development that remains largely unexplained. In this paper, we showed that the populist party PiS was able to maintain political power in Poland through the implementation of a large child benefit program. We exploited the variation in the per capita cash transfer amounts received at the municipal level using a difference-in-differences research design, and found that PiS achieved sizable gains in the 2019 parliamentary elections. Cash transfer of $100 per capita translated into an increase in the vote share for PiS of nearly two percentage points. We thus conclude that without these transfers, the ruling party would not have been able to retain its parliamentary majority after 2019.

Our findings indicate that the effects of the cash transfers operated mainly through increases in families' incomes, and were especially strong in smaller and poorer municipalities. The additional votes for the ruling party came mostly from new voters coming off the sidelines, and

to much smaller extent from voters who had previously voted for other parties. Our results suggest that the effects of the program were not entirely driven by clientelist motives, but were associated with a deeper sense of identification with the ruling party. Specifically, we found that the effects were virtually the same for all types of elections, and were particularly strong as measured by the support for the politicians responsible for the implementation of the program. We ruled out other mechanisms through which the program might have affected electoral outcomes, such as better local labor market conditions, changing social norms, or the provision of public goods. The main findings were shown to be robust to a number of sensitivity checks.

The paper's results are in line with the previous literature that reported positive electoral outcomes for parties that have implemented social transfer programs. While most of this literature focused on conditional transfers in developing or middle-income countries, our findings confirm that cash transfers can generate increased support for the government of a high-income country as well. We have no reason to believe that these effects are limited to populist parties. Indeed, recent studies have shown that mainstream parties have benefited from implementing redistributive policies in the past (Acemoglu et al., 2021; Caprettini, Casaburi, and Venturini, 2021). Nevertheless, in the context of Poland, we have shown that the introduction of a generous cash transfer program allowed the populist government to stay in power, and to further dismantle the independence of the courts, the freedom of the media, and minority rights.

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Figures

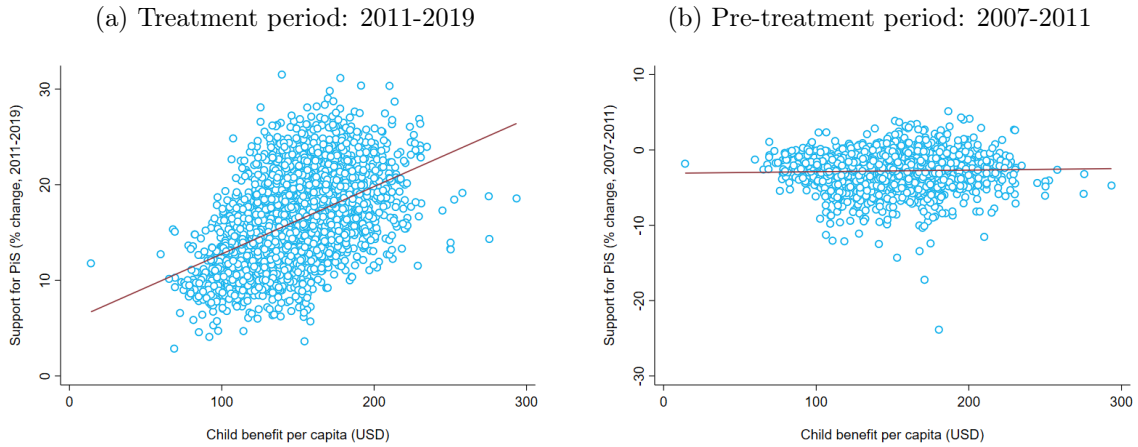

Figure 1: Child benefit and changes in the vote share for PiS

Notes: Figure presents the relationship between the per capita child benefit and the changes in the support for PiS (between 2011 and 2019 in Figure 1a and between 2007 and 2011 in Figure 1b) at the municipality-level. The per capita child benefit is the total amount of child benefit received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of registered voters.

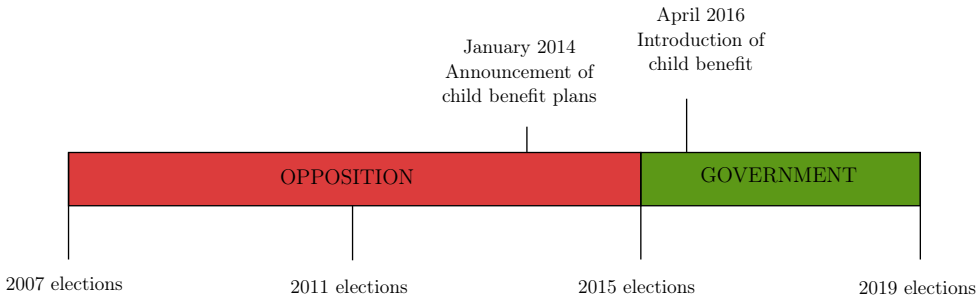

Figure 2: Introduction of child benefit: timeline

Notes: Figure presents a timeline of events related to the introduction of the child benefit program in Poland. The red bar denotes the period in which PiS was in the opposition, and the green bar denotes the period in which PiS was in the government.

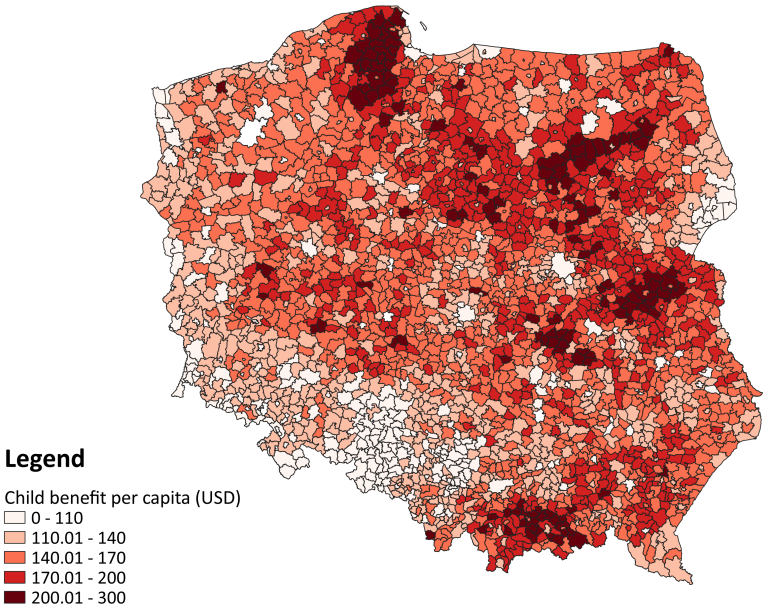

Figure 3: Child benefit per capita (USD)

Notes: Map displays the amount of child benefit per capita received in 2016 at the municipality level.

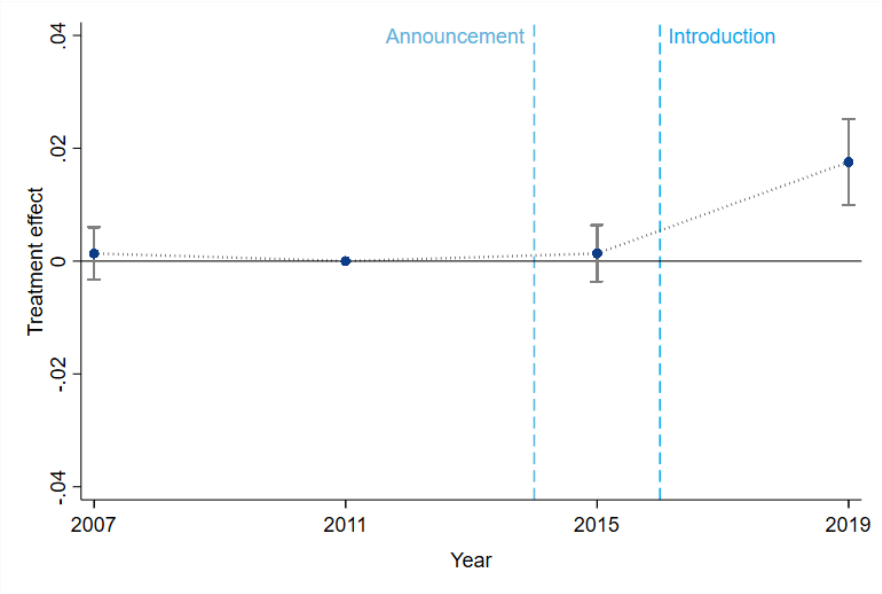

Figure 4: Leads and lags of the treatment effect

Notes: Figure shows the event-study coefficients from three regressions of the change in the vote shares between elections in year t (shown on the horizontal axis) and the 2011 parliamentary elections on the per capita child benefit. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). 95% confidence intervals are constructed based on standard errors clustered at the municipality level.

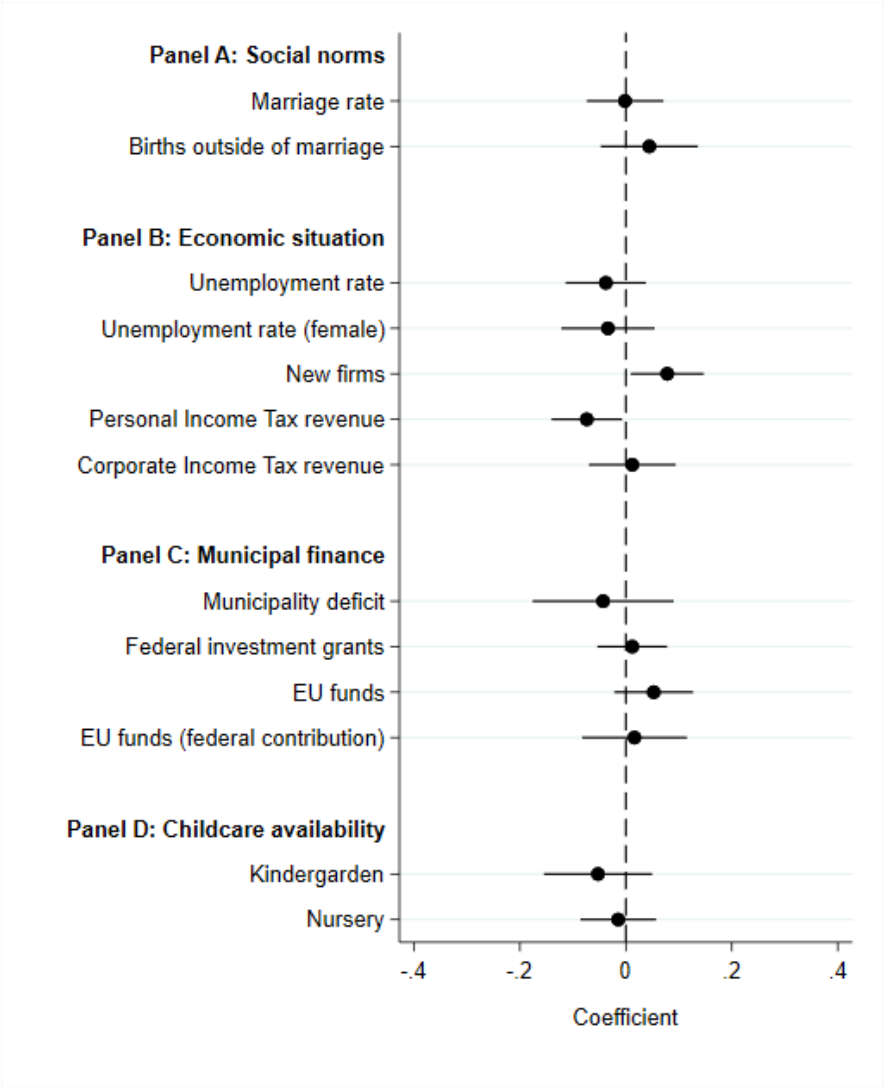

Figure 5: Alternative mechanisms

Notes: Figure shows the treatment effects for alternative outcome variables (2011-2019 differences). Figure shows the point estimates of the treatment effects and 95% confidence intervals. For ease of interpretation, outcome variables were standardized to a zero mean and a standard deviation of one. We control for the 2011 values of outcome variables and baseline control variables. In each regression, we control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). Standard errors are clustered at the municipality level.

