What Happens When Working-Class Candidates Run for Office?

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Abstract

Working-class Americans are significantly underrepresented in politics. Yet it remains unclear whether elections contribute to this underrepresentation, and if so, at which stage. To address this question, we collect the full occupational histories of over 8,000 congressional candidates who ran in contested primaries or general elections between 2010 and 2024. Comparing candidates under similar electoral conditions, we find that working-class candidates perform substantially worse in primaries but nearly as well as other candidates in general elections. In primaries, working-class candidates receive about 3 percentage points less vote share and are 7 percentage points less likely to win, whereas parties nominating working-class candidates receive only 0.6 percentage points less general-election vote share, with no detectable effect on victory. To explain this difference, we compare working-class and non-working-class candidates across election stages. Working-class general-election nominees remain less likely to hold elite credentials, raise less money, and receive relatively greater support from working-class than upper-middle-class voters. Because these differences persist after nomination, the absence of a meaningful general-election penalty is difficult to attribute to a screening account in which primaries select only working-class candidates who resemble other nominees. Instead, the pattern is consistent with party labels attenuating the electoral consequences of class-based disadvantages in general elections.

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"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 Osborn (I-NE) [1]

1 Introduction

Working-class Americans are significantly underrepresented in political office. They constitute a majority of the U.S. population, but only six percent of members of Congress have ever held a working-class job (Carnes, 2013). This gap matters for representation: working-class politicians tend to support more left-leaning economic policies (Carnes, 2013; Carnes & Lupu, 2016a; O'Grady, 2019), while politicians with elite or business backgrounds are more likely to favor fiscally conservative policies and spend less on redistribution (Alexiadou, 2022; Borwein, 2022; Kirkland, 2021). One explanation for this underrepresentation is that working-class Americans are disadvantaged in elections once they run for office. They may possess fewer credentials associated with electoral success (Besley et al., 2011; Besley & Reynal-Querol, 2011), face voter bias (Simon & Turnbull-Dugarte, 2024), or lack access to campaign resources and donor networks (Carnes, 2018). Another explanation is that elections play only a limited role and that working-class Americans are instead deterred from running in the first place (Carnes, 2018).

Existing evidence on how working-class candidates perform in elections is mixed. Experimental studies find little consistent evidence that voters penalize working-class candidates, but they isolate candidate class by holding constant the credentials, resources, and campaign dynamics that often accompany real-world candidacies (Abbott & DeVeaux, 2024; Campbell & Cowley, 2014; Carnes & Lupu, 2016a; Vivyan et al., 2020). These accompanying factors, including weaker fundraising networks and fewer elite credentials, may themselves contribute to the electoral disadvantages working-class candidates face. Observational studies of elected officials and general-election candidates find little evidence that working-class candidates perform worse (Carnes, 2013, 2018). By contrast, recent work on congressional primaries finds that working-class candidates receive substantially less electoral support and points to fundraising constraints as a possible explanation (Treul & Hansen, 2023). Once working-class candidates run for office, do they face

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

electoral disadvantages in primary elections, general elections, or both?

To answer this question, we build an original dataset of occupational backgrounds for congressional candidates who won and lost between 2010 and 2024. Identifying electoral disadvantages is difficult because working-class candidates may run in different kinds of districts, face different opponents, or compete under different electoral conditions. We address this problem with research designs that compare working-class and non-working-class candidates under more similar conditions. For general elections, we use a panel dataset of 704 U.S. House districts and Senate seats across more than 2,300 elections to compare how party vote shares change over time when parties nominate working-class rather than non-working-class candidates. In primary elections, we compare working-class and non-working-class candidates competing for the same party's nomination. By holding fixed the electoral constituency or primary contest, these comparisons reduce the concern that differences in performance simply reflect where working-class candidates run. At the same time, they preserve the full set of candidate characteristics associated with working-class candidacy. Our estimates therefore capture how working-class candidates perform as they actually appear in elections, rather than the isolated causal effect of occupational class holding all other candidate characteristics constant (Bertoli & Hazlett, 2024; Marshall, 2024).

