Parenthood and political engagement

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ABSTRACT

This paper analyzes the impact of parenthood on political engagement using the longitudinal British survey data and a repeated cross-sectional European Social survey. I construct a political engagement measure by applying confirmatory factor analysis to observable indicators of several different aspects of political engagement. Then, I estimate the impact of becoming a parent on political engagement based on an event study around the birth of an individual's first child, using UK data. The results indicate that having children reduces the political engagement of female parents but does not significantly affect the political engagement of male parents. The impact on women is temporary and disappears several years after the birth of their first child. The analysis of the impact of additional children on political engagement suggests that women's political engagement is reduced by the fact of becoming a mother rather than by the number of children. The results are confirmed using repeated cross-sectional data for European regions, controlling for fixed regional characteristics. The policy implications of these findings are discussed.

1. Introduction

Global birth rates and the share of families with children are declining. Worldwide, the average fertility rate has dropped from 3.25 in 1990 to 2.4 in 2019 (according to World Bank data). In the UK, the share of families with dependent children declined from 44.6% in 1996 to 41.6% in 2020 (according to ONS data). In the US, the share of families with children declined from 50% to 40% during the same period (according to US Census data). Public policies are necessary to support parents (Mills et al., 2011) and address economic challenges caused by demographic changes (Harper, 2014). There are concerns about the lack of such public policies (Intergenerational Commission, 2018; Hammer et al., 2018) and the potential feedback on demographics because of a two-way interaction between the structure of the family and political reform (see Doepke and Tertilt, 2016). The question arises as to whether individuals with children have a sufficiently active political position to influence the public agenda. On the one side, parents are particularly concerned about certain policy issues (see, for example, Shrum, 2021). On the other side, the increased time burden of childbearing and childrearing, and the need to provide for a larger family can reduce parents' civic and political engagement (Brady et al., 1995).

The purpose of this paper is to evaluate how becoming a parent shapes individuals' political engagement. To this end, I construct a political engagement measure based on the observable indicators from individual survey responses. I use the constructed measure to estimate the impact of becoming a parent on political engagement in the UK, based on an event study around the birth of individuals' first child, following Kleven et al. (2019). Then, I confirm the results in a different setting, by evaluating the association between the presence of children at home and individual political engagement using repeated cross-sectional data for a sample of European regions.

Related studies have analyzed the impact of parenthood on several separate aspects of political engagement, such as voter turnout (Jennings, 1979; Burns et al., 2021; Wolfinger and Wolfinger, 2008; Bhatti et al., 2019), anticipated political activities (Voorpostel and Coffé, 2012) and attitudes towards social and child-related policies (Elder and Greene, 2012; Banducci et al., 2016). These studies rely on cross-sectional or two-period panel data, where the selection into parenthood and the impacts of parenthood on outcomes are difficult to disentangle. The exception is the study by Dahlgaard and Hansen (2021), who causally identify the effect on voter turnout – one of the components of political engagement – of an additional child due to twinning. This paper contributes to the existing literature in three ways. First, I construct a general political engagement measure by applying confirmatory factor analysis to observable indicators of several different aspects of political engagement, including voter turnout, political interest, individual attachment to a particular party and support for or membership of political groups. Second, I estimate the impact of parenthood on political engagement applying a quasiexperimental approach using UK data. Furthermore, I explore the impact of parenthood on political engagement using repeated cross-sectional data for European regions, controlling for fixed regional characteristics. By so doing, I implicitly take into account regional policies that can affect political engagement or the decision to become a parent. Finally, I evaluate the potential mechanism through which children can affect their parents' political engagement: the lack of time.

The findings of the paper suggest that parenthood does not affect men's political engagement but it does adversely impact women's. This impact is temporary and disappears as children grow. Moreover, it is not the number of children that matters, but rather the simple fact of becoming a parent. These findings call for policy interventions to encourage mothers' political engagement.

The remainder of the paper is organized as follows. Section 2 discusses the measurement of political engagement. Section 3 analyzes the impact of children on their parents' political engagement using UK data and employing an event study around the birth of the first child. Section 4 analyzes the association between the presence of children at home and the respondents' political engagement in the European regions. Section 5 discusses the policy implications of the results. Section 6 concludes.

2. Measuring political engagement

Political engagement is a broad concept with no single agreed-upon meaning (Adler and Goggin, 2005; Alesina and Giuliano, 2011). Synonymous terms used by researchers include political participation, civic engagement, civic participation, and political involvement. It consists of "manifest" activities, such as voting, participation in demonstrations, civic organizations and boycotting, and "latent" participation, such as taking an interest in politics or perceiving that politics is important (Ekman and Amnå, 2012).

For the purposes of this paper, I use individual survey responses to construct the individual political engagement measure based on several forms of "manifest" and "latent" political activity measures. The examples of "manifest" political activity measures used in this study include the participation in elections and participation in political parties' activities on a regular basis. The "latent" measures used in this study are the individual's identification with a particular political party and individual interest in politics.

I use confirmatory factor analysis to estimate the unobserved latent variable political engagement given the vector of observed responses in the form of binary indicators for these political activities. Since all of the observed political engagement components are in the form of binary indicators, and can be interpreted as probabilities, the relationship between the observed components and the latent political engagement is modeled with a logistic function (Mavridis et al., 2007).

