What Happens When Working-Class Candidates Run for Office?

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Abstract

Working-class Americans are significantly underrepresented in politics. It is unclear whether this is due to electoral disadvantages or pre-election barriers to entry. To address this question, we collect the full occupational histories from campaign websites for all 8,775 candidates who finished first or second in congressional primaries between 2010 and 2024. Using a difference-in-differences design, we find that when a party nominates a working-class candidate to the general election, it sees a modest decrease of about 0.6 percentage points in its two-party vote share, though the effect is too small to alter more than a few electoral outcomes. However, parity in electoral outcomes does not mean working-class candidates face no disadvantage. We find that they are more ideologically left-wing than their peers, lack elite credentials associated with higher vote shares, raise a smaller share of campaign donations, and attract less support from non-working-class voters. Our findings suggest that while general elections do not filter out working-class candidates, they nonetheless face structural disadvantages that they must overcome to achieve electoral parity.

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"I was an industrial electrician...Why that is important, at least from my perspective, is that you see, you understand things at just a different level because you've been there. I love lawyers...but I don't need 435 lawyers. I want diversity." - Congressman Donald Norcross (D-NJ)[1]

"I tried to contact all my debt collectors, and they don't really give a shit that I lost a very close election...They need their money for my mortgage and my insurance. Most people who run for office probably can take a few months or a year off and lick their wounds and go live on a beach somewhere. But I gotta go back and start welding some iron." - 2024 Senate Candidate Dan Osborne (I-NE) [2]

1 Introduction

Working-class Americans are significantly underrepresented in politics. They constitute a majority of the US population, but just three percent of state legislators and two percent of all members of Congress (Carnes, 2018, 5). The gap between the socioeconomic class of politicians and the public they represent has serious implications for the quality of substantive and symbolic representation. For example, previous research has found that working-class politicians tend to support more left-leaning economic policies (Carnes, 2013; Carnes and Lupu, 2016; O'Grady, 2019), and that executives with elite backgrounds spend less on redistribution and are more likely to enact fiscally conservative policies (Alexiadou, 2022; Borwein, 2022; Kirkland, 2021).

One possible explanation for why there are so few working-class Americans in office is that they are filtered out during elections. Working-class candidates may face voter bias (Simon and Turnbull-Dugarte, 2024), possess fewer traditional "qualifications" (Besley, Montalvo and Reynal-Querol, 2011; Besley and Reynal-Querol, 2011), or encounter structural disadvantages when running a campaign (Carnes, 2018). However, experimental research has found no consistent evidence of electoral penalties for working-class candidates (Abbott and DeVeaux, 2024; Campbell and Cowley, 2014; Carnes and Lupu, 2016; Vivyan et al., 2020). Instead, recent work suggests that they are disproportionately deterred from running in the first place (Carnes, 2018). To date, however, little research has tested the existence of an electoral penalty using observational data. The question remains unresolved: conditional on running, do working-class candidates face disadvantages in elections?

[1] Interview with the Author, August 10, 2024.

[2] https://www.politico.com/news/2024/11/19/dan-osborn-nebraska-working-class-pac-00190316

This question is difficult to answer because of the lack of occupational data on candidates who win and lose elections. To overcome this limitation, we build an original dataset of candidates' class background. We collect the complete occupational history available on campaign websites for all 8,775 candidates who finished first or second in a congressional primary between 2010 and 2024 and classify candidates as working class if at least 25% of their previous jobs were working-class occupations. Beyond data limitations, sorting out whether working-class candidates are more or less likely to lose elections poses methodological challenges. Working-class candidates might be more likely to run in elections where their party tends to do better or worse. But this does not tell us whether working-class candidates themselves face any kind of electoral penalty.

We overcome this problem using a difference-in-difference design to estimate changes in a party's electoral outcomes when it nominates a working-class candidate instead of a non-working-class candidate. The sample includes 2,300 House and Senate general elections over 14 years. This design ensures that any differences we observe arise from the candidates rather than differences in constituency preferences or local conditions. Importantly, this research design is not intended to isolate the "causal effect" of candidate class on electoral outcomes (Bertoli and Hazlett, 2024; Marshall, 2024). Instead, it captures the "selection effect" of nominating working-class candidates, asking whether, given the full set of characteristics they bring, they are more or less likely to win elections.

We find that when a party nominates a working-class candidate, it experiences a modest 0.6 percentage point decrease in its vote share, though the probability of winning is unaffected. Given typical electoral margins in the 2010-2024 period, this effect is too small to meaningfully alter outcomes: only 2% of elections are decided by margins this small, and only 6 of 437 working-class candidates (1.4%) ran in such races. Moreover, the effect appears mostly driven by outcomes in safe districts, where it cannot influence who wins; in competitive districts the effect is close to zero, and in open seats it is positive, though we caution against reading too much into small subsamples. These results suggest general elections are not the stage at which working-class Americans are excluded from office.

However, comparable outcomes in general elections does not by itself imply the absence of electoral liabilities for working-class candidates. Parity can coexist with discrimination if barriers to entry positively select who runs (Anzia and Berry, 2011; Ashworth,

Berry and Bueno de Mesquita, 2024). We find evidence that working-class candidates face several disadvantages. First, we find that working-class candidates are more ideologically left-wing than other candidates. To the extent that candidates farther from the ideological center face an electoral penalty (Hall 2015; but see Bonica, Rhee and Studen 2025), this could disadvantage working-class Democratic candidates in particular. Second, working-class candidates are less likely to have valence characteristics that give candidates an electoral advantage, such as higher educational credentials and previous political experience. Third, we find that they receive fewer campaign donations, particularly from individual donors. And lastly, we find that working-class candidates receive relatively less support from non-working-class voters than from working-class voters. Although experimental studies find little evidence of voter bias when class is isolated from other traits (Carnes and Lupu, 2016; Heath, 2015), our results show that working-class candidates must overcome these real-world disadvantages to achieve electoral parity. We return to the implications of these findings for real-world policy interventions in the discussion section.

This paper makes three primary contributions. First, we add to the discussion about the causes of working-class underrepresentation by introducing a novel dataset on the class backgrounds of congressional candidates. Our descriptive evidence corroborates recent work arguing that pre-election structural barriers—rather than elections themselves—are the main source of working-class underrepresentation (Carnes, 2018). The steepest decline in representation occurs before the primary: although more than half of Americans hold working-class jobs, only about 8% of top-two primary candidates do. Using a research design that compares candidates running under similar conditions, we find that working-class candidates are just as likely to win as others—the modest vote share differences we observe are too small to explain more than a handful of outcomes. General elections therefore do not appear to be the stage at which working-class Americans are excluded from office.

Second, we contribute to research on candidate valence characteristics. We show that candidates with elite credentials perform better. Since working-class candidates are less likely to possess such credentials, they are at a disadvantage (Bonica, 2020; Carnes, 2018; Treul and Hansen, 2023). This provides two possible explanations for why our findings diverge from existing experimental studies. First, if voters value elite credentials, then

conjoint experiments that hold such characteristics constant in order to isolate preferences for class may underestimate how voters assess the full package of traits candidates present (Carnes and Lupu, 2016). Second, and perhaps more importantly, survey experiments capture voter preferences but not other electoral dynamics. Elite credentials may also represent access to resources, networks, and wealthier donors, advantages that can systematically benefit elite candidates and disadvantage working-class ones even in the absence of direct voter prejudice. Our results contribute to debates about the importance of elite credentials, showing that they remain a significant source of electoral advantage (Holliday, 2024; Porter and Steelman, 2023).

Third, we extend research on group affinity in voter behavior to class. Prior work shows that voters tend to prefer candidates similar to themselves on salient traits, including race, religion, gender, and age (Badas and Stauffer, 2019; Barreto, 2010; Brians, 2005; Castle et al., 2017; McConnaughy et al., 2010; McDermott, 2009; Washington, 2006). Despite persistent working-class underrepresentation in the United States (Carnes, 2013, 2018), we know less about whether candidates' class backgrounds activate class-aligned support among voters or donors. Observational evidence from Europe (Heath, 2015) and experimental evidence from the U.S. and Europe (Carnes and Lupu, 2016; Vivyan et al., 2020) suggest they do. We contribute new observational evidence from the U.S. showing that candidates with working-class backgrounds can activate class-aligned support among both voters and donors. This represents a critical but understudied source of electoral disadvantage for working-class candidates, especially given the sharp class-based imbalance in both voter participation and donor resources.

2 Working-Class Underrepresentation

Scholars have long highlighted the disconnect between the socioeconomic backgrounds of politicians and the people they represent (for a comprehensive review, see Carnes and Lupu (2023)). This disconnect has important implications for political representation, since class shapes political values, preferences, and behaviors, both among the electorate (Kitschelt and Rehm, 2014; Oesch and Rennwald, 2018; Rennwald and Pontusson, 2022) and politicians (Carnes, 2013; Evans, 2000; Hout, Brooks and Manza, 1995; Kirkland, 2021). For example, like the general public, legislators from higher social classes tend to

hold more conservative views on economic redistribution (Carnes 2018; Carnes and Lupu 2023; Fiva, Nedregård and Øien 2021; Grumbach 2015; O'Grady 2019; but see Volden, Wai and Wiseman 2020). As a result, overrepresentation of the wealthy might tilt policy away from the interests of the broad public (Gilens and Page, 2014; Lupu and Warner, 2022; Schattschneider, 1960). Even if class does not shape politicians' behavior, descriptive underrepresentation can erode public trust in government and belief in the fairness of government decisions (Barnes and Saxton, 2019; Barnes, Kerevel and Saxton, 2023; Lawless, 2004; Mansbridge, 1999) as well as political participation among underrepresented groups (Evans and Tilley, 2012, 2017; Heath, 2015; Poertner, 2023). Yet while a growing number of studies document the consequences of unequal representation, the causes of working-class underrepresentation remain less well understood. As Carnes and Lupu (2023, 265) conclude in a recent review of this literature: "Most pressingly, there are not many published studies that ask when less advantaged groups are screened out of the political pipeline and why the economic makeup of political institutions is as unequal as it is."

3 Causes of Working-Class Underrepresentation

Existing literature is divided on whether we should expect working-class candidates to perform worse in elections. On the one hand, scholars have proposed three important mechanisms that are likely to hinder working-class candidates' success. First, they may be less qualified: if entry into credentialed or higher-salaried careers is shaped by traits such as competence, motivation, or resourcefulness, then candidates with more upper-class occupational histories may exhibit a level of "quality" that influences electoral success (Besley, Montalvo and Reynal-Querol, 2011; Besley and Reynal-Querol, 2011; Carreri and Payson, 2020; Dal Bó et al., 2017; Feigenbaum, Hall and Yoder, 2019). Second, voters may be biased against working-class candidates because they make inferences about candidate quality (Simon and Turnbull-Dugarte, 2024) or ideology (Kirkland and Coppock, 2018) based on candidates' occupational background, even absent real differences. Alternatively, voters may implicitly prefer candidates from wealthy backgrounds due to likeability or admiration (Horwitz and Dovidio, 2017). Third, working-class candidates may lack support from party leaders or rich donors due to assumptions about electability

(Carnes, 2018), differing preferences for economic redistribution (Marble and Nall, 2021; Oklobdzija, 2019; Zacher, 2023), or exclusion from wealthy donor networks (Bonica, 2017, 2020; Treul and Hansen, 2023). They may also face structural disadvantages such as lower personal wealth, financial security, and less time to run a campaign (Carnes, 2018).

Yet recent experimental studies find little evidence that working-class candidates face electoral penalties. Educational qualifications do not necessarily imply higher competence or leadership abilities Carnes and Lupu (2016). And voters are not biased against working-class candidates: when asked, Americans express more positive attitudes toward people of humble backgrounds (Piston, 2018) and cite "relatable", "understanding" and "honest" as top traits over educational or political experience (Carnes, 2018). Results from survey experiments comparing hypothetical candidates from different class backgrounds indicate that working-class candidates are just as likely to win, are seen as more relatable, and receive greater support among working-class respondents (Abbott and DeVeaux, 2024; Carnes and Lupu, 2016; Vivyan et al., 2020). Rather than being filtered out during elections, working-class individuals are less likely to run due to higher personal costs and a lower likelihood of being recruited by party leaders (Carnes, 2018).

While experimental evidence shows that voters are not biased against a working-class background in isolation, it is unclear if this generalizes to the "whole package" of real-world working-class candidates, where associated characteristics are not held equal.[3] To see how working-class candidates actually do in elections, we need to turn to observational data. The limited existing evidence from observational studies is mixed, with some studies concluding that working-class candidates do just as well as other candidates in general elections (Albaugh 2020; Carnes 2013, 2018; but see Matthews and Kerevel 2022) while others uncover evidence that working-class candidates significantly under-perform in primary elections (Treul and Hansen, 2023). Unfortunately a lack of data, at least in the U.S. context, has made it difficult to employ a credible research design. The few observational studies in the United States either examine a small number of winning candidates (Carnes, 2013, 2018) or offer interesting but suggestive evidence of candidate success across class in the early primary stage (Treul and Hansen, 2023). To date we lack a systematic analysis of variation in general election performance that compares the success of working-class

[3]For instance, Carnes and Lupu (2016) finds that voters are not biased against candidates with a working-class background when controlling for factors like political experience.

candidates to non-working-class candidates when they run under similar conditions.

4 Data and Measurement

4.1 Occupational Data from Campaign Websites

We measure class using occupation. Among common proxies such as income, wealth, and education, occupation is widely regarded as the gold standard (Carnes, 2013; Hout, Brooks and Manza, 1995; Kitschelt and Rehm, 2014; Oesch and Rennwald, 2018), particularly for studying how class shapes candidates' political attitudes, behavior, and campaign resources (Carnes and Lupu, 2023, 255). Second, unlike wealth and income, occupation is consistently available on candidate campaign websites, making it both more practical to measure and more directly relevant to how voters perceive campaigns.

We first searched for campaign websites for all 8,775 congressional candidates who finished in the top two of their primaries for the U.S. House and Senate between 2010 and 2024. We focus on this period to avoid selection bias, as campaign websites became standard during these years.[4][5] We use the Wayback Machine to access pages as close as possible to the general election. We then record candidates' full occupational histories from their website biographies or home pages.