In general elections, we find when a party nominates a working-class candidate it receives 0.6 percentage points less in the two-party vote share, with no detectable effect on victory. This vote-share difference is too small to meaningfully alter electoral outcomes. In primary elections, however, working-class candidates face substantially larger disadvantages. They receive about 3.2 percentage points less vote share and are roughly 7 percentage points less likely to win their primary. The gap widens in open-seat contests, where working-class candidates receive 5 percentage points less vote share and are 12 percentage points less likely to win. Taken together, these results suggest that working-class candidates face electoral disadvantages, but that those disadvantages are concentrated in primary rather than general elections.

Why do working-class candidates face substantial disadvantages in primaries but not in general elections? One possibility is that candidate-level differences matter less in general elections because, in an increasingly nationalized and polarized electoral environment, voters rely more heavily on party labels (Bartels, 2000; Carson et al., 2023; Hopkins, 2018).

Another is that primaries screen out the working-class candidates who are most disadvantaged relative to non-working-class candidates, leaving a general-election pool in which working-class nominees more closely resemble their opponents. To distinguish between these explanations, we examine whether the electoral disadvantages facing working-class candidates diminish across stages alongside corresponding differences in credentials, ideology, and fundraising. The evidence is more consistent with the party-label explanation. Although the electoral penalty mostly disappears in general elections, working-class nominees remain less likely to hold elite credentials, raise less money, and, among Democrats, are somewhat more left-wing than other nominees. Voters also continue to respond differently to working-class candidates depending on their own class, with working-class voters demonstrating relatively more support, consistent with prior work showing that candidate class shapes voter evaluations (Abbott & DeVeaux, 2024; Vivyan et al., 2020). The persistence of these differences is difficult to reconcile with a simple screening account in which primaries eliminate the working-class candidates who are most different from their non-working-class counterparts. Instead, the results suggest that party labels attenuate the electoral consequences of class-linked disadvantages once working-class candidates secure a nomination.

This paper makes three primary contributions. First, we add to research on the causes of working-class underrepresentation by introducing a new dataset on the class backgrounds of congressional candidates and estimating how working-class candidates perform at both the primary and general-election stages. Our descriptive evidence corroborates recent work arguing that pre-election structural barriers are a major source of working-class underrepresentation (Carnes, 2018): the steepest decline occurs before the primary, where roughly half of employed Americans hold working-class jobs but only about 13% of primary candidates have ever held one. Yet elections still matter. Conditional on entering contested primaries, working-class candidates win nominations at significantly lower rates. But this underperformance largely disappears in the general election stage, where they are just as likely as other candidates to win. Primary elections are therefore a meaningful site of class-based disadvantage, but not general elections.

Second, we contribute to research on candidate credentials, electoral resources, and the bundled nature of real-world candidacies. Previous work shows that elite credentials, including legal backgrounds and advanced degrees, can advantage candidates through

fundraising and voter evaluations (Arceneaux & Vander Wielen, 2023; Bonica, 2017, 2020). We show that working-class candidates are systematically less likely to possess these credentials and receive less campaign money, especially from large individual donors. This helps explain why observational analyses of elections may reveal class-based disadvantages even when survey experiments find little evidence that voters penalize working-class backgrounds in isolation. Our results also show where these bundled disadvantages appear to matter most. Consistent with research showing that candidate characteristics carry greater weight when party labels cannot distinguish among candidates (Kirkland & Coppock, 2018), working-class candidates face penalties in primaries but not in general elections, where partisan cues dominate vote choice (Bartels, 2000; Carson et al., 2023; Hopkins, 2018).

Third, we extend research on group affinity in voter behavior to candidate class. Prior work shows that voters often prefer candidates who share salient traits with them, including race, religion, gender, and age (Badas & Stauffer, 2019; Barreto, 2010; Castle et al., 2017; McDermott, 2009; Washington, 2006). Yet less is known about whether candidates' class backgrounds activate class-aligned support in real elections. Observational evidence from Europe (Heath, 2015) and experimental evidence from the U.S. and Europe suggest that they do (Abbott & DeVeaux, 2024; Carnes & Lupu, 2016a; Vivyan et al., 2020). We provide observational evidence from U.S. congressional elections that candidate class continues to structure voter responses in general elections: voters without college degrees are more favorable to working-class nominees than college-educated voters are. This matters because class-based voting does not disappear once working-class candidates secure a nomination. Rather, it persists in a context where party labels are strong enough to mute its aggregate electoral consequences.