In particular, given the vector $Y = \{y_1, ..y_N\}$ of N observed types of political activities ("manifest" and "latent"), denote by $Pr(y_{ij} = 1|\xi_j)$ the probability of individual j claiming participation in activity i conditional on his or her political engagement, the latent variable ξ_j, where ξ_j is assumed to follow a normal distribution. The relationship between these variables is modeled as follows:

$$Pr(y_{ij} = 1|\xi_j) = \frac{1}{1 + e^{-\beta_i - \Lambda\xi_j - \mu_j}}, \tag{1}$$

where $y_{ij} = 1[\beta_i + \Lambda\xi_j + \mu_j + \epsilon_{ij} > 0]$, β_i is an intercept, μ_j is an individual fixed effect, and ϵ_{ij} is the error term.

Model (1) represents a version of the generalized structural equation model that can be estimated by maximum likelihood. Once the model is estimated, the political engagement measure is constructed as a predicted value of the common factor ξ_j.

The description of the underlying data forming the vector Y and the predicted political engagement measures are provided in Sections 3 and 4, for UK and EU regional data, respectively.

3. Parenthood and political engagement: Event study for the UK

I adopt a quasiexperimental approach based on event studies around the birth of the first child, following Kleven et al. (2019), to estimate the impact of children on political engagement in the UK. For this purpose, I use the individual data from a longitudinal survey of British households, combining the British Households Panel Survey and Understanding Society Survey, to obtain the individual panel dataset (referred to as BSS data hereafter) covering the years 1991–2019. I consider the individuals from the survey who become parents and are observed over the interval spanning the four years before having a child, the year of the birth of their child, and the four years after.[2] Some of the individuals in the resulting sample have missing responses in some of the years within that nine-year window. I evaluate the static impact of parenthood on political engagement using the unbalanced panel and the dynamic impact using the balanced data, as explained below. Thus, I analyze the responses of individuals who reside in the UK and whose first child is born between 1995 and 2015. The dataset includes 5180 individuals (2336 men and 2844 women), while the balanced version of the dataset consists of 2124 individuals (1089 men and 1035 women).

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[2] The time window of four years before and four years after is chosen to maximize the number of observations. The results are robust to other time windows.

I construct the individual political engagement measure, predicting the latent common factor ξ after the maximum likelihood estimation of Model (1), controlling for individual fixed effects and clustering errors at the individual level. I use four components of political engagement to construct the vector $Y = \{y_1, y_2, y_3, y_4\}$, based on the individual responses to the following survey questions:

- **[Support party]** *"Generally speaking do you think of yourself as a supporter of any one political party?":* a variable taking the value one if the individual respondent considers him- or herself a supporter of a particular political party, and zero if the individual respondent does not considers him- or herself a supporter of a particular political party.
- **[Polit. interest]** *"How interested would you say you are in politics?":* a variable taking the value one if the respondent states he or she is interested in politics, and zero if he or she is not (the original four-point categorical variable ranging from "not at all interested" to "very interested" has been re-scaled to a binary indicator for the purposes of this estimation).
- **[Voted in elections]** *"Did you vote in this (past) year's general election?":* a variable taking the value one if the individual states he or she voted in the last general elections and zero if the individual states he or she did not; this variable is missing for individuals not eligible to vote; the responses analyzed are restricted to those recorded after the elections, considering the general elections held in 1992, 1997, 2001, 2005, 2010, 2015, and 2017.
- **[Join polit. activities]** *"Whether you are a member or not, do you join in the activities of political parties on a regular basis?":* a variable taking the value one if the individual states he or she joins in the activities of political parties on a regular basis, and zero if he or she does not.

The summary statistics on these variables and the correlation coefficients among the components of political engagement and the estimated political engagement are reported in Table 3 in the Appendix. The correlations between any two components of political engagement vary between 0.0391 and 0.3131, implying that an individual who is not interested in politics might also forgo voting in the elections and not support any particular party. On average, one third of the individuals support some political party and around 66% of individuals participate in general elections. The hypothetical average respondent is not very interested in politics (in other words, the probability that the average respondent is interested in politics is around 40%). The participation in the activities of political parties has a low correlation with the other political engagement components, mainly because only 0.6% of respondents have stated that they participate in such activities.

The results of the estimation of Model (1) with latent overall political engagement are presented in Table 4 in the Appendix. All four components have a significant factor loading, with the individual support of a particular political party and participation in general elections accounting for most of the variation in the political engagement.

I use several control variables that can affect the political engagement. The respondent's age and its square control for the potential impact of age and life-cycle on political engagement (Nie et al., 1974; Smets and Van Ham, 2013). Marital status, a binary variable for individuals who are married or living with a partner, accounts for the fact that married citizens may be motivated to become politically engaged by a politically active spouse (Stoker and Jennings, 1995; Smets and Van Ham, 2013). An indicator of financial difficulties is included to account for the fact that lower income is associated with lower voter turnout (Smets and Van Ham, 2013). Finally, unemployment status is included to account for the fact that the unemployed are more dependent on public policies and may thus be more politically active.

Table 3 in the Appendix reports the descriptive statistics on these individual characteristics. The hypothetical average respondent is thirty years old; 49% of respondents are married or in a civil partnership; only 4.7% of the respondents claim to have financial difficulties; and 2.27% of the respondents report being unemployed.