Using Carnes's (2013) coding schema, with the help of over 20 research assistants, we manually classified occupations into 67 narrow categories, further condensed into 10 broad groups.[6] Occupations are classified as working-class if they fall into one of the "service industry," "manual laborer," or "union employee/official" categories. To test intercoder reliability, multiple research assistants coded the same 100 randomly selected candidates, agreeing in 96% of cases. The final sample includes 8,775 candidates across 5,180 primary elections and 2,300 distinct U.S. House and Senate general election contests.[7]

[4] We report missing data rates in the supplemental material. On average, occupation data is missing for just 2% of candidates.

[5] Most candidates' website links are available on Ballotpedia. For missing cases, we search sources such as Politics1, the Library of Congress Congressional Archive, Wikipedia, news articles, and election aggregation sites like Vote Smart.

[6] See Table A.1 the Supplementary Material for the full schema.

[7] We exclude states with nonpartisan elections: California, Washington, and Louisiana.

4.2 Classifying Candidate Class

In our sample, 965 candidates (12%) held at least one working-class job, while 76 (1%) had only working-class jobs before entering politics.[8] We classify candidates as working-class if at least 25% of their previous occupational history consisted of working-class occupations.[9] Because there is no agreed-upon standard for how much experience qualifies a candidate as "working-class," we adopt this threshold as a practical compromise. Too few candidates have held only working-class jobs before seeking office, yet those who briefly worked in such jobs before pursuing white-collar careers may develop different political preferences as their material interests and workplace experiences shift. Their upward mobility could also reflect greater competence (Besley, Montalvo and Reynal-Querol, 2011; Besley and Reynal-Querol, 2011), expand access to donor networks (Bonica, 2017; Carnes, 2018), or shape voter perceptions through elite credentials (Simon and Turnbull-Dugarte, 2024). This 25% threshold balances sample size with the goal of distinguishing candidate types, and provides a conservative estimate since effects are likely attenuated relative to stricter definitions.

We also rerun analyses using alternative thresholds: candidates whose pre-political occupational histories include at least one, 50%, 75%, or 100% working-class jobs and excluding candidates who later pursued elite careers (i.e., lawyers, executives) or attended Ivy League institutions. Results remain consistent across definitions.

4.3 Descriptive Statistics

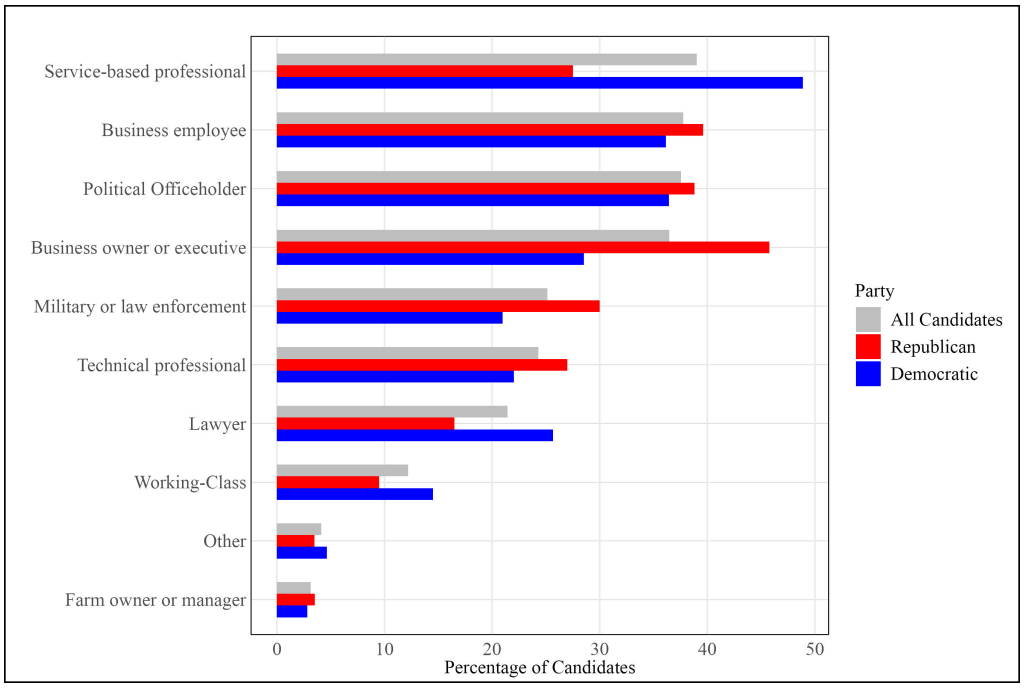
Figure 1 shows the percentage of Congressional general election candidates (2010–2024) who held at least one job in each of the 10 broad occupational categories. The most common backgrounds are political officeholders,[10] service-based professionals (e.g., teachers, professors, non-profit executives), and for-profit business employees. Candidates with a working-class job are the least numerous, apart from agriculture, with just 12% having at least one working-class job in their career. This share remained relatively stable from

[8] We estimate that 8% of general election winners in Congress have held at least one working-class job, similar to Carnes' (2013) estimate that 6% of members of Congress had worked in at least one working-class job in their lifetime. The 1% estimate for those with *only* working-class jobs before running also aligns with Carnes' (2013) findings on Representatives from 1945–1996 (Carnes, 2013).

[9] Since candidates do not report job durations, we simply count the proportion of their non-political jobs that are working-class. We exclude summer or part-time work but include cases where a candidate held a working-class job to pay for college.

[10] This category is a stricter version of Carnes' "Politician or Staff Member" category, including only those elected to prior political office at any level.

FIGURE 1: Occupations Held by General Election Candidates, US Congress 2010-2024



Note: This figure displays the share of all general election candidates who have ever held a job in one of the ten broad occupational categories from Carnes (2013).

2010 to 2024 (see Figure A.1 in the online Appendix). There are also notable partisan differences: service professionals, lawyers, and workers are more Democratic, while business executives, military and law enforcement leaned Republican.

Figure 2 shows the percentage of working-class candidates (based on our selected 25% threshold) at each stage of the election cycle: among top-2 primary candidates, general election competitors, and general election winners. While 8.6% of top-2 primary candidates are classified as working-class, this share drops to 7.7% among primary winners and 5.4% among general election winners. This naive comparison suggests that working-class candidates lose at higher rates, particularly in general elections. However, these results do not account for differences in the types of districts where they run.[11]

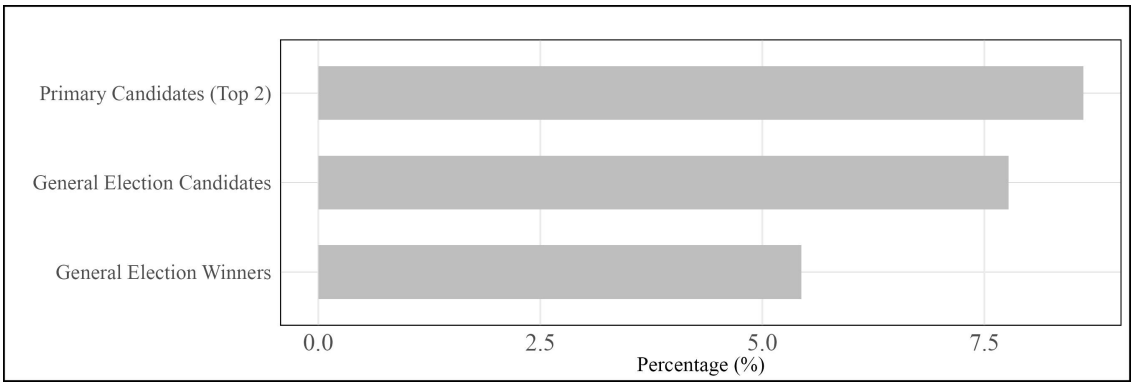
4.4 Estimation Strategy: Difference-in-Differences Design

General election outcomes are primarily determined by factors outside of candidates' control, such as the partisan leaning of a district or state (Abramowitz and Webster, 2016; Jacobson, 2015),[12] incumbency status, or changes in national moods (Ebanks, Katz and

[11] See Table A.3 in the online Appendix for election statistics by candidates' occupational class.

[12] Since we study election outcomes for House and Senate concurrently, for simplicity and unless otherwise specified, we use "districts" throughout this paper to refer to both types of electoral units (congres-

FIGURE 2: Share of Working-Class Candidates, by Election Stage, US Congress 2010-2022



Note: This figure presents the share of candidates who have spent 25% or more of their occupations in working-class occupations, in each election stage, starting with all candidates who made it to the top 2 positions of their primary, all general election candidates, and those who won the general election.

King, 2023; Vavreck, 2009). Therefore, comparing the average vote shares of candidates from different class backgrounds does not reveal whether working-class candidates are more or less likely to win when running under similar electoral conditions.

To address this estimation challenge, we use a difference-in-differences design to estimate changes in the general election vote share between districts when a party nominates a working-class candidate instead of a non-working-class candidate. The observations come from a panel dataset of 703 distinct US House and Senate districts (states) that experience between 2 and 7 general election contests between 2010 to 2024. Districts are treated as unique within each redistricting period. We exclude all uncontested elections. This yields a total of 2,300 district-year observations.[13] The outcome variable is measured either as the Democratic Party's two-party general election vote share or as a binary indicator for a Democratic victory.[14] The treatment variable is coded as follows: 1 when a working-class Democratic candidate faces a non-working-class Republican candidate, 0 when both candidates are either working-class or non-working-class, and -1 when a working-class Republican candidate faces a non-working-class Democratic candidate. We

sional districts and states, respectively).

[13]For more details about types of districts that make it into the dataset, see online Appendix Section A.1.1

[14]Because the treatment variable is coded symmetrically, with positive values for Democratic working-class candidacy and negative values for Republican working-class candidacy, the model estimates the average effect of working-class candidacy on either party's vote share. Therefore, although the outcome variable is the Democratic Party's general election vote share, we refer to it as the candidate's party's vote share throughout the paper for simplicity. For full model specifications, see section A.2.1 in the online Appendix.

include district fixed effects to control for time-invariant confounders that differ across races, such as district partisanship. We also include year fixed effects to address time-varying confounders, such as partisan changes in national mood. We cluster standard errors at the district level. Put together, this design compares changes in Democratic vote share overtime within districts, and estimates whether this change is different between the districts that go from nominating a non-working-class candidate to nominating a working-class candidate, versus those that do not.[15]

5 Results

5.1 Regression Estimates Suggest Working-Class Candidates Win at Equal Rates but Receive Fewer Votes

Table 1 presents results from our difference-in-differences design. The coefficient on "Working-Class" in Column 1 suggests that nominating a working-class candidate reduces a party's general election vote share by 0.6 percentage points on average—an effect that is statistically significant at the 0.10 level but substantively small: only 2 of elections in this period were decided by margins this narrow. Column 2 adds district incumbency controls, and Column 3 adds controls for candidate race and gender. For comparison, incumbents gain an estimated 2.7 percentage points in vote share (Ebanks, Katz and King, 2023)—an effect nearly five times larger.

In Columns 4–6 of Table 1, we turn to the effect of nominating a working-class candidate on the probability of victory. Across specifications, the estimated effect is substantively negligible and statistically indistinguishable from zero. In the baseline model (Column 4), nominating a working-class candidate is associated with a 0.3 percentage point decrease in win probability, but this estimate is well within the margin of error. Once we add controls for incumbency (Column 5), and then for candidate race and gender (Column 6), the coefficient rounds to zero.

The effect appears concentrated in safe districts, where it cannot influence who wins; in competitive districts the effect is close to zero, and in open seats it is positive (see online Appendix Section A.2.3).[16] Taken together, these results indicate that working-

[15] We present a visualization of the treatment across all districts and years in Figure A.4 in the online Appendix.

[16] See online Appendix Section A.2.3

TABLE 1: Effect of Nominating a Working-Class Candidate on General Election Vote Share and Victory, U.S. Congress 2010-2024

	Vote Share			Victory		
	(1)	(2)	(3)	(4)	(5)	(6)
Working-Class	-0.006+	-0.006+	-0.006+	-0.003	0.000	-0.000
	(0.004)	(0.003)	(0.003)	(0.018)	(0.016)	(0.016)
District Incumbency		0.027***	0.027***		0.093***	0.092***
		(0.002)	(0.002)		(0.015)	(0.015)
N	2300	2300	2298	2300	2300	2298
Year FE	X	X	X	X	X	X
District (State) FE	X	X	X	X	X	X
District Incumbency		X	X		X	X
Race and Gender			X			X

Note: Each observation represents a general election for the U.S. House or Senate from 2010 to 2024. The treatment variable is coded as 1 when a working-class Democratic candidate faced a non-working-class Republican candidate, 0 when neither or both candidates are working-class, and -1 when a working-class Republican candidate faced a non-working-class Democratic candidate. District incumbency is trichotomous, taking values of 1 for a district with a Democratic incumbent, 0 for an open seat, and -1 for a district with a Republican incumbent. The outcome variable is either the Democratic general election vote share or binary indicator for Democratic candidate victory. All models include district and year fixed effects to account for time-invariant and time-varying confounders. Standard errors are clustered at the district level. +p < 0.1, *p < 0.05, **p < 0.01.

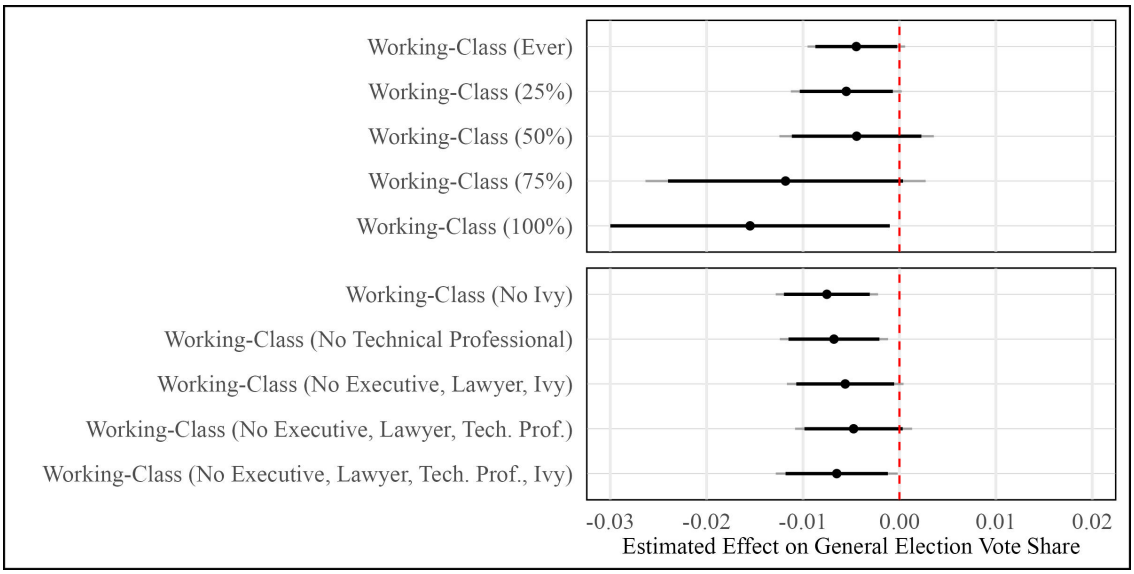
class candidates are no less likely to win the general election. The modest vote share difference we observe is too small to meaningfully affect electoral outcomes.