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 & Lupu (2023)). This disconnect matters for representation, since class shapes political values, preferences, and behavior among both the electorate (Kitschelt & Rehm, 2014; Oesch & Rennwald, 2018; Rennwald & Pontusson, 2022) and politicians (Carnes, 2013;

Evans, 2000; Hout et al., 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 & Lupu 2023; Fiva et al. 2021; Grumbach 2015; O'Grady 2019; but see Volden et al. 2020). As a result, overrepresentation of the wealthy may tilt policy away from the interests of the broad public (Gilens & Page, 2014; Lupu & Warner, 2022; Schattschneider, 1960). Even if class does not shape politicians' behavior, descriptive underrepresentation can erode public trust in government, belief in the fairness of government decisions (Barnes et al., 2023; Barnes & Saxton, 2019; Mansbridge, 1999; **?**), and political participation among underrepresented groups (Evans & 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 & 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

Should we expect working-class candidates to perform worse than other candidates once they run for office? Existing research points to several reasons they might. First, working-class candidates may be less likely to possess credentials associated with electoral success, such as advanced degrees (Arceneaux & Vander Wielen, 2023), prior political experience (Holliday, 2024), or prestigious professional backgrounds. These credentials tend to be less common among working-class candidates because entry into the schooling, professions, and lower offices that build them is itself shaped by class (Carnes, 2018). They may matter because voters use education and occupation to infer competence (Simon & Turnbull-Dugarte, 2024), even when such inferences do not necessarily reflect underlying candidate quality (Carnes & Lupu, 2016b). More broadly, if entry into higher-status careers is correlated with traits such as political skill, motivation, or strategic capacity, candidates from higher-status occupations may possess advantages that matter for electoral success (Besley et al., 2011; Besley & Reynal-Querol, 2011).

Second, working-class candidates may hold different ideological positions, particularly on economic issues. Working-class politicians' personal connections to working-class experiences may make them more attuned to the economic problems facing working-class Americans and more likely to support progressive policies on taxation, spending, and regulation (Carnes, 2013). These differences could carry electoral costs in contexts where voters penalize candidate extremity (Hall, 2015; Handan-Nader et al., 2026). Third, working-class candidates may face resource disadvantages. They may have less personal wealth, less financial security, less time to campaign, and less access–partly due to the role of party gatekeepers who control access to donor lists and networks (Carnes, 2018)–to the professional, party, and donor networks through which early campaign money flows (Bonica, 2017, 2020; Carnes, 2018; Treul & Hansen, 2023). Donors may also view working-class candidates as less viable or less aligned with their economic interests, especially if working-class candidates are perceived as more economically progressive.

There are also reasons to expect little or no electoral penalty for working-class candidates. Americans express favorable attitudes toward people from humble backgrounds and often value traits such as relatability, understanding, and honesty over formal educational or political credentials (Carnes, 2018; Piston, 2018). Working-class candidates may therefore benefit from perceptions that they better understand ordinary voters and are better positioned to represent their interests. Consistent with this possibility, survey experiments generally find that working-class candidates are viewed as more relatable, receive greater support from working-class respondents, and perform no worse than otherwise similar candidates from professional backgrounds (Abbott & DeVeaux, 2024; Carnes & Lupu, 2016a; Vivyan et al., 2020). Working-class underrepresentation may therefore reflect barriers to entry more than voter penalties once candidates run (Carnes, 2018).

Although experimental studies find little evidence that voters penalize working-class backgrounds in isolation, it remains unclear whether these findings generalize to real-world candidates, whose class backgrounds are bundled with other electorally relevant traits.[2] Assessing how this bundle affects actual electoral performance requires observational evidence from real candidacies. The limited existing evidence is mixed. Some studies conclude that working-class candidates perform just as well as other candidates in

[2]For instance, Carnes & Lupu (2016a) find that voters are not biased against candidates with working-class backgrounds when holding constant factors such as political experience.

general elections (Albaugh 2020; Carnes 2013, 2018; but see Matthews & Kerevel 2022), while others find that working-class candidates significantly underperform in primary elections (Treul & Hansen, 2023). No previous study, however, has estimated how nominating a working-class candidate affects a party's general-election performance or directly compared working-class candidates' performance across stages of the electoral pipeline.

