

1150 2021

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The Role of Personality for Gender Gaps in Political Interest and Activity

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ISSN: 1864-6689 (online)

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THE ROLE OF PERSONALITY FOR GENDER GAPS IN POLITICAL INTEREST AND ACTIVITY*

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October 2021

* This study was preregistered at the Open Science Framework on October 25, 2020, prior to data analysis: https://osf.io/7b4w8?view_only=5c13f4b54547403f946595885800a178.

I thank Johannes Mellein, who had the original idea for this study.

ABSTRACT

Women have been found to be, on average, less interested in politics and less politically active than men, which might reduce the representation of women's interests in a democracy. In order to enhance the understanding of these gender gaps, this preregistered study analyzes the role of personality differences for gender gaps in political interest and activity. I use a large representative sample of the adult population in Germany for the analysis. First, I replicate the findings that women tend to have lower scores in political interest and activity and that these gaps are not fully explained by demographic, situational, and structural factors. Second, I find that the remaining gender gaps in political interest and activity are, overall, not significantly explained by gender differences in personality. However, gender differences in some specific personality traits partially explain the political gender gaps: Women's higher average agreeableness contributes to the gender gap in political interest, and women's higher average conscientiousness contributes to the gender gap in political activity.

Keywords: gender, personality, political activity, political engagement, political interest, politics

Political interest (i.e., interest in political issues) facilitates citizens' informed choices as voters. Moreover, political interest positively predicts political activity, such as participating in a political party or campaign (Coffé & Bolzendahl, 2010; Coffé & Dilli, 2015; Fukuzawa & Inamasu, 2020; Verba et al., 1997). Political activity facilitates the representation of one's own interests in the political domain (Coffé & Bolzendahl, 2011; Verba et al., 1997). Therefore, political interest and activity are important elements of any democratic system that adheres to all of its citizens' rights and interests (Coffé & Bolzendahl, 2011; Coffé, 2013; Coffé & Bolzendahl, 2010; Coffé & Dilli, 2015; Schlozman et al., 1995).

Although gender differences in voter turnout have vanished from many Western countries (Coffé & Bolzendahl, 2010; Schlozman et al., 1995), women across countries have been found to be, on average, less politically interested and less politically active with respect to party membership, collective political action, and political contact compared to men (e.g., Beauregard, 2016; Coffé & Bolzendahl, 2011; Coffé & Bolzendahl, 2010; Coffé & Dilli, 2015; Paxton et al., 2007; Schlozman et al., 1995; Verba et al., 1997; Wen et al., 2013). These disparities might lead to weaker governmental responsiveness to women's (compared to men's) interests and needs (Coffé & Bolzendahl, 2010; Verba et al., 1997).

The present study aims to explain gender gaps in political interest and activity and investigates in particular the role of personality in this matter. Previous empirical research on explanations of gender gaps in political interest and activity has largely focused on the role of situational and structural factors and has mostly neglected the role of personality factors, except for the construct of "political efficacy" (e.g., Verba et al., 1997). In the present study, I include a broad range of personality factors: the Big Five personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism as well as locus of control, self-esteem, and risk

aversion. I argue that these personality factors are likely to explain at least a part of the gender gaps in political interest and activity, since these factors might be associated with gender and also with political interest and activity.

For the analysis, I use a large representative sample of the adult population in Germany and apply multivariate structural equation models (SEM). First, I investigate gender gaps in political interest and activity, using a regression analysis. In line with previous literature, I find that women are on average less politically interested and less politically active than men and that these raw gender gaps largely remain if demographic, situational, and structural factors are held constant. Second, I investigate the role of personality for the remaining gender gaps, using SEM mediation analyses. I find that gender differences in personality do, overall, not significantly explain the gender gaps in political interest and activity. However, women tend to score significantly higher in agreeableness, which contributes to their lower political interest, and significantly higher in conscientiousness, which contributes to their lower political activity.

EXPLAINING GENDER GAPS IN POLITICAL INTEREST AND ACTIVITY

Several explanations for women's lower average political interest and activity have been proposed and empirically supported in previous literature. One set of explanations are "situational" factors, such as marital status, children at home, and employment status (e.g., Bennett & Bennett, 1989; Verba et al., 1997). Another set of explanations are "structural" factors (or "resources"), which reflect individuals' socioeconomic status and are measured by such variables as income and education level (e.g., Beaugard, 2016; Bennett & Bennett, 1989; Coffé, 2013; Coffé & Bolzendahl, 2010; Coffé & Dilli, 2015; Verba et al., 1997). The reasoning behind the latter set of explanations is that financial resources and human capital might be needed for some forms of active political engagement, especially when running for office (e.g.,

Paxton et al., 2007). However, according to previous empirical literature, differences in situational and structural factors do not fully explain gender gaps in political interest and activity (e.g., Coffé, 2013; Coffé & Bolzendahl, 2010; Coffé & Dilli, 2015; Verba et al., 1997).

The role of personality factors for gender gaps in political interest and activity has received less attention so far. An exception is the construct of “political efficacy”, which describes the feeling and belief that an individual her- or himself can have an impact on political processes (Campbell et al., 1954: 187). Lower average values in political efficacy have been shown to partially explain women’s lower political interest and activity (Beauregard, 2016; Bennett & Bennett, 1989; Coffé, 2013; Coffé & Bolzendahl, 2010; Verba et al., 1997; Wen et al., 2013).

The present study contributes to the literature by explaining gender gaps in political interest and activity with a more extensive set of personality factors than used in previous studies. I follow a broad conceptualization of personality, including not only core personality traits (a comprehensive measure of people’s thinking, feeling, and acting) but also self-related schemata and motives (Kandler et al., 2014). In particular, I include the Big Five personality traits, locus of control, self-esteem, and risk aversion as personality factors in this study. Including these personality factors together in one study, while considering factors other than personality as well (including situational factors and structural factors), facilitates a more comprehensive understanding of the gender gaps than that achieved so far. I note that this is also one of the few studies to explain gender gaps in political interest and activity specifically in Germany (Fukuzawa & Inamasu, 2020 present data on the gender gap in political activity—in particular, protest activity—in Germany, considering locus of control but no other personality factors).

THEORETICAL CONSIDERATIONS AND PREVIOUS LITERATURE ON THE ROLE OF PERSONALITY FOR GENDER GAPS IN POLITICAL INTEREST AND ACTIVITY

In this section, I first describe the personality factors that are included in the present study. Then I describe, referring to previous empirical literature, how gender might be associated with these personality factors and how these personality factors might in turn be associated with political interest and activity. On this basis, I sketch the relationship between gender, personality, and political interest and activity, which leads to two hypotheses on the role of personality for gender gaps in political interest and activity.