A potential limitation is that working-class candidates may select into races based on time-varying district conditions. For example, if they tend to run when their party is in secular decline, estimates of their effect on vote share could be biased downward. We test for anticipation and spill-over effects by adding *leads* and *lags* of the treatment variable (results are displayed in online Appendix Table A.5).[17] Both coefficients are small and statistically indistinguishable from zero, consistent with the absence of anticipatory or carryover effects. The contemporaneous effect of nominating a working-class candidate on vote share remains negative across specifications, while the effect on victory remains effectively zero, though estimates are less precisely estimated once leads and lags are included.

Recent studies have raised concerns about two-way fixed-effects models with staggered treatments (Callaway and Sant'Anna, 2021; Sun and Abraham, 2021). We conduct robustness checks using the counterfactual imputation method from Liu, Wang and Xu

[17]The lead term asks whether nominating a working-class candidate in the *next* election (t+1) influences outcomes in the *current* election (t); a nonzero effect would indicate anticipatory dynamics or a violation of parallel trends. The lag term asks whether nominating a working-class candidate in the *previous* election ($t-1$) has lingering effects on current outcomes.

FIGURE 3: Effect of Nominating a Working-Class Candidate on General Election Vote Share, Across Definitions of Working-class, US Congress 2010-2024



Note: This figure reports the effects of nominating a working-class candidate on a party's general election vote share. The regression model includes district (state) and year fixed effects. In the top panel we use five different operationalizations of "working-class", ranging from candidates who have ever held at least one working-class job ("ever") to candidates who have only had working-class jobs in their pre-political career (100%). In the bottom panel we only include candidates who have ever held working-class job and do not have experience in the specified elite occupations or elite education. Black bars denote 90% confidence intervals, gray bars 95% intervals.

(2024); results closely match our baseline estimates (see online Appendix Section A.2.4).

5.2 Similar Findings Across Definitions of Candidate Class

One potential concern is that our results may be sensitive to how we define candidate class. So far, we have classified candidates as working-class if at least 25% of their previously held occupations were working-class jobs. However, effects could vary based on other occupations candidates have held.

Figure 3 plots the estimated effect of nominating a working-class candidate on general election vote share across varying definitions of working-class. We first consider five definitions, from broad to restrictive, based on proportion of working-class jobs they've held. They range from candidates who have ever held a working-class to those with biographies composed of 25%, 50%, 75% and 100% working-class jobs. The results are plotted in the top panel. The estimated effects are consistently negative and tend to increase as the proportion of working-class jobs increases, ranging from a decrease in vote share of 0.4 percentage points to a decrease of 1.5 percentage points. [18]

[18]The estimates are generated from separate regressions, based on the model used in column 3 in Table

Next, we consider five more definitions of working class that exclude candidates with various elite credentials. Here we classify candidates as working-class if they have ever held a working-class job and do not have certain educational credentials such as an Ivy League degree, or experience in elite occupations, such as a corporate executive, lawyer, or technical professional. We exclude these occupations because they are commonly perceived as "upper-class" and associated with distinct ideologies, networks, and perceived quality (Bonica, 2020; Carnes, 2013; Kirkland, 2021). The results are plotted in the bottom panel. The estimated effects are consistently negative, ranging from a decrease in vote share of 0.5 to 0.8 percentage points.[19] Across a wide range of definitions, from broader to more restrictive, we observe a consistent negative effect on vote share—though as noted above, effects of this magnitude are too small to meaningfully affect electoral outcomes.

6 Sources of Disadvantage for Working-Class Candidates

Our results thus far show that when a party nominates a working-class candidate, it experiences a small decrease in general election vote share—but one too small to meaningfully affect electoral outcomes. This raises the question of whether working-class candidates face–and overcome–disadvantages in order to achieve electoral parity. In this section, we examine four potential sources of disadvantage. The first two focus on candidate characteristics: (1) whether they hold more extreme ideological positions (Carnes, 2013; Carnes and Lupu, 2016), and (2) whether they differ on key valence traits, such as political experience or educational credentials. The next two consider factors of the electoral environment: (3) whether they receive less campaign funding (Bonica, 2013, 2020), and (4) whether they receive different levels of support from voters of different class backgrounds (Abbott and DeVeaux, 2024; Carnes, 2018; Evans and Tilley, 2017).

6.1 Working-Class Candidates Are More Ideologically Left-Wing

Previous work shows that working-class politicians tend to be more left-wing on economic issues (Barnes, Kerevel and Saxton, 2023; Carnes, 2013). Some studies suggest candidates

1, with controls for district incumbency and candidate race and gender. Full results are in online Appendix Table A.8.

[19]Consistent with the main results presented in Table 1, there is no significant effect of nominating a working-class candidate on the probability of winning. See online Appendix Section A.2.5.

further from the ideological center perform worse in general elections (Hall, 2015), though recent work challenges this finding (Bonica, Rhee and Studen, 2025; Hall and Thompson, 2025). We test whether working-class candidates differ ideologically from their peers.

Figure 4 displays the relationship between candidates' working-class background and ideological positioning, using data on all top-two primary candidates for the U.S. House and Senate (2010–2022). Regression estimates include district-party and year fixed effects, with controls for incumbency, allowing comparisons within the same party and district. We measure ideology using donation-based scores: roll-call adjusted DW-DIME scores (Bonica, 2023) and CFscores (Bonica, 2014), standardized for comparability (lower values indicate a more left-wing position).

We find that working-class candidates are more left-leaning than non-working-class candidates on both DW-DIME and CFscores. The estimates are larger and more precise for Democratic candidates, but the effect is negative (leftward) for both Democrats and Republicans. This implies, however, that only working-class Democrats are farther from the ideological center.[20] To the extent that candidates farther from the ideological center face electoral penalties, these results suggest that such penalties are likely concentrated among working-class Democrats.

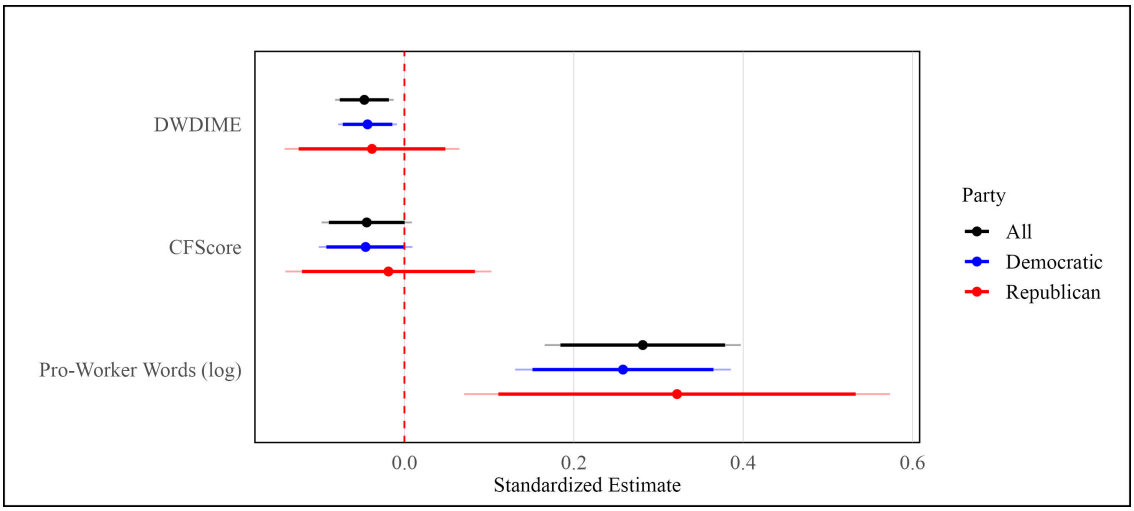
Since the donation-based ideological scores used above capture ideology along a single dimension, without distinguishing economic from social issues, let alone other aspects of campaign rhetoric or issue emphasis, it is possible that working-class candidates differ in other meaningful ways. We therefore test whether they make more rhetorical appeals to the "working class." Specifically, we construct a dictionary of terms referring to workers or unions to capture "pro-worker" rhetoric.[21] The bottom estimate in Figure 4 shows that working-class candidates are significantly more likely than other candidates to use pro-worker rhetoric.[22] The implications for electoral success remain unclear, though this may help explain why, as we show in Section 6.4, working-class candidates receive more support from working-class voters.

[20] When we instead estimate the relative ideological extremity of working-class candidates by comparing their scores to the ideological center (results shown in online Appendix Table A.14), we find that only Democratic candidates, and not working-class candidates in general, are ideologically extreme.

[21] See online Appendix Figure A.9 for the list of phrases included in the dictionary.

[22] We control for a candidate's total website word count. See online Appendix Section A.3 for more details.

FIGURE 4: Estimated Difference in Candidate Ideology, by Candidate Class, Within Congressional Primaries 2010-2022



Note: This figure presents estimates of the relationship between candidates' working-class background and their ideology (dwdime and cfscore) and the logged count of "Pro-Worker" words on their campaign website. All regressions include controls for candidate incumbency, race and gender, as well as district-party and year fixed effects. The standard errors are clustered at the district-party level. The sample includes all top 2 primary Democratic candidates for House and Senate, from 2010 to 2022, in states with partisan primaries (i.e. excluding CA, LA, and WA). +p < 0.1, *p < 0.05, **p < 0.01.

6.2 Working-Class Candidates Lack Elite Credentials That Are Associated With Higher Vote Shares

If working-class candidates are less likely to possess electorally advantageous, valence traits, such as political experience or higher educational credentials, then this might partially explain their underperformance. Political experience is linked to stronger fundraising (Albert, Desmarais and La Raja 2016; Bonica 2017; but see Porter and Steelman 2023) and perceived competence (Volden, Wai and Wiseman, 2020), as voters may view experienced candidates as more capable of delivering policy outcomes (Fowler, 2018). Observational studies also find that experienced candidates perform better electorally (Holliday 2024; but see Porter and Steelman 2023).

Similarly, higher education may signal competence (Krasno and Green, 1988) and is associated with better performance in office (Besley and Reynal-Querol 2011; Dal Bó et al. 2017; but see Carnes and Lupu 2016). Experimental evidence suggests that voters prefer candidates with advanced degrees, particularly from prestigious institutions (Arceneaux and Vander Wielen 2023; Hainmueller, Hopkins and Yamamoto 2014; but see Carnes and Lupu 2016), and observational studies find that graduate degree holders perform better in elections (Arceneaux and Vander Wielen, 2023).

We first test whether working-class candidates are less likely to have political experience and advanced degrees, and present our results in Table 2. Regression estimates are based on a sample of all top 2 primary candidates, and include district-party and year fixed effects, with controls for candidate incumbency. Standard errors are clustered at the district-party level, allowing comparisons within the same party and district.

TABLE 2: Estimated Probability of Candidate Characteristic, by Candidate Class, Congressional Primaries 2010-2022

	Political Experience	Graduate School	Ivy League
	(1)	(2)	(3)
Working-Class	-0.057**	-0.202***	-0.081**
	(0.020)	(0.037)	(0.029)
N	6638	6265	6265
Incumbent	X	X	X
District-Party FE	X	X	X
Race and Gender	X	X	X
Year FE	X	X	X

Note: This Table presents estimates of the effect of candidates' working-class background on the probability that they possess political experience and educational credentials. All regressions include controls for candidate incumbency, as well as district and year fixed effects. The sample includes all top 2 primary Democratic candidates, from 2010 to 2022, in states with partisan primaries (i.e. excluding CA, LA, and WA). +p < 0.1, *p < 0.05, **p < 0.01.

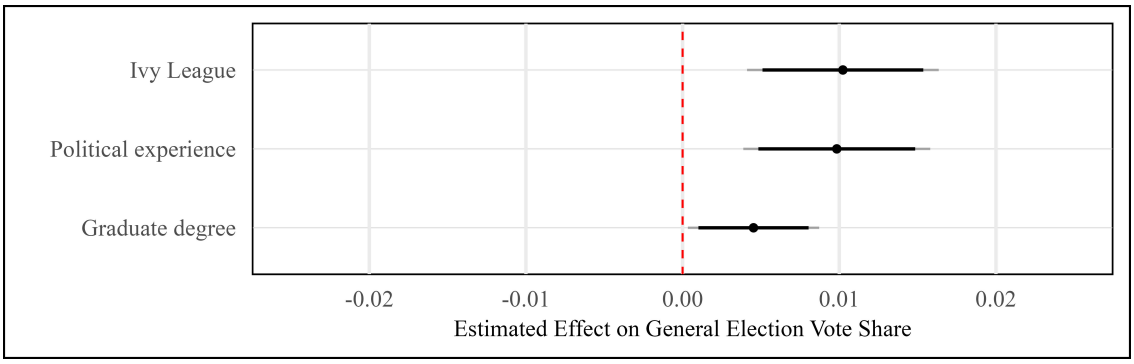
The first column of Table 2 estimates the relationship between candidates' working-class backgrounds and probability of having certain elite credentials. Political experience is an indicator variable equal to 1 if a candidate previously held elected office. We find that working-class candidates are 5.7 percentage points less likely to have political experience than others in their party. The next two columns estimate the relationship between a working-class background and educational credentials: having a graduate degree and attending an Ivy League institution.[23] We find that working-class candidates are 20.2 percentage points less likely to have a graduate degree, 8.1 points less likely to have attended an Ivy League institution.

We then estimate the electoral benefits of elite credentials by rerunning our main model separately for each credential indicator, replacing the working-class variable with the credential of interest.[24] The results, shown in Figure 5, indicate that several credentials are associated with modest but statistically significant increases in general election

[23]In addition to the eight Ivy League schools, we include similarly prestigious institutions: Stanford, University of Chicago, MIT, Duke, Caltech, and Northwestern. We exclude the 8% of candidates with missing education data. A graduate degree includes any mention of a master's, law, or doctoral degree.

[24]We do not include all credentials simultaneously or alongside the working-class variable, since the indicators are highly correlated. Estimating their effects one at a time provides a benchmark for the electoral advantages they confer, which we then compare to the working-class vote share effect.