First, I estimate the average (static) impact of becoming a parent on political engagement, separately for men and women, based on an unbalanced panel of parents (individuals from the survey who become parents and are observed for the interval spanning the four years before having a child and the four years after, during 1991–2019), using the following model:

$$P_{it}^{gn} = \alpha^g C_{it}^g + \sum_k \beta_k^g \mathbf{I}[k = t] + \gamma \mathbf{X_{it}^g} + \mu_i^g + \epsilon_{it}^g, \ g \in \{f, m\}, n \in \{0; N\}, \tag{2}$$

where P_{it}^{gn} denotes political engagement ($n = 0$) or one of its N components, for individual i of gender g in year t; C_{it}^g is a dummy variable taking the value one for the year of the birth of the first child and the four subsequent years, and zero otherwise; $\mathbf{X_{it}^g}$ is the set of controls; μ_i^g is the individual fixed effect; and ϵ_{it}^g is the error term.

Columns (1) and (4) of Table 1 present the results of the estimation of Model (2), where the dependent variable is overall political engagement, for men and women, respectively. The results for the political engagement components are reported in Table 5 in the Appendix. The estimation is performed by OLS controlling for individual and year fixed effects and clustering errors at the individual level (for the political engagement components, which are binary indicators, the logit estimated coefficients are provided as a robustness check in the last row of Table 5). The impact of the birth of the first child on political engagement and all its components is not significant for men. Moreover, the control variables do not contribute significantly to the variation in political engagement and the overall fit of the model is rather poor, with an R-squared being 0.008 in the baseline specification. This suggests that political engagement is very stable for men who become parents. For women, the impact of the birth of their first child significantly reduces their overall political engagement, the probability of supporting a particular party and the probability of participating in elections. In particular, becoming a mother reduces their political engagement in the first four years after the birth of their child by approximately 8% of one standard deviation, compared to the individual political engagement in the four years preceding the birth. Besides, being married, unemployed, or in financial difficulties are associated with the reduction in overall political engagement for women. The overall fit for the baseline specification, measured as within R-squared, is 0.023.

Table 1

Children and political engagement: results from BSS data.

	(1)	(2)	(3)	(4)	(5)	(6)
	Men			Women		
First child born	−0.0027	−0.0017	−0.0018	−0.0823***	−0.0783***	−0.0757***
	(0.0268)	(0.0269)	(0.0270)	(0.0243)	(0.0244)	(0.0243)
Second child		0.0132	0.0117		0.0366	0.0488
		(0.0363)	(0.0377)		(0.0334)	(0.0354)
More than two children			−0.0123			0.138
			(0.0878)			(0.0997)
Age squared	0.0012***	0.0012***	0.0012***	0.00051	0.00049	0.00048
	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Married	−0.0120	−0.0141	−0.0132	−0.155***	−0.159***	−0.162***
	(0.0355)	(0.0359)	(0.0366)	(0.0340)	(0.0342)	(0.0344)
Unemployed	−0.232***	−0.232***	−0.232***	−0.123*	−0.121*	−0.121*
	(0.0721)	(0.0721)	(0.0721)	(0.0688)	(0.0688)	(0.0688)
Financial difficulties	0.0204	0.0199	0.0201	−0.107**	−0.108**	−0.109**
	(0.0567)	(0.0567)	(0.0566)	(0.0448)	(0.0449)	(0.0448)
Constant	−0.490***	−0.482***	−0.484***	−0.309*	−0.293*	−0.280
	(0.179)	(0.181)	(0.182)	(0.177)	(0.178)	(0.178)
Obs.	16,294	16,294	16,294	18,071	18,071	18,071
R-squared	0.008	0.008	0.008	0.023	0.023	0.024
N individuals	2336	2336	2336	2844	2844	2844

Note: The table reports the estimation results for Model (2) based on the BSS sample for men, in Columns (1)–(3), and women, in Columns (4)–(6); year and individual fixed effects are included in all estimations; errors are clustered at individual's level; robust errors in parenthesis.

*Denote significance at 10%.

**Denote significance at 5%.

***Denote significance at 1%.

Using the same sample, I also evaluate the impact of additional children on parents' political engagement. If having children reduces political engagement because of the additional time the parents – especially mothers – devote to childcare (the hypothesis proposed by Brady et al., 1995), more children should result in lower political engagement. In this respect, 12.7% of respondents reported having a second child, and 2.5% reported having more than two children within the four-year window of their first child being born. I reestimate Model (2) by adding a binary indicator for the presence of the second child, and then another binary indicator for the presence of more than two children. Columns (2)–(3) and (5)–(6) of Table 1 report the estimation results, for men and women, respectively. The additional children do not have any significant impact on the political engagement of new parents, either men or women. This finding suggest that it is not the number of children that reduces women's political engagement, but rather the fact of becoming a parent. Intuitively, new mothers have less experience in childrearing and may require a more significant adjustment of time and routine after the birth of their first child, compared to that required after the birth of their second and subsequent children.