3.1 Class Penalties Across Election Stages

Existing research offers conflicting expectations about whether working-class candidates face electoral disadvantages. But if such disadvantages exist, research on partisanship suggests that they should be larger in primary elections than in general elections. Differences in credentials, ideology, and resources could depress working-class candidates' performance at either stage, but their consequences may be attenuated in general elections, where party identification is the dominant cue, particularly in a polarized and nationalized electoral environment (Bartels, 2000; Carson et al., 2023; Hopkins, 2018). When voters rely primarily on party labels, candidate-level differences that matter within parties may have only limited consequences for general-election outcomes.

Primary elections provide weaker partisan guidance because candidates compete against co-partisans. Voters must therefore rely more heavily on other information when choosing among candidates (Schaffner et al., 2001). Occupational background can serve as one such cue, helping voters infer candidates' ideological positions (Kirkland & Coppock, 2018), while differences in credentials and campaign resources may also become more consequential. Early fundraising can help candidates demonstrate viability and remain competitive (Thomsen, 2025), yet access to campaign money is shaped by professional and donor networks that working-class candidates may lack (Bonica, 2017). Consistent with this account, working-class candidates appear especially disadvantaged in early primary fundraising (Treul & Hansen, 2023). We therefore expect any electoral penalty associated with working-class candidacy to be most visible at the primary stage, and, based on the contrasting expectations from previous experimental and observational research described above, we remain agnostic with respect to whether we will observe any effect at the general-election stage.

A primary-election disadvantage that disappears in general elections would be consistent with party labels attenuating the electoral consequences of class-linked differences.

But the same pattern could arise if primaries screen out the working-class candidates who differ most from non-working-class candidates in their credentials, ideology, or fundraising. In that case, working-class candidates who reach the general election would be a more selected group and should more closely resemble non-working-class nominees on these dimensions. The absence of a general-election disadvantage could then reflect convergence in candidate characteristics rather than party labels reducing the importance of those differences. In Section 7, we compare these gaps across election stages. If the gaps narrow or disappear among general-election nominees, the pattern would be more consistent with primary-stage screening. If they persist even as differences in electoral performance fade, it would be more consistent with party labels attenuating their electoral consequences.

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 for measuring class (Carnes, 2013; Hout et al., 1995; Kitschelt & Rehm, 2014; Oesch & Rennwald, 2018), particularly for studying how class shapes candidates' political attitudes, behavior, and campaign resources (Carnes & Lupu, 2023, 255). Unlike wealth and income, occupation is also commonly available on candidate campaign websites, making it both more practical to measure and more directly relevant to how voters encounter candidates.

We searched for campaign websites for major-party congressional candidates who appeared in a contested general or primary election between 2010 and 2024. We focus on this period because campaign websites became standard during these years. We use the Wayback Machine to prioritize the archived capture closest to and preceding each candidate's relevant election, with prespecified fallback windows when necessary. We then record candidates' occupational histories from their campaign biographies or home pages. When campaign materials do not provide occupational information, we use alternative public sources, primarily Vote Smart and Ballotpedia.[3]

With the help of over 20 research assistants, we classified occupations using an expanded version of Carnes's (2013) schema. Our adapted instrument contains 74 nar-

[3]Appendix Section A.1.1 describes website discovery, archived-page retrieval, occupational coverage, and source selection, and provides examples linking archived biographies to coded occupations.

row categories, which we consolidate into the broader occupational groups used in the analysis.[4] We classify occupations as working-class if they fall into the "service industry," "manual laborer," or "union employee/official" categories. To assess reliability, two coders recoded every occupation for a random sample of 100 candidates. Candidate-level working-class classifications agree in 98% of cases, with Cohen's $\kappa = 0.90$. Appendix Table A.3 reports this and additional candidate- and occupation-level reliability checks.

Our analysis sample consists of Democratic and Republican candidates for the U.S. House and Senate who competed in a contested primary or contested general election between 2010 and 2024.[5] For the primary-election analyses, we restrict attention to candidates who received more than 5% of the vote in their primary, for two reasons. First, campaign-website and occupation data are far more often missing for candidates below this threshold, especially in earlier years. Second, candidates who fail to exceed 5% are typically not viable: they raise little money and run minimal campaigns, and the group often includes perennial candidates with no realistic path to office. Focusing on candidates who mount a viable candidacy avoids conflating the disadvantages working-class candidates face with noise from non-serious entrants.[6] We find at least one occupation for 7,530 of the 8,097 candidates in this analysis universe, or 93%. At the candidate-cycle level, missingness ranges from 1.4% among candidates in contested general elections to 6.3% among viable primary candidates (Table A.4).