FIGURE 5: The Estimated Effect of Nominating Candidate Types on General Election Vote Share, US Congress 2010–2024



Note: Estimates from three separate regressions, each replacing the working-class indicator with one credential (graduate degree, Ivy League degree, or prior political experience). Models include district-party and year fixed effects, with controls for incumbency, race, and gender. Standard errors are clustered at the district-party level.

vote shares. Candidates with Ivy League degrees gain roughly one percentage point, those with prior political experience about 0.98 points, and candidates with graduate degrees about 0.45 points.

Taken together, these results suggest that elite credentials confer modest electoral advantages. Working-class candidates, who are less likely to possess these credentials, must overcome this disadvantage to achieve electoral parity.

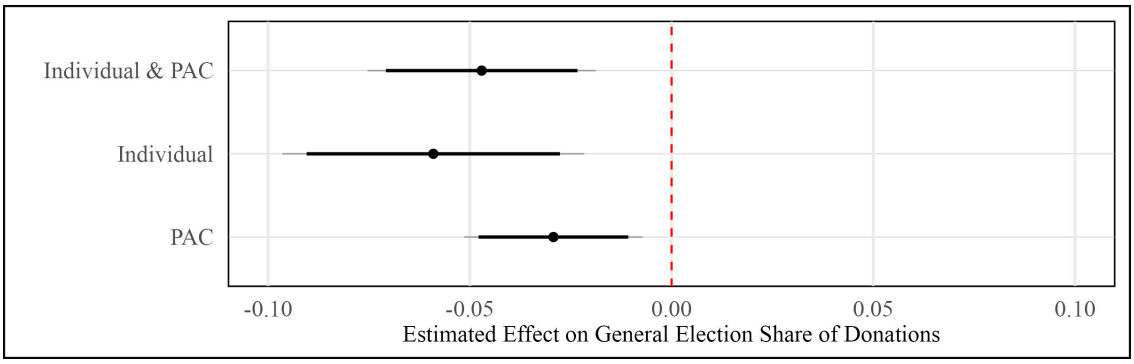
6.3 Working-Class Candidates Receive A Lower Share of Campaign Donations

Another potential disadvantage for working-class candidates is difficulty raising money from donor networks dominated by wealthier individuals and business PACs (Bonica, 2017; Carnes, 2018). Donor skepticism may stem from expectations that working-class candidates will be more economically progressive (Bonica, 2013; Broockman and Malhotra, 2020), or from weaker social ties with high-SES donors (Bonica, 2020; Carnes, 2018).

To test whether working-class candidates receive fewer donations, we compile general election contributions from the FEC (see online Appendix Section A.5 for details). Figure 6 presents the results. When a party nominates a working-class candidate, it receives 4.7 percentage points less of the two-party donation share—driven by a 5.9 percentage point decrease in individual donations and a 2.9 percentage point decrease in PAC donations.

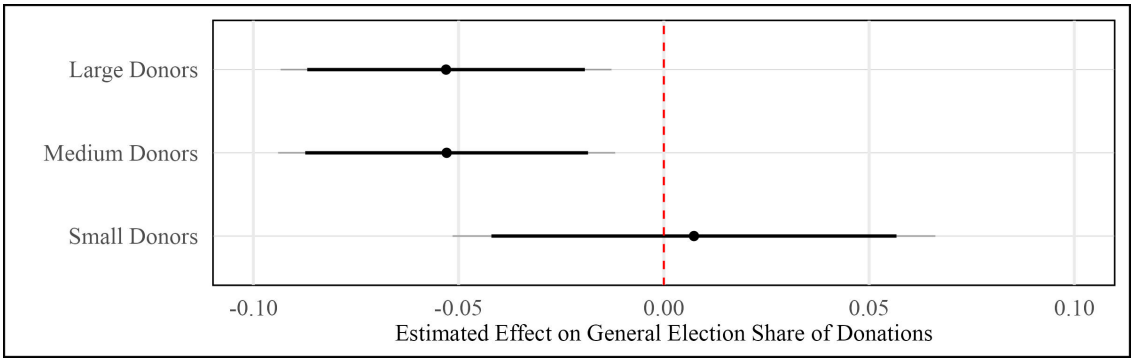
Figure 7 shows that this effect among individual donors is driven entirely by large

FIGURE 6: Estimated Effect of Nominating a Working-Class Candidate on the Share of General Election Donations, US Congress 2010-2022



Note: This figure plots coefficients of a regression model that estimates the effect of running a working-class candidate on a party's share of donations in the general election. The model includes district fixed effects and year fixed effects, and mirrors the model in Table 1. Individual & PAC donations are from OpenSecrets, and are subsetted to donations after the primary election date and up to the general election date.

FIGURE 7: Estimated Effect of Nominating a Working-Class Candidate on the Share of General Election Individual Donations, US Congress 2010-2022



Note: This figure plots coefficients of a regression model that estimates the effect of running a working-class candidate on a party's share of donations in the general election among certain types of donors: large donors are those who gave more than $1,000 to a candidate committee during an election cycle, medium are those who gave between $200 and $1,000, and small donors $200 or below. The model includes district fixed effects and year fixed effects, and mirrors the model in Table 1. Individual donations are from OpenSecrets, and are subsetted to donations after the primary election date and up to the general election date.

and medium-sized donors rather than small donors. Since large donors have substantially higher incomes than small donors (Bouton et al., 2022), this suggests that the fundraising disadvantage facing working-class candidates is largely class-based.

Overall, these results suggest that working-class candidates face a significant financial disadvantage, particularly among larger donors. This represents a structural barrier they must overcome to compete on equal footing.

6.4 Working-Class Candidates Receive Less Support From Non-Working-Class Voters Than From Working-Class Voters

A fourth factor that may influence working-class candidates' electoral outcomes is their appeal among different sections of the electorate. Prior work documents both in-group affinity and out-group penalties along class lines (Abbott and DeVeaux, 2024; Carnes and Lupu, 2016; Heath, 2015; Simon and Turnbull-Dugarte, 2024; Vivyan et al., 2020). If working-class candidates receive less support from non-working-class voters, this represents another disadvantage they must overcome.

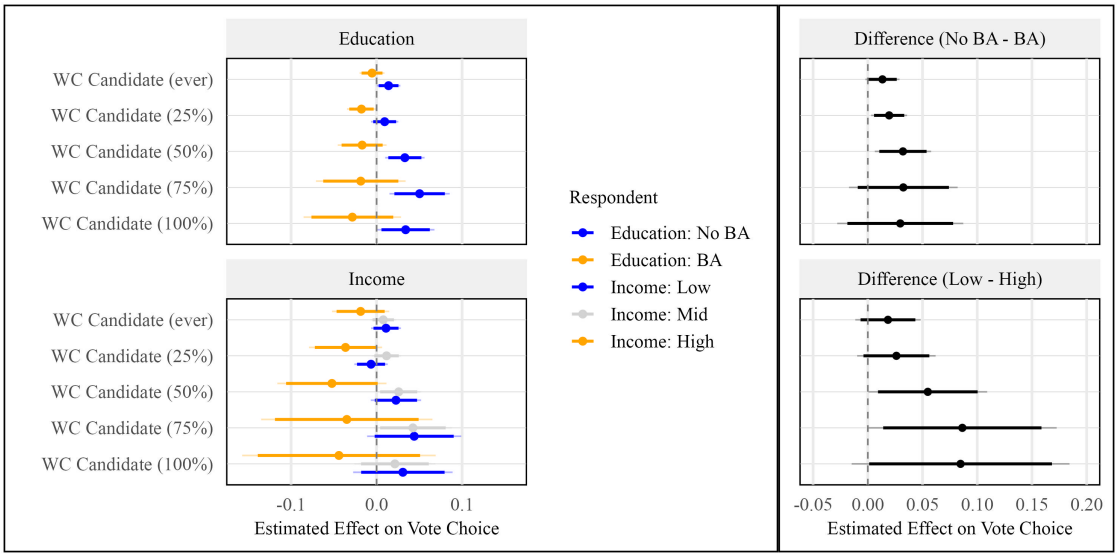
To estimate the difference in support for working-class candidates between working-class and non-working-class voters, we use respondent-level CCES survey data from 2010 to 2024, classifying respondents by education and income (see online Appendix Section A.6.1 for details). The model includes district and year fixed effects, testing whether the effect of nominating a working-class candidate on vote choice varies across respondent class within the same election.

The top-left panel of Figure 8 displays results separately by respondent education. Among respondents without a BA, the estimated effect of nominating a working-class candidate is positive, while the effect among BA-holders is negative. As the definition of working-class candidates becomes stricter, the magnitude of these effects grows. For example, when defining working-class candidates as those who spent more than 25% of their pre-political career in working-class jobs, parties that nominate such candidates polarize voters by education: non-college respondents are 1 percentage point more likely to support the candidate, while college-educated respondents are 2 percentage points less likely to do so.

The top-right panel presents interaction effects estimated on the full dataset, comparing the relative effect on working-class respondents against non-working-class respondents. The consistent positive estimates indicate that working-class respondents are systematically more likely to support working-class candidates. While less precise, the income-based results (bottom panels) point in the same direction and are even larger, reaching differences of nearly 10 percentage points for the strictest definitions of candidate class.

These findings suggest that working-class candidates activate class-based voting, gaining support among working-class voters but losing support among non-working-class

FIGURE 8: Relative Effect of Nominating a Working-Class Candidate on Probability of Vote Choice by Respondent Class



Note: This figure presents estimated effects of nominating a working-class candidate on respondents' probability of voting for that candidate. The estimates in the left panels are from regressions run separately by respondent type (education or income) across various definitions of candidate class. The right panels show estimated interaction effects between candidate class and respondent class, where effects are relative to non-working-class respondents (baseline not shown). Models include controls for respondent age, gender, race, district incumbency, candidate race, and candidate gender as well as district and year fixed effects. The sample includes 2,300 U.S. House elections from 2010 to 2024, covering 172,630 respondents (CCES).

voters—a pattern consistent with experimental evidence (Abbott and DeVeaux, 2024; Vivyan et al., 2020). Whether this represents a net disadvantage depends on electorate composition, though higher turnout among affluent voters may tilt the balance against working-class candidates.

7 Conclusion

What happens when working-class candidates run for office? We find that they perform roughly as well as other candidates in general elections. While we observe a modest 0.6 percentage point decrease in vote share when parties nominate working-class candidates, this effect is too small to meaningfully affect electoral outcomes—only 2% of elections are decided by margins this narrow. Working-class candidates are no more likely to lose than their peers. However, electoral parity does not mean working-class candidates experience no barriers to success relative to other candidates. We find evidence of several obstacles they must overcome to achieve comparable outcomes.

Working-class candidates hold more left-wing policy positions (Barnes, Kerevel and

Saxton, 2023; Carnes, 2013), though whether this harms them electorally remains uncertain given mixed evidence on the costs of ideological positioning (Hall 2015; but see Bonica, Rhee and Studen 2025; Hall and Thompson 2025). Next, working-class candidates are less likely to possess elite credentials—such as prior political experience, graduate degrees, or Ivy League education—that are associated with higher vote shares (Arceneaux and Vander Wielen, 2023; Holliday, 2024). They also raise fewer campaign donations, particularly from larger individual donors (Bonica, 2017; Carnes, 2018). And working-class candidates also receive less support from non-working-class voters (Abbott and DeVeaux, 2024; Vivyan et al., 2020), a pattern that may disadvantage them in electorates where affluent and college-educated voters turn out at higher rates.

These findings have important implications for debates about class underrepresentation and efforts to address it. If pre-election barriers produce positive selection among working-class candidates—as theory suggests (Anzia and Berry, 2011; Ashworth, Berry and Bueno de Mesquita, 2024)—we might expect them to outperform others once they enter the race. The fact that they instead achieve only parity, despite likely being positively selected, suggests they may face real disadvantages during elections that offset any quality advantage.

This interpretation has consequences for policy interventions. Efforts to reduce pre-candidacy barriers—such as recruitment programs, paid leave, or public campaign financing—may be necessary to increase the supply of working-class candidates. But if those barriers currently generate positive selection, reducing them could lower the average quality of working-class candidates who enter races. In that case, we might observe even larger disadvantages in general elections. Whether such interventions succeed would depend on whether gains from increasing the supply of working-class candidates outweigh any costs from a less positively selected pool. We see hints of this tradeoff in our results: candidates whose entire careers were in working-class jobs face larger disadvantages than those with more mixed occupational backgrounds.

Our study has limitations. Our reliance on campaign materials to measure candidates' occupational backgrounds raises the possibility of strategic misrepresentation, which could bias estimates depending on whether winners or losers are more likely to exaggerate or downplay working-class experience. This measurement challenge also opens questions for future research: How strategic is the decision to appear working-class on the campaign

trail? Are there other ways candidates signal class identity—through rhetoric (Devine, Turnbull-Dugarte and Ryan, 2025) or self-presentation (Lenz and Lawson, 2011)—and can even elite candidates credibly adopt such signals? Future work should also explore the mechanisms behind working-class candidates' fundraising disadvantage. The funding gap could reflect ideological distance from wealthier donors, or structural exclusion from the professional and social networks through which fundraising flows (Bonica, 2017). Disentangling these explanations would have different policy implications.

Ultimately, our findings suggest that addressing pre-candidacy barriers is necessary but not sufficient for increasing working-class representation in politics. Reducing underrepresentation will also require tackling the disadvantages working-class candidates face during elections themselves.

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Online Appendix: Are Working-Class Candidates Less Likely to Win Elections?