Tables

Table 1: Main results: child benefit and the support for PiS

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.070***	0.035***	0.029***	0.024***	0.018***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.23	0.63	0.65	0.66	0.72
Mean of outcome	16.24	16.24	16.24	16.24	16.24
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level (2011-2019). The per capita child benefit is the total amount of child benefit received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include PiS' vote share in 2011, the vote shares for the right-wing populist parties in 2005, the "yes" vote shares in the 2003 EU membership referendum, and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate, and log tax revenue from personal income tax per capita. All control variables are measured in 2011 unless otherwise specified. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table 2: Child benefit and voter turnout

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.024***	0.023***	0.016***	0.021***	0.014***
	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.14	0.39	0.44	0.47	0.57
Mean of outcome	15.62	15.62	15.62	15.62	15.62
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the turnout in parliamentary elections at the municipal level (2011-2019). The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table 3: Child benefit and support for the Prime Minister and Minister of Family

	(1)	(2)	(3)	(4)
	1st position	1st position	3rd position	3rd position
Child benefit p.c.	-0.000	-0.006	-0.023*	-0.026*
	(0.019)	(0.021)	(0.013)	(0.013)
Prime Minister		0.051***		
× Child benefit p.c.		(0.015)		
Minister of Family				0.032***
× Child benefit p.c.				(0.008)
Political controls	yes	yes	yes	yes
Geographic controls	yes	yes	yes	yes
Demographic controls	yes	yes	yes	yes
Economic controls	yes	yes	yes	yes
Electoral district FE	yes	yes	yes	yes
Adj. R-Squared	0.38	0.39	0.59	0.60
Observations	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the support for the Prime Minister and Minister of Family. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Columns 1 and 2 show the effects of the child benefit on the difference in 2009-2019 differences in the support for candidates running in the first position and the remaining positions on the lists of PiS in the elections to the European Parliament. Prime Minister × Child benefit p.c. denotes the interaction of the child benefit variable with the 10th electoral district dummy (in which the Prime Minister was running). Columns 3 and 4 show the effects of the child benefit on the difference in 2009-2019 differences in the support for candidates running in the third position and the remaining positions on the lists of PiS. Minister of Family × Child benefit p.c. denotes the interaction of the child benefit variable with the 13th electoral district dummy (in which the Minister of Family was running). Vote shares are calculated as percentages of eligible voters. All control variables are measured in 2009 unless otherwise specified. Standard errors are clustered at the level of the electoral districts (the districts in the European elections).
* p<.10; ** p<.05; *** p<.01

Table 4: Child benefit and support for PiS, survey data

	(1) Vote for PiS	(2) Vote for PiS	(3) Vote for PiS	(4) Vote for PiS
Post-treatment	0.008***	0.008***		
period × Child benefit amount	(0.002)	(0.002)		
Post-treatment			0.084**	0.086**
period × Treatment group			(0.036)	(0.036)
Ind. characteristics	no	yes	no	yes
Election year FE	no	yes	no	yes
Region FE	no	yes	no	yes
Adj. R-Squared	0.04	0.06	0.03	0.06
N	3240	3240	3240	3240

Notes: Table presents difference-in-differences estimation of the effect of the child benefit on voting for PiS. The child benefit amount is imputed based on the number of household members under the age of 18. The binary treatment group variable equals one for households with a non-zero imputed child benefit (households with at least two members under the age of 18), and equals zero for households not eligible for the unconditional cash transfer. The pre-treatment period includes the 2007 and 2011 parliamentary elections. The post-treatment period includes the 2019 parliamentary elections. The sample is restricted to respondents aged 25-49. Individual characteristics variables include gender, age and urban/rural area. The sources and description of the variables can be found in Table F.1 and their descriptive statistics can be found in Table F.2.
* p<.10; ** p<.05; *** p<.01

Table 5: Child benefit and turnout, survey data

	(1) Turnout	(2) Turnout	(3) Turnout	(4) Turnout
Post-treatment	0.005**	0.005**		
period × Child benefit amount	(0.002)	(0.002)		
Post-treatment			0.056	0.045
period × Treatment group			(0.037)	(0.037)
Ind. characteristics	no	yes	no	yes
Election year FE	no	yes	no	yes
Region FE	no	yes	no	yes
Adj. R-Squared	0.01	0.04	0.01	0.04
N	3240	3240	3240	3240

Notes: Table presents difference-in-differences estimation of the effect of child benefit on the probability of voting in parliamentary elections. Child benefit amount is imputed based on the number of household members under the age of 18. The binary treatment group variable equals one for households with a non-zero imputed child benefit (households with at least two members under the age of 18), and equals zero for households not eligible for the unconditional cash transfer. The pre-treatment period includes the 2007 and 2011 parliamentary elections. The post-treatment period includes the 2019 parliamentary elections. The sample is restricted to respondents aged 25-49. Individual characteristics variables include gender, age and urban/rural area. The sources and description of the variables can be found in Table F.1 and their descriptive statistics can be found in Table F.2.
* p<.10; ** p<.05; *** p<.01

Appendix A Sources and descriptive statistics

Table A.1: Variable descriptions (i.)

Variable	Description	Source
Treatment Variables		
Child benefit p.c.	the 2015-2016 difference in the amount of earmarked subsidies received from the central government divided by population in 2016	Statistics Poland
Dependent Variables		
Support for PiS	the number of votes for PiS in parliamentary elections divided by the number of eligible voters (multiplied by 100)	National Electoral Commission (2005, 2007, 2011, 2015, 2019)
$\Delta Y_{m,2011-2019}$	the difference between the support for PiS in 2011 and 2019 parliamentary elections	National Electoral Commission
Turnout	the number of valid votes divided by the number of eligible voters (multiplied by 100)	National Electoral Commission (2005, 2007, 2011, 2015, 2019)
Support for PiS (presidential elections)	the number of votes for the PiS official candidate in the presidential elections divided by the number of eligible voters (multiplied by 100). Jarosław Kaczyński was the candidate of PiS in the 2010 presidential elections. Andrzej Duda was the candidate of PiS in the 2015 and 2020 presidential elections.	National Electoral Commission (2010, 2015, 2020)

Notes: Description of variables used in the analysis.

Table A.2: Variable descriptions (ii.)

Variable	Description	Source
Control variables		
Populist vote share (2005)	the number of votes for populist parties (Samoobrona and LPR) in the 2005 parliamentary elections divided by the number of eligible voters (multiplied by 100)	National Electoral Commission
Support for the EU accession (2003)	the number of 'yes' votes in the 2003 Polish European Union membership referendum divided by the number of eligible voters (multiplied by 100)	National Electoral Commission
incidence of out-of-wedlock births	the number of births outside marriage divided by the number of all births	Statistics Poland
Secondary education (2002)	the number of individuals with at least secondary education divided by the municipality's population	Statistics Poland (2002 census)
Log population density	log of population per square kilometre	Statistics Poland
Femininity ratio	the number of females divided by the municipality's population	Statistics Poland
Average age	average age in municipality	Statistics Poland
Population aged 13-17	population aged 13-17 divided by the municipality's population	Statistics Poland
Population above retirement age	population aged 65 or more divided by the municipality's population	Statistics Poland
Urbanization	fraction of the population that lives in urban area	Statistics Poland
Longitude	longitude of municipality centroid	own calculations using Geopandas and shapefiles from `https://gis-support.pl/`
Latitude	latitude of municipality centroid	own calculations using Geopandas and shapefiles from `https://gis-support.pl/`
distance to the provincial capital	distance to the nearest province (województwo) capital in kilometers	own calculations using Geopandas and shapefiles from `https://gis-support.pl/`
Distance to Warsaw	distance to Warsaw (Poland's capital city) in kilometers	own calculations using Geopandas and shapefiles from `https://gis-support.pl/`
Log PIT revenue p.c	log of personal income tax revenue divided by the municipality's population	Statistics Poland
Unemployment rate	registered unemployment rate	Statistics Poland
Catholic Mass participation (2008)	the number of participants of Sunday mass in parishes located in a municipality (12 October 2008) divided by the municipality's population	Institute for Catholic Church Statistics (ISKK)
Catholic Communion reception (2008)	the number of individuals who received Communion during a Sunday mass in parishes located in a municipality (12 October 2008) divided by the municipality's population	Institute for Catholic Church Statistics (ISKK)
Catholic groups membership (2008)	the number of Catholic groups members (altar servers, rosary groups, choirs, etc.) divided by the municipality's population	Institute for Catholic Church Statistics (ISKK)

Notes: Description of variables used in the analysis.

Table A.3: Descriptive statstics

	Obs.	**Mean**	**Std. Dev.**	**Min.**	**Max.**
$\Delta Y\_m, 2011-2019$	2473	16.24	4.62	2.86	31.51
Child benefit p.c.	2473	149.36	31.40	14.08	293.50
Populist vote share (2005)	2473	10.08	4.35	1.58	46.58
Support for the EU accession (2003)	2473	35.89	10.42	8.70	65.95
PiS vote share (2011)	2473	13.38	5.92	1.48	44.27
Incident of out-of-wedlock births	2473	0.20	0.12	0.00	0.64
Secondary education (2002)	2473	0.42	0.10	0.17	0.83
Log population density	2473	4.29	1.19	1.46	8.31
Femininity ratio	2473	0.50	0.01	0.47	0.55
Average age	2473	38.53	1.98	32.36	52.41
Population aged 12-17	2473	0.06	0.01	0.04	0.09
Population above retirement age	2473	0.19	0.03	0.10	0.47
Urbanization rate	2473	0.24	0.36	0.00	1.00
Longitude	2473	19.55	2.33	14.22	24.01
Lattitude	2473	51.80	1.36	49.15	54.81
Distance to provincial capital	2473	54.54	25.11	0.00	145.32
Distance to Warsaw	2473	225.98	100.36	0.00	485.51
Log PIT revenue p.c.	2473	5.75	0.50	4.46	7.84
Unemployment rate	2473	0.37	0.16	0.01	0.82
Catholic Mass participation (2008)	2424	0.29	0.13	0.02	1.06
Catholic Communion reception (2008)	2424	0.11	0.05	0.01	0.42
Catholic groups membership (2008)	2419	0.08	0.06	0.00	0.54

Notes: This table presents the following statistics for each variable: Number of Observations, Average Value, Standard Deviation, Maximum and Minimum Value. All variables are measured in 2011 unless specified otherwise. The sources and description of the variables can be found in Tables A.1 and A.2.

Appendix B Additional results

Table B.1: Effects of the announcement of child benefit plans: (2011-2015)

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.021***	0.012***	0.003	0.004	0.001
	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.08	0.37	0.38	0.39	0.47
Mean of outcome	5.41	5.41	5.41	5.41	5.41
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level (between the 2011 and 2015 parliamentary elections). The introduction of the child benefit program was the key element of the electoral campaign of PiS in the 2015 parliamentary elections. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2011 unless otherwise specified. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.2: Pre-treatment: (2007-2011)

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.002	0.006***	0.004*	0.004*	0.001
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.00	0.29	0.32	0.32	0.44
Mean of outcome	-2.79	-2.79	-2.79	-2.79	-2.79
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level (between the 2007 and 2011 parliamentary elections). The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2007 unless specified differently. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.3: Pre-treatment: (2005-2011)

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.065***	0.013***	0.006*	0.007*	0.003
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.19	0.63	0.66	0.66	0.72
Mean of outcome	5.42	5.42	5.42	5.42	5.42
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level (between the 2005 and 2011 parliamentary elections). The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2005 unless specified differently. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.4: Post-treatment: (2015-2019)

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.049***	0.024***	0.021***	0.016***	0.014***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.21	0.59	0.63	0.64	0.71
Mean of outcome	10.83	10.83	10.83	10.83	10.83
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level (between the 2015 and 2019 parliamentary elections). The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2005 unless specified differently. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.5: Effects of the 2019 expansion of the child benefit program

	(1)	(2)	(3)	(4)	(5)
Child benefit	-0.003	0.005*	0.008**	0.008**	0.006
expansion	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)
Initial child benefit	yes	yes	yes	yes	yes
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.20	0.46	0.47	0.47	0.57
Mean of outcome	6.99	6.99	6.99	6.99	6.99
Mean of child benefit p.c.	44.83	44.83	44.83	44.83	44.83
Observations	2471	2471	2471	2471	2471

Notes: Table shows the effects of the 2019 child benefit expansion on the changes in the vote share for PiS at the municipal level between the elections to the European Parliament (May 2019) and the parliamentary elections (October 2019). The expansion of the child benefit program (replacing the means-tested transfer for the first child with an unconditional transfer) took place in July 2019. The child benefit expansion variable is calculated as the 2018-2019 difference in the amount of the per capita child benefit received. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2011 unless otherwise specified. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.6: Additional controls: strength of the Catholic church

	(1)	(2)	(3)	(4)
Child benefit p.c.	0.018***	0.018***	0.017***	0.017***
	(0.004)	(0.004)	(0.004)	(0.004)
Political controls	yes	yes	yes	yes
Geographic controls	yes	yes	yes	yes
Demographic controls	yes	yes	yes	yes
Economic controls	yes	yes	yes	yes
Electoral district FE	yes	yes	yes	yes
Catholic Mass participation	no	yes	yes	yes
Catholic Communion reception	no	no	yes	yes
Catholic groups membership	no	no	no	yes
Adj. R-Squared	0.73	0.73	0.73	0.73
Mean of outcome	16.23	16.23	16.23	16.23
Mean of child benefit p.c.	149.24	149.24	149.24	149.24
Observations	2419	2419	2419	2419

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS in the parliamentary elections (2011-2019) at the municipality-level. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. In all columns, we control for a baseline set of demographic, economic, and social norms variables. In Column 4, we additionally control for the fraction of the population participating in Catholic mass. In Column 5, we add the fraction of the population receiving Catholic communion to the set of the control variables. In Column 6, we add the fraction of the population belonging to Catholic groups (prayer groups, church choirs, altar servers) to the set of the control variables. All variables measuring the strength of the Roman Catholic church were collected in 2008. We removed observations with missing values for at least one of the three variables. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.7: Child benefit and the support for PiS, covariates selected by LASSO

	(1) Baseline, excl. Electoral district FE	(2) Baseline, incl. Electoral district FE	(3) Extended, excl. Electoral district FE	(4) Extended, incl. Electoral district FE
Child benefit p.c.	0.032***	0.026***	0.024***	0.023***
	(0.004)	(0.004)	(0.004)	(0.004)
Number of potential control variables	17	58	81	122
Number of selected control variables	13	30	38	51
Mean of outcome	16.24	16.24	16.24	16.24
Mean of child benefit p.c.	149.36	149.36	149.36	149.36
Observations	2473	2473	2472	2472

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS (2011-2019), where the set of covariates is selected using a double-selection LASSO procedure (see Belloni, Chernozhukov, and Hansen, 2014). Column 1 presents the results for the baseline set of covariates. Column 2 presents the results for the baseline covariates including electoral district fixed effects. Column 3 presents the results for the extended set of covariates (baseline variables and variables listed in Tables B.8-B.10). Column 4 presents the results for the extended set of covariates and electoral fixed effects. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters.
* p<.10; ** p<.05; *** p<.01

Table B.8: Extended list of covariates for LASSO (i.)