Description of Personality Factors

The Big Five personality traits are a comprehensive measure of individuals' core personality traits, i.e., their relatively persistent tendencies in thinking, feeling, and acting (P. T. Costa & McCrae, 1992; Kandler et al., 2014). The following five traits are distinguished in the Big Five model: openness (i.e., how original and open to experiences a person is), conscientiousness (i.e., how diligent and thorough a person is working), extraversion (i.e., how outgoing and communicative a person is), agreeableness (i.e., how trusting and sensitive a person is toward others), and neuroticism (i.e., how emotionally unstable and nervous a person is).

Locus of control and self-esteem are two elements of the "core self-evaluations", i.e., fundamental evaluations of individuals about themselves, in particular about their ability to deal with different life situations (Judge et al., 1997; Judge et al., 1998). Locus of control describes to what extent one believes that one can control one's own life and its outcomes (Rotter, 1966): A high (or internal) locus of control means that one feels in control of one's own life and its outcomes, while a low (or external) locus means that one feels more dependent on external influences. Self-esteem describes whether and to what extent one has a positive attitude toward oneself (Rosenberg, 1965).

The constructs of locus of control and self-esteem are theoretically related to the construct of political efficacy: Those people who tend to believe that they can control the outcomes of their life and who have a more positive self-view should also assess their chances of influencing political processes more positively (Bennett & Bennett, 1989). In fact, political efficacy is a part of locus of control according to the Rotter (1966) scale, and descriptive evidence supports a positive relationship between self-esteem and political efficacy (Carmines, 1978).

Risk aversion describes people's tendency to avoid risks. It is a well-established construct in economics (e.g., Arrow, 1965; Holt & Laury, 2002; Pratt, 1964).

Gender and Personality

Previous empirical research has found significant associations between gender and the Big Five personality traits. According to meta-studies, the most consistent findings are that, on average, women score higher than men in agreeableness and neuroticism (P. T. Costa, Jr. et al., 2001; Lippa, 2010; Weisberg et al., 2011).

With respect to locus of control, empirical findings generally suggest that women tend to score overall lower (i.e., tend to have a more external locus) than men (Sherman et al., 1997). Regarding self-esteem, empirical research generally finds slightly lower average values among women compared to men, as well (Kling et al., 1999).

Risk aversion has been found to be more pronounced on average among women than among men in most empirical studies (Croson & Gneezy, 2009).

Personality and Political Interest and Activity

The Big Five personality traits have been found to be related to political interest and activity. In particular, openness and extraversion have been found to be positive predictors and neuroticism to be a negative predictor of political interest; however, being female was associated

with lower average political interest even when controlling for the Big Five (Gerber, Huber, Doherty, & Dowling, 2011). With regard to political activity, openness and extraversion have typically been found to be positive predictors (Gerber, Huber, Doherty, Dowling, et al., 2011; Ha et al., 2013; Mondak et al., 2010; Mondak et al., 2011; Mondak & Halperin, 2008), and the associations between gender and political activity were mostly insignificant when accounting for the Big Five (Gerber, Huber, Doherty, Dowling, et al., 2011; Ha et al., 2013; Mondak et al., 2011).

Higher (internal) locus of control has been found to be positively related to political activity (Deutchman, 1985; Fukuzawa & Inamasu, 2020; Rosen & Salling, 1971), and being female was not associated with significantly lower political activity (in particular, protest activity) if locus of control and political interest were held constant (Fukuzawa & Inamasu, 2020). Descriptive data also suggest a positive correlation between self-esteem and political interest (Rosenberg, 1962). Empirical results further suggest that self-esteem is positively related to political activity (Pancer et al., 2007).

While research on the associations of political interest and activity with locus of control and self-esteem is limited, it is well established that the related construct of political efficacy predicts political interest and activity. Political efficacy has been found to be a positive predictor of political interest; nevertheless, when political efficacy was held constant, being female was still—although to a smaller extent—associated with lower political interest (Coffé, 2013). Political efficacy has also been found to be positively related to political activity (Beauregard, 2016; Bennett & Bennett, 1989; Coffé & Bolzendahl, 2010; Verba et al., 1997; Wen et al., 2013); however, being female was mostly associated with lower political activity even when accounting for political efficacy (Beauregard, 2016; Coffé & Bolzendahl, 2011; Coffé &

Bolzendahl, 2010), except if political interest and information were additionally held constant (Verba et al., 1997).

Political engagement—especially seeking a political office—is associated with risks (Sweet-Cushman, 2016). For example, people often invest less time in their professional career in order to have the time for political activities, while not knowing whether the political activity will be successful and rewarding for them. Therefore, it is likely that more risk-averse individuals will tend to refrain from political activity, which would imply a negative relationship of risk aversion with political activity.

Hypotheses

On the basis of the described relationships between gender and personality on the one hand and between personality and political interest and activity on the other hand, it is likely that statistical gender differences in personality explain at least a part of the gender gaps in political interest and activity. The structure of this argument is shown in Figure 1.

Insert Figure 1 about here

Specifically, a part of the gender gap in political interest might be explained by neuroticism, since this personality factor has been found to be positively related to being female and negatively related to political interest. Furthermore, the gender gaps in political interest and activity might be explained by locus of control and self-esteem, since these personality factors have been found to be lower among females, on average, and there is some evidence that they may be positive predictors of political interest and activity. Finally, the gender gap in political activity might be explained by risk aversion, as this personality factor has been found to be more pronounced among women and might be a negative predictor of political activity.

Overall, the theoretical considerations and previous literature lead to the following hypotheses:

Hypothesis 1. The gender gap in political interest is at least partially explained by differences in personality.

Hypothesis 2: The gender gap in political activity is at least partially explained by differences in personality.

METHOD

Sample

I use data from the Socio-Economic Panel (SOEP) for the analysis. The SOEP is a large representative longitudinal survey of the adult population in Germany (Goebel et al., 2019). The survey includes such diverse topics as demography, education, occupations, personality, and politics, which makes it highly suitable for the present study. The precise data source of this study is SOEP-Core v35, which includes data from 1984-2018.¹ I use for the analysis the data from 2017, because most of the constructs needed for this study have been assessed in that year. This sample includes 32,485 observations (individuals); no observations are omitted.

Variables

Political interest: Political interest is assessed with the following item: “Generally speaking, how interested are you in politics?”² The variable is measured on a Likert scale from 0 (*disinterested*) to 3 (*very interested*).

¹ <https://doi.org/10.5684/soep-core.v35>.

² The original questionnaire is in German, and I use the official English translations provided by the German Institute for Economic Research, which releases the SOEP data (see Kantar Public, 2018).