Appendix Contents

A.1 Data Construction and Sample Statistics

TABLE A.1: Occupational Categories

Broad Occupational Category	Narrow Occupational Category
Business employee	Real estate agent or broker; Real estate developer; Bank manager/investment banker/stock broker; Manager of a small/local business; Manager in a medium- or large-sized business; Business employee; Business person (no other information given); Chamber of commerce or Jaycees leader; College administrator, Politics, government, or public relations consultant; Leadership or management consultant; Scientific or health care consultant; Other consultant
Business owner or executive	Contractor; Bank owner/banker; Hospital/medical services administrator; Owner of a small/local business; Owner of a medium- or large-sized business; Executive of a medium- or large-sized business; Media executive, publisher, or media owner
Farm owner or manager	Farmer, rancher, farm owner, ranch owner, farm manager
Lawyer	Lawyer, private practice; Lawyer, corporate; Lawyer, other; Lawyer, unspecified; Government attorney
Military or law enforcement	Law enforcement manager/director; Law enforcement analyst; Law enforcement officer or patrolman; Military service member
Politician or staff member	Interest group director, executive, founder; Interest group lobbyist; Interest group worker; Political staffer; Political Officeholder
Service-based professional	Elementary/secondary school teacher; Elementary or secondary school administrator; College professor (except law schools); Law school professor; Nurse; Psychiatrist/psychologist; Librarian; Social worker; Rabbi, minister, priest, reverend, or other clergy; Advocate for the elderly; Provider of other local public services; Nonprofit service group director or executive; Nonprofit service group worker
Technical professional	Medical doctor; Dentist; Veterinarian; Pharmacist; Journalist; Author/public speaker; Actor/director; Musician/entertainer; Athlete; Coach, fitness instructor, or referee; Architect or urban planner; Accountant; Economist (nonacademic); Engineer/scientist (nonacademic)
Working-Class	Manual laborer; Service industry worker; Union official/employee; Other working-class
Other	Other occupation; Vague occupational description

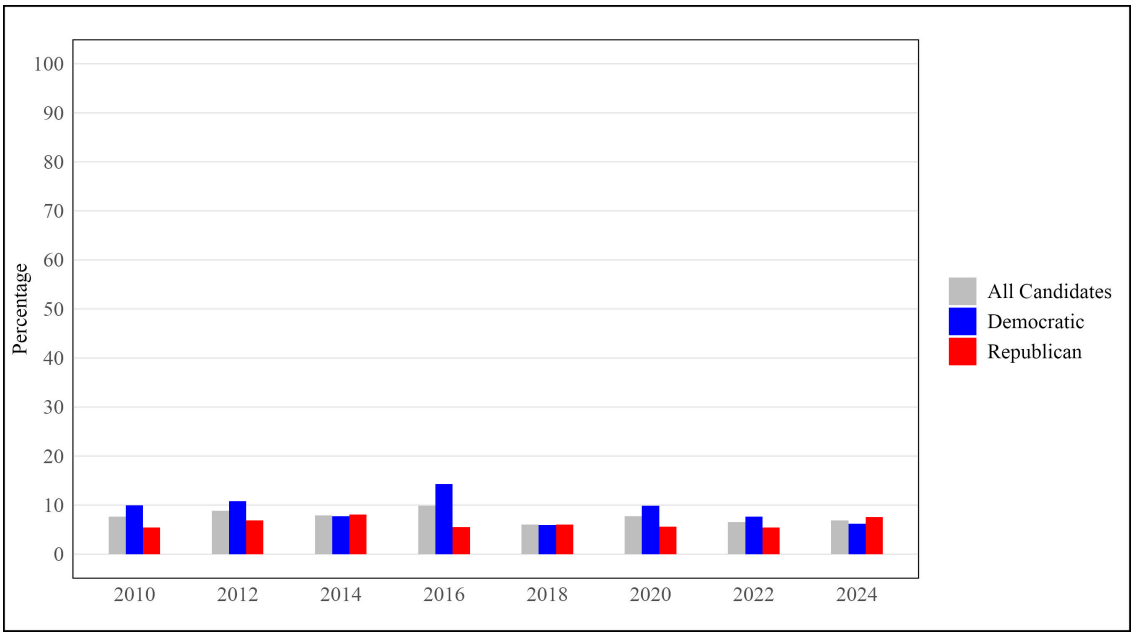
TABLE A.2: Rate of Missing Occupation Data among Top 2 Primary Candidates, US Congress 2010–2022

Year	Total Candidates	Missing Occupation (N)	Missing Occupation (%)
2010	1168	29	2.48
2012	1146	23	2.01
2014	1039	18	1.73
2016	1074	18	1.68
2018	1205	32	2.66
2020	1187	21	1.77
2022	1200	18	1.50

TABLE A.3: General Elections by Nominee's Occupational Class, U.S. Congress 2010-2024

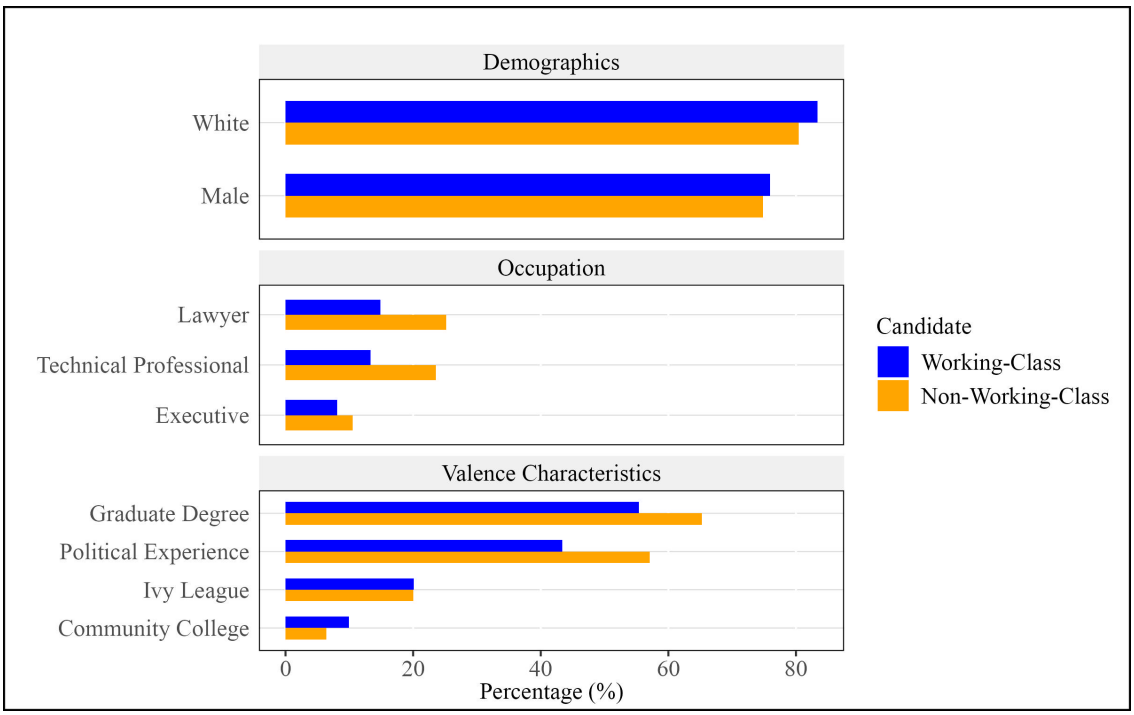
	Not Working-Class	Working-Class	Overall
	(N=5502)	(N=457)	(N=5959)
Party			
Democratic	2707 (49.2%)	269 (58.9%)	2976 (49.9%)
Republican	2795 (50.8%)	188 (41.1%)	2983 (50.1%)
Office			
House	5056 (91.9%)	424 (92.8%)	5480 (92.0%)
Senate	446 (8.1%)	33 (7.2%)	479 (8.0%)
Competitiveness			
Safe Democratic	976 (17.7%)	94 (20.6%)	1070 (18.0%)
Competitive	1946 (35.4%)	157 (34.4%)	2103 (35.3%)
Safe Republican	1094 (19.9%)	85 (18.6%)	1179 (19.8%)
Missing	1486 (27.0%)	121 (26.5%)	1607 (27.0%)
Incumbency			
Same Party Incumbent	2607 (47.4%)	159 (34.8%)	2766 (46.4%)
Open Seat	710 (12.9%)	51 (11.2%)	761 (12.8%)
Other Party Incumbent	2185 (39.7%)	247 (54.0%)	2432 (40.8%)
Year			
2010	700 (12.7%)	58 (12.7%)	758 (12.7%)
2012	680 (12.4%)	66 (14.4%)	746 (12.5%)
2014	664 (12.1%)	57 (12.5%)	721 (12.1%)
2016	656 (11.9%)	72 (15.8%)	728 (12.2%)
2018	706 (12.8%)	45 (9.8%)	751 (12.6%)
2020	703 (12.8%)	59 (12.9%)	762 (12.8%)
2022	702 (12.8%)	49 (10.7%)	751 (12.6%)
2024	691 (12.6%)	51 (11.2%)	742 (12.5%)

FIGURE A.1: Share Working-Class Candidates in General Elections by Year, US Congress 2010–2024



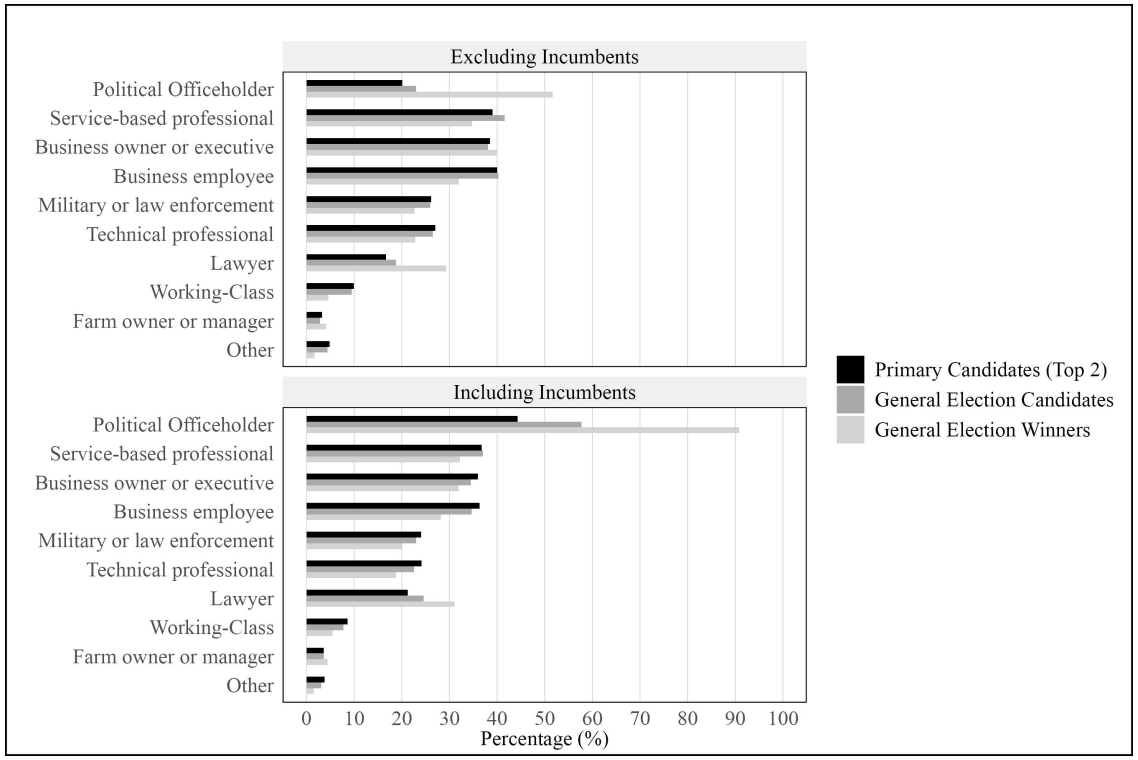
Note: This figure displays the share of all general election candidates whose occupational history is composed of 25% or more working-class jobs, by year.

FIGURE A.2: Demographics and Valence Characteristics of General Election Candidates, by Candidate Class, US Congress 2010-2024



Note: This figure compares the average prevalence of demographic, educational, occupational and political characteristics between working-class and non-working-class general election candidates for US House or Senate from 2010 to 2024.

FIGURE A.3: Share of Candidates with Occupations, by Election Stage, US Congress 2010–2022



Note: This figure displays the share of candidates at each election stage who ever held at least one occupation within each category. Working-Class candidates are those whose occupational history is composed of 25% or more working-class jobs

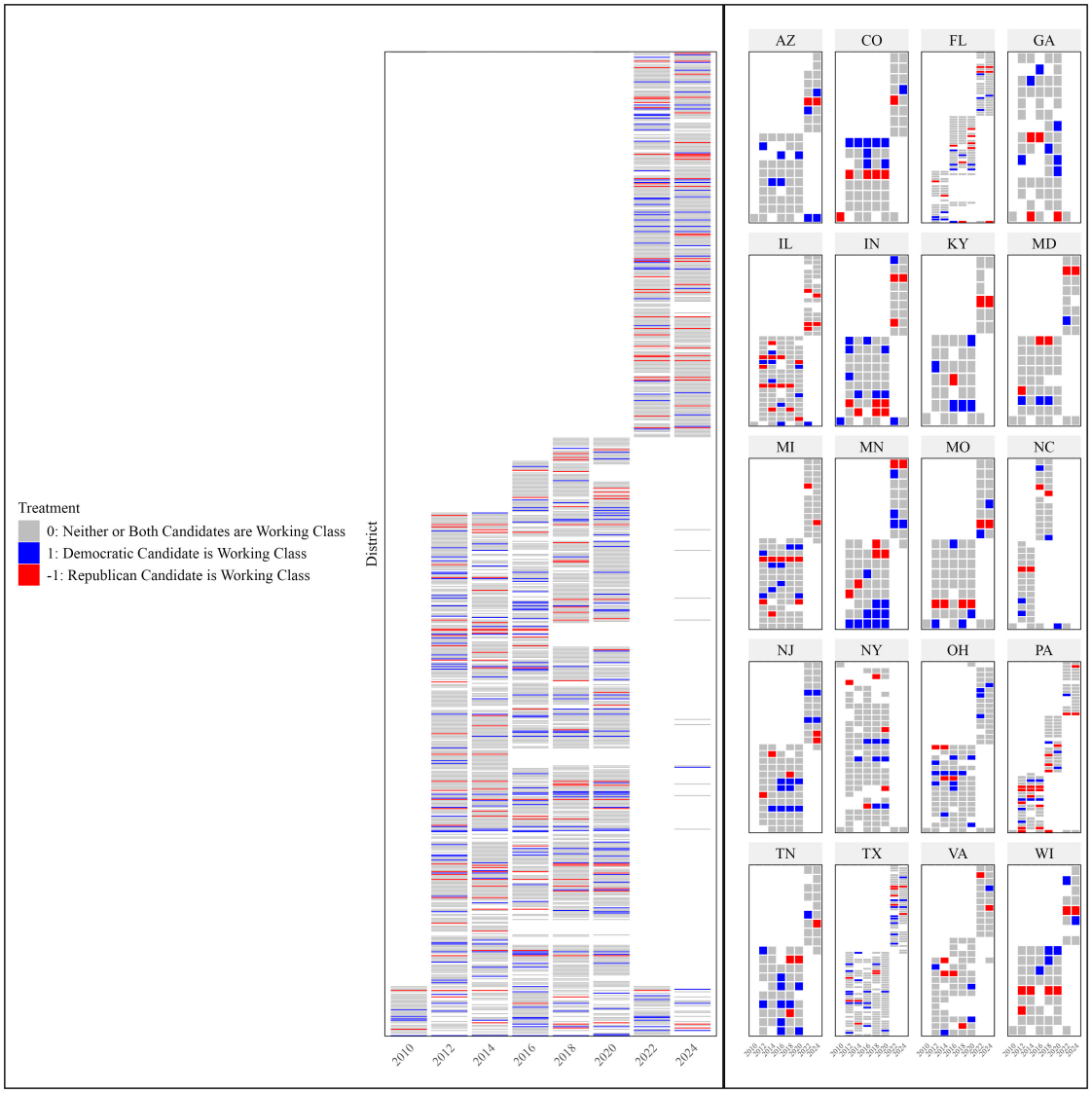
A.1.1 Constructing the General Election Panel Dataset

Our analysis covers all U.S. Senate and House general elections from 2010 to 2024. We exclude non-partisan elections in California, Louisiana, and Washington and limit the sample to races contested by both major parties. We further exclude cases where neither candidate's occupation is known, producing a final dataset of 2,300 election-year observations.