Second, I estimate the dynamic impact of becoming a parent on political engagement using a balanced panel of parents observed *every* year for the interval spanning the four years before having their first child and the four years after. For each parent in the dataset, $t = 0$ is the year in which the individual has his/her first child and all other years are indexed relative to that year. Denoting by P_{ist}^g the political engagement for individual i of gender g in year s and at event time t, I run the following regression separately for men and women:

$$P_{ist}^g = \sum_{j \neq -1} \alpha_j^g \mathbf{I}[j = t] + \sum_k \beta_k^g \mathbf{I}[k = s] + \gamma \mathbf{X}_{ist}^g + \epsilon_{ist}^g, \ g \in \{f, m\}, \tag{3}$$

where the first and second terms on the right-hand side represent the whole set of event time dummies and year dummies, respectively, and $\mathbf{X}_{ist}^g$ is a set of individual characteristics used as controls. The event time dummy at $t = -1$ is omitted, implying that the event time coefficients measure the impact of children relative to the year just before the birth of the first child. Specification (3) follows Kleven et al. (2019) and is estimated first without and then with the set of controls $\mathbf{X}_{ist}^g$, which do not affect the results significantly. The individual fixed effects are not included to prevent underidentification (the underidentification problem appears as the fully-dynamic specification cannot distinguish between a linear path in treatment effects and a combination of a time trend and a treatment group-specific effect; see Borusyak and Jaravel, 2017).

The results of the estimation of Model (3) are presented in Fig. 1, for men and women in the left and right panel, respectively. The coefficients on the dummy variables corresponding to each period in the interval from four years before to four years after the child's birth are plotted with the 90% confidence interval.

There is no significant impact of the birth of first child on the political engagement of men. For women, political engagement sharply declines in the year their first child is born, but then returns to the normal level after two periods. The coefficients on periods 0 and 1 dummies are similar in magnitude to the estimates reported in Table 1; specifically, −0.0789 and −0.0702, and significant at 5% and 10%, respectively.

Thus, the analysis based on the UK panel data suggests that parenthood does not significantly alter men's political engagement. Parenthood reduces women's political engagement, but the impact is temporary. In the next section, I reconfirm these findings using the repeated cross-sectional data from the European regions.
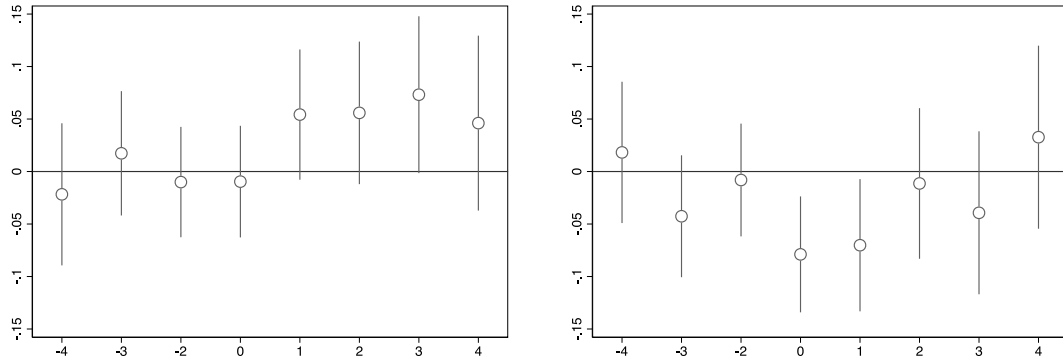
Fig. 1. The impact of the birth of the first child on political engagement: results from BSS data. *Note:* The figure depicts the coefficients on the dummy variables corresponding to each period in the interval from four years before to four years after the year the first child was born with the baseline (omitted) period -1, for men and women in the left and right panel, respectively, based on the OLS estimation of Eq. (3) using the balanced panel of 1089 men and 1035 women, respectively.

4. The presence of children and political engagement in the EU regions

In this section, I reconfirm the results by analyzing the impact of the presence of children at home on the individual political engagement in a repeated cross-sectional dataset of individual respondents from the European regions based on the European Social Survey (referred to as ESS data hereafter). The survey covers the years 2002 to 2019 with around 20,000 respondents per year, on average, and 34 countries and 499 NUTS2 regions. In this survey, the information on the year the first child is born (the main variable used in the analysis of the BSS sample) is available for only four years. However, there is a binary indicator for the presence of children at home, which is available for every year of the survey. This variable is used for the baseline analysis of the association between the presence of children at home and the political engagement of the respondent; the subsample with the data on the birth of the first child will be used for the analysis of the relationship between the presence of children and individual political engagement over time. While this dataset does not allow the estimation of the causal effect of parenthood on political engagement, it can be used to implicitly control for the regional policies that might affect individual political engagement or the decision to become a parent. A number of studies have demonstrated that public policies such as child benefits and free childcare are determinants of women's social involvement (Epple et al., 2015; Van der Lippe et al., 2011). Furthermore, regional public policies can affect people's decision to have children (Egger and Radulescu, 2012). I control for regional, country, and the interaction of country and year fixed effects to account for the potential unobserved factors, including the differences in public policies across regions and countries, that could affect individual political engagement and the decision to have children.

The individual political engagement measure is estimated from Model (1), based on the following political engagement components from the survey. The first three components are identical to the first three components used in the British sample; namely the indicators for support of a political party (**Support party**), interest in politics (**Polit. interest**), and participation in elections (**Voted in elections**). There is no counterpart to the last political engagement component used in the British sample: participation in the activities of political parties, **Join polit. activities**. Instead, there are additional binary indicators of political engagement, taking the value one if the statement is true, and zero otherwise, as follows:

- **[Participate demonstr.]** *"Taken part in lawful public demonstration in the last 12 months"*;
- **[Signed petition]** *"Signed petition in the last 12 months"*;
- **[Contacted politician]** *"Contacted politician in the last 12 months"*;
- **[Worked in polit. group]** *"Worked in political party or action group in the last 12 months"*.