Political activity: Political activity is assessed with the following item: “Involvement in a citizens’ group, political party, local government”. Therefore, this variable essentially captures political party membership and collective political action (e.g., Coffe & Bolzendahl, 2011; Coffé & Bolzendahl, 2010). Respondents are asked how often they perform this activity. The original variable is measured on a Likert scale with the possible values 1 (*at least once a week*), 2 (*at least once a month*), 3 (*less often*), and 4 (*never*). Because there are relatively few observations in each of the separate categories 1–3 and because the distances between the variable categories are not equal, I use a dummy variable to assess whether the respondent is politically active at all. This dummy takes the value 0 if the respondent is never politically active (corresponding to the original category 4) and the value 1 if the respondent is at least sometimes politically active (corresponding to the original categories 1, 2, and 3).

Female: Gender is assessed with one item asking for the respondent’s sex (0 = male, 1 = female).³

Demographic factors: I consider demographic factors that are likely to affect political interest or activity and that might also be related to gender. First, respondents’ age (in years) as well as squared age is considered. The survey also assesses whether the respondent holds German citizenship (0 = no, 1 = yes). Two additional dummy variables assess whether the respondent has a migration background (0 = no, 1 = yes): direct migration background and indirect migration background. A direct migration background is assigned if the respondent was not born in Germany and at least one of the following conditions additionally holds: The respondent has not held German citizenship since birth or at least one parent was not born in Germany. An indirect

³ Unfortunately, due to data limitations I am unable to distinguish between sex and gender or to consider additional sexes or genders within this study.

migration background is assigned if the respondent was born in Germany and at least one parent was not born in Germany. The reference category are individuals without migration background. Finally, I assess the federal state of residence with 16 dummy variables for each of the 16 German federal states.

Situational factors: I consider situational factors, whose importance has been demonstrated by previous literature on gender gaps in political interest or activity (e.g., Bennett & Bennett, 1989; Verba et al., 1997). First, a dummy variable assesses whether the respondent is married (0 = no, 1 = yes). Next, the number of children living in the household of the respondent is considered on a metric scale. The employment status is assessed with four dummy variables (0 = no, 1 = yes): full-time employment, part-time employment, marginal employment, and no employment. “No employment” is used as the reference category in the analysis. Finally, I assess whether the respondent is currently enrolled in education or training, using four dummy variables (0 = no, 1 = yes): currently enrolled in general education, currently enrolled in vocational training, currently studying at university, and currently enrolled in further training or retraining. The reference category is currently not being enrolled in education or training.

Structural factors: I also consider structural factors, whose relevance has been shown by previous research on gender gaps in political interest or activity (e.g., Beauregard, 2016; Bennett & Bennett, 1989; Coffé, 2013; Coffé & Bolzendahl, 2010; Coffé & Dilli, 2015; Verba et al., 1997). Household income is considered in terms of monthly net (i.e., after-tax) household income in euros, divided by 100. Education level is considered in terms of the respondent’s highest education level according to her or his CASMIN score (Comparative Analysis of Social Mobility in Industrial Nations; König et al., 1988). Specifically, I use the following four dummy variables to assess the education level (0 = no, 1 = yes): no secondary schooling qualification,

lower or intermediate secondary schooling qualification, upper secondary schooling or vocational qualification, and university degree. “No secondary schooling qualification” is used as the reference category in the analysis.

Big Five personality traits: The Big Five personality traits of openness, conscientiousness, extraversion, agreeableness, and neuroticism are assessed with the validated short German Socio-Economic Panel Big Five Inventory, which consists of 15 items in total (Gerlitz & Schupp, 2005). Although the shortness of the scales comes at the expense of moderate internal consistencies, the short scales are strongly correlated with more comprehensive scales (Hahn et al., 2012). Each personality trait is assessed with three items. An example item for openness is “I am imaginative”, an example item for conscientiousness is “I am somewhat lazy” (reversed item), an example item for extraversion is “I am communicative, talkative”, an example item for agreeableness is “I am considerate and kind to others”, and an example item for neuroticism is “I am relaxed, able to deal with stress” (reversed item). The items are measured on a Likert scale from 0 (*does not describe me at all*) to 6 (*describes me perfectly*). Each personality trait is built as the average of the respective items, and reversed items are inverted beforehand.

Locus of control: Locus of control is assessed with a validated ten-item version (Nolte et al., 1997) of the Rotter (1966) scale. Example items are “How my life goes depends on me” and “If a person is socially or politically active, he/she can have an effect on social conditions”. The variable is measured on a Likert scale from 0 (*disagree completely*) to 6 (*agree completely*). Locus of control is built as the average of the ten items, and reversed items are inverted beforehand. Higher values in locus of control reflect a more internal (vs. external) locus. Because locus of control is not assessed in the 2017 survey, I take, for each individual, the information for that same individual from the 2015 survey.

Self-esteem: Self-esteem is assessed with a single-item measure that has been found to be strongly correlated with an established more extensive measure (Robins et al., 2001). The item is: “I have a positive attitude toward myself”. The variable is measured on a Likert scale from 0 (*does not apply to me at all*) to 6 (*applies to me perfectly*). The information on self-esteem is also taken from the 2015 survey because the construct is not assessed in 2017.

Risk aversion: Risk aversion is assessed with a single-item measure that has been found to be a significant positive predictor of risk-averse behavior in an experiment (Dohmen et al., 2011). The item is: “Are you generally a person who is willing to take risks or do you try to avoid taking risks?” The variable is measured on a Likert scale from 0 (*very willing to take risks*) to 10 (*not at all willing to take risks*).

Each personality factor (i.e., openness, conscientiousness, extraversion, agreeableness, neuroticism, locus of control, self-esteem, and risk aversion) is z-standardized for the analysis to have a mean of 0 and a standard deviation of 1.

Analysis

I use multivariate structural equation modeling (SEM) for the data analysis. Missing values are accounted for with full information maximum likelihood (FIML) estimation, where information from all observations is used to estimate the parameters of the models (C. K. Enders, 2001; C. Enders & Bandalos, 2001). In order to ensure representativeness of the analyses, sampling weights for participation in the 2017 survey are always included: Individuals with characteristics that are underrepresented in the sample relative to the population are given a larger weight and vice versa, so that sample distributions match population distributions. The weights have been provided by the SOEP dataset.

In the first step, I use an SEM regression analysis to determine the gender gaps in political interest and activity. I analyze raw gender gaps by regressing each dependent variable—political interest and political activity—on being female. Then, I add explanatory factors that have commonly been considered in previous research to the models: demographic factors (age, age squared, German citizenship, migration background, and federal state of residence), situational factors (married, children in household, employment status, and currently enrolled in education or training), and structural factors (household income and education level).