Variable	Description	Source
Marriage rate (2011)	the number of new marriages divided by the municipality's population	Statistics Poland
Employment rate (2011)	the number of individuals employed in medium and large firms (10+ workers) divided by working-age population	Statistics Poland
Employment rate, female (2011)	the number of women employed in medium and large firms (10+ workers) divided by working-age female population	Statistics Poland
Unemployment rate, female	registered female unemployment rate	Statistics Poland
Firms (2011)	the number of all firms divided by the municipality's population (log)	Statistics Poland
Firms, new (2011)	the number of firms established in 2011 divided by the municipality's population (log)	Statistics Poland
Firms, removed (2011)	the number of firms removed from the firm register in 2011 divided by the municipality's population (log)	Statistics Poland
Public firms (2011)	the number of public firms divided by the number of all firms	Statistics Poland
kindergarten availability (2011)	the number of places in kindergarten divided by the number of children aged 3-5	Statistics Poland
Nurseries availability (2011)	the number of places in nurseries divided by the number of children aged 0-3	Statistics Poland
Family benefit recipients (2011)	the number of recipients of family benefits divided by the municipality's population	Statistics Poland
Social benefit recipients (2011)	the number of recipients of social benefits divided by the municipality's population	Statistics Poland
Library readership (2011)	the number of library users divided by the municipality's population	Statistics Poland
Forest area (2011)	forest area divided by municipality area	Statistics Poland
Government investment grants (2011)	the amount of government investment grants received divided by the municipality's population	Statistics Poland
Municipality revenue (2011)	total municipality revenue divided by the municipality's population (log)	Statistics Poland
Municipality expenditure (2011)	total municipality spending divided by the municipality's population (log)	Statistics Poland
Municipality expenditure: education (2011)	municipality spending on education divided by the municipality's population (log)	Statistics Poland
Municipality expenditure: social assistance (2011)	municipality spending on social assistance divided by the municipality's population (log)	Statistics Poland
Municipality expenditure: culture (2011)	municipality spending on culture divided by the municipality's population (log)	Statistics Poland
Municipality expenditure: public administration (2011)	municipality spending on public administration divided by the municipality's population (log)	Statistics Poland
Municipality expenditure: utilities (2011)	municipality spending on utilities divided by the municipality's population (log)	Statistics Poland
Municipality expenditure: health (2011)	municipality spending on utilities divided by the municipality's population (log)	Statistics Poland
Distance to big town	distance to the nearest town with population above 250,000 in kilometers	own calculations using Geopandas and shapefiles from `https://gis-support.pl/`
Distance to county town	distance to the nearest county town in kilometers	own calculations using Geopandas and shapefiles from `https://gis-support.pl/`

Notes: Description of variables used in the double-selection LASSO procedure.

Table B.9: Extended list of covariates for LASSO (ii.)

Variable	Description	Source
Dwelling area per capita (2011)	total residential dwelling area divided by the municipality's population	Statistics Poland
New flats (2011)	the number of flats built in 2011 divided by the municipality's population	Statistics Poland
New non-residential buildings (2011)	cubic volume of new non-residential buildings built in 2011 divided by the municipality's population	Statistics Poland
Commuters (2011)	the number of workers commuting to other municipality divided by the municipality's population in the working-age in the 2011 census	Statistics Poland
Community social assistance (2011)	the number of adults who were benefiting from community social assistance in 2011 divided by the municipality's population	Statistics Poland
Pharmacies availability (2011)	the number of pharmacies divided by the municipality's population	Statistics Poland
Hotel availability (2011)	number of beds available in tourist facilities in July 2011 divided by the municipality's population	Statistics Poland
Female municipality councillors (2011)	number of female municipality councillors divided by the total number of municipality councillors	Statistics Poland
Education of municipality council (2011)	number of municipality councillors with tertiary education divided by the total number of municipality councillors	Statistics Poland
Agricultural households (2010)	the number of households with income from agriculture divided by the municipality's population in the 2010 agricultural census	Statistics Poland
Agricultural land share (2010)	the total area of farms divided by total municipality area in the 2010 agricultural census	Statistics Poland
Average farm area (2010)	the total area of farms divided by the number of farms	Statistics Poland
Small farms share (2010)	the number of farms with area below 1 ha divided by the number of all farms in the 2010 agricultural census	Statistics Poland
Medium farms share (2010)	the number of farms with area from 1 ha to 10 ha divided by the number of all farms in the 2010 agricultural census (residual category is large farms with area of more than 10 ha)	Statistics Poland
Farms: cereals (2010)	the number of farms cultivating cereals divided by the number of all farms in the 2010 agricultural census	Statistics Poland
Farms: potatoes (2010)	the number of farms cultivating potatoes divided by the number of all farms in the 2010 agricultural census	Statistics Poland
Farms: cattle (2010)	the number of farms with cattle (non-zero livestock) divided by the number of all farms in the 2010 agricultural census	Statistics Poland
Farms: pigs (2010)	the number of farms with pigs (non-zero livestock) divided by the number of all farms in the 2010 agricultural census	Statistics Poland
Farms: poultry (2010)	the number of farms with poultry (non-zero livestock) divided by the number of all farms in the 2010 agricultural census	Statistics Poland

Notes: Description of variables used in the double-selection LASSO procedure. For municipalities with no farms, farm variables equal to zero.

Table B.10: Extended list of covariates for LASSO (iii.)

Variable	Description	Source
Marital status: married (2002)	the number of married individuals divided by the municipality's population in the 2002 census	Statistics Poland
Married, not living together (2002)	the number of married individuals who do not live together divided by the number of all married individuals in the 2002 census	Statistics Poland
Households with children (2002)	the number of households with at least one dependent child aged 0-24 divided by the number of all households in the 2002 census	Statistics Poland
Households with children, 18-24 years old (2002)	the number of households with at least one dependent child aged 18-24 divided by the number of all households in the 2002 census	Statistics Poland
Households: 1 person (2002)	the number of households with one household member divided by the number of all households in the 2002 census	Statistics Poland
Households: 2 persons (2002)	the number of households with two household members divided by the number of all households in the 2002 census	Statistics Poland
Households: 3-4 persons (2002)	the number of households with three or four household members divided by the number of all households in the 2002 census	Statistics Poland
Households: 5 persons or more (2002)	the number of households with five household members or more divided by the number of all households in the 2002 census	Statistics Poland
Internal migration, inflow 1989-2002 (2002)	the number of individuals who moved to the municipality between 1989 and 2002 and lived in the municipality in 2002 divided by the municipality's population in the 2002 census	Statistics Poland
Rental housing (2002)	the number of households who live in a rented dwelling divided by the number of all households in the 2002 census	Statistics Poland
Small dwellings (2002)	the number of individuals who live in a dwelling with less than 7 m squared per person divided by the municipality's population in the 2002 census	Statistics Poland
Large dwellings (2002)	the number of individuals who live in a dwelling with at least 30 m squared per person divided by the municipality's population in the 2002 census	Statistics Poland
Dwelling age, 1918-1944 (2002)	the number of dwellings built between 1918-1944 divided by the number of all dwellings in the 2002 census	Statistics Poland
Dwelling age, 1945-1970 (2002)	the number of dwellings built between 1945-1970 divided by the number of all dwellings in the 2002 census	Statistics Poland
Dwelling age, 1971-1988 (2002)	the number of dwellings built between 1971-1988 divided by the number of all dwellings in the 2002 census	Statistics Poland
Dwelling age, 1971-1988 (2002)	the number of dwellings built between 1989-2002 divided by the number of all dwellings in the 2002 census	Statistics Poland
Water access (2002)	the number of dwellings with the access to water-line system divided by the number of all dwellings in the 2002 census	Statistics Poland
Sewerage access (2002)	the number of dwellings with the access to sewerage system divided by the number of all dwellings in the 2002 census	Statistics Poland
Central heating access (2002)	the number of dwellings with the access to central heating divided by the number of all dwellings in the 2002 census	Statistics Poland
Stove use (2002)	the number of individuals in dwellings with stove as the heating equipment divided by the municipality's population in the 2002 census	Statistics Poland

Notes: Description of variables used in the double-selection LASSO procedure.

Table B.11: Child benefit and the support for the remaining parties

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	-0.041***	-0.006**	-0.013***	-0.004	-0.004
	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.10	0.48	0.56	0.60	0.66
Mean of outcome	-0.61	-0.61	-0.61	-0.61	-0.61
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for parties other than PiS at the municipality-level (2011-2019) from a regression, in which each observation is weighted by its population in 2011. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include vote share of parties other than PiS in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2011 unless otherwise specified. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.12: Child benefit and support for PiS (share of valid votes)

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.070***	0.045***	0.037***	0.020***	0.018***
	(0.005)	(0.005)	(0.007)	(0.007)	(0.006)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.08	0.57	0.63	0.67	0.72
Mean of outcome	20.31	20.31	20.31	20.31	20.31
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the valid votes share for PiS at the municipality-level (2011-2019) from a regression, in which each observation is weighted by its population in 2011. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of valid votes. Political variables include valid votes share of PiS in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2011 unless otherwise specified. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.13: Child benefit and the support for PiS, weighted by municipality population

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.101***	0.029***	0.022***	0.019***	0.014***
	(0.008)	(0.004)	(0.005)	(0.005)	(0.004)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.46	0.78	0.82	0.82	0.86
Mean of outcome	16.24	16.24	16.24	16.24	16.24
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level (2011-2019) from a regression, in which each observation is weighted by its population in 2011. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2011 unless otherwise specified. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.14: Child benefit and the support for PiS, treatment divided by eligible voters

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.043***	0.021***	0.015***	0.013***	0.009***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.16	0.62	0.65	0.66	0.72
Mean of outcome	16.24	16.24	16.24	16.24	16.24
Mean of child benefit p.c.	187.21	187.21	187.21	187.21	187.21
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level (2011-2019). Child benefit per capita is the total amount of child benefit received in 2016 divided by eligible voters in the 2015 parliamentary elections. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2011 unless otherwise specified. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.15: Child benefit recipients and the support for PiS

	(1)	(2)	(3)	(4)	(5)
Child benefit	1.661***	0.765***	0.834***	0.827***	0.557***
recipients	(0.076)	(0.083)	(0.121)	(0.120)	(0.114)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.16	0.62	0.66	0.66	0.72
Mean of outcome	16.24	16.24	16.24	16.24	16.24
Mean of child benefit p.c.	7.20	7.20	7.20	7.20	7.20
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level (2011-2019). Child benefit recipients is the number of families that received child benefit in 2017 multiplied by 100 and divided by municipal population. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2011 unless otherwise specified. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.16: Child benefit and the support for PiS, average annual child benefit per capita (2016-2019)

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.060***	0.027***	0.020***	0.018***	0.017***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.19	0.62	0.65	0.66	0.72
Mean of outcome	16.24	16.24	16.24	16.24	16.24
Mean of child benefit p.c.	177.28	177.28	177.28	177.28	177.28
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level (2011-2019). Child benefit per capita is the average annual amount of child benefit received between 2016 and 2019 divided by municipal population. Vote shares for PiS are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2011 unless otherwise specified. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table B.17: Child benefit and the support for PiS: binary treatment variable

	(1)	(2)	(3)	(4)
Child benefit dummy	3.286***	1.125***	0.658*	1.039***
	(0.163)	(0.426)	(0.354)	(0.393)
Political controls	no	yes	yes	yes
Geographic controls	no	yes	yes	yes
Demographic controls	no	no	yes	yes
Economic controls	no	no	no	yes
N	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the vote share for PiS at the municipality-level estimated using doubly robust difference-in-differences estimator (Sant'Anna and Zhao, 2020). Treatment variable is a dummy variable which equals 1 for municipalities with child benefit amount per capita above median and 0 for municipalities below or equal to median. Pre-treatment elections are the elections in 2007 and 2011, post-treatment elections are the elections in 2015 and 2019. We report event-study coefficients on the 2019 elections average treatment effect on treated with the 2011 elections as a reference category for consistency. Vote shares for PiS are calculated as percentages of eligible voters. Demographic controls include log population density, and the female share of the population. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births (2005). All control variables are measured in 2005 unless specified differently. Compared to the baseline specification, we do not control for mean age, since the inclusion of this variable led to computational error. Standard errors clustered at the level of the municipality were calculated.
* p<.10; ** p<.05; *** p<.01

Table B.18: Child benefit per capita and the support for PiS: controlling for trends in covariates

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.018***	0.018***	0.017***	0.017***	0.017***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Political controls	yes	yes	yes	yes	yes
Geographic controls	yes	yes	yes	yes	yes
Demographic controls	yes	yes	yes	yes	yes
Economic controls	yes	yes	yes	yes	yes
Electoral district FE	yes	yes	yes	yes	yes
Political controls (2011-2014 diff)	no	yes	yes	yes	yes
Demographic controls (2011-2014 diff)	no	no	yes	yes	yes
Economic controls (2011-2014 diff)	no	no	no	yes	yes
Adj. R-Squared	0.72	0.72	0.73	0.73	0.73
Mean of outcome	16.24	16.24	16.24	16.24	16.24
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS (2011-2019) at the municipality-level. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). We additionally control for 2011-2014 differences in political (the share of out-of-wedlock births), demographic (log population density, femininity ratio, urbanization rate), and economic (unemployment rate, log tax revenue from personal income tax per capita) covariates.
* p<.10; ** p<.05; *** p<.01

Table B.19: Alternative standard errors

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Robust	Cluster: municipality	Cluster: county	Cluster: electoral district	Conley (25 km)	Conley (50 km)	Conley (75 km)
Child benefit p.c.	0.018***	0.018***	0.018**	0.018***	0.018***	0.018**	0.018***
	(0.004)	(0.005)	(0.007)	(0.005)	(0.007)	(0.007)	(0.007)
Political controls	yes	yes	yes	yes	yes	yes	yes
Geographic controls	yes	yes	yes	yes	yes	yes	yes
Demographic controls	yes	yes	yes	yes	yes	yes	yes
Economic controls	yes	yes	yes	yes	yes	yes	yes
Electoral district FE	yes	yes	yes	yes	yes	yes	yes
Adj. R-Squared	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Observations	2473	2473	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS (2011-2019) at the municipality-level. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). In column 1, robust standard errors were calculated, column 2 shows standard errors clustered at the level of county, column 3 shows standard errors clustered at the level of electoral district, columns 4-7 show Conley standard errors with different choice of the distance cutoff.
* p<.10; ** p<.05; *** p<.01