The panel includes 700 unique districts (distinct by redistricting period, including mid-cycle redistricting), each observed in 2 to 7 elections.[25]

Figure A.4 visualizes the dataset. Each row is a district; each rectangle represents a district-year, color-coded by treatment. Missing data appear blank. About half of the districts receive treatment in at least one of the five elections. The only districts that see observations across all 13 elections (from 2010 to 2024) are at-large congressional districts and senate seats.

FIGURE A.4: Treatment Variation Plot for All Congressional Districts and Top 20 States, US Congress 2010–2024



[25]We drop districts with only one election, as these are excluded from the main model.

A.2 Main Results

A.2.1 Model Specification

$$Y_{jt} = \beta_0 + \beta_1 \cdot \text{WorkingClass}_{jt} + \beta_2 \cdot \text{PartyInc}_{jt} + \beta_3 \cdot \text{Race}_{jt} + \beta_4 \cdot \text{Gender}_{jt} + \lambda_j + \tau_t + \varepsilon_{jt}$$

- **Dependent Variable (Y_{jt}):**
  - **Vote Share:** The percentage of the general election vote received by the Democratic candidate.
  - **Victory:** An indicator variable equal to 1 if the Democratic candidate won the general election, and 0 if the Republican candidate won.
- **Independent Variables:**
  - **WorkingClass$_{jt}$:** General-election candidate class (district j, time t)
    - 1: Democratic Party runs a working-class candidate, and the Republican Party runs a non-working-class candidate.
    - -1: Republican Party runs a working-class candidate, and the Democratic Party runs a non-working-class candidate.
    - 0: Both candidates are either working-class or non-working-class.
  - **PartyInc$_{jt}$:** Party incumbency (1 = Democratic incumbent; 0 = open seat; -1 = Republican incumbent)
  - **Race$_{jt}$:** 1 = Only the Democratic candidate is white; 0 = Both or neither candidates are white; -1 = Only the Republican candidate is white
  - **Gender$_{jt}$:** 1 = Only the Democratic candidate is male; 0 = Both or neither candidates are male; -1 = Only the Republican candidate is male
- **Fixed Effects:**
  - **District (λ_j):** District fixed effects.
  - **Year (τ_t):** Year fixed effects.
- **Error Term:**
  - **Clustered (ε_{jt}):** Clustered standard errors at the district level.

A.2.2 Main Results Robustness Checks

TABLE A.4: Effect of Nominating a Working-Class Candidate on General Election Victory, U.S. Congress 2010-2024

	Victory		
	(1)	(2)	(3)
Working-Class	-0.003	0.000	-0.000
	(0.018)	(0.016)	(0.016)
District Incumbency		0.093***	0.092***
		(0.015)	(0.015)
N	2300	2300	2298
Year FE	X	X	X
District (State) FE	X	X	X
District Incumbency		X	X
Race and Gender Controls			X

TABLE A.5: Effect of Nominating a Working-Class Candidate on General Election Vote Share and Victory, U.S. Congress 2010-2024

	Vote Share			Victory		
	(1)	(2)	(3)	(4)	(5)	(6)
Working-Class	-0.006+	-0.003	-0.004	-0.000	-0.012	0.012
	(0.003)	(0.004)	(0.004)	(0.016)	(0.026)	(0.025)
Working-Class (Lag)			-0.005			-0.017
			(0.004)			(0.025)
Working-Class (Lead)		-0.004			0.016	
		(0.004)			(0.033)	
N	2298	1512	1509	2298	1512	1509
Year FE	X	X	X	X	X	X
District (State) FE	X	X	X	X	X	X
District Incumbency	X	X	X	X	X	X
Race and Gender Controls	X	X	X	X	X	X

Note: Each observation represents a general election for the U.S. House or Senate from 2010 to 2024. The treatment variable is coded as 1 when a working-class Democratic candidate faced a non-working-class Republican candidate, 0 when neither or both candidates are working-class, and -1 when a working-class Republican candidate faced a non-working-class Democratic candidate. District incumbency is trichotomous, taking values of 1 for a district with a Democratic incumbent, 0 for an open seat, and -1 for a district with a Republican incumbent. The outcome variable is the Democratic general election vote share in the first three columns, and an indicator for the victory of the Democratic candidate in the second three columns. All models include district and year fixed effects to account for time-invariant and time-varying confounders. Standard errors are clustered at the district level. +p < 0.1, *p < 0.05, **p < 0.01.

A.2.3 Main Results Across Different Types of Districts

The finding that working-class candidates do not underperform in the general election is not limited to certain types of elections, based on election incumbency or election competitiveness.[26] In Table **??** we present estimates of the effect of nominating a working-class candidate on the general election vote share, subsetting by election type. Estimates are modeled with district and year fixed effects, similarly to the main model used in column 1 of Table 1.

Columns 1-3 subset elections based on district incumbency, while columns 4-6 subset elections based on electoral competitiveness. Similarly to Hall (2015), we classify districts as "safe" for a party if they voted for the party's president with a vote share greater than 60% in the previous election. The estimated effect of nominating a working-class candidate on the general election vote share is negative and relatively consistent in magnitude across all election types, except for open general elections where is it quite large and positive. Besides this exception, it is unlikely that working-class candidates are significantly more disadvantaged in one type of election than others.

We also run the results using general election victory as the outcome, and find a similar pattern. The results are presented in Table A.7.

TABLE A.6: Effect of Nominating a Working-Class Candidate on General Election Vote Share, U.S. Congress 2010-2024

	Vote Share					
	(1)	(2)	(3)	(4)	(5)	(6)
Working-Class	-0.004	0.048+	-0.002	-0.004	-0.002	-0.005
	(0.005)	(0.025)	(0.004)	(0.007)	(0.004)	(0.006)
District Incumbency				0.020*	0.027***	0.027***
				(0.009)	(0.002)	(0.007)
N	1093	405	1295	472	1778	543
Incumbency				X	X	X
Year FE	X	X	X	X	X	X
District (State) FE	X	X	X	X	X	X
Race & Gender Controls	X	X	X	X	X	X
District Type	Dem. Inc.	Open	Rep. Inc.	Safe Dem.	Competitive	Safe Rep.

[26] For a distribution of general elections that enter into the sample by election incumbency and competitiveness, see Table A.3

TABLE A.7: Effect of Nominating a Working-Class Candidate on General Election Victory, U.S. Congress 2010-2024

	Victory					
	(1)	(2)	(3)	(4)	(5)	(6)
Working-Class	-0.026	0.134+	0.005	-0.000	0.010	0.009
	(0.024)	(0.071)	(0.016)	(0.002)	(0.031)	(0.006)
District Incumbency				-0.024	0.110***	0.041
				(0.024)	(0.021)	(0.027)
N	1093	405	1295	472	1778	543
Incumbency				X	X	X
Year FE	X	X	X	X	X	X
District (State) FE	X	X	X	X	X	X
Race & Gender Controls	X	X	X	X	X	X
District Type	Dem. Inc.	Open	Rep. Inc.	Safe Dem.	Competitive	Safe Rep.

Note: Each model is run separately in a subset of districts indicated in the "District Type" row. Districts with a previous Democratic vote share over 0.60 are classified as "Safe Democratic" districts, under 0.40 as "Safe Republican" districts, and between 0.40 and 0.60 as "Competitive". The outcome variable is a binary variable for Democratic general election victory. All models include district (or state) and year fixed effects. +p < 0.1, *p < 0.05

A.2.4 Fixed Effects Counterfactual Estimators

To address concerns with traditional two-way fixed-effects (TWFE) models, we implement the Fixed Effects Counterfactual Treatment (FECT) model developed by Liu, Wang and Xu (2024), which estimates causal effects in panel data through counterfactual imputation.

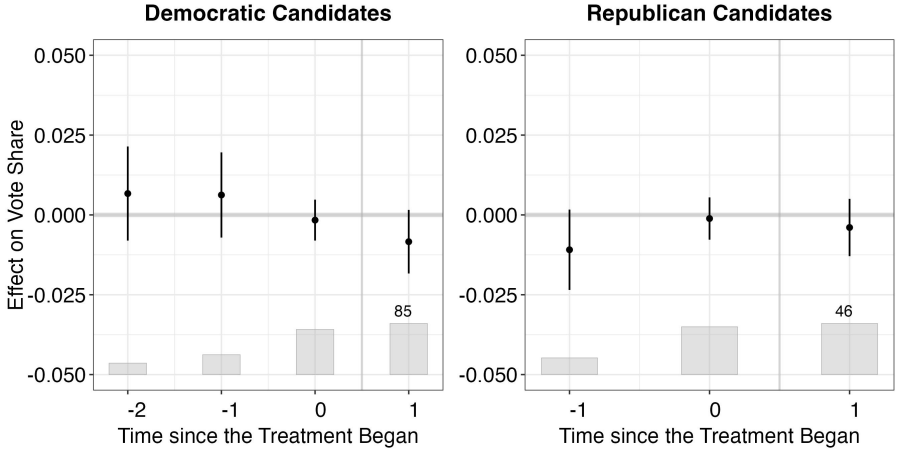
Since FECT does not accommodate trichotomous treatments, we conduct separate analyses for Democratic and Republican candidates. For the Democratic candidate analysis, we include all 543 districts that were never treated and the 114 districts where a Democratic working-class candidate was nominated. For the Republican candidate analysis, we use the same 543 never-treated districts, along with the 67 districts where a Republican working-class candidate was nominated. This approach excludes the 5 districts that experienced both types of treatments to ensure clear comparisons.

To estimate the Average Treatment Effect on the Treated (ATT), we use FECT with a two-way fixed-effects approach, which accounts for both unit-specific and time-specific unobserved heterogeneity. This method offers a more flexible alternative to standard difference-in-differences models, mitigating concerns related to staggered treatment timing and heterogeneous treatment effects.

Figure A.5 presents the estimated period-wise ATT for Democratic and Republican candidates, with uncertainty estimates derived from nonparametric bootstrapping. The vertical bars represent confidence intervals, while the bar plot at the bottom indicates the number of treated units per period. We focus on intervals with sufficient data coverage where the number of treated observations is at least 20% of number of treated units in period 1.

The results suggest that the estimated treatment effects remain close to zero across all periods, with confidence intervals consistently overlapping zero. These findings indicate that nominating a working-class candidate does not significantly affect a party's general election vote share.

FIGURE A.5: Estimated ATT for Democratic and Republican candidates using the FEct method.



We conduct further placebo tests by removing observations from selected pre-treatment periods (`placebo.period = c(-2, 0)`) and re-estimating the ATT for those excluded periods. The primary objective is to confirm that the estimated ATT remains close to zero when no treatment has taken place.

Figure A.6 displays the placebo test results for Democratic and Republican candidates. The placebo test p-values for both groups are well above conventional significance thresholds, meaning we fail to detect any significant pre-treatment effects. Additionally, the TOST results confirm that estimated ATTs remain within an acceptable range.

Figure A.7 presents pre-trend tests for Democratic and Republican candidates. The F-test p-values suggest no strong evidence of pre-trend differences, meaning we fail to reject the null hypothesis that treated and untreated units followed similar pre-treatment paths. The TOST equivalence test p-values, however, do not reach conventional significance levels, so we cannot conclude that pre-treatment differences fall within the equivalence range. Overall, the results suggest no evidence of differential pre-trends, but the absence of equivalence cautions against treating pre-treatment balance as fully established.

Lastly, figure A.8 presents the results for Democratic and Republican candidates, with estimates from the TWFE model in black and those from FECT in red. The estimates from FECT are nearly identical to those of the TWFE model in the main paper. The results also suggest that Democratic candidates are driving the negative result on general election vote share.

FIGURE A.6: Placebo test results for Democratic and Republican candidates using the FEct method.

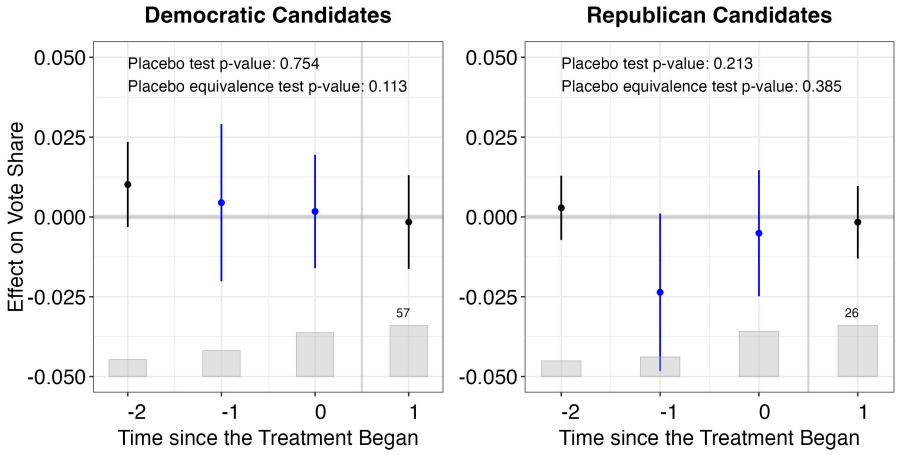


FIGURE A.7: Pre-trend test results for Democratic and Republican candidates using the FEct method.