I combine these seven indicators in the vector Y from Model (1) and predict the latent political engagement ξ after the maximum likelihood estimation of Model (1). Table 7 in the Appendix reports the results. The summary statistics, the correlations among the political engagement components, and the estimated measure of political engagement based on the data for 229,144 individuals, 53% of which are women, are reported in Table 6 in the Appendix.

Given that the ESS sample includes all individuals and not just parents, as in the BSS sample, the average age is much higher, at 48.76 years, and the unemployment rate is higher at 4.65%. The political engagement components are positively correlated with correlations ranging from 0.0577 to 0.2887, comparable with the BSS data. The estimated political engagement has the highest correlation with the individual attachment to a particular party and individual interest in politics.

Given the data, I estimate the linear regression, separately for men and women, with the following form:

$$P_{ijst}^g = \alpha_0^g + \sum_m \alpha_{1m}^g \mathbf{I}[m=j] + \sum_p \alpha_{2p}^g \mathbf{I}[p=s] + \sum_k \alpha_{3k}^g \mathbf{I}[k=t] +$$

$$\alpha_{pk}^g \sum_p \sum_k \mathbf{I}[p=s]\mathbf{I}[k=t] + \gamma \mathbf{X}_{ijst}^g + \epsilon_{ijt}^g, \ g \in \{f, m\}, \tag{4}$$

Table 2
Children and political engagement: results from ESS data.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Men			Women		
Children living at home	−0.0007			−0.0603***		
	(0.011)			(0.0126)		
First child's age		−0.0114	−0.0169		−0.0364***	−0.0776***
		(0.0156)	(0.0255)		(0.0116)	(0.0218)
First child's age squared		−9.17e−06	5.52e−05		0.00121*	0.00178**
		(0.0009)	(0.0009)		(0.0007)	(0.0007)
First child's age × Parent's age at birth			0.0002			0.0016**
			(0.0008)			(0.0008)
Age	0.0416***	0.0609**	0.0637**	0.0451***	0.0933***	0.117***
	(0.00261)	(0.0226)	(0.0265)	(0.00193)	(0.0164)	(0.0174)
Age squared	−0.0003***	−0.0004	−0.0005	−0.0004***	−0.0008***	−0.0012***
	(2.57e−05)	(0.0003)	(0.0004)	(2.07e−05)	(0.0002)	(0.0003)
Income 2nd decile	0.0452**	0.125	0.125	0.0448**	0.0763	0.0785
	(0.0218)	(0.134)	(0.134)	(0.0184)	(0.0844)	(0.0846)
Income 3rd decile	0.104***	0.230	0.231	0.102***	−0.0969	−0.0909
	(0.0234)	(0.163)	(0.163)	(0.0211)	(0.0893)	(0.0897)
Income 4th decile	0.158***	0.229	0.230	0.169***	0.107	0.107
	(0.0265)	(0.146)	(0.146)	(0.0217)	(0.0835)	(0.0832)
Income 5th decile	0.219***	0.350***	0.351***	0.219***	0.115	0.113
	(0.0266)	(0.119)	(0.119)	(0.0260)	(0.0686)	(0.0681)
Income 6th decile	0.286***	0.401**	0.401**	0.268***	0.136*	0.135*
	(0.0281)	(0.143)	(0.144)	(0.0268)	(0.0679)	(0.0675)
Income 7th decile	0.358***	0.506***	0.506***	0.314***	0.271***	0.269***
	(0.0316)	(0.134)	(0.134)	(0.0272)	(0.0716)	(0.0718)
Income 8th decile	0.423***	0.582***	0.582***	0.381***	0.287***	0.284***
	(0.0351)	(0.138)	(0.139)	(0.0331)	(0.0745)	(0.0745)
Income 9th decile	0.508***	0.752***	0.752***	0.455***	0.351***	0.346***
	(0.0426)	(0.137)	(0.137)	(0.0382)	(0.0730)	(0.0727)
Income 10th decile	0.564***	0.784***	0.784***	0.517***	0.411***	0.406***
	(0.0405)	(0.136)	(0.136)	(0.0403)	(0.0623)	(0.0620)
Married	0.0336	−0.111	−0.111	0.0008	0.001	0.008
	(0.0207)	(0.136)	(0.137)	(0.016)	(0.075)	(0.074)
Retired	0.165***	0.165	0.168	0.176***	−0.0648	−0.0665
	(0.0183)	(0.200)	(0.195)	(0.0217)	(0.252)	(0.248)
Education	0.369***	0.330***	0.330***	0.354***	0.316***	0.315***
	(0.0234)	(0.0869)	(0.0881)	(0.0214)	(0.0657)	(0.0657)
Employed	0.113***	−0.0447	−0.0451	0.134***	0.0685	0.0655
	(0.0155)	(0.0898)	(0.0902)	(0.0116)	(0.0430)	(0.0426)
Unemployed	0.0667***	−0.0486	−0.0479	0.0874***	0.0988	0.0998
	(0.0215)	(0.182)	(0.181)	(0.0244)	(0.0603)	(0.0607)
Constant	−3.124***	−1.370***	−1.402**	−1.879***	−1.893***	−2.093***
	(0.0771)	(0.476)	(0.504)	(0.0555)	(0.294)	(0.286)
Observations	108,017	4337	4337	121,070	4938	4938
R-squared	0.151	0.210	0.210	0.159	0.230	0.231
F-stat (FE)	22 921.86	9529.38	8921.60	5079.00	1733.47	3889.31

Note: The table reports the estimation results for Model (4) based on the ESS sample, for men, in Columns (1)–(3), and women, in Columns (4)–(6); year, region, country, and country-year fixed effects are included in all estimations; F-stat (FE) reports F-statistics measuring the overall significance of the region, country, and country-year fixed effects; errors are clustered at the country level; robust errors in parentheses.
*Denote significance at 10%.
**Denote significance at 5%.
***Denote significance at 1%.

where P_{ijst}^g is political engagement of individual i of gender g living in region j of country s in year t; $\mathbf{X}_{ijst}^g$ is the set of control characteristics such as age, income, and marital status; and the summation terms represent region, country, year, and the interaction of country and year fixed effects.