Table B.20: Fixed effects: region, electoral district, county, commuting zone

	(1)	(2)	(3)	(4)
Child benefit p.c.	0.018***	0.015***	0.011***	0.011***
	(0.004)	(0.004)	(0.004)	(0.004)
Political controls	yes	yes	yes	yes
Geographic controls	yes	yes	yes	yes
Demographic controls	yes	yes	yes	yes
Economic controls	yes	yes	yes	yes
Electoral district FE	yes	no	no	no
Region FE	no	yes	no	no
Commuting zone FE	no	no	yes	no
County FE	no	no	no	yes
Adj. R-Squared	0.72	0.70	0.80	0.79
Mean of outcome	16.24	16.24	16.24	16.24
Mean of child benefit p.c.	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS (2011-2019) at the municipality-level. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). In column 2, we control for region fixed effects (16 NUTS-2 regions). In column 3, we control for electoral district fixed effects (41 districts). In column 4, we control for commuting zone fixed effects (339 zones). In column 5, we control for county fixed effects (380 counties). Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

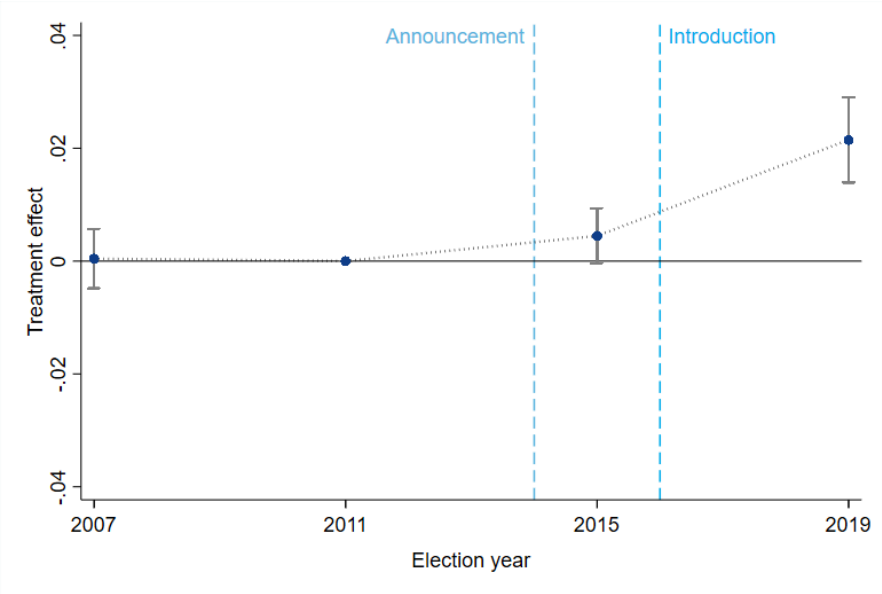

Figure B.1: Leads and lags of the treatment effect: fixed effects estimator

Notes: Figure shows the event-study coefficients of the interactions of election year dummy variable with the child benefit per capita variable obtained using a panel fixed effects estimator. We control for interactions of election years dummy variables with political, geographic, demographic, and economic variables measured in the initial year of the analysis as well as with electoral district fixed effects (see the note of Table 1 for the list of control variables). 95% confidence intervals are constructed based on standard errors clustered at the municipality level.

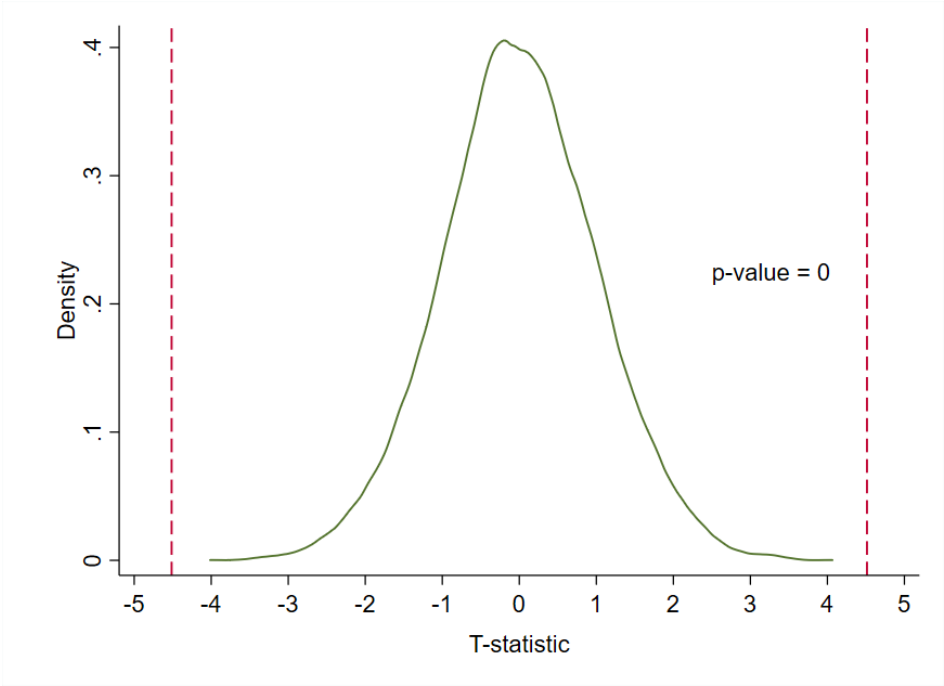

Figure B.2: Child benefit and the support for PiS: randomization inference

Notes: Figure shows kernel density plot of t-statistics from a randomization test with 10000 permutations. In each permutation, child benefit per capita variable was randomly drawn from the distribution of the variable and baseline difference-in-differences regression was estimated. For 0 random permutations, the absolute value of estimated t-statistic was greater than the absolute value of the baseline t-statistic. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). Standard errors were clustered at the level of the municipality.

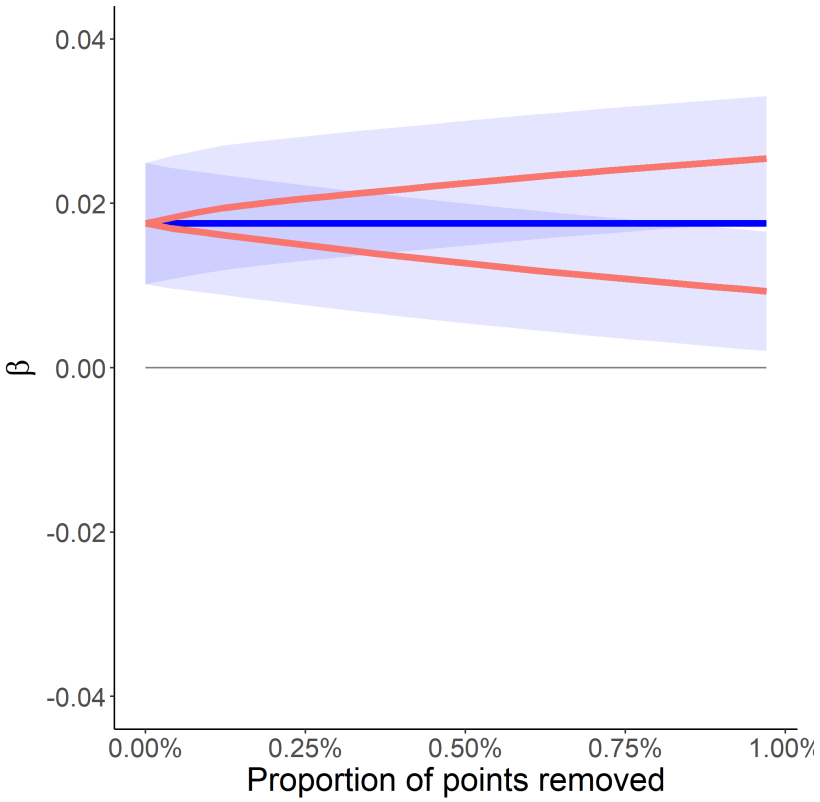

Figure B.3: Sensitivity of the treatment effect to the removal of a small fraction of the sample

Notes: Figure illustrates the the Approximate Maximum Influence Perturbation for the effect of child benefit on the change in the vote share for PiS (2011-2019) following Broderick, Giordano, and Meager (2021). Values of $\hat{\beta}$ (treatment effect) are on the vertical axis; values of α (proportion of the data removed) are on the horizontal axis. The dark blue line shows the original $\hat{\beta}$ value. The red lines show how $\hat{\beta}$ can be altered by adversarial removal in both directions; the light blue shaded area is the 95% confidence interval. Figure shows that removal of 1% observations cannot change the direction or the significance of the effect. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). Standard errors were clustered at the level of the municipality.

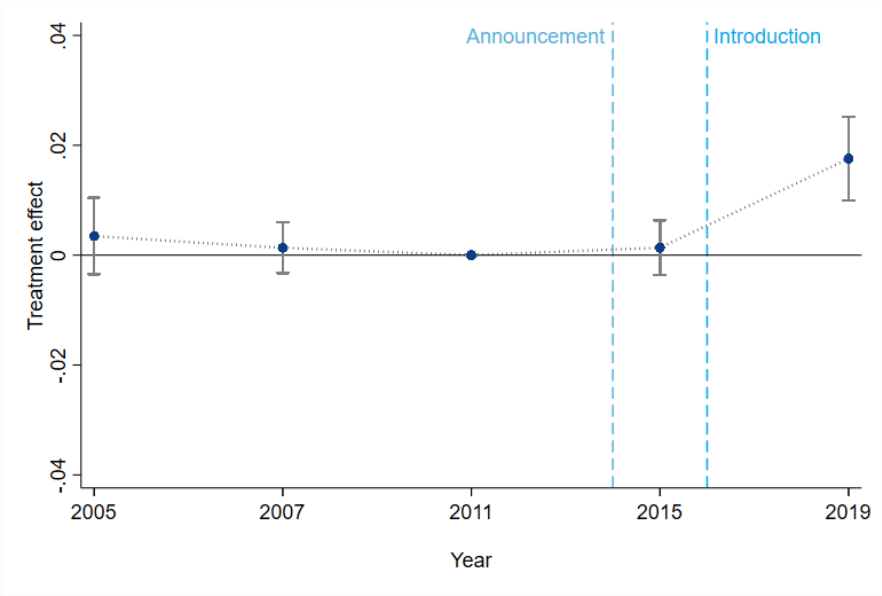

Figure B.4: Leads and lags of the treatment effect including the 2005 elections

Notes: Figure shows the event-study coefficients from five regressions of the change in the vote shares between elections in year t (shown on the horizontal axis) and 2011 parliamentary elections on child benefit per capita. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). 95% confidence intervals are constructed based on standard errors clustered at the municipality level.

Table B.21: Placebo: child benefit and the support for the ministers of unrelated departments

	(1)	(2)	(3)	(4)
	1st position	1st position	1st position	1st position
Child benefit p.c.	-0.000	0.002	-0.000	-0.002
	(0.019)	(0.021)	(0.019)	(0.020)
Minister of		-0.033		
Education × Child benefit p.c.		(0.025)		
Minister of the				0.020
Interior × Child benefit p.c.				(0.015)
Political controls	yes	yes	yes	yes
Geographic controls	yes	yes	yes	yes
Demographic controls	yes	yes	yes	yes
Economic controls	yes	yes	yes	yes
Electoral district FE	yes	yes	yes	yes
Adj. R-Squared	0.38	0.38	0.38	0.38
Observations	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the support for the Minister of Education (Anna Zalewska) and Minister of the Interior (Joachim Brudziński). The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Columns 1-4 show the effects of the child benefit on the difference in 2009-2019 differences in the support for candidates running in the first position and the remaining positions on the lists of PiS in the elections to the European Parliament. Child benefit p.c. × Minister of Education denotes the interaction of the child benefit variable with the 12th electoral district dummy (in which the Minister of Education was running). Child benefit p.c. × Minister of the Interior denotes the interaction of the child benefit variable with the 13th electoral district dummy (in which the Minister of the Interior was running). The vote shares are calculated as percentages of eligible voters. All control variables are measured in 2009 unless otherwise specified. Standard errors are clustered at the level of the electoral districts (the districts in the European elections).
* p<.10; ** p<.05; *** p<.01

Table B.22: Placebo: child benefit and support for the PiS candidates in the parliamentary elections (different candidates, same districts)

	(1)	(2)	(3)	(4)
	1st position	1st position	3rd position	3rd position
Child benefit p.c.	0.010	0.012	0.007	0.008
	(0.030)	(0.030)	(0.017)	(0.018)
Prime Minister		-0.026		
× Child benefit p.c.		(0.026)		
Minister of Family				-0.008
× Child benefit p.c.				(0.016)
Political controls	yes	yes	yes	yes
Geographic controls	yes	yes	yes	yes
Demographic controls	yes	yes	yes	yes
Economic controls	yes	yes	yes	yes
Electoral district FE	yes	yes	yes	yes
Adj. R-Squared	0.36	0.36	0.21	0.21
Observations	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the support for the PiS candidates in the parliamentary elections. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Columns 1 and 2 show the effects of the child benefit on the difference in 2011-2019 differences in the support for candidates running in the first position and the remaining positions on the lists of PiS in the parliamentary elections. Child benefit p.c. × Prime Minister denotes the interaction of the child benefit variable with the 10th electoral district dummy (the electoral district in which the former Prime Minister was running in the 2019 European elections). This is a placebo test because the former Prime Minister was not running in the 2019 parliamentary elections, and electoral districts differ between parliamentary elections and elections to the European Parliament. Similarly, columns 3 and 4 show the effects of the child benefit on the difference in 2011-2019 differences in the support for candidates running in the third position and the remaining positions on the lists of PiS. Child benefit p.c. × Minister of Family denotes the interaction of the child benefit variable with the 13th electoral district dummy (in which the Minister of Family was running in the 2019 European elections). Again, the former Minister of Family was not running in the 2019 parliamentary elections so this is a placebo test. The vote shares are calculated as percentages of eligible voters. All control variables are measured in 2011 unless otherwise specified. Standard errors are clustered at the level of the electoral districts (the districts in the European elections).
* p<.10; ** p<.05; *** p<.01

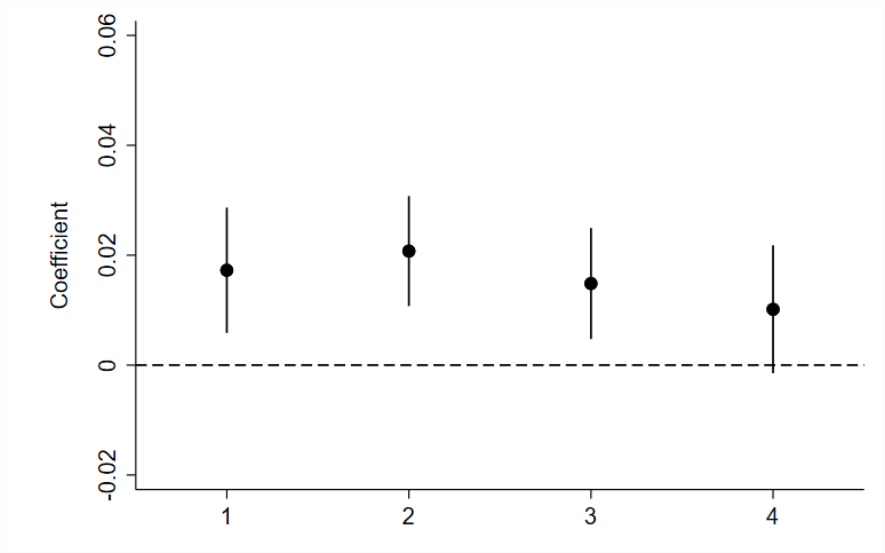

Figure B.5: Treatment effect by quartile of average income

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level for quartiles of municipality average income. The coefficients are obtained from a regression with the interaction of the treatment dummy and income quartile dummies. Since direct measure of average or median income at the municipality level is not available, we approximate average income by average revenue from personal income tax. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). 95% confidence intervals are constructed based on standard errors clustered at the municipality level.