In the second step, I use SEM mediation analyses to determine whether and how the remaining gender gaps in political interest and activity are explained (i.e., mediated) by gender differences in personality factors (i.e., openness, conscientiousness, extraversion, agreeableness, neuroticism, locus of control, self-esteem, and risk aversion). These mediation analyses test Hypothesis 1 and Hypothesis 2.⁴

RESULTS

Descriptive Statistics

Table 1 presents means and standard deviations of the variables used in the analysis. On average, women report significantly lower values of political interest (difference of -0.28 points on the four-point Likert scale, $p < .001$) and political activity (difference of -4 percentage points,

⁴ In the preregistration of this study, I planned to use bootstrapping to determine the statistical significance of the mediation effects. However, since bootstrapping could not be combined with sampling weights, I use SEM mediation analyses with Sobel standard errors instead of bootstrapping. Separate regression results for the relationship between gender and personality as well as for the relationships between gender and political interest and activity, controlling for personality factors, are available in the Appendix.

$p < .001$) than men. There are also some gender differences in demographic factors: Women are on average slightly older, are more likely to hold German citizenship, and less likely to have a direct migration background than men. Regarding situational factors, women are slightly less likely to be married, they have on average more children in the household, are less likely to be employed full-time, more likely to be either employed part-time, marginally, or not at all, and less likely to be enrolled in a vocational training or university program. With respect to structural factors, women are less likely to have no secondary schooling qualification, more likely to have a lower or intermediate secondary schooling qualification, more likely to have an upper secondary or vocational qualification, and less likely to have a university degree than men. Mean differences in personality are as follows: Women tend to be more open, more conscientious, more extraverted, more agreeable, and more neurotic (i.e., emotionally unstable) than men, while they have on average lower values in (internal) locus of control and self-esteem and are more risk-averse than men.

Insert Table 1 about here

Regression Results

Table 2 shows the results of the regression analysis. In Models (1)–(2), I determine raw gender gaps in political interest and activity by regressing each of these variables on the Female variable. Overall, women tend to score 0.30 points lower in political interest on the four-point Likert scale ($p < .001$) and are 4 percentage points less likely to be politically active ($p < .001$) than men. This pattern of results is in line with previous empirical evidence (e.g., Beauregard, 2016; Coffé & Bolzendahl, 2011; Coffé & Bolzendahl, 2010; Coffé & Dilli, 2015; Schlozman et al., 1995; Verba et al., 1997).

Models (3)–(4) control for demographic, situational, and structural factors. When holding these factors constant, the gender gap in political interest slightly changes to -0.28 points ($p < .001$), while the gender gap in political activity remains at -4 percentage points ($p < .001$), meaning that women still tend to score lower in political interest and activity than men. The general finding that there are still such gender gaps in political interest and activity when controlling for demographic, situational, and structural factors is in line with previous empirical evidence (e.g., Coffé, 2013; Coffé & Bolzendahl, 2010; Coffé & Dilli, 2015; Verba et al., 1997). Among the demographic factors, Table 2 shows that holding German citizenship is related to higher political interest, while a direct migration background is related to lower political interest and less political activity. Some situational factors are significantly associated with political interest and activity, as well: Currently being enrolled in a general education or vocational training program is positively related to political interest and activity, and currently studying at university is positively related to political interest, compared to individuals who are currently not enrolled in education or training. These results are consistent with previous empirical evidence that school students tend to be more politically interested than those who have left school (Coffé, 2013). Regarding structural factors, the results in Table 2 show that having an upper secondary schooling or vocational qualification is positively associated with political interest, while a university degree is positively associated with political interest and activity, compared to individuals without a secondary schooling qualification. These results are in line with previous empirical evidence that a higher education level is associated with higher political interest and more political activity (e.g., Beauregard, 2016; Bennett & Bennett, 1989; Coffé & Bolzendahl, 2010; Coffé & Dilli, 2015; Verba et al., 1997).

Insert Table 2 about here

Results of Mediation Analyses

In order to investigate whether personality differences explain the remaining gender gaps in political interest and activity that were shown in Models (3)–(4) of Table 2, I use two SEM mediation analyses, one for political interest and one for political activity. The results of these mediation analyses are shown in Figure 2. Analogously to Models (3)–(4) of Table 2, demographic, situational, and structural factors are held constant in the mediation analyses.

The results of the mediation analyses show that being female is associated with higher openness (0.13 standard deviations, $p < .001$), higher conscientiousness (0.26 standard deviations, $p < .001$), higher extraversion (0.20 standard deviations, $p < .001$), higher agreeableness (0.24 standard deviations, $p < .001$), higher neuroticism (0.35 standard deviations, $p < .001$), lower self-esteem (–0.13 standard deviations, $p < .001$), and higher risk aversion (0.30 standard deviations, $p < .001$) compared to men. These results are similar to previous empirical findings on gender differences in personality factors (P. T. Costa, Jr. et al., 2001; Croson & Gneezy, 2009; Kling et al., 1999; Lippa, 2010; Weisberg et al., 2011).

Regarding political interest, the results in Figure 2 first document a total effect of being female that amounts to –0.28 points on the four-point Likert scale ($p < .001$). This is the effect of being female on political interest when personality factors are not held constant (see Model (3) of Table 2). The indirect effect of being female on political interest, mediated by personality factors, is positive and amounts to 0.02 points ($p = .005$). This indicates that, overall, personality differences do not explain women’s lower political interest but even contribute slightly positively to women’s (compared to men’s) political interest. The results are therefore not in line with Hypothesis 1. The direct effect of being female on political interest (i.e., the effect of being

female when personality factors are held constant) is -0.30 points ($p < .001$) and therefore stronger than the total effect.

However, a closer look at the role of different personality factors reveals a more nuanced picture (see Figure 2). Openness is a positive predictor of political interest (a one standard deviation higher value in openness is associated with a 0.12 points higher political interest on the four-point Likert scale, $p < .001$), which creates a positive indirect effect of being female on political interest, mediated by women's higher openness. Extraversion is a positive predictor of political interest, as well (0.05 points, $p < .001$), which also creates a positive indirect effect of being female on political interest, mediated by women's higher extraversion. Agreeableness is a negative predictor of political interest (-0.02 points, $p = .022$), which leads to a negative indirect effect of being female on political interest, mediated by women's higher agreeableness. Finally, locus of control is positively related to political interest (0.03 points, $p = .003$).

For political activity, the results in Figure 2 first indicate a total effect of being female of -4 percentage points ($p < .001$). This is the effect of being female when personality factors are not held constant (see Model (4) of Table 2). The indirect effect of being female on political activity, mediated by personality factors, is estimated to be 0 percentage points and is statistically insignificant ($p = .676$). This suggests that personality differences do, overall, not explain the gender gap in political activity, and therefore the results do not support Hypothesis 2. The direct effect of being female on political activity (holding personality factors constant) amounts to -4 percentage points ($p < .001$) and is not different from the total effect.