4.2 Classifying Candidate Class

Since candidates often report jobs from more than one occupational category over the course of their careers, we identify working-class candidates based on the share of their reported jobs that were working-class. The broadest measure identifies candidates who have ever held at least one working-class job; the remaining measures require working-class jobs to constitute at least 25%, 50%, 75%, or 100% of the candidate's occupational history.[7] Among the 7,530 distinct candidates in our sample, 986 (13%) had ever held a

[4] See Table A.2 in the Appendix for the full schema.

[5] We exclude states that use nonpartisan top-two or top-four primaries: Washington and Louisiana throughout the period, California from 2012 onward, and Alaska from 2022 onward.

[6] In several analyses, we further restrict the sample to the top two primary finishers to test whether working-class disadvantages persist even among the most viable candidates.

[7] Because candidates do not consistently report how long they held each job, we calculate the proportion of their occupations outside of elected political office that were working-class. We exclude incidental summer or part-time work but include working-class jobs held to pay for college.

working-class job and 84 (1%) had held only working-class jobs.

The broadest and narrowest measures produce shares similar to estimates in prior research. Among general-election winners, 8% have held at least one working-class job, close to Carnes's (2013) estimate that 6% of members of Congress from 1998 to 2008 had held a working-class job during their lifetime. At the narrow end, 1% of viable primary candidates in our data had recorded pre-political occupational histories consisting entirely of working-class jobs. This aligns with Treul & Hansen's (2023) estimate that 0.98% of U.S. House primary candidates were working in working-class occupations when they ran.

For our main analyses, we classify candidates as working-class if at least 25% of their recorded pre-political occupations were working-class. There is no agreed-upon threshold for how much working-class experience qualifies a candidate as working-class. An "ever held" definition may include candidates whose working-class experience was brief or incidental, while requiring an entirely working-class career leaves too few candidates to study. Candidates who moved from working-class jobs into professional careers may differ from those who remained in working-class occupations in their material interests, credentials, and access to donor and professional networks (Besley et al., 2011; Besley & Reynal-Querol, 2011; Bonica, 2017; Carnes, 2018; Simon & Turnbull-Dugarte, 2024). The 25% threshold identifies candidates with substantial working-class experience while retaining enough cases for analysis. A total of 716 candidates (9.5%) meet this definition. We also rerun analyses using alternative thresholds and find consistent patterns across these alternative definitions.

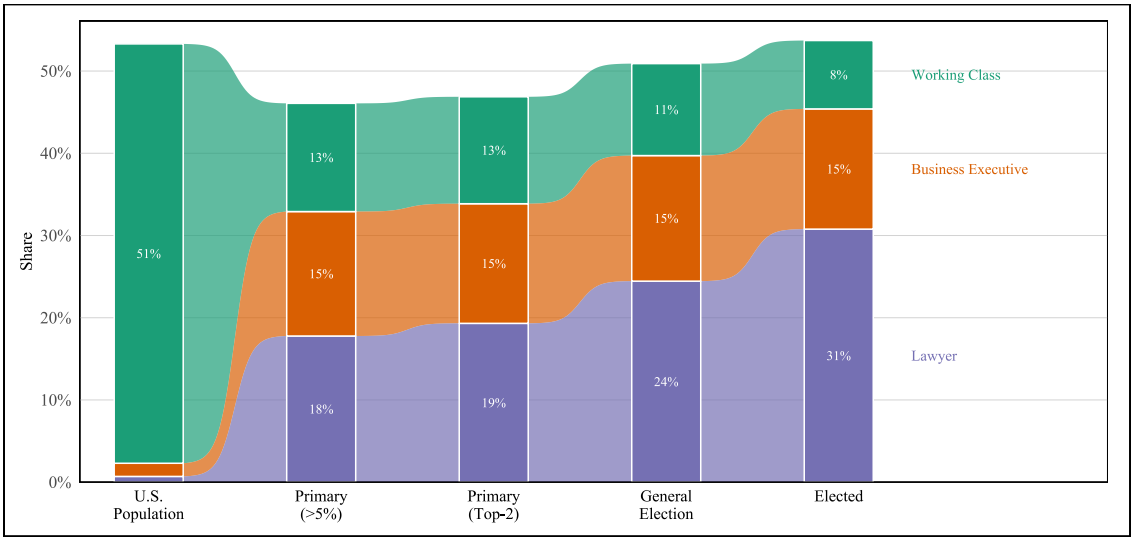
Figure 1 reports the share of candidates at each stage who have held at least one working-class job. For comparison, it reports the corresponding shares who have worked as lawyers or business executives and benchmarks these candidate shares against the occupational composition of the employed U.S. adult population.[8] Among viable primary candidates—those who received more than 5% of the vote in a qualifying contested primary—13% have held at least one working-class job. This share remains 13% among candidates who finished in the top two of their primary, before falling to 11% among general-election nominees and 8% among general-election winners.