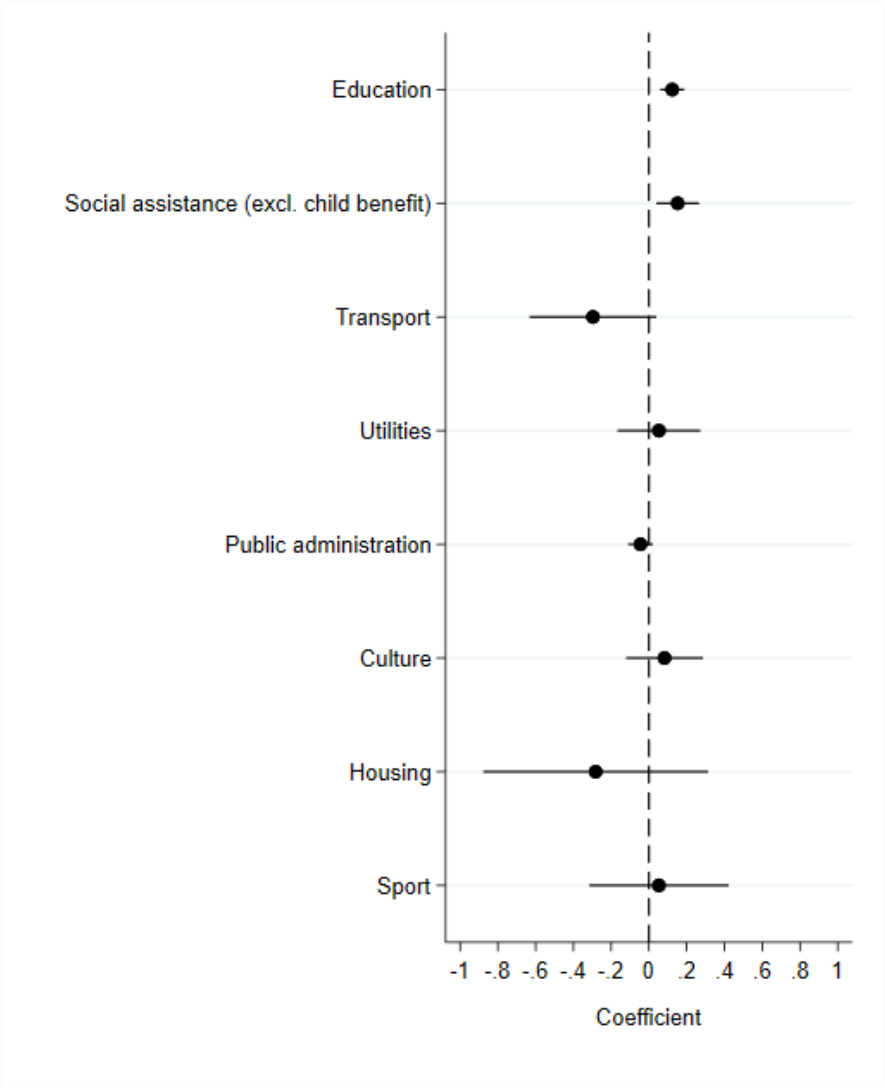

Figure B.6: Elasticity of municipality spending

Notes: Figure shows child benefit elasticity of municipality spending divided into categories. Figure shows point estimates of the treatment effects and 95% confidence intervals. For ease of interpretation, treatment variables is log child benefit per capita and outcomes are differences in log spending per capita. In each regression, we control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). Standard errors are clustered at the municipality level.

Appendix C Heterogeneity

Table C.1: Treatment effects: presidential elections (2010-2020)

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.035***	0.036***	0.027***	0.022***	0.018***
	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.09	0.47	0.54	0.55	0.58
Mean of outcome	11.99	11.99	11.99	11.99	11.99
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the changes in the vote share for the official PiS candidate in the presidential elections (2010-2020) at the municipality-level. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Jarosław Kaczyński was the candidate of PiS in the 2010 presidential elections. Andrzej Duda was the candidate of PiS in the 2020 presidential elections. Vote shares are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2010 unless specified differently. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

Table C.2: Treatment effects: European Parliament elections (2009-2019)

	(1)	(2)	(3)	(4)	(5)
Child benefit p.c.	0.081***	0.032***	0.032***	0.030***	0.017***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Political controls	no	yes	yes	yes	yes
Geographic controls	no	yes	yes	yes	yes
Demographic controls	no	no	yes	yes	yes
Economic controls	no	no	no	yes	yes
Electoral district FE	no	no	no	no	yes
Adj. R-Squared	0.23	0.71	0.72	0.72	0.79
Mean of outcome	11.99	11.99	11.99	11.99	11.99
Mean of child benefit p.c.	149.36	149.36	149.36	149.36	149.36
Observations	2473	2473	2473	2473	2473

Notes: Table shows the effects of the child benefit on the change the vote share for PiS in the elections to the European Parliament (2009-2019) at the municipality-level. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares are calculated as percentages of eligible voters. Political variables include the PiS vote share in 2011, the vote shares for the right-wing populist parties in 2005, "yes" vote shares in the 2003 EU membership referendum and the share of out-of-wedlock births. Geographic controls include latitude, longitude, distance to the provincial capital, and distance to Warsaw. Demographic controls include log population density, mean age, femininity ratio, fraction of the population with at least secondary education, share of the population aged 13-17, share of the population above retirement age, and urbanization rate. Economic controls include registered unemployment rate and log tax revenue from personal income tax per capita. All control variables are measured in 2009 unless specified differently. Standard errors are clustered at the municipality level.
* p<.10; ** p<.05; *** p<.01

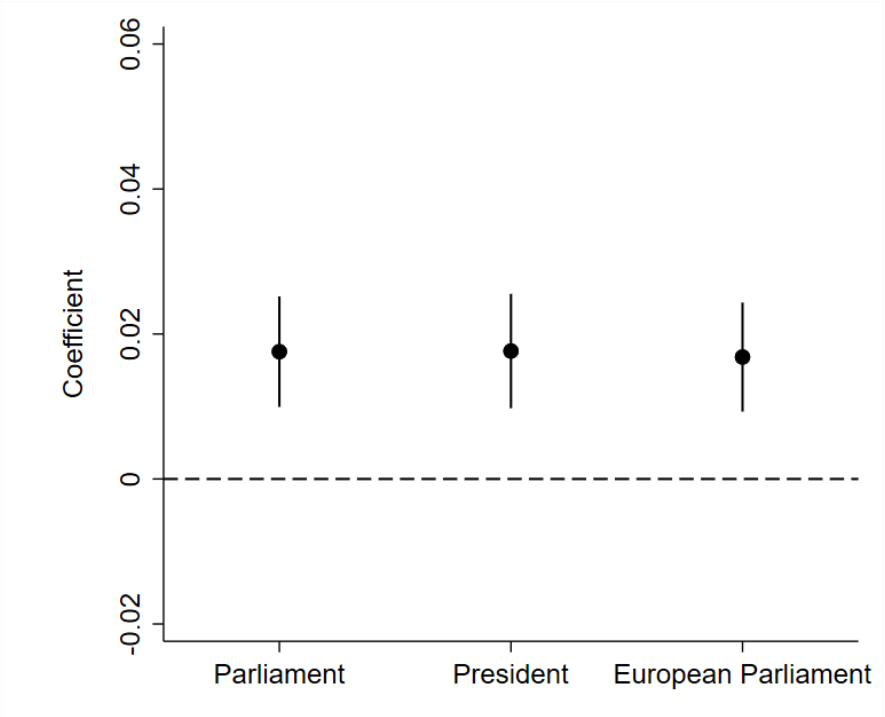

Figure C.1: Treatment effects by elections level

Notes: Figure shows the effects of the child benefit on the change in the vote share for PiS at the municipality-level in parliamentary, presidential and European Parliament elections. Figure shows point estimates of the treatment effects and 95% confidence intervals. The outcome variable in the parliamentary elections is the main outcome: change in the vote share for PiS (2011-2019) in the parliamentary elections. The outcome variable in the presidential elections is the change in the vote share for the official PiS candidate (Jarosław Kaczyński in 2010 and Andrzej Duda in 2020). The outcome variable in the European Parliament elections is change in the vote share for PiS (2009-2019) in the election to the European Parliament. Vote shares are calculated as percentages of eligible voters. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). Standard errors are clustered at the municipality level.

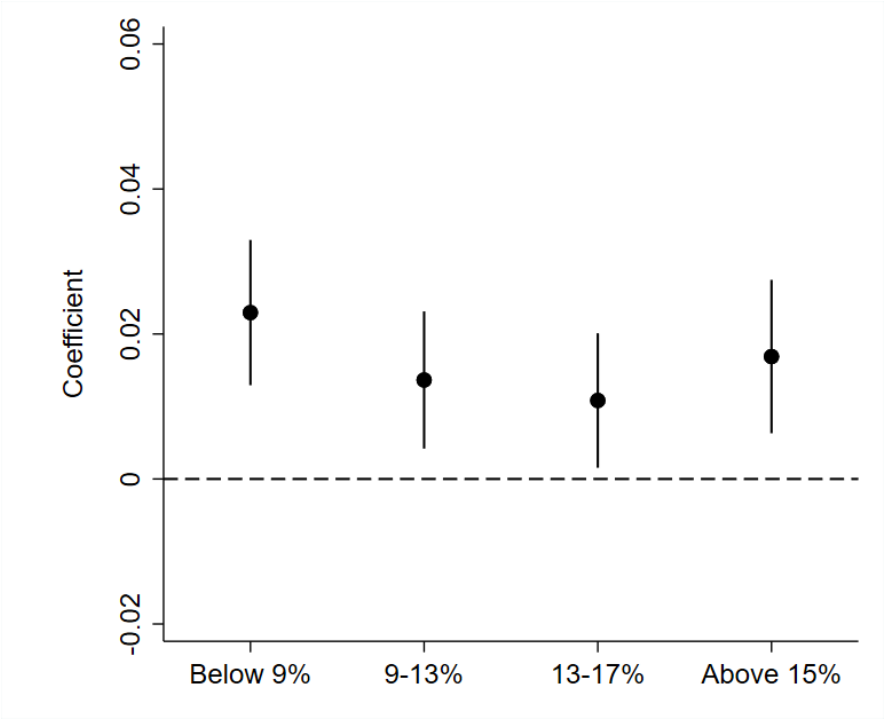

Figure C.2: Heterogeneity of the main effect: initial support for PiS

Notes: Figure shows the effects of the child benefit on the change in the vote share for PiS (2011-2019) at the municipality-level obtained from a regression with the interaction of the treatment dummy and initial support category dummies. Figure shows point estimates of the treatment effects and 95% confidence intervals. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). Horizontal axis labels denote the range of the support for PiS in the 2011 parliamentary elections in municipalities. Standard errors are clustered at the municipality level.

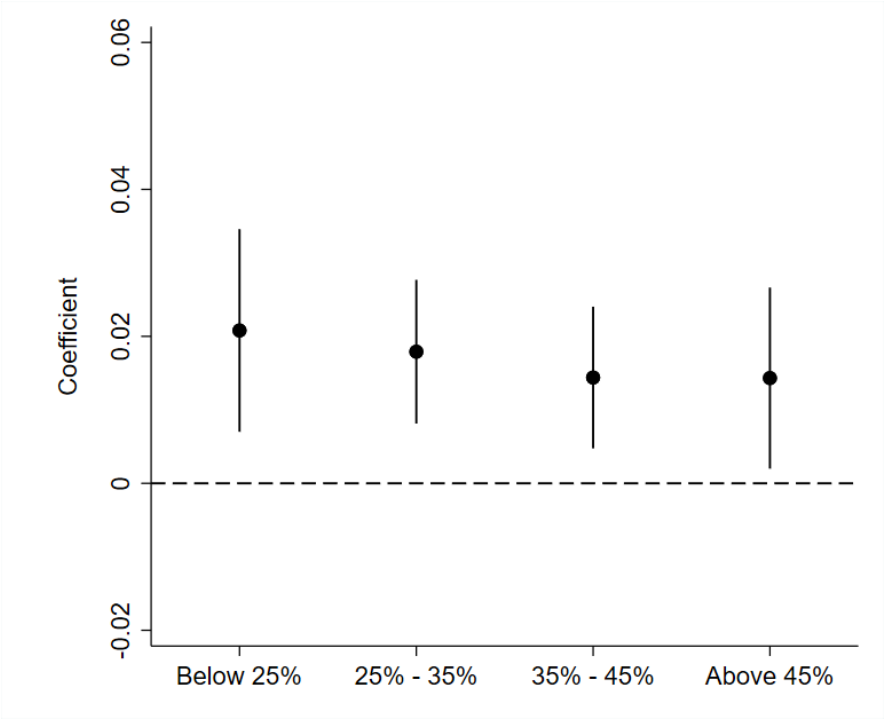

Figure C.3: Heterogeneity of the main effect: support for the EU

Notes: Figure shows the effects of the child benefit on the change in the vote share for PiS (2011-2019) at the municipality-level obtained from a regression with the interaction of the treatment dummy and support for the EU accession (2003) category dummies. Figure shows point estimates of the treatment effects and 95% confidence intervals. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). Horizontal axis labels denote the range of the municipality population. Standard errors are clustered at the municipality level.