However, a closer look at the different mechanisms again indicates a more nuanced picture. Openness is a positive predictor of political activity (a one standard deviation higher value in openness is related to a 2 percentage points higher probability of political activity, $p < .001$),

which leads to a positive indirect effect of being female on political activity, mediated by women's higher openness. Conscientiousness is a negative predictor of political activity (–1 percentage points, $p = .038$), leading to a negative indirect effect of being female on political activity, mediated by women's higher conscientiousness. Extraversion is positively related to political activity (1 percentage point, $p = .008$), which creates a positive indirect effect of being female on political activity, mediated by women's higher extraversion. Locus of control is also a positive predictor of political activity (1 percentage point, $p = .010$). Finally, self-esteem is a negative predictor of political activity (–1 percentage point, $p = .026$), leading to a positive indirect effect of being female on political activity, mediated by women's lower average self-esteem.

Insert Figure 2 about here

DISCUSSION

Using a large representative sample of the adult population in Germany, I find evidence of lower political interest and less political activity among women compared to men, on average. These raw gender gaps largely remain when controlling for demographic factors (such as age, citizenship, and migration background), situational factors (such as marital status, children in the household, and employment status), and structural factors (household income and education level). The results of mediation analyses indicate that these remaining gender gaps in political interest and activity are, overall, not explained by gender differences in personality factors (openness, conscientiousness, extraversion, agreeableness, neuroticism, locus of control, self-esteem, and risk aversion). In fact, the negative association between being female and political interest would be even slightly stronger if women had the same personality factors as men. Nevertheless, gender differences in some specific personality traits partially explain women's

lower average political interest and activity: Women tend to score higher in agreeableness, which is a negative predictor of political interest, and women tend to score higher in conscientiousness, which is a negative predictor of political activity. Gender differences in agreeableness and conscientiousness therefore contribute to the gender gap in political interest and activity, respectively.

It is somewhat surprising that the personality factors considered in this study do, overall, not explain the gender differences in political interest and activity, especially because the Big Five personality traits are a comprehensive measure of individuals' thinking, feeling, and acting (P. T. Costa & McCrae, 1992; Kandler et al., 2014) and locus of control reflects the belief that one can control the outcomes of one's life, including the belief that one can make a difference in social and political matters (Rotter, 1966). The reason that this set of personality factors does overall not explain gender gaps in political interest and activity is that there are both positive and negative indirect effects that are mediated by personality: Some gender differences in personality contribute to higher political interest or activity among women, and some contribute to lower political interest or activity among women. In particular, gender differences in openness and extraversion contribute to higher political interest of women, and gender differences in openness, extraversion, and self-esteem contribute to higher political activity of women. In contrast, the gender difference in agreeableness contributes to lower political interest of women, and the gender difference in conscientiousness contributes to lower political activity of women. These differing mediation effects of personality largely cancel each other out and even lead to a positive total mediation effect in case of political interest.

The reason that agreeableness is a negative predictor of political interest—which, on average, decreases women's political interest compared to men's—might be that politics is perceived as

competitive and creating conflicts, both of which might not be attractive for highly agreeable individuals. Relatedly, when investigating gender differences in political ambition (i.e., interest in running for a political office), conflict avoidance and lower competitiveness have been found to be explanatory factors (Preece & Stoddard, 2015; Schneider et al., 2016).

It is perhaps more surprising that this study determines conscientiousness to be a negative predictor of political activity, which decreases women's average political activity compared to men's. It is conceivable that more conscientious individuals tend to avoid political activities because they are more thorough in completing other tasks (for example, at school, at work, and in the household).

This study has some limitations due to the availability of variables in the dataset. In particular, I am unable to distinguish different forms of political interest and activity. Previous empirical evidence indicates that men tend to be more interested than women in national and international politics but not in local politics (Coffé, 2013). With respect to political activity, previous evidence indicates that men are more likely to participate in political parties, collective activism (e.g., demonstrations), and political contact activism (e.g., contacting politicians), while women are more likely to participate in private activism, such as signing a petition or donating money (Coffé & Bolzendahl, 2010). The measure of political activity included in the present study focuses on political party membership and collective political action and does not explicitly consider political contact or private activism.

The findings of this study have some implications for research and practice. When trying to explain gender gaps in political interest and activity, broad and general personality factors are not likely overall to play an important role, with some exceptions (namely, agreeableness and conscientiousness). In contrast, highly specific measures such as political efficacy might be more

relevant, since this construct has repeatedly been shown to partially explain women's lower average political interest and activity (Beauregard, 2016; Bennett & Bennett, 1989; Coffé, 2013; Coffé & Bolzendahl, 2010; Verba et al., 1997; Wen et al., 2013). Moreover, since previous empirical research indicates that gender gaps in political ambition are explained by differences in competitiveness, conflict avoidance, and power goals (Preece & Stoddard, 2015; Schneider et al., 2016), such specific factors might also help to explain gender gaps in political interest and activity. Future research might empirically test this possibility.

From a practical point of view, it is not likely that reducing any gender differences in personality would increase women's political interest or activity, since women would not, on average, be more politically interested or active if they had the same personality factors as men. Nevertheless, changes in some particular personality factors might increase women's political interest and activity. Specifically, since women's higher average agreeableness and conscientiousness have been found to be partial explanations for their lower political interest and activity, respectively, the results suggest that a decrease in women's agreeableness and a decrease in their conscientiousness would positively contribute to their political interest and activity and reduce the respective gender gaps. However, personality traits are relatively stable constructs that are difficult to change, especially with increasing age (e.g., Roberts, 2009; Roberts & DelVecchio, 2000). Moreover, any attempts to reduce agreeableness or conscientiousness should be made very carefully, because these personality traits are likely to be beneficial in many life domains (e.g., Graziano & Eisenberg, 1997; Roberts et al., 2014). Nevertheless, the reduction of social status differences and the reduction of differences in the education of girls and boys (including early childhood education) might have the potential to reduce gender differences in personality in the future.

In addition or alternatively to such attempts to change personality, societies and policy leaders might try to change attitudes of their political system so that it fits the personalities of women better than is currently the case. The results of this study suggest that a political atmosphere that rather values agreeableness (vs. disagreeableness and conflict) would be beneficial for women's political interest, and a political environment that is more attractive for highly conscientious individuals would on average increase women's political activity.