The largest drop in working-class representation appears before the primary stage.

[8]We use an "ever held" measure here so that the working-class, business-executive, and lawyer categories are directly comparable. This differs from the 25% threshold used in our main regression estimates.

Working-class occupations account for 51% of the employed-population benchmark, compared with only 13% of viable primary candidates.[9] Lawyers display the opposite pattern. They constitute less than 1% of the employed population but 18% of viable primary candidates, rising to 31% of general-election winners. Business executives are also substantially overrepresented among candidates, comprising approximately 15% of viable primary candidates compared with 1.6% of the employed population, but their share remains relatively constant across later electoral stages. This descriptive pattern suggests that working-class candidates are less likely to advance through the electoral process once they run, though it does not account for differences in the candidates, contests, or districts represented at each stage.[10]

FIGURE 1: Occupational Backgrounds Across Congressional Election Stages, U.S. Congress, 2010–2024



Note: This figure reports the share of candidates in each election- stage sample who have ever held a job as a business executive, as a lawyer, or in a working-class occupation. Viable primary candidates received more than 5% of the vote in a contested partisan primary with at least two viable candidates; top-two primary finishers placed first or second in a contested partisan primary. Elected candidates are the winners among general election nominees. Candidate samples exclude states and years using nonpartisan primaries. The U.S. population benchmark is the share of employed adults whose current or most recent occupation falls in each category, based on the 2010–2024 General Social Survey. Candidate shares need not sum to 100 because candidates may belong to more than one category.

4.3 Estimation Strategy

General-election outcomes are primarily determined by factors outside of candidates' control, including the partisan leaning of a district or state (Abramowitz & Webster, 2016;

[9]This comparison is conservative because the candidate measure captures whether candidates have ever held a working-class job, whereas the population benchmark reflects respondents' current or most recent occupation.

[10]See Table A.5 in the online Appendix for election statistics by candidates' occupational class.

Jacobson, 2015),[11] incumbency status, and changes in national mood (Ebanks et al., 2023; Vavreck, 2009). Comparing the average vote shares of candidates from different class backgrounds therefore does not reveal whether working-class candidates perform better or worse when running under similar electoral conditions.

To address this estimation challenge, we use a panel design that compares changes over time in general-election vote share within a district when a party nominates a working-class candidate instead of a non-working-class candidate. The observations come from a panel dataset of 704 distinct U.S. House districts and states that experience between 2 and 8 general-election contests from 2010 to 2024. Districts are treated as unique within each redistricting period. We exclude all uncontested elections, yielding 2,314 district-year observations.[12] The outcome is measured either as the Democratic Party's two-party general-election vote share or as a binary indicator for Democratic victory.[13] The treatment variable is coded as 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 include district fixed effects to control for time-invariant confounders that differ across races, such as district partisanship. We also include year-by-chamber fixed effects to address time-varying confounders, such as partisan changes in national mood, and cluster standard errors at the district level. Put together, this design compares changes in Democratic vote share over time within districts, estimating how that vote share shifts when a party nominates a working-class rather than a non-working-class candidate.[14]

5 General Election Results

Table 1 presents the results. Columns 1–4 report estimates for general-election vote share, and Columns 5–8 for the probability of victory. Columns 1 and 5 omit district

[11] Since we study House and Senate elections together, for simplicity and unless otherwise specified, we use "districts" throughout this paper to refer to both congressional districts and states.

[12] For more details about the types of districts that enter the dataset, see Appendix Section A.1.4.

[13] 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 Democratic 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 Appendix Section A.2.1.