Table 2 presents the results of the OLS estimation of Model (4), with robust standard errors clustered at country level, for men and women, in Columns (1) and (4), respectively. The dummy for the presence of children at home is not significant for men and negative and significant for women, suggesting that the presence of children at home is associated with a decline in women's political engagement. In particular, the presence of children at home is associated with a decrease of around 6% of one standard deviation in political engagement. These results are consisted with the findings based on the BSS sample.

The results for the control variables are generally in accordance with the existing studies. Age and its squared term reflect the life-cycle pattern of political engagement; higher income, being a student or being retired are associated with higher political engagement. The last row of Table 2 reports the F-statistics measuring the overall significance of the region, country, and country-year fixed effects; these statistics are significant for all estimations, suggesting that the fixed regional and country differences account for a significant fraction of individual political engagement across European regions.
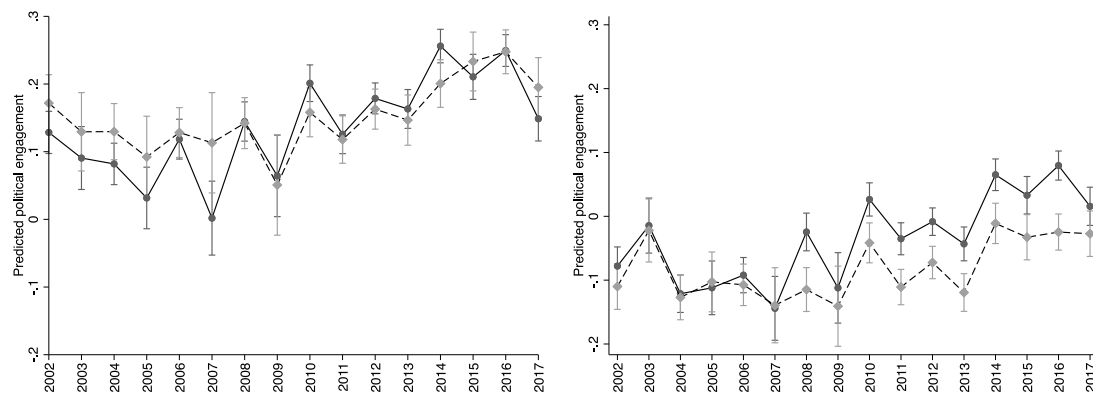
Fig. 2. Predicted political engagement and the presence of children at home: results from ESS data. *Note:* The figure depicts the predicted political engagement based on the predicted margins, and the 95% confidence interval, for men and women, in the left and right panel, respectively, without children, in solid black, and with children, in dashed gray, based on the OLS estimation of Model (4) for 108,017 men and 121,070 women, respectively.

I further evaluate the potential lack-of-time mechanism for the children's impact on political engagement in the ESS sample. If the parents, particularly mothers, experience a decline in their political engagement because of a lack of time, this decline should reverse as children grow older. In four years of the ESS survey, 2006, 2007, 2018, 2019, there is information on the year the first child is born. To evaluate the impact of the child's age on political engagement, I consider a subsample of individuals with children for which the year of the birth of the first child is available. I estimate Model (4) on this subsample (including only individuals with children), replacing the dummy for child with the age of the child and the age squared (where the age of the child is restricted between 0 and 16).

Columns (2) and (4) of Table 2 report the results, for men and women, respectively. For men, the impact of children remains non-significant. For women, the coefficient on the linear term of the first child's age is negative and significant, and the coefficient on its squared term is positive and significant, providing some evidence of the nonlinear relationship between the first child's age and the female carer's political engagement. The tipping point corresponding to the results reported in Column (5) of Table 2 is 15 years, suggesting that, on average, mothers' political engagement decreases until their first child reaches adolescence, at which point it starts increasing. The results from the BSS sample, reported in the previous section, suggest that the impact of the first child on political engagement is much shorter and lasts around two years. Unlike the BSS sample, the ESS sample does not make it possible to control for womens' fixed characteristics. In particular, the individual's age when their first child is born is a fixed characteristic that can affect an individual's political engagement and influence the subsequent social and economic conditions of the parents. For example, more mature first-time parents are likely to have some wealth accumulated whereas the lives of younger new parents are likely to be more disrupted by the birth of their first child.