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TABLE 1
Means and Standard Deviations in Different Groups

Variables	Operationalization	(1) Females (<i>n</i> ₁ = 16,702)	(2) Males (<i>n</i> ₂ = 15,783)	(3) <i>p</i> -value of mean difference
Dependent variables:				
Political interest	Likert scale (0–3)	1.09 (0.83)	1.37 (0.93)	<.001
Political activity	0 = no, 1 = yes	0.07 (0.25)	0.11 (0.31)	<.001
Demographic factors:				
Age	In years	46.39 (17.25)	45.54 (17.73)	<.001
German citizenship	0 = no, 1 = yes	0.83 (0.37)	0.79 (0.41)	<.001
Migration background: direct	0 = no, 1 = yes	0.23 (0.42)	0.26 (0.44)	<.001
Migration background: indirect	0 = no, 1 = yes	0.07 (0.25)	0.07 (0.25)	.673
Situational factors:				
Married	0 = no, 1 = yes	0.60 (0.49)	0.62 (0.48)	<.001
Number of children in household	Metric	0.92 (1.28)	0.85 (1.28)	<.001
Employed: full-time	0 = no, 1 = yes	0.22 (0.41)	0.46 (0.50)	<.001
Employed: part-time	0 = no, 1 = yes	0.22 (0.42)	0.04 (0.20)	<.001
Employed: marginal	0 = no, 1 = yes	0.07 (0.26)	0.04 (0.19)	<.001
Employed: none	0 = no, 1 = yes	0.49 (0.50)	0.46 (0.50)	<.001
Currently in education: general education	0 = no, 1 = yes	0.02 (0.13)	0.02 (0.13)	.770
Currently in education: vocational training	0 = no, 1 = yes	0.03 (0.17)	0.04 (0.19)	<.001
Currently in education: university studies	0 = no, 1 = yes	0.03 (0.18)	0.04 (0.19)	.020
Currently in education: further training/retraining	0 = no, 1 = yes	0.01 (0.11)	0.01 (0.11)	.450

Variables	Operationalization	(1) Females ($n_1 = 16,702$)	(2) Males ($n_2 = 15,783$)	(3) <i>p</i> -value of mean difference
Structural factors:				
Monthly net household income in €100	Metric	30.62 (81.79)	30.43 (84.42)	.838
Education level: no secondary schooling	0 = no, 1 = yes	0.09 (0.29)	0.11 (0.31)	<.001
Education level: lower or intermediate secondary	0 = no, 1 = yes	0.13 (0.34)	0.12 (0.32)	<.001
Education level: upper secondary or vocational	0 = no, 1 = yes	0.55 (0.50)	0.51 (0.50)	<.001
Education level: university degree	0 = no, 1 = yes	0.22 (0.42)	0.26 (0.44)	<.001
Personality factors:				
Openness	Likert scale (0–6)	3.80 (1.20)	3.69 (1.21)	<.001
Conscientiousness	Likert scale (0–6)	4.87 (0.92)	4.72 (0.99)	<.001
Extraversion	Likert scale (0–6)	4.03 (1.13)	3.87 (1.16)	<.001
Agreeableness	Likert scale (0–6)	4.58 (0.96)	4.39 (1.02)	<.001
Neuroticism	Likert scale (0–6)	3.04 (1.23)	2.51 (1.19)	<.001
Locus of control	Likert scale (0–6)	3.60 (0.69)	3.66 (0.70)	<.001
Self-esteem	Likert scale (0–6)	4.54 (1.36)	4.77 (1.18)	<.001
Risk aversion	Likert scale (0–10)	5.73 (2.53)	4.92 (2.62)	<.001

Notes. Standard deviations in parentheses. Two-sided *t*-tests were used to assess differences in means.

TABLE 2
Regression Results on Gender and Political Interest and Activity

Variables	Raw gender gaps		Controlling for demographic, situational, and structural factors	
	(1) Political interest	(2) Political activity	(3) Political interest	(4) Political activity
Female	-0.30** (0.02)	-0.04** (0.01)	-0.28** (0.02)	-0.04** (0.01)
Demographic factors:				
Age			0.02** (0.00)	0.00** (0.00)
Age squared			-0.00* (0.00)	-0.00* (0.00)
German citizenship			0.11** (0.03)	0.01 (0.01)
Migration background: direct			-0.20** (0.03)	-0.03** (0.01)
Migration background: indirect			0.02 (0.03)	-0.01 (0.01)
Situational factors:				
Married			0.01 (0.02)	0.00 (0.01)
Number of children in household			-0.00 (0.01)	-0.00 (0.00)
Employed: full-time			-0.01 (0.02)	0.00 (0.01)
Employed: part-time			-0.03 (0.03)	0.01 (0.01)
Employed: marginal			-0.06 (0.03)	0.01 (0.01)
Currently in education: general education			0.56** (0.06)	0.06* (0.03)
Currently in education: vocational training			0.13** (0.05)	0.03* (0.01)
Currently in education: university studies			0.43** (0.05)	0.02 (0.02)
Currently in education: further training/retraining			0.12 (0.07)	0.02 (0.03)
Structural factors:				
Monthly net household income in €100			0.00* (0.00)	0.00 (0.00)

Variables	Raw gender gaps		Controlling for demographic, situational, and structural factors	
	(1) Political interest	(2) Political activity	(3) Political interest	(4) Political activity
Education level: lower or intermediate secondary			-0.04 (0.05)	-0.01 (0.02)
Education level: upper secondary or vocational			0.22** (0.05)	0.01 (0.01)
Education level: university degree			0.66** (0.05)	0.07** (0.02)
Constant	1.52** (0.01)	0.11** (0.00)	0.48** (0.08)	-0.03 (0.03)
Observations	32,485	32,485	32,485	32,485
R-squared	0.03	0.00	0.18	0.02

Notes. Multivariate structural equation models with full-information maximum likelihood. The dependent variable in models (1) and (3) is political interest (Likert scale from 0 to 3), and the dependent variable in models (2) and (4) is political activity (dummy variable). The reference category for migration background is no migration background, the reference category for employment status is no employment, the reference category for currently enrolled in education or training is currently not enrolled in education or training, and the reference category for education level is no secondary schooling qualification. Models (3)–(4) also include dummies for federal state of residence. Sampling weights included in all models. Robust standard errors in parentheses. ** $p < .01$. * $p < .05$.