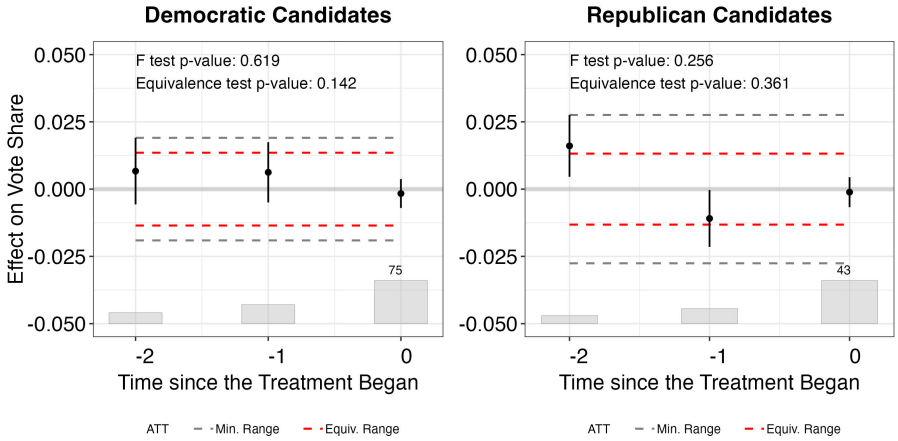
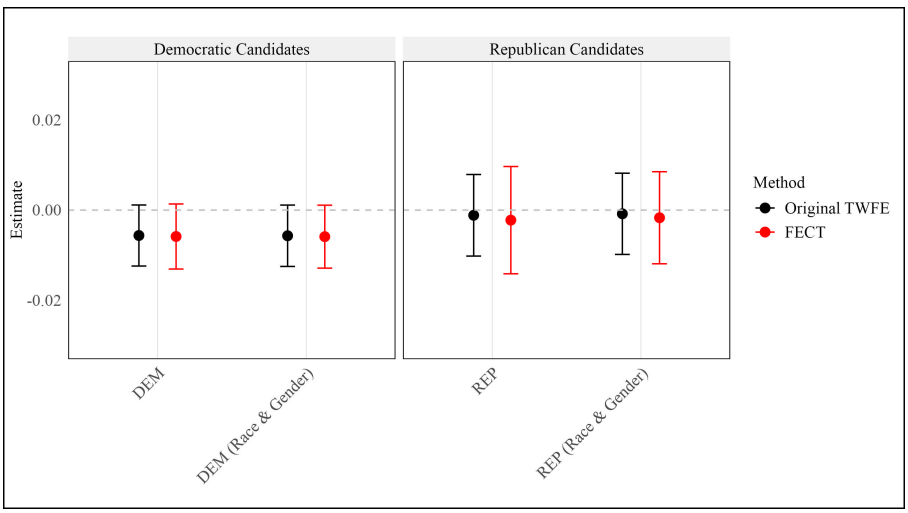


FIGURE A.8: Comparison of estimates from the TWFE and FECT models



A.2.5 Main Results Across Definitions of Candidate Class

TABLE A.8: Effect of Nominating a Working-Class Candidate on General Election Vote Share, Across Definitions of Working-Class

	Vote Share				
	(1)	(2)	(3)	(4)	(5)
Working-Class	-0.004+	-0.006+	-0.004	-0.012	-0.015+
	(0.003)	(0.003)	(0.004)	(0.007)	(0.009)
District Incumbency	0.027***	0.027***	0.027***	0.027***	0.027***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
N	2793	2793	2793	2793	2793
N Workers	545	390	167	58	47
Year FE	X	X	X	X	X
District (State) FE	X	X	X	X	X
Race & Gender	X	X	X	X	X
WC Definition	Ever	25%	50%	75%	100%

Note: This table reports the effects of nominating a working-class candidate on a party's general election vote share. We use five different operationalizations of "working-class", ranging from candidates who have ever held at least one working-class job ("ever") to candidates who have only had working-class jobs in their pre-political career (100%). All models include district and year fixed effects to account for time-invariant and time-varying confounders. Standard errors are clustered at the district level. +p < 0.1, *p < 0.05, **p < 0.01.

TABLE A.9: Effect of Nominating a Working-Class Candidate on General Election Vote Share, Across Definitions of Working-Class

	Vote Share				
	(1)	(2)	(3)	(4)	(5)
Working-Class	-0.008**	-0.007*	-0.006+	-0.005	-0.007*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
District Incumbency	0.027***	0.027***	0.027***	0.027***	0.027***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
N	2793	2793	2793	2793	2793
N Workers	478	443	362	320	274
Year FE	X	X	X	X	X
District (State) FE	X	X	X	X	X
Race & Gender	X	X	X	X	X
Excluding:	Ivy	Technical Professional	Executive, Lawyer, Ivy	Executive, Lawyer, Tech. Prof.	Executive, Lawyer, Tech. Prof., Ivy

Note: This table reports the effects of nominating a working-class candidate on a party's general election vote share. We use five different operationalizations of "working-class", including candidates who have ever had a working-class job and haven't had one of the specified elite occupations or educational credentials (eg. Column 1 excludes all working-class candidates who have an Ivy League degree). All models include district and year fixed effects to account for time-invariant and time-varying confounders. Standard errors are clustered at the district level. +p < 0.1, *p < 0.05, **p < 0.01.

TABLE A.10: Effect of Nominating a Working-Class Candidate on General Election Victory, Across Definitions of Working-Class

	Victory				
	(1)	(2)	(3)	(4)	(5)
Working-Class	0.022	-0.008	0.022	0.018	0.018
	(0.021)	(0.020)	(0.028)	(0.034)	(0.044)
N	2454	2454	2454	2454	2454
N Workers	483	349	147	48	38
Year FE	X	X	X	X	X
District (State) FE	X	X	X	X	X
WC Definition	Ever	25%	50%	75%	100%

Note: This table reports the effects of nominating a working-class candidate on a party's general election vote share. We use five different operationalizations of "working-class", ranging from candidates who have ever held at least one working-class job ("ever") to candidates who have only had working-class jobs in their pre-political career (100%). The outcome variable is a binary variable for Democratic general election victory. All models include district and year fixed effects to account for time-invariant and time-varying confounders. Standard errors are clustered at the district level. +p < 0.1, *p < 0.05, **p < 0.01.

TABLE A.11: Effect of Nominating a Working-Class Candidate on General Election Victory, Across Definitions of Working-Class

	Victory				
	(1)	(2)	(3)	(4)	(5)
Working-Class	0.007	0.006	0.024	0.023	0.008
	(0.015)	(0.020)	(0.016)	(0.020)	(0.015)
District Incumbency	0.092***	0.092***	0.092***	0.092***	0.092***
	(0.016)	(0.015)	(0.015)	(0.015)	(0.015)
N	2289	2289	2289	2289	2289
N Workers	398	372	305	269	232
Year FE	X	X	X	X	X
District (State) FE	X	X	X	X	X
Race & Gender	X	X	X	X	X
Excluding:	Ivy	Technical Professional	Executive, Lawyer, Ivy	Executive, Lawyer, Tech. Prof.	Executive, Lawyer, Tech. Prof., Ivy

Note: This table reports the effects of nominating a working-class candidate on a party's general election vote share. We use five different operationalizations of "working-class", including candidates who have ever had a working-class job and haven't had one of the specified elite occupations or educational credentials (eg. Column 1 excludes all working-class candidates who have an Ivy League degree). All models include district and year fixed effects to account for time-invariant and time-varying confounders. Standard errors are clustered at the district level. +p < 0.1, *p < 0.05, **p < 0.01.

A.3 Ideology

To measure candidates' rhetorical appeals to the "working class," we construct a dictionary of terms commonly used to refer to working-class people. We then calculate the frequency of each term on candidates' campaign websites, captured as close as possible to the general election of that year. To ensure that terms are used in the intended context (e.g., excluding "Soviet Union" for "union" or "hard worker" for "worker"), we manually review all occurrences in its surrounding context, retaining only instances with the expected meaning and a positive association. This process also eliminates negative references. Figure A.9 presents the average frequency per candidate, showing that "worker" is the most common term, followed by "union." Across nearly all terms, working-class candidates use them more frequently than non-working-class candidates.

FIGURE A.9: Average Frequency of Pro-Worker Words by Candidate Class, On Websites of Top 2 Primary Candidates, US Congress 2010-2022

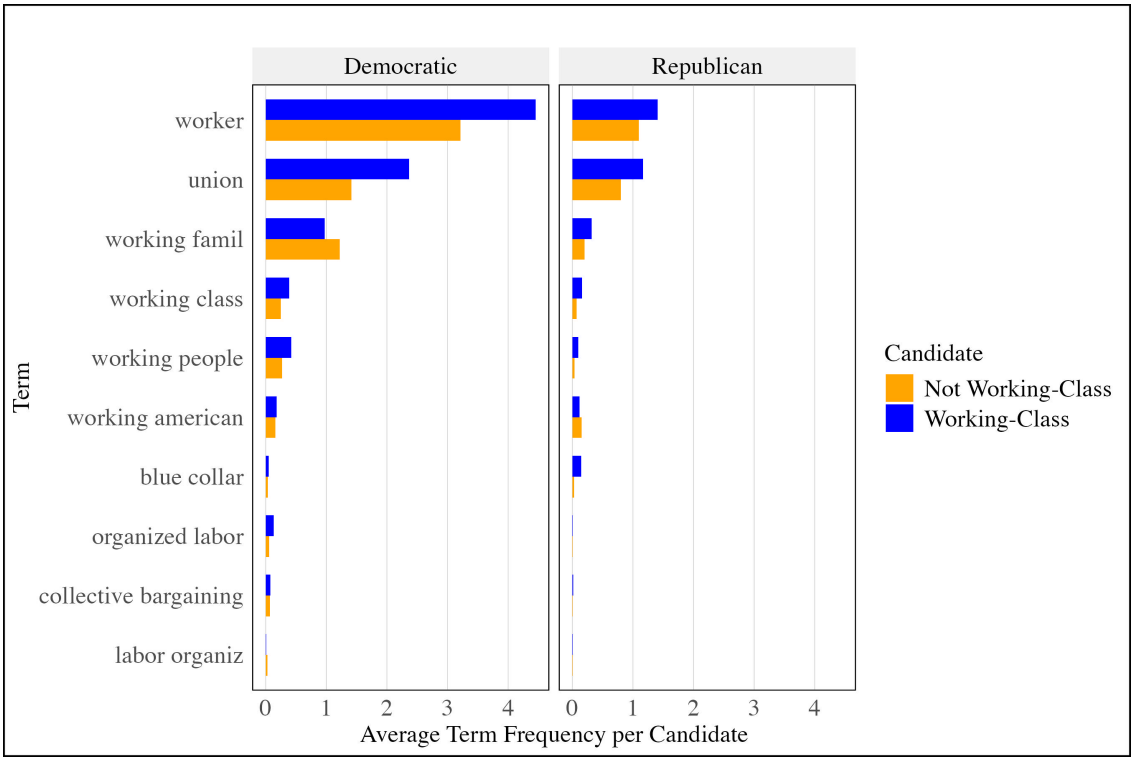


TABLE A.12: Estimated Difference in Candidate Ideology, by Candidate Class, Within Congressional Primaries 2010-2022

	DWDIME			CFScore		
	All	Rep	Dem	All	Rep	Dem
	(1)	(2)	(3)	(4)	(5)	(6)
Working-Class	-0.021**	-0.017	-0.019*	-0.049	-0.021	-0.050
	(0.018)	(0.053)	(0.018)	(0.027)	(0.062)	(0.028)
N	5018	2260	2758	5946	2650	3296
Incumbent	X	X	X	X	X	X
Year FE	X	X	X	X	X	X
District-Party FE	X	X	X	X	X	X
Race & Gender	X	X	X	X	X	X

Note: This table presents estimates of the relationship between candidates' working-class background and their ideology (dwdime and cfscore). All models include controls for candidate incumbency, as well as district-party and year fixed effects. Standard errors are clustered at the district-party level. The sample includes all top 2 primary Democratic candidates for House and Senate, from 2010 to 2022, in states with partisan primaries (i.e. excluding CA, LA, and WA). < 0.1, *p < 0.05, **p < 0.01.

TABLE A.13: Estimated Difference in Prevalence of "Pro-Worker" Rhetoric, by Candidate Class, Within Congressional Primaries 2010-2022

	Pro-Worker Words (log)		
	All	Rep	Dem
	(1)	(2)	(3)
Working-Class	0.278***	0.318*	0.255***
	(0.059)	(0.128)	(0.065)
Incumbent	0.033	0.100+	-0.025
	(0.039)	(0.052)	(0.053)
Website Word Count (log)	0.645***	0.464***	0.754***
	(0.020)	(0.027)	(0.026)
N	5418	2312	3106
Incumbent	X	X	X
Year FE	X	X	X
District-Party FE	X	X	X
Race & Gender	X	X	X

Note: This table presents estimates of the relationship between candidates' working-class background and the logged count of "Pro-Worker" words on their campaign website. All models include controls for candidate incumbency, as well as district-party and year fixed effects. Standard errors are clustered at the district-party level. The sample includes all top 2 primary Democratic candidates for House and Senate, from 2010 to 2022, in states with partisan primaries (i.e. excluding CA, LA, and WA). < 0.1, *p < 0.05, **p < 0.01.

TABLE A.14: Estimated Difference in Ideological Extremity, by Candidate Class, Within Congressional Primaries 2010-2022

	Ideological Extremity	
	DWDime	CFscore
	(1)	(2)
Working-Class	0.012	0.032
	(0.008)	(0.029)
Incumbent	-0.012+	-0.095***
	(0.006)	(0.018)
N	5018	5946
Incumbent	X	X
Year FE	X	X
District-Party FE	X	X
Race & Gender	X	X

Note: This table presents estimates of the relationship between candidates' working-class background and their ideological extremity (dwdime and cfscore). To calculate the overall ideological extremity across both parties, we simply flip the scale for Democrats, so that their scores are multiplied by negative 1. Therefore a larger value indicates further from the center. The estimates are standardized. All models include controls for candidate incumbency, as well as district-party and year fixed effects. Standard errors are clustered at the district-party level. The sample includes all top 2 primary Democratic candidates for House and Senate, from 2010 to 2022, in states with partisan primaries (i.e. excluding CA, LA, and WA). < 0.1, *p < 0.05, **p < 0.01.