Therefore, I reestimate the impact of the first child's age on political engagement adding the interaction between the child's birth and parent's age when his or her first child was born. For men, the interaction term is not significant and does not alter the non-significance of the first child's impact on political engagement. The interaction term has a positive and significant coefficient for women and suggests that the relationship between parenthood and political engagement depends on the age on becoming a mother. In particular, for 20-year-old first-time mothers, the predicted tipping point of the first child's age is 12 years old, whereas for first-time mothers who have their first child at 40, the predicted tipping point of the first child's age is 3 years. Moreover, younger mothers experience a much sharper decline in political engagement at the tipping point: the maximum decline is 30% of one standard deviation for 20-year-old first-time mothers and only 2.5% of one standard deviation for 40-year-old first-time mothers. Overall, these estimation results suggest that the negative impact of children on mothers' political engagement is temporary, consistent with the results obtained with the BSS sample.

Finally, I use the estimates of Model (4) to generate the predicted political engagement over time, for individuals with and without children, at average values of individual characteristics. Fig. 2 reports the results, for men and women in the left and right panel, respectively. For men, there is no significant difference in the political engagement between men with and without children living at home; for women, the difference is significant starting from 2007. Both men and women demonstrate increasing political engagement over time. The analysis of the reasons behind this positive trend is outside the scope of this paper, but potential explanations could include the rise of internet use (see Czernich, 2012) combined with the use of social media by political parties (see Dewenter et al., 2019).

5. Policy implications

The results suggest that parenthood does not affect the political engagement of men but it does temporarily reduce the political engagement of women. The policy implications of these findings are related to the existence of the political gender gap documented by various studies: the diverging preferences of men and women regarding the preferred public policies and the underrepresentation of women in politics. Growing evidence suggests that women place relatively greater weight on child welfare and the provision of public goods (Thomas, 1994; Duflo, 2003; Aidt and Dallal, 2008; Miller, 2008; Bhalotra and Clots-Figueras, 2014; Braga and Scervini,

2017) and are more in favor of redistributive policies and larger government (Edlund and Pande, 2002; Edlund et al., 2005; Hicks et al., 2016). At the same time, women are underrepresented in politics (Dal Bó et al., 2017).

Public policies aimed at encouraging the political participation of new mothers could foster political support for welfare and child-related policies. Such public policies have been discussed in the literature and include childhood expenditures and cash benefits to families (Shore, 2020).

Moreover, encouraging the political participation of mothers could have a positive spillover effect by encouraging the political participation of young girls (Arvate et al., 2021). Female leadership influences adolescent girls' career aspirations and educational attainment (Beaman et al., 2012) as well as young girls' intentions to be politically active (Campbell and Wolbrecht, 2006). Therefore, the policies aimed at increasing the political engagement of female parents could eventually increase female representation in politics.

6. Conclusions

This paper analyzed the impact of parenthood on the political engagement of men and women based on longitudinal British survey data and a repeated cross-sectional European Social survey. The estimation methods employed make it possible to evaluate the static and dynamic impact of the birth of the first child on the parents' political engagement; the impact of additional children on political engagement in the British sample; and the association of having children at home or the age of the first child with political engagement in the European regions sample.

The results indicate that children reduce the political engagement of female parents but do not significantly affect the political engagement of male parents. The impact on women is temporary: the results from the British sample suggest that the birth of the first child reduces political engagement in the first couple of years and additional children do not have any significant impact. In the European regions sample, where the individual fixed effects cannot be controlled for, the age of the child is found to have a nonlinear impact on the political engagement of women, with the tipping point depending on the mother's age when her first child is born.

The findings of this paper support the calls for policy interventions aimed at boosting female political engagement, especially that of new mothers.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

Appendix

See Tables 3–7.

Table 3
Descriptive statistics for BSS data.

Variables	(1) Mean	(2) St.dev.	(3) Min	(4) Max
Support party	0.318	0.466	0	1
Polit. interest	0.394	0.489	0	1
Voted in elections	0.658	0.474	0	1
Join polit. activities	0.006	0.074	0	1
Political engagement	−0.028	1.104	−2.285	5.119
Age	29.49	5.683	20	60
Married	0.492	0.500	0	1
Financial difficulties	0.047	0.212	0	1
Unemployed	0.023	0.149	0	1
First child born	0.664	0.472	0	1
Second child	0.127	0.333	0	1
More than two children	0.025	0.156	0	1
Correlations among political engagement components				
	(I)	(II)	(III)	(IV)
(I) Support party	1.0000			
(II) Polit. interest	0.3131	1.0000		
(III) Voted in elections	0.2933	0.2613	1.0000	
(IV) Join polit. activities	0.0890	0.0749	0.0391	1.0000
(V) Political engagement	0.7817	0.6658	0.7058	0.2039

Note: The table reports the descriptive statistics for the political engagement components, the estimated political engagement, and individual characteristics based on the unbalanced panel of 5180 individuals (2336 men and 2844 women) from the British Households and Understanding Society survey during the period 1991–2019; the individual responses span the nine-year interval from four years before to four years after the birth of the first child.

Table 4

Political engagement components and latent political engagement: results from BSS data.

	(1) Polit. engagement	(2) Cons.
Support party	1	−1.219
	(norm.)	(0.043)
Polit. interest	0.673	−0.597
	(0.038)	(0.026)
Voted in elections	0.799	1.289
	(0.045)	(0.034)
Join polit. activities	1.308	−8.379
	(0 .090)	(0.330)
Var(Political engagement)	4.739	
	(0.355)	

Note: The table reports the structural equation Model (1) estimation results for each political component, the coefficients and the standard errors in parentheses; the individual fixed effects are controlled for; the robust standard errors are clustered at individual level; all the coefficients are significant at the 1% significance level.