FIGURE 1

Structure of Hypothesized Relationships

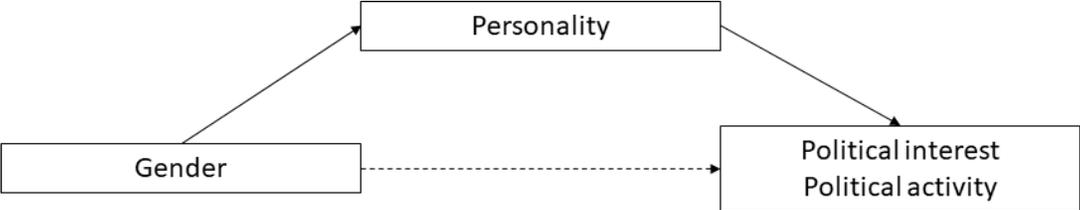
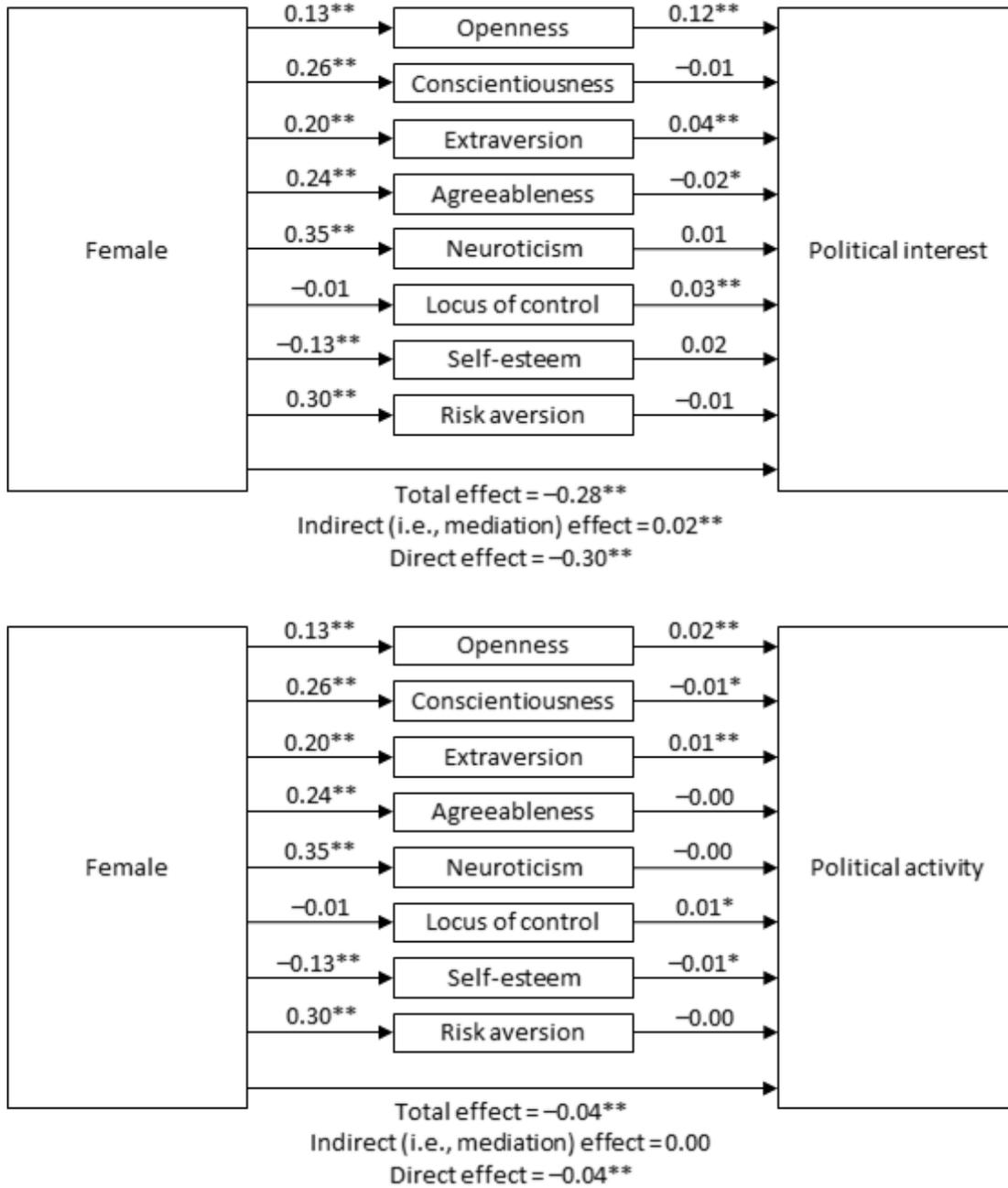


FIGURE 2

Results of Mediation Analyses on Gender, Personality, and Political Interest and Activity



Notes. Mediation analyses with multivariate structural equation models and full-information maximum likelihood. Political interest measured on a Likert scale from 0 to 3. Political activity is a dummy variable. All mediators (personality factors) z-standardized. Both analyses control for demographic factors (age,

age squared, German citizenship, migration background, and federal state of residence), situational factors (married, children in household, employment status, and currently enrolled in education or training), and structural factors (household income and education level). Sampling weights and robust standard errors used in both analyses. $**p < .01$. $*p < .05$.

APPENDIX

TABLE A.1

Regression Results on Gender and Personality

Variables	(1) Openness	(2) Conscientiousness	(3) Extraversion	(4) Agreeableness	(5) Neuroticism	(6) Locus of control	(7) Self-esteem	(8) Risk aversion
Female	0.13** (0.02)	0.26** (0.02)	0.20** (0.02)	0.24** (0.02)	0.35** (0.02)	-0.01 (0.02)	-0.13** (0.02)	0.30** (0.02)
Demographic factors:								
Age	0.02** (0.00)	0.02** (0.00)	-0.00 (0.00)	-0.01** (0.00)	-0.00 (0.00)	-0.02** (0.00)	-0.00 (0.00)	0.00 (0.00)
Age squared	-0.00** (0.00)	-0.00** (0.00)	0.00 (0.00)	0.00** (0.00)	-0.00 (0.00)	0.00** (0.00)	0.00* (0.00)	0.00 (0.00)
German citizenship	-0.02 (0.04)	-0.04 (0.04)	-0.02 (0.04)	-0.06 (0.04)	0.10* (0.04)	0.04 (0.06)	-0.12* (0.06)	-0.08* (0.04)
Migration background: direct	0.08* (0.04)	0.13** (0.03)	0.02 (0.04)	0.10** (0.04)	0.13** (0.04)	-0.12* (0.05)	0.14** (0.05)	-0.04 (0.03)
Migration background: indirect	0.11** (0.04)	-0.07 (0.04)	0.06 (0.04)	-0.01 (0.04)	0.03 (0.04)	0.01 (0.05)	0.15** (0.05)	-0.10** (0.03)
Situational factors:								
Married	-0.04 (0.02)	0.11** (0.02)	0.01 (0.02)	-0.04 (0.02)	0.09** (0.02)	-0.02 (0.03)	-0.03 (0.03)	0.03 (0.02)
Number of children in household	-0.01 (0.01)	0.05** (0.01)	0.05** (0.01)	0.05** (0.01)	-0.06** (0.01)	0.04** (0.01)	0.06** (0.01)	0.02 (0.01)
Employed: full-time	-0.05* (0.03)	0.31** (0.03)	0.12** (0.03)	-0.06* (0.03)	-0.28** (0.03)	0.23** (0.04)	0.15** (0.03)	-0.12** (0.02)
Employed: part-time	-0.04 (0.03)	0.16** (0.03)	0.08** (0.03)	0.00 (0.03)	-0.19** (0.03)	0.19** (0.04)	0.13** (0.04)	-0.02 (0.03)