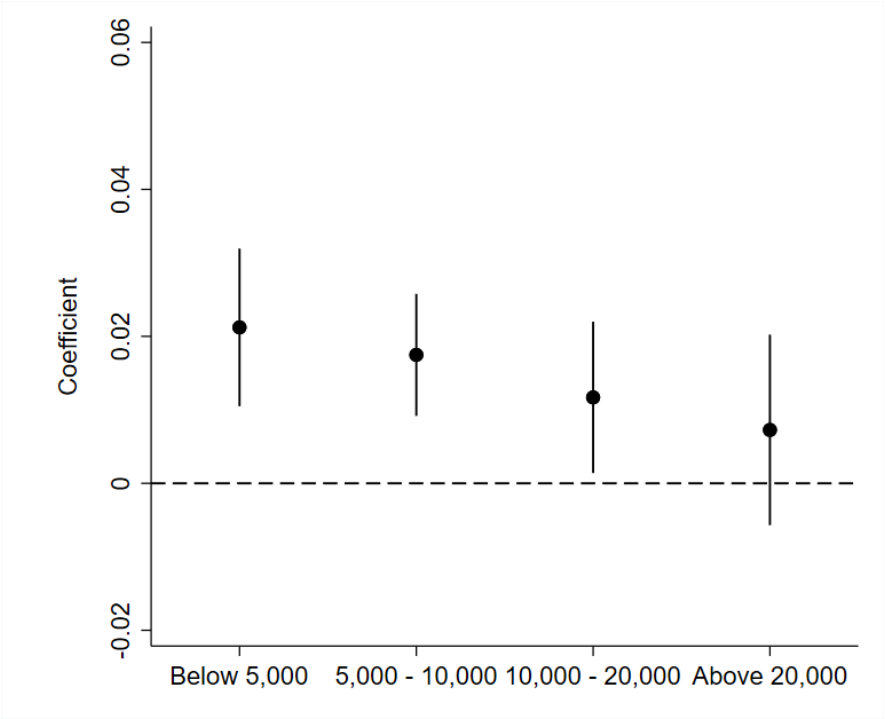

Figure C.4: Heterogeneity of the main effect: municipality size

Notes: Figure shows the effects of the child benefit on the change in the vote share for PiS (2011-2019) at the municipality-level obtained from a regression with the interaction of the treatment dummy and municipality size category dummies. Figure shows point estimates of the treatment effects and 95% confidence intervals. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). Horizontal axis labels denote the range of the municipality population. Standard errors are clustered at the municipality level.

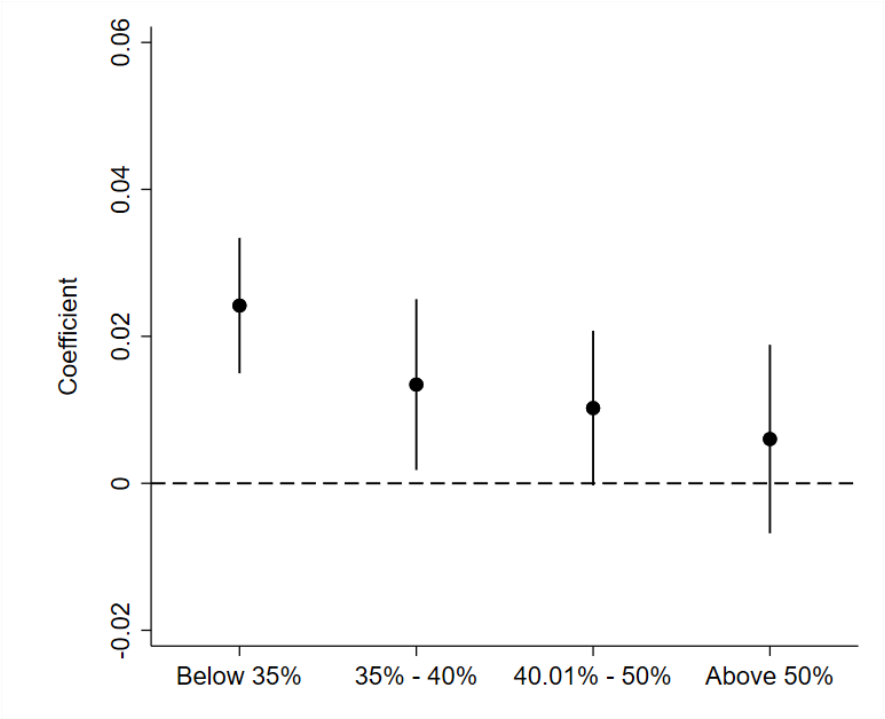

Figure C.5: Heterogeneity of the main effect: secondary education

Notes: Figure shows the effects of the child benefit on the change in the vote share for PiS (2011-2019) at the municipality-level obtained from a regression with the interaction of the treatment dummy and secondary education categories dummies (% of population with at least secondary education in the 2002 census). Figure shows point estimates of the treatment effects and 95% confidence intervals. The per capita child benefit is the total child benefit amount received in 2016 divided by the municipality's population. Vote shares for PiS are calculated as percentages of eligible voters. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). Horizontal axis labels denote the range of the municipality population. Standard errors are clustered at the municipality level.

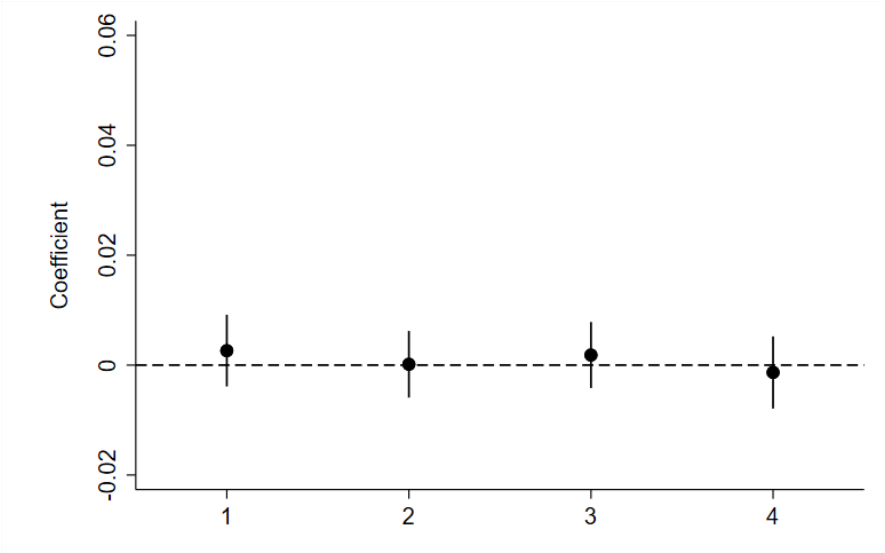

Figure C.6: Pre-treatment: effects by quartile of average income, 2007-2011

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level for quartiles of municipality average income. The coefficients are obtained from a regression with the interaction of the treatment dummy and income quartile dummies. Since direct measure of average or median income at the municipality level is not available, we approximate average income by average revenue from personal income tax. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). 95% confidence intervals are constructed based on standard errors clustered at the municipality level.

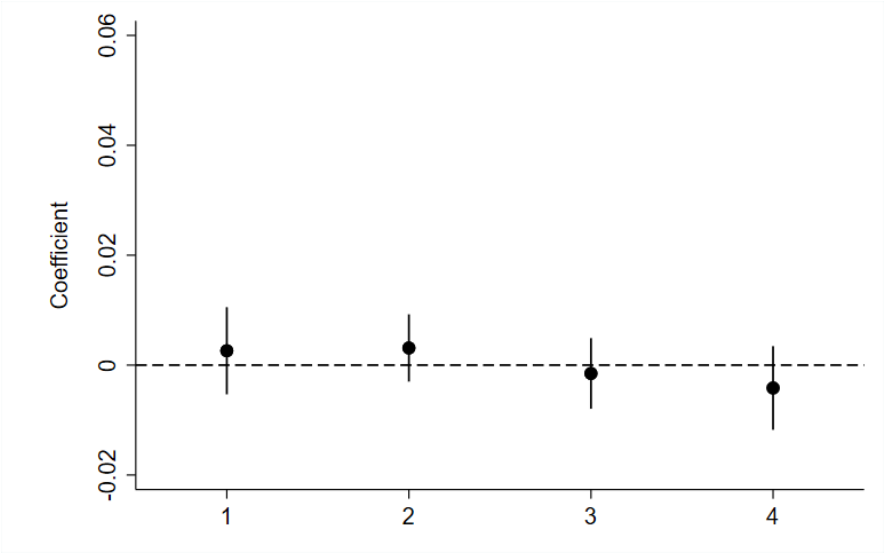

Figure C.7: Pre-treatment: effects by quartile of average income, 2011-2015

Notes: Table shows the effects of the child benefit on the changes in the vote share for PiS at the municipal level for quartiles of municipality average income. The coefficients are obtained from a regression with the interaction of the treatment dummy and income quartile dummies. Since direct measure of average or median income at the municipality level is not available, we approximate average income by average revenue from personal income tax. We control for political, geographic, demographic, and economic variables measured in the initial year as well as for electoral district fixed effects (see the note of Table 1 for the list of control variables). 95% confidence intervals are constructed based on standard errors clustered at the municipality level.

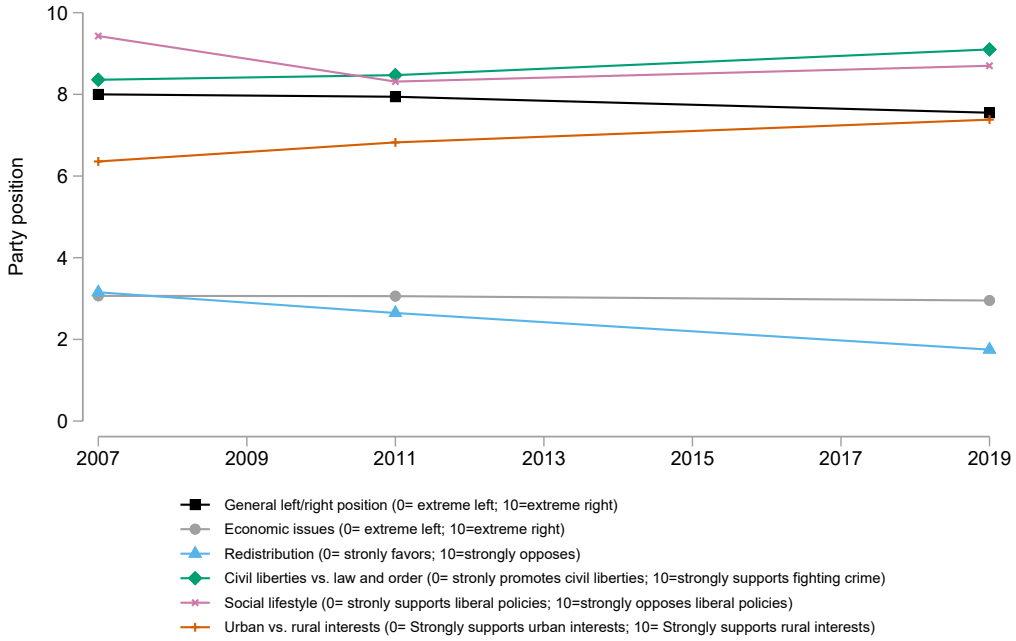

Figure C.8: Evolution of PiS ideology over time

Notes: Figure shows the position of PiS on a number of ideological and policy issues using data from the 1999-2019 Chapel Hill Expert Survey (CHES) trend file.

Appendix D The design of the Family 500+ program

The Family 500+ program was introduced by the PiS government in April 2016. In its initial form, the program provided a payment of 500 PLN per month for the second and every subsequent child aged from 0-17 in each family. Poor families with a disposable net monthly income of up to 800 PLN per capita were also eligible for a 500 PLN transfer for the first (oldest) child in the family. For families with a disabled child, the threshold for receiving the child benefit for the oldest child was set at 1,200 PLN. The means test thresholds were determined using the average per capita monthly disposable family income from the most recent tax returns of children's parents or guardians. The child benefit is tax-free, and does not affect the eligibility of families for other welfare transfers in Poland, such as family allowances or social assistance benefits.

According to the official position of the Ministry of Family, Labor, and Social Policy, the program has three main objectives: encouraging families to have more children, investing in human capital, and reducing child poverty.

In July 2019, the Family 500+ program was extended to cover all children in all families, regardless of family income. In addition, children placed in foster care and care homes became eligible for the payment. Since then, the program has become a fully universal unconditional child benefit. After the introduction and subsequent expansion of the child benefit program, Poland became the developed country with the highest family benefit levels relative to the average wage (see Figure D.9).