Table 5

Political engagement components and children: Additional results from BSS data.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Men				Women			
	Support party	Polit. interest	Voted elections	Join polit. activities	Support party	Polit. interest	Voted elections	Join polit. activities
OLS estimation results								
First child born	0.005	−0.007	0.004	0.0003	−0.0230*	−0.0110	−0.0954*	−0.002
	(0.015)	(0.017)	(0.056)	(0.004)	(0.013)	(0.0155)	(0.0506)	(0.003)
Age squared	0.0003	−0.0001	0.0002	2.0e−05	−8.4e−05	−0.0002	−0.0003	−3.6e−05
	(0.0002)	(0.0002)	(0.0004)	(4.3e−05)	(0.0002)	(0.0002)	(0.0004)	(3.4e−05)
Married	0.024	0.030	−0.002	−0.011**	0.005	0.004	0.064	0.008*
	(0.021)	(0.024)	(0.042)	(0.005)	(0.017)	(0.019)	(0.044)	(0.005)
Unemployed	−0.0255	0.0191	0.0401	0.0044	−0.0021	−0.0262	0.0458	−0.0024
	(0.0223)	(0.0285)	(0.0882)	(0.0052)	(0.0223)	(0.0244)	(0.0871)	(0.0031)
Financial difficulties	−0.0009	0.0440*	0.0239	0.00783	0.00197	0.0191	−0.0462	−0.0049
	(0.0195)	(0.0236)	(0.0544)	(0.0063)	(0.0155)	(0.0160)	(0.0572)	(0.0045)
Constant	0.141	0.553***	0.575***	0.00558	0.265***	0.435***	0.705***	0.0156
	(0.102)	(0.1000)	(0.205)	(0.0279)	(0.0849)	(0.0788)	(0.175)	(0.0169)
Obs.	8659	6368	2126	5134	10,110	7459	2475	6106
R-squared	0.009	0.008	0.029	0.005	0.009	0.014	0.031	0.004
N individuals	1615	1476	1415	1573	1953	1770	1691	1897
Logit estimation results (all controls and fixed effects are included)								
First child born	0.0700	−0.0436	0.0501	−0.310	−0.209*	−0.109	−0.889*	−1.431
	(0.133)	(0.179)	(0.471)	(1.750)	(0.124)	(0.175)	(0.479)	(1.257)

Note: The table reports the OLS estimation results (Logit estimation results for the coefficients on the first child dummy in the last row) of Model (2) with the political engagement component stated in the header of the corresponding Column as dependent variable, based on BSS sample for men and women, in Columns (1)–(4) and (5)–(8), respectively; year and individual fixed effects are included in all estimations; robust standard errors clustered at individual level.

*Denote significance at 10%.

**Denote significance at 5%.

***Denote significance at 1%.

Table 6
Descriptive statistics for ESS data.

Variables	(1) Mean	(2) St.dev.	(3) Min	(4) Max
Support party	0.506	0.500	0	1
Polit. interest	0.485	0.500	0	1
Voted in elections	0.791	0.407	0	1
Participate demonstr.	0.072	0.258	0	1
Signed petition	0.149	0.356	0	1
Contacted politician	0.043	0.202	0	1
Worked in polit. group	0.241	0.427	0	1
Polit. engagement	0.054	0.991	−1.617	3.133
Age	48.76	17.64	16	86
Married	0.123	0.328	0	1
Income, decile	5.481	2.696	1	10
Unemployed	0.047	0.211	0	1
Retired	0.260	0.439	0	1
Employed	0.535	0.499	0	1
Studying	0.078	0.268	0	1
Children at home	0.388	0.487	0	1
First child's age	8.456	4.738	0	16
Age at first child's birth	28.98	5.655	16	57

Correlations among political engagement components

	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)
(I) Support party	1.0000						
(II) Polit. interest	0.2862	1.0000					
(III) Voted in elections	0.2787	0.2356	1.0000				
(IV) Participate demonstr.	0.0854	0.1094	0.0577	1.0000			
(V) Signed petition	0.1354	0.1843	0.1087	0.2800	1.0000		
(VI) Contacted politician	0.1310	0.1807	0.1081	0.1465	0.2122	1.0000	
(VII) Worked in polit. group	0.1354	0.1484	0.0765	0.2064	0.1578	0.2879	1.0000
(VIII) Polit. engagement	0.6183	0.6608	0.5593	0.3735	0.4988	0.5010	0.4630

Note: The table reports the descriptive statistics for the political engagement components, the estimated political engagement, and individual characteristics, based on the repeated cross-sectional data of 229,087 individual responses from the European Social Survey covering the years 2002–2019.

Table 7
Political engagement components and latent political engagement: results from ESS data.

	(1) Polit. engagement	(2) Cons.
Support party	1	−0.081
	(norm.)	(0.005)
Polit. interest	1.118	−0.226
	(0.011)	(0.005)
Voted in elections	1.054	1.655
	(0.010)	(0.008)
Participate demonstr	1.010	−3.222
	(0.012)	(0.013)
Signed petition	0.087	−1.524
	(0.009)	(0.006)
Contacted politician	1.070	−2.341
	(0.011)	(0.009)
Worked in polit. group	2.031	−5.529
	(0.028)	(0.044)
Var(Polit. engagement)	1.660	
	(0.022)	

Note: The table reports the structural equation Model (1) (without fixed effects) estimation results, the coefficients and the standard errors in parentheses; all the coefficients are significant at the 1% significance level.

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