[14] We present a visualization of the treatment across all districts and years in Figure A.7 in the online Appendix.

fixed effects and show the across-district association between working-class candidacy and electoral performance. On average, parties that nominate working-class candidates receive 7.1 percentage points less of the general-election vote share and are 17.9 percentage points less likely to win. This suggests that working-class candidates are disproportionately nominated in less favorable races for their party. That sorting may itself be part of the broader disadvantage working-class candidates face, but it is distinct from the question of whether they underperform when running under similar district conditions. The remaining columns add district fixed effects, defined separately within each redistricting period, to address that question.

Once we compare within districts, the vote share penalty decreases almost entirely, but remains detectable. In the baseline district fixed-effects specification (Column 2), nominating a working-class candidate reduces a party's general-election vote share by 0.7 percentage points. The estimate is stable, shrinking only slightly to 0.6 percentage points once we control for incumbency (Column 3) and candidate race and gender (Column 4). The effect is nonetheless substantively small: a 0.6-percentage-point shift in vote share could only flip races decided by less than a 1.2-point margin, of which there were just 57 among the 2,868 contested general elections in this period, only 4 involving a working-class candidate. For comparison, consistent with prior work (Ebanks et al., 2023), we find that incumbents receive a 2.6 percentage point increase in vote share, more than four times the working-class penalty.

In Columns 6–8, we turn to the probability of victory. Here the estimated effect is substantively negligible and statistically indistinguishable from zero in every within-district specification, ranging from a 0.6 percentage point decrease in the baseline (Column 6) to 0.4 points once controls are added (Columns 7–8). The same pattern holds across district types. Even in competitive districts, where elections are actually decided, working-class candidacy carries the same small vote-share penalty and no detectable effect on the probability of victory (see online Appendix Section A.2.4). Taken together, the modest within-district vote-share difference we observe is too small to meaningfully affect electoral outcomes.[15].

[15]These conclusions remain unchanged when we replace the signed trichotomous measures of class, incumbency, race, and gender with separate indicators for Democratic-only, Republican-only, and both-nominee cases. Candidate-level models also show no detectable difference between Democratic and Republican working-class nominees (Appendix Section A.2.2)

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)	(7)	(8)
Working-Class	-0.071***	-0.007*	-0.006*	-0.006*	-0.179***	-0.006	-0.004	-0.004
	(0.012)	(0.003)	(0.003)	(0.003)	(0.038)	(0.017)	(0.015)	(0.015)
Dist. Incumbency			0.027***	0.026***			0.081***	0.075***
			(0.002)	(0.002)			(0.015)	(0.016)
N	2314	2314	2314	2261	2314	2314	2314	2261
Year × Chamber FE	X	X	X	X	X	X	X	X
District FE		X	X	X		X	X	X
Dist. Incumbency			X	X			X	X
Race/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 Democratic general-election vote share or a binary indicator for Democratic candidate victory. All models include year-by-chamber fixed effects. Columns 1 and 5 omit district fixed effects and show the descriptive across-district association between working-class candidacy and electoral performance. Columns 2–4 and 6–8 include district fixed effects, defined separately within each redistricting period. Standard errors are clustered at the district level. +p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001.

One possibility is that the results depend on how we define candidate class. In Appendix Section A.2.5, we rerun the analysis using alternative definitions, ranging from candidates who ever held a working-class job to candidates whose entire pre-political careers were in working-class occupations. The estimated vote-share penalties remain consistently negative and become larger as the definition becomes stricter, increasing from 0.6 to 1.7 percentage points. The effects on victory, however, remain close to zero across definitions.

A further concern is that working-class candidates select into races on the basis of time-varying district conditions. The most plausible version, that they run when their party is in secular decline, would lead us to overstate a penalty that is already small. But we find little sign that nominations track a district's trajectory: a working-class nomination does not predict the district's vote share in the prior election, and controlling for the district's recent presidential lean leaves the estimate unchanged. We report these checks alongside further diagnostics, including leads and lags of the treatment and an imputation estimator robust to staggered treatment timing (Liu et al., 2024), in Appendix A.2.3.

6 Primary Election Results

Do working-class candidates face electoral disadvantages in contested primary elections? If class-based disadvantages exist, they should be most visible at this stage. Because candidates share a party label, voters must rely more heavily on other information when choosing among co-partisans. Differences in credentials, ideology, and campaign resources may therefore matter more in primaries than in general elections. Existing observational evidence is consistent with this possibility: Treul & Hansen (2023) find that working-class candidates perform substantially worse in U.S. House primaries.