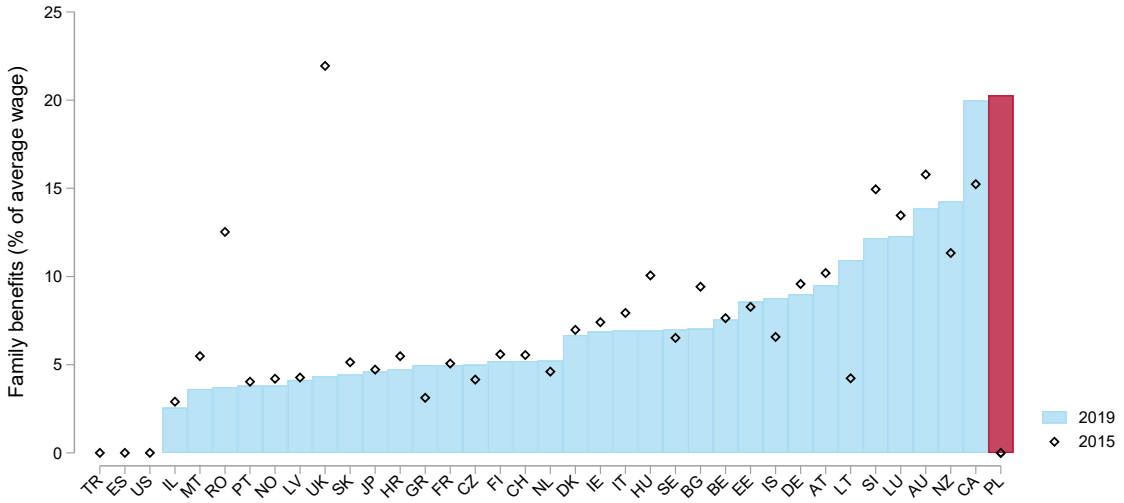

Figure D.9: Family benefits as % of average wage

Notes: Figure shows the family cash benefits for a couple aged 40 years old (one employed earning 80% of the average wage, the other unemployed) with two children (ages four and six) in relation to the average wage (gross annual value for a full-time worker).
Data: OECD

Two politicians were especially strongly associated with the implementation and promotion of the child benefit program. Beata Szydło served as the prime minister after the success of her party in the 2015 elections, and she oversaw the implementation of the program. The introduction of the child benefit program was a flagship issue of two electoral campaigns in 2015 in which Szydło played a crucial role. She was the chief of staff of the campaign of the PiS candidate in the 2015 presidential elections, and a candidate for prime minister in the campaign before the 2015 parliamentary elections (see a leaflet from the campaign in Figure D.10). Elżbieta Rafalska served as the minister of the Ministry of Family, Labor, and Social Policy. Her ministry was directly responsible for the implementation of the child benefit program. Therefore, she was present at the press conferences related to the program, and personally participated in the child benefit program information campaign (along with Szydło, see Figures D.11 and D.12).

Figure D.10: Beata Szydło's leaflet from the campaign before the 2015 parliamentary elections

Translation: "Children are not a cost - they are the best investment.
Program Family 500+.
I have prepared a bill which will allow Polish families to receive PLN 500 a month for each second and next child. In families where the situation is more difficult, also for the first child. This money is real help. Parents will no longer have to take out loans for school starter kits.
Why is the program Family 500+ so necessary. The bill aims to help families bringing up children and to counteract demographic decline in Poland. 900 thousand of Polish children live in extreme poverty. 11% of families with three children live below the minimum subsistence level. 27% of families with four or more children live below the minimum subsistence level. In 2014, the extent of extreme poverty in rural areas was more than twice as high as in urban areas."
Source: `https://300polityka.pl/news/2015/09/07/pis-startuje-z-akcja-rozdawania-ulotek-w-calym-kraju-z-planem-500/`

Figure D.11: Elżbieta Rafalska (to the left) and Beata Szydło in front of the bus used in the information campaign about the child benefit program.

Photo © Franciszek Mazur.
Source: `https://wyborcza.pl/7,75398,24485585,500-plus-dla-kazdego-dziecka-ta-propozycja-pis-goni-opozycje.html`.

Figure D.12: Elżbieta Rafalska (to the left) and Beata Szydło presenting the results of the program after three months since its implementation (1st July 2016).

Photo © Slawomir Kaminski/Agencja Gazeta.
Source: `https://oko.press/szydlo-proponuje-polkom-ciaze-jeza-ratowac-dzietnosc/`

Appendix E Quantifying the size of the effect

To what extent do our results explain recent election outcomes? In 2019, PiS won 43.6% of the popular vote, and 235 of the 460 seats in the lower house of the parliament. We can assess the political importance of the estimated effect by calculating how many seats in the lower house of the parliament the PiS would have lost if the child benefit program had not been introduced. Using the baseline estimate of the main effect from Table 1 (0.018) and the per capita value of the child benefit across municipalities in 2016, we can calculate that the additional number of votes received by PiS in 2019 is about 735,000. We then subtract the additional votes PiS gained due to the child benefit program from the total number of votes, and apply the rules of the electoral system in Poland to translate the counterfactual vote shares of parties into parliamentary seats. The results indicate that in the absence of the child benefit program, PiS would have secured 225 seats in the parliament. Thus, the party would have fallen short of winning an absolute majority in the lower chamber of parliament (231 seats), and would have been forced to seek coalition partners.

In addition, we estimate the implications of our findings while taking into account the heterogeneity of the effects we found across municipalities of different size. Using estimates displayed in Figure C.4, we find that the additional number of votes PiS gained is 487,000. Without these votes, PiS would have failed to obtain the parliamentary majority, as it would have secured just 227 seats in the Sejm. Overall, these calculations show that the introduction of the Family 500+ child benefit program led to significant political gains for PiS.

We can also interpret the magnitude of our estimates in the context of the literature measuring the cost of "buying" a vote. The overall cost of the Family 500+ program since its introduction in 2016 during the parliamentary elections in October 2019 has been approximately PLN 85 billion (USD 21.6 billion). Given that our estimates imply that the implementation of the child benefit program led to PiS attracting about 487,000 additional votes in 2019, the average cost of a vote equals PLN 174,500 (USD 44,400). This estimate is slightly higher than other

estimates of the impact of public spending on electoral outcomes found in the literature. Vannutelli (2020) studied the impact of a large tax credit introduced in Italy in 2014, and estimated that the long-run cost of a vote is EUR 27,000. Earlier research found that in the US context, the price of a vote ranges from USD 14,000 to USD 27,000 (Healy and Malhotra, 2009; Levitt and Snyder Jr, 1997).

Appendix F Survey data

Table F.1: Variable descriptions: survey data

Variable	Description	Source
Treatment variables		
Child benefit amount	Imputed child benefit amount received by households: all households with at least 2 children are assumed to receive monthly transfer of PLN 500 per child. This number is further multiplied by 12 (for a yearly amount), divided by 3.93 (2016 exchange rate between PLN and USD), and then dived by 100 for the ease of interpretation.	CBOS
Treatment group (baseline definition)	Binary indicator for the treated group: 1 = the respondent lives with at least 2 children in the household, 0 = the respondent lives with at most 1 child in the household. In both cases the respondent is aged 25-49.	CBOS
Treatment group (one-child-households in the treatment group)	Binary indicator for the treated group: 1 = the respondent lives with (any number of) children in the household, 0 = the respondent does not live with children in the household. In both cases the respondent is aged 25-49.	CBOS
Treatment group (one-child-households excluded)	Binary indicator for the treated group: 1 = the respondent lives with at least 2 children in the household, 0 = the respondent does not live with children in the household. In both cases the respondent is aged 25-49. Households with 1 child are disregarded in this specification.	CBOS
Post-treatment period	Binary indicator for post-treatment period: 1 = 2019 parliamentary elections, 0 = 2007 or 2011 parliamentary elections. 2015 parliamentary elections are disregarded in the main specification.	CBOS
Post-treatment period x Child benefit amount	Treatment effect: interaction between Post-treatment period and Child benefit amount variables	CBOS
Post-treatment period x Treatment group	Treatment effect: interaction between Post-treatment period and Treatment group variables	CBOS
Dependent variables		
Voted for PiS in Polish Parliament elections (2007, 2011, 2015, 2019)	Binary indicator: did the respondent vote for PiS in Polish Parliament elections in 2007, 2011, 2015 or 2019, respectively.	CBOS
Turnout (voted in Polish Parliament elections 2007, 2011, 2015, 2019)	Binary indicator: did the respondent vote (invalid or empty votes included) in Polish Parliament elections in 2007, 2011, 2015 or 2019, respectively.	CBOS
Control variables		
Female	Gender of the respondent, binary indicator (1= female, 0 otherwise).	CBOS
Age	Age of the respondent at the time of the survey, continuous.	CBOS
City	Binary indicator: 1 = respondent lives in a city of at least 20 thous. inhabitants, 0 otherwise.	CBOS
Election year FE	Fixed effects for election year: 2007, 2011, 2015, 2019. We use three surveys (with independent groups of respondents) for each year.	CBOS
Region FE	Fixed effects for 16 voivodships in Poland.	CBOS

Notes: Description of variables used in the survey data analysis. 'CBOS' stands for 'Centrum Badania Opinii Społecznej' ('Public Opinion Research Center'). CBOS data come from the surveys from the following months and years: Nov 2007, Dec 2007, Jan 2008 (data on 2007 parliamentary elections), Jan 2013, Feb 2013, Mar 2013 (data on 2011 parliamentary elections), Nov 2015, Dec 2015, Jan 2016 (data on 2015 parliamentary elections), Nov 2019, Dec 2019, Jan 2020 (data on 2019 parliamentary elections). The parliamentary elections took place in October 2007, 2011, 2015 and 2019. For each of these years, when possible, the surveys from the three subsequent months were taken. This was impossible for 2011 elections, because in the Nov 2011, Dec 2011 and Jan 2012 surveys we were unable to identify the number of children in the household. This is why for 2011 elections we took surveys from the beginning of 2013.

Table F.2: Descriptive statistics: survey data

	Obs.	**Mean**	**Std. Dev.**	**Min.**	**Max.**
Imputed treatment	4427	5.11	8.43	0.00	91.60
Treatment group (baseline definition)	4427	0.34	0.47	0.00	1.00
Treatment group (one-child-households in the treatment group)	4427	0.64	0.48	0.00	1.00
Treatment group (one-child-households excluded)	3114	0.48	0.50	0.00	1.00
Vote for PiS in Polish Parliament elections	4427	0.21	0.41	0.00	1.00
Turnout (voted in Polish Parliament elections)	4427	0.67	0.47	0.00	1.00
2007 elections	4427	0.22	0.42	0.00	1.00
2011 elections	4427	0.26	0.44	0.00	1.00
2015 elections	4427	0.27	0.44	0.00	1.00
2019 elections	4427	0.25	0.43	0.00	1.00
Female	4427	0.53	0.50	0.00	1.00
Age	4427	37.35	7.08	25.00	49.00
Lives in a city of at least 20 thous. inhabitants	4427	0.46	0.50	0.00	1.00

Notes: Table presents the following statistics for each variable: Number of Observations, Average Value, Standard Deviation, Minimum and Maximum Value. The sources and description of the variables can be found in Table F.1.

Table F.3: Child benefit and support for PiS: one-child-households in the treatment group, survey data

	(1) Vote for PiS	(2) Vote for PiS	(3) Turnout	(4) Turnout
Post-treatment	0.091***	0.078**	0.070*	0.060
period × Treatment group	(0.034)	(0.034)	(0.038)	(0.038)
Ind. characteristics	no	yes	no	yes
Election year FE	no	yes	no	yes
Region FE	no	yes	no	yes
Adj. R-Squared	0.03	0.05	0.01	0.04
N	3240	3240	3240	3240

Notes: Table presents difference-in-differences estimation of the effect of the child benefit on voting for PiS and turnout. The binary treatment group variable equals one for respondents living in households with at least one member under the age of 18, and equals zero for respondents living in households with no members under the age of 18. The pre-treatment period includes the 2007 and 2011 parliamentary elections. The post-treatment period includes the 2019 parliamentary elections. The sample is restricted to respondents aged 25-49. Individual characteristics variables include gender, age and urban/rural area. The sources and descriptions of the variables can be found in Table F.1, and their descriptive statistics can be found in Table F.2.
* p<.10; ** p<.05; *** p<.01

Table F.4: Child benefit and support for PiS: one-child-households excluded, survey data

	(1) Vote for PiS	(2) Vote for PiS	(3) Turnout	(4) Turnout
Post-treatment	0.112***	0.107***	0.081*	0.072*
period × Treatment group	(0.040)	(0.039)	(0.043)	(0.043)
Ind. characteristics	no	yes	no	yes
Election year FE	no	yes	no	yes
Region FE	no	yes	no	yes
Adj. R-Squared	0.03	0.06	0.01	0.04
N	2266	2266	2266	2266

Notes: Table presents difference-in-differences estimation of the effect of the child benefit on voting for PiS and turnout. The binary treatment group variable equals one for respondents living in households with at least two members under the age of 18, and equals zero for respondents living in households with no members under the age of 18. The pre-treatment period includes the 2007 and 2011 parliamentary elections. The post-treatment period includes the 2019 parliamentary elections. The sample is restricted to respondents aged 25-49. Individual characteristics variables include gender, age and urban/rural area. The sources and description of the variables can be found in Table F.1, and their descriptive statistics can be found in Table F.2.
* p<.10; ** p<.05; *** p<.01

Table F.5: Child benefit, support for PiS and turnout: controlling for treatment-specific time trends, survey data

	(1) Vote for PiS	(2) Vote for PiS	(3) Turnout	(4) Turnout
Post-treatment	0.008**		0.009**	
period × Child benefit amount	(0.003)		(0.004)	
Post-treatment		0.094		0.080
period × Treatment group		(0.065)		(0.079)
Year x Treatment Variable	yes	yes	yes	yes
Ind. characteristics	yes	yes	yes	yes
Election year FE	yes	yes	yes	yes
Region FE	yes	yes	yes	yes
Adj. R-Squared	0.06	0.06	0.04	0.04
N	3240	3240	3240	3240