A.4 Valence

TABLE A.15: Estimated Effect that Nominating Candidate Types has on General Election Vote Share, U.S. Congress 2010-2024

	Vote Share			
	(1)	(2)	(3)	(4)
Graduate degree	0.005*			
	(0.002)			
Ivy League		0.010**		
		(0.003)		
Political experience				0.010**
				(0.003)
District Incumbency	0.027***	0.027***	0.027***	0.023***
	(0.002)	(0.002)	(0.002)	(0.003)
N	1898	1898	2298	2055
Year FE	X	X	X	X
District (State) FE	X	X	X	X
Race & Gender	X	X	X	X

TABLE A.16: Estimated Effect that Nominating Candidate Types has on General Election Victory Share, U.S. Congress 2010-2024

	Victory			
	(1)	(2)	(3)	(4)
Graduate degree	0.004			
	(0.011)			
Ivy League		0.020		
		(0.019)		
Political experience				0.024
				(0.018)
District Incumbency	0.099***	0.099***	0.092***	0.090***
	(0.018)	(0.018)	(0.016)	(0.022)
N	1898	1898	2298	2055
Year FE	X	X	X	X
District (State) FE	X	X	X	X
Race & Gender	X	X	X	X

A.5 Donations

We compile general election contributions from the FEC, as collected by OpenSecrets. We include only direct contributions from individuals and PACs to candidate committees in the two-year cycle, following OpenSecrets' best practices by excluding refunds. Donations are classified as general election contributions if given between the primary and general election date for that district-year.

We classify large donors as those who donate more than $1000 to the corresponding candidate committee within an election cycle, medium-sized donors as those who give between $200 and $1000, and small donors as those who give under $200.

The financial disadvantage becomes increasingly large—up to 15 percentage points among individual donations—for candidates who spent a larger share of their career in working-class jobs (see A.10.

One might ask whether working-class candidates perform better or worse than expected given their fundraising disadvantage. This is difficult to assess because donations and votes are jointly determined: donors gravitate toward candidates likely to succeed, and candidates with more resources are better positioned to win votes. Still, when we regress general election vote share on donation share in our main difference-in-differences model, we find that a one percentage point decrease in donations is associated with a 0.1 percentage point decrease in vote share. By this benchmark, working-class candidates' 0.6 percentage point vote share deficit roughly aligns with their 4.7 percentage point shortfall in donations. Overall, these results suggest that working-class candidates face a financial disadvantage, which may help explain the vote share penalty we observe.

TABLE A.17: Effect of Nominating a Working-Class Candidate on Share of General Election Donations

	Individual and PAC	Individual	PAC
	(1)	(2)	(3)
Working-Class	-0.047**	-0.059**	-0.029**
	(0.014)	(0.019)	(0.011)
N	2353	2313	2353
District Incumbency	X	X	X
Year FE	X	X	X
District (State) FE	X	X	X
Race and Gender	X	X	X

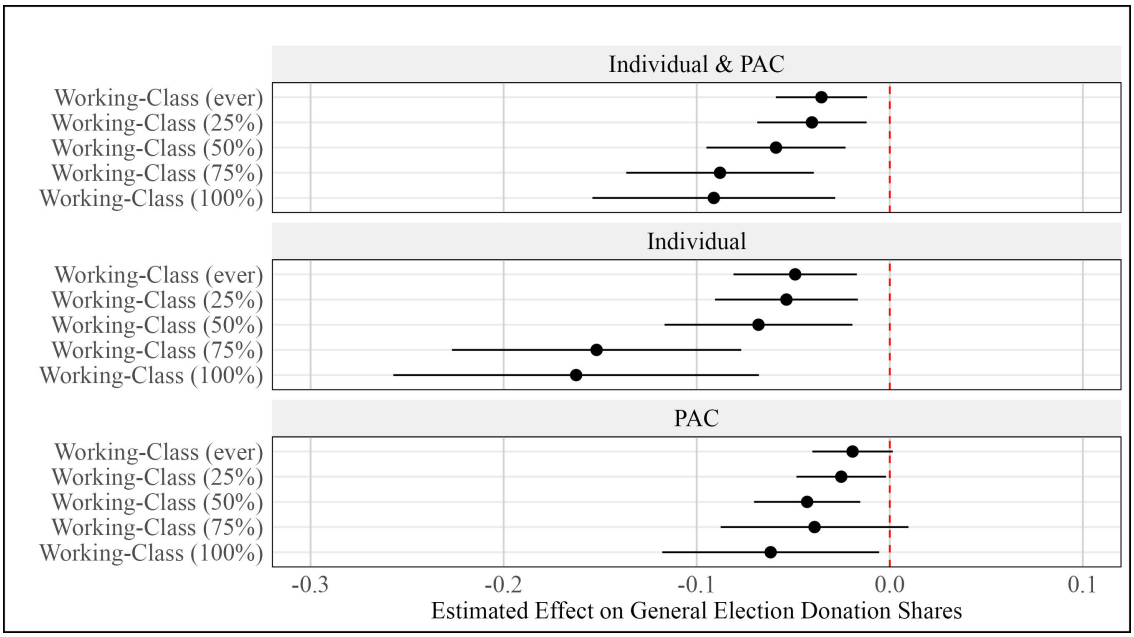
Note: This table reports the results of regression models that estimates the effect of running a working-class candidate on a party's share of donations in the general election. Individual and PAC donations are from OpenSecrets, and are subset to donations after the primary election date and up to the general election date.

TABLE A.18: Effect of Nominating a Working-Class Candidate on Share of General Election Donations, by Individual Donor Type

	Large Donors	Medium Donors	Smal Donors
	(1)	(2)	(3)
Working-Class	-0.053**	-0.053*	0.007
	(0.021)	(0.021)	(0.030)
N	2087	2220	1919
District Incumbency	X	X	X
Year FE	X	X	X
District (State) FE	X	X	X
Race and Gender	X	X	X

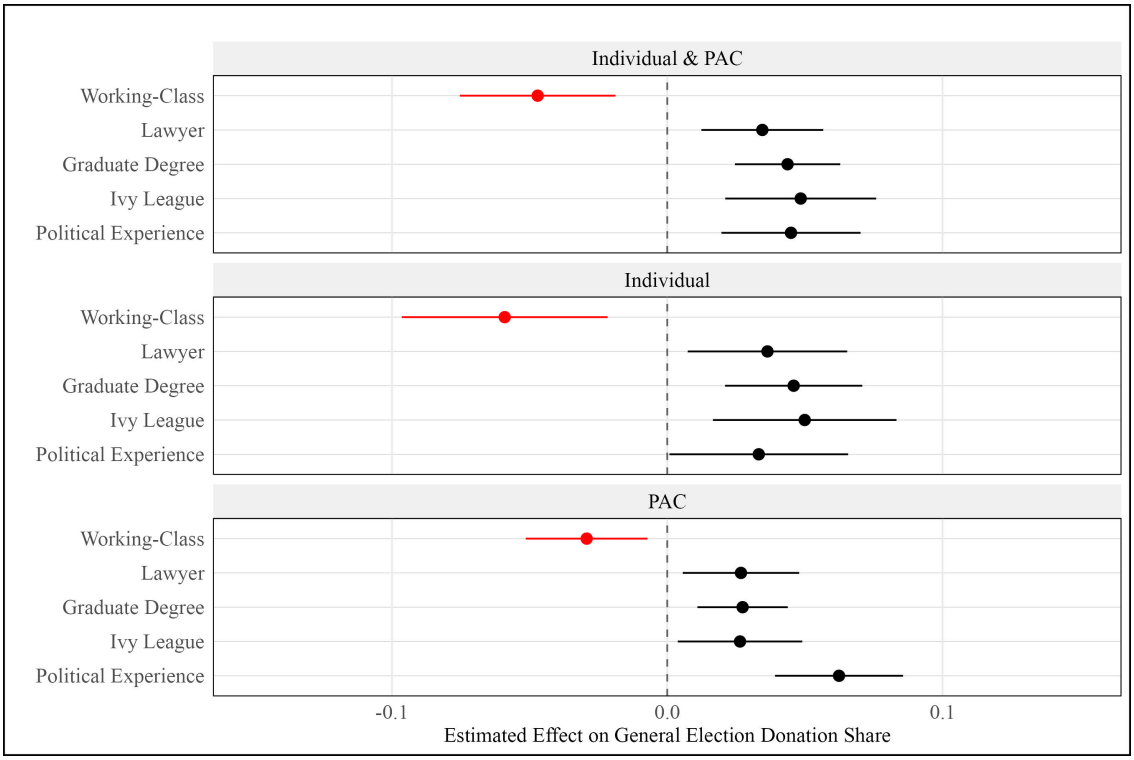
Note: This table reports the results of regression models that estimates the effect of running a working-class candidate on a party's share of donations in the general election. Individual and PAC donations are from OpenSecrets, and are subset to donations after the primary election date and up to the general election date.

FIGURE A.10: Estimated Effect of Nominating a Working-Class Candidate on the Share of General Election Donations, US Congress 2010-2022



Note: This figure plots coefficients of a regression model that estimates the effect of running a working-class candidate on a party's share of donations in the general election. The model includes district fixed effects and year fixed effects, and mirrors the model in Table 1. Individual and PAC donations are from OpenSecrets, and are subsetted to donations after the primary election date and up to the general election date.

FIGURE A.11: Estimated Effect of Nominating Candidate Types on the Share of General Election Donations, US Congress 2010–2022



Note: Each coefficient is estimated from a separate regression of general election donation share on the candidate characteristic shown, with controls for candidate race, gender, and incumbency, as well as district and year fixed effects. Estimates are reported separately for combined individual and PAC donations, individual donations only, and PAC donations only. The red coefficient corresponds to the working-class estimate, included for comparison. Donation data are from OpenSecrets and cover contributions made after the primary election and before the general election.

A.6 Voters

We use respondent-level CCES survey data from 2010 to 2024. We subset the sample to House elections to avoid double-counting respondents' vote choices.

Since the CCES does not include respondent occupation, we classify respondents by education and income. We divide respondents into three roughly equal groups based on reported household income, classifying those under $50k as working-class ("low income").

The outcome variable is a binary indicator equal to 1 if the respondent voted for the Democratic candidate and 0 if they voted for the Republican. We restrict the sample to validated voters, yielding 172,630 respondents. The model includes district and year fixed effects, with standard errors clustered at the election level. This design tests whether the effect of nominating a working-class candidate on vote choice varies across respondent class within the same election.

For the interaction models (right panels of Figure 8), we include an interaction term between candidate class and respondent class, comparing the relative effect on working-class respondents against non-working-class respondents (baseline not shown). Models include controls for respondent age, gender, race, district incumbency, candidate race, and candidate gender.

A.6.1 Respondent-Level Analysis - Model Specification

$$\begin{aligned} Y_{ijt} = \alpha &+ \beta_1 \cdot WC_{jt} + \beta_2 \cdot Class_i + \beta_3 \cdot (WC_{jt} \times Class_i) \\ &+ \beta_4 \cdot Age_i + \beta_5 \cdot Gender_i + \beta_6 \cdot Race_i \\ &+ \beta_7 \cdot Inc_{jt} + \beta_8 \cdot Gender_{jt} + \beta_9 \cdot Race_{jt} \\ &+ \lambda_j + \tau_t + \varepsilon_{ijt} \end{aligned}$$

- **Dependent Variable (Y_{ijt}):**
  - Indicator equal to 1 if respondent i in district j, year t reported voting for the Democratic House candidate, and 0 if they voted for the Republican candidate.
- **Independent Variables:**
  - WC_{jt}**:** General election candidate class in district j, year t: 1 = Democratic WC vs. Republican non-WC; 0 = both WC or both non-WC; -1 = Republican WC vs. Democratic non-WC.
  - $Class_i$**:** Respondent i's class (by education or income).
  - $WC_{jt} \times Class_i$**:** Interaction term testing whether support for WC candidates varies by respondent class.
  - Age_i**,** $Gender_i$**,** $Race_i$**:** Respondent covariates.
  - Inc_{jt}**:** Party incumbency in district j, year t (1 = Dem incumbent; 0 = open seat; -1 = Rep incumbent).
  - $Gender_{jt}$**,** $Race_{jt}$**:** Candidate gender and race in district j, year t (coded analogously to WC_{jt}).
- **Fixed Effects:**
  - λ_j: District fixed effects.
  - τ_t: Year fixed effects.
- **Errors:**
  - ε_{ijt}: Error term; standard errors clustered at the election (district–year) level.

TABLE A.19: Effect of Nominating a Working-Class Candidate on Democratic Vote Choice, by Respondent Education, Across Working-Class Definitions

	(1)	(2)	(3)	(4)	(5)
WC Candidate	-0.002	-0.013	-0.005	0.012	-0.000
	(0.007)	(0.008)	(0.014)	(0.025)	(0.027)
WC Candidate x No BA	0.013+	0.020*	0.032*	0.032	0.030
	(0.008)	(0.008)	(0.013)	(0.025)	(0.029)
District Incumbency	0.034***	0.034***	0.034***	0.034***	0.034***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Non College (Respondent)	-0.078***	-0.078***	-0.078***	-0.077***	-0.077***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
White (Respondent)	-0.266***	-0.266***	-0.266***	-0.265***	-0.265***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Male (Respondent)	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Age (Respondent)	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	172630	172630	172630	172630	172630
District-Year FE	X	X	X	X	X
District Incumbency	X	X	X	X	X
Candidate Race and Gender	X	X	X	X	X
Worker Definition	Ever	25%	50%	75%	100%

TABLE A.20: Effect of Nominating a Working-Class Candidate on Democratic Vote Choice, by Respondent Income, Across Working-Class Definitions

	(1)	(2)	(3)	(4)	(5)
WC Candidate	-0.009	-0.025	-0.032	-0.026	-0.045
	(0.014)	(0.017)	(0.026)	(0.044)	(0.050)
WC Candidate x Low Income	0.018	0.026	0.055*	0.086*	0.085+
	(0.015)	(0.018)	(0.028)	(0.044)	(0.051)
District Incumbency	0.035***	0.035***	0.034***	0.034***	0.034***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Low Income (Respondent)	0.015*	0.015*	0.016*	0.016*	0.016*
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
White (Respondent)	-0.257***	-0.257***	-0.257***	-0.257***	-0.257***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Male (Respondent)	-0.078***	-0.078***	-0.078***	-0.078***	-0.078***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Age (Respondent)	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
N	153592	153592	153592	153592	153592
District-Year FE	X	X	X	X	X
District Incumbency	X	X	X	X	X
Candidate Race and Gender	X	X	X	X	X
Worker Definition	Ever	25%	50%	75%	100%