Variables	(1) Openness	(2) Conscientiousness	(3) Extraversion	(4) Agreeableness	(5) Neuroticism	(6) Locus of control	(7) Self-esteem	(8) Risk aversion
Employed: marginal	-0.00 (0.04)	0.08 (0.04)	0.03 (0.04)	0.02 (0.04)	-0.03 (0.04)	-0.05 (0.05)	0.15** (0.05)	-0.05 (0.04)
Currently in education: general education	0.29** (0.09)	-0.41** (0.09)	0.10 (0.09)	-0.18 (0.10)	-0.34** (0.09)	0.53* (0.21)	0.06 (0.23)	-0.30** (0.07)
Currently in education: vocational training	0.21** (0.05)	0.05 (0.06)	0.06 (0.06)	0.04 (0.06)	0.02 (0.06)	0.12 (0.09)	0.13 (0.09)	-0.17** (0.05)
Currently in education: university studies	0.17** (0.06)	-0.08 (0.06)	-0.02 (0.06)	0.14** (0.05)	-0.07 (0.05)	0.27** (0.07)	0.08 (0.06)	0.00 (0.05)
Currently in education: further training/retraining	0.20* (0.08)	0.08 (0.07)	0.06 (0.07)	0.14 (0.08)	-0.04 (0.08)	-0.00 (0.10)	0.08 (0.10)	-0.11 (0.07)
Structural factors:								
Monthly net household income in €100	0.00** (0.00)	0.00 (0.00)	0.00** (0.00)	-0.00 (0.00)	0.00 (0.00)	0.00** (0.00)	0.00** (0.00)	-0.00 (0.00)
Education level: lower or intermediate secondary	-0.08 (0.07)	0.03 (0.06)	-0.05 (0.06)	-0.04 (0.07)	-0.02 (0.06)	0.15 (0.09)	0.06 (0.09)	-0.04 (0.06)
Education level: upper secondary or vocational	0.12 (0.06)	0.03 (0.06)	0.04 (0.05)	-0.09 (0.06)	-0.13* (0.05)	0.40** (0.09)	0.19* (0.08)	-0.10 (0.05)
Education level: university degree	0.35** (0.06)	-0.10 (0.06)	-0.03 (0.05)	-0.06 (0.07)	-0.27** (0.06)	0.72** (0.09)	0.16 (0.08)	-0.11* (0.05)
Constant	-0.56** (0.11)	-1.10** (0.11)	-0.10 (0.10)	-0.00 (0.11)	0.29** (0.10)	-0.31* (0.15)	-0.48** (0.15)	-0.27** (0.09)
Observations	32,485	32,485	32,485	32,485	32,485	32,485	32,485	32,485
R-squared	0.04	0.08	0.03	0.04	0.07	0.27	0.06	0.08

Notes. Multivariate structural equation models with full-information maximum likelihood. In each model, the dependent variable is a z-standardized personality factor. The reference category for migration background is no migration background, the reference category for employment status is no employment, the reference category for currently enrolled in education or training is currently not enrolled in education or

training, and the reference category for education level is no secondary schooling qualification. Dummies for federal state of residence as well as sampling weights included in all models. Robust standard errors in parentheses. $**p < .01$. $*p < .05$.

TABLE A.2

Regression Results on Gender and Political Interest and Activity, Controlling for

Personality Factors

Variables	(1) Political interest	(2) Political activity
Female	-0.30** (0.02)	-0.04** (0.01)
Demographic factors:		
Age	0.02** (0.00)	0.00** (0.00)
Age squared	-0.00 (0.00)	-0.00* (0.00)
German citizenship	0.11** (0.03)	0.01 (0.01)
Migration background: direct	-0.20** (0.03)	-0.03** (0.01)
Migration background: indirect	-0.00 (0.03)	-0.01 (0.01)
Situational factors:		
Married	0.01 (0.02)	0.01 (0.01)
Number of children in household	-0.00 (0.01)	-0.00 (0.00)
Employed: full-time	-0.01 (0.02)	0.00 (0.01)
Employed: part-time	-0.03 (0.03)	0.01 (0.01)
Employed: marginal	-0.06 (0.03)	0.01 (0.01)
Currently in education: general education	0.50** (0.06)	0.05 (0.03)
Currently in education: vocational training	0.10* (0.05)	0.03 (0.01)
Currently in education: university studies	0.41** (0.04)	0.02 (0.02)
Currently in education: further training/retraining	0.10 (0.07)	0.02 (0.03)
Structural factors:		
Monthly net household income in €100	0.00 (0.00)	-0.00 (0.00)
Education level: lower or	-0.04	-0.01

Variables	(1) Political interest	(2) Political activity
intermediate secondary	(0.05)	(0.02)
Education level: upper secondary or vocational	0.19** (0.05)	0.01 (0.02)
Education level: university degree	0.59** (0.05)	0.06** (0.02)
Personality factors:		
Openness	0.12** (0.01)	0.02** (0.00)
Conscientiousness	-0.01 (0.01)	-0.01* (0.00)
Extraversion	0.04** (0.01)	0.01** (0.00)
Agreeableness	-0.02* (0.01)	-0.00 (0.00)
Neuroticism	0.01 (0.01)	-0.00 (0.00)
Locus of control	0.03** (0.01)	0.01* (0.00)
Self-esteem	0.02* (0.01)	-0.01* (0.00)
Risk aversion	-0.01 (0.01)	-0.00 (0.00)
Constant	0.55** (0.08)	-0.02 (0.03)
Observations	32,485	32,485
R-squared	0.21	0.03

Notes. Multivariate structural equation models with full-information maximum likelihood. The dependent variable in model (1) is political interest (Likert scale from 0 to 3), and the dependent variable in model (2) is political activity (dummy variable). The reference category for migration background is no migration background, the reference category for employment status is no employment, the reference category for currently enrolled in education or training is currently not enrolled in education or training, and the reference category for education level is no secondary schooling qualification. All personality factors z-standardized. Dummies for federal state of residence as well as sampling weights included in both models. Robust standard errors in parentheses. ** $p < .01$. * $p < .05$.