Notes: Table shows difference-in-differences estimation of the treatment-specific time trends of the effect of the child benefit on voting for PiS and turnout. The child benefit amount is imputed based on the number of household members under the age of 18. The binary treatment group variable equals one for households with a non-zero imputed child benefit (households with at least two members under the age of 18), and equals zero for households not eligible for the unconditional cash transfer. The pre-treatment period includes the 2007 and 2011 parliamentary elections. The post-treatment period includes the 2019 parliamentary elections. The sample is restricted to respondents aged 25-49. Individual characteristics variables include gender, age and urban/rural area. The sources and description of the variables can be found in Table F.1 and their descriptive statistics can be found in Table F.2.
* p<.10; ** p<.05; *** p<.01

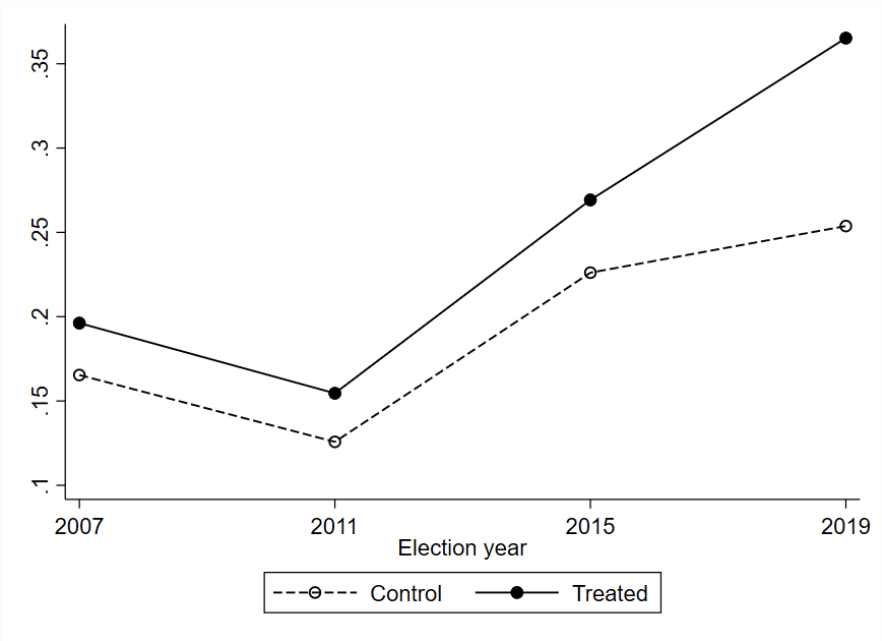

Figure F.1: Vote share for PiS in the treatment and control group, survey data

Notes: Figure shows the vote shares for PiS in the Polish Parliament elections in 2007, 2011, 2015 and 2019, for the treated and control groups, separately. The binary treatment group variable equals one for households with a non-zero imputed child benefit (households with at least two members under the age of 18), and equals zero for households not eligible for the unconditional cash transfer. The sample is restricted to respondents aged 25-49.

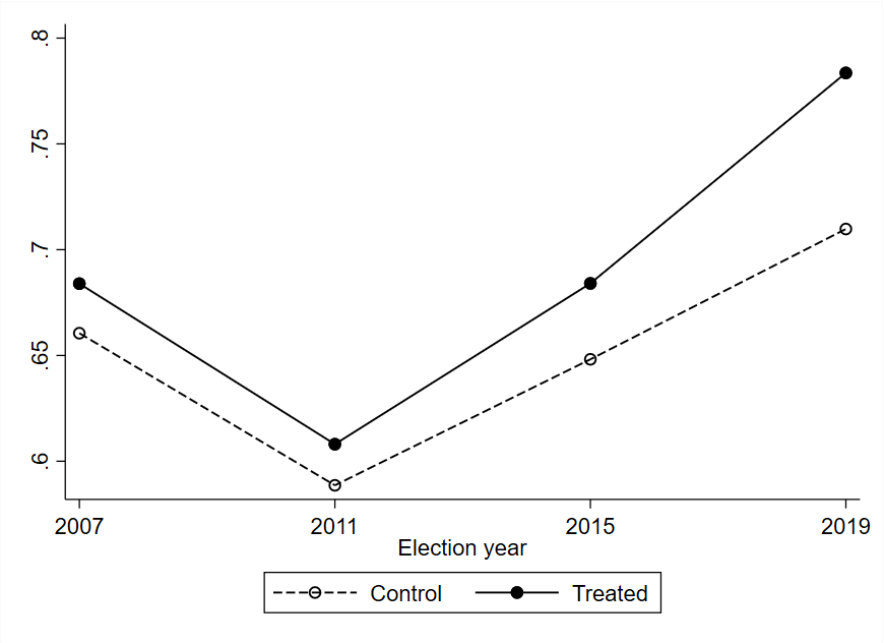

Figure F.2: Voter turnout in the treatment and control group, survey data

Notes: Figure shows turnout in the Polish Parliament elections in 2007, 2011, 2015 and 2019, for the treated and control groups, separately. The binary treatment group variable equals one for households with a non-zero imputed child benefit (households with at least two members under the age of 18), and equals zero for households not eligible for the unconditional cash transfer. The sample is restricted to respondents aged 25-49. The sources and description of the variables can be found in Table F.1.

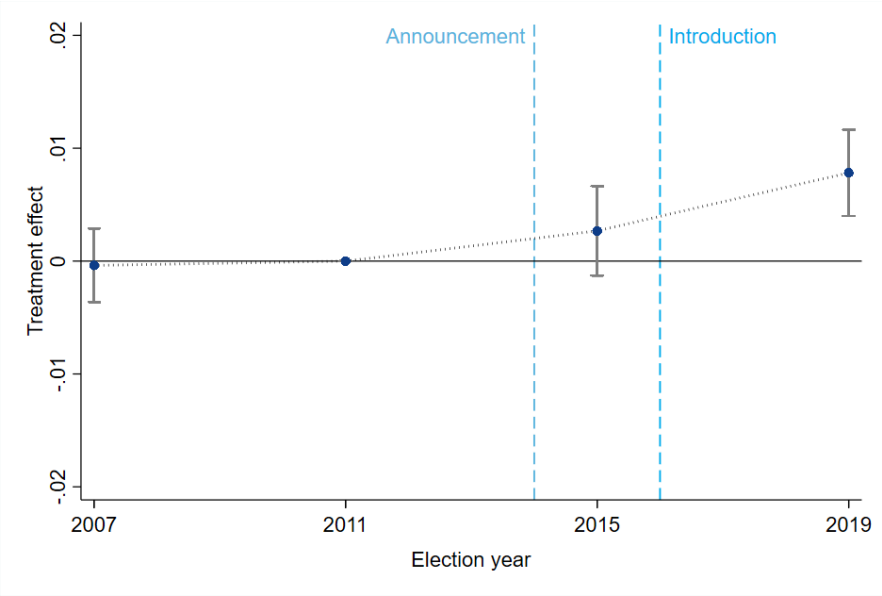

Figure F.3: Leads and lags of the treatment effect: the effects on voting for PiS, survey data

Notes: Figure shows the event-study coefficients from the regression of voting for PiS on the interaction between child benefit amount and election year (reference year: 2011). The child benefit amount is imputed based on the number of household members under the age of 18. The sample is restricted to respondents aged 25-49. We control for gender, age and urban/rural area, as well as region fixed effects (see Table F.1 for the list of control variables). 95% confidence intervals are constructed based on robust standard errors.

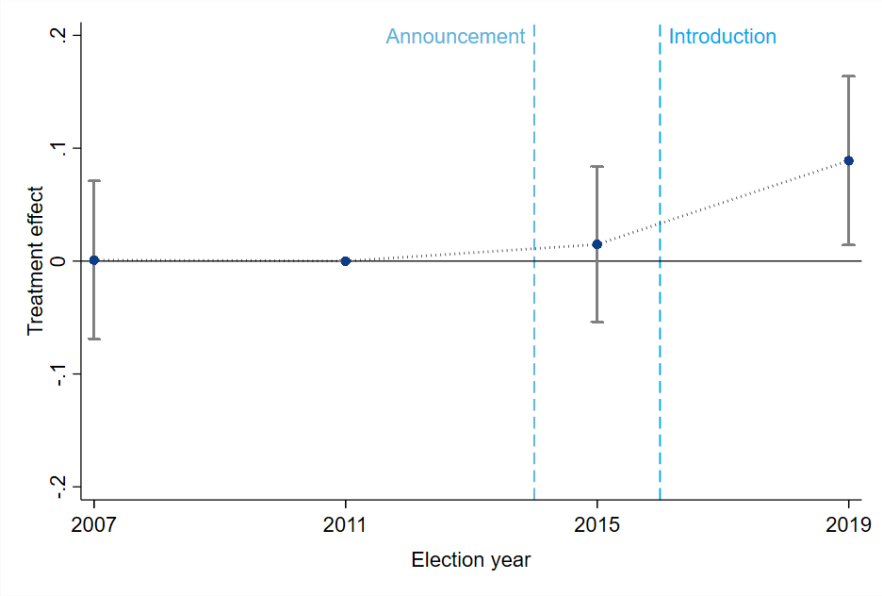

Figure F.4: Leads and lags of the treatment effect: the effects on support for PiS, binary treatment group, survey data

Notes: Figure shows the event-study coefficients from the regression of voting for PiS on the interaction between treatment group and election year (reference year: 2011). The binary treatment group variable equals one for households with a non-zero imputed child benefit (households with at least two members under the age of 18), and equals zero for households not eligible for the unconditional cash transfer. The sample is restricted to respondents aged 25-49. We control for gender, age and urban/rural area, as well as region fixed effects (see Table F.1 for the list of control variables). 95% confidence intervals are constructed based on robust standard errors.

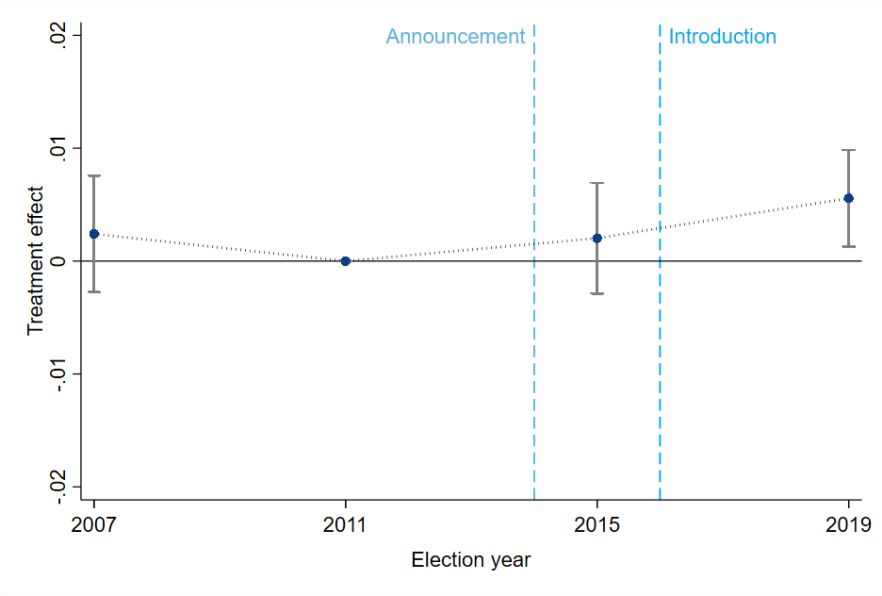

Figure F.5: Leads and lags of the treatment effect: the effects on turnout, survey data

Notes: Figure shows the event-study coefficients from the regression of turnout on the interaction between child benefit amount and election year (reference year: 2011). The child benefit amount is imputed based on the number of household members under the age of 18. The sample is restricted to respondents aged 25-49. We control for gender, age and urban/rural area, as well as region fixed effects (see Table F.1 for the list of control variables). 95% confidence intervals are constructed based on robust standard errors.

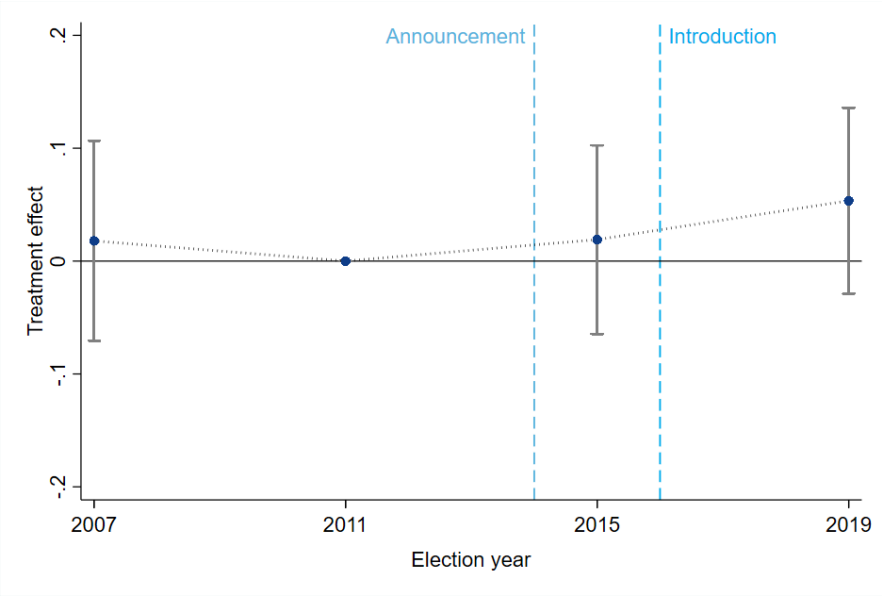

Figure F.6: Leads and lags of the treatment effect: the effects on turnout, binary treatment group, survey data

Notes: Figure shows the event-study coefficients from the regression of turnout on the interaction between treatment group and election year (reference year: 2011). The binary treatment group variable equals one for households with a non-zero imputed child benefit (households with at least two members under the age of 18), and equals zero for households not eligible for the unconditional cash transfer. The sample is restricted to respondents aged 25-49. We control for gender, age and urban/rural area, as well as region fixed effects (see Table F.1 for the list of control variables). 95% confidence intervals are constructed based on robust standard errors.