We examine this pattern for House and Senate candidates from 2010 to 2024, restricting attention to candidates who have demonstrated at least some electoral viability. This restriction helps ensure that the results are not driven by perennial or marginal candidates who formally enter primaries but raise little money, do not run substantial campaigns, and receive minimal voter support. Our main primary-election sample therefore includes candidates who received at least five percent of the primary vote and competed in races with at least two such viable candidates.

We estimate candidate-level models of primary vote share and primary victory, using a specification similar to Handan-Nader et al. (2026). Our first specification includes district-party fixed effects, year-by-party-by-chamber fixed effects, and fixed effects for the number of candidates in the primary. This specification compares working-class and non-working-class candidates within the same district-party over time. Our second specification includes primary-contest fixed effects, comparing candidates who ran against one another in the same primary. Because all candidates in a contest face the same electoral environment, this specification provides a more demanding within-race comparison. Across specifications, we control for incumbency and gender and cluster standard errors at the district-party level.

Table 2 presents the results. We find a consistent primary-election disadvantage for working-class candidates across specifications. In the full viable-candidate sample, working-class candidates receive 3.2 percentage points less vote share than comparable non-working-class candidates. This vote-share gap translates into a meaningful difference in electoral success: working-class candidates are roughly 7 percentage points less likely to win their primary.

TABLE 2: Disadvantage of Working-Class Candidates in Contested Primary Elections, U.S. Congress 2010–2024.

	Vote Share			Victory		
	(1)	(2)	(3)	(4)	(5)	(6)
Working-Class	-0.032***	-0.032***	-0.049*	-0.067**	-0.072**	-0.119*
	(0.008)	(0.010)	(0.019)	(0.021)	(0.026)	(0.051)
Incumbency	0.492***	0.527***		0.858***	0.927***	
	(0.007)	(0.008)		(0.011)	(0.011)	
N	8040	8040	2005	8040	8040	2005
Sample	All	All	Open	All	All	Open
District-Party FE	X			X		
Year × Party × Chamber FE	X			X		
No. of Candidates FE	X			X		
Contest FE		X	X		X	X
Gender Control	X	X	X	X	X	X

Note: Each observation is a viable candidate (one receiving more than 5% of the primary vote) in a contested, partisan congressional primary for the U.S. House or Senate, 2010 to 2024. The treatment variable is a binary indicator equal to 1 if the candidate is working-class and 0 otherwise. The outcome is the candidate's share of all votes cast in the primary (columns 1–3) or a binary indicator for winning the primary (columns 4–6). Columns 1 and 4 include district-party, year-by-party-by-chamber, and number-of-candidates fixed effects; the remaining columns replace these with a contest (district-party by year) fixed effect that compares candidates within the same primary. Columns 3 and 6 restrict the sample to open-seat primaries (no incumbent running for the seat). All models control for gender; columns 1–2 and 4–5 also control for incumbency (the open-seat columns contain no incumbents). Standard errors are clustered by district-party. +p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001.

The disadvantage is larger in open-seat primaries, where no incumbent is present and the nomination is more likely to create a path to Congress. In these contests, working-class candidates receive 4.9 percentage points less vote share and are 11.9 percentage points less likely to win. The primary-election penalty is therefore not simply an artifact of working-class candidates challenging entrenched incumbents; it also appears in contests where new candidates have the clearest opportunity to enter office.

The same pattern appears in two additional checks. When we restrict the sample to candidates who finished first or second in their primary, working-class candidates continue to underperform. The disadvantage also grows as the working-class definition becomes stricter. As shown in Appendix Figure A.11, candidates who ever held a working-class job receive a modest penalty, while candidates whose entire pre-political careers were spent in working-class occupations receive roughly 8 percentage points less vote share and are roughly 15 percentage points less likely to win. Taken together, these results indicate that working-class candidates systematically underperform in contested primaries. The disadvantage is not driven by candidates with minimal electoral support, and it persists when the analysis is restricted to first- and second-place finishers.

7 Class Differences Across the Electoral Pipeline

Working-class candidates face a substantial disadvantage in primary elections but only a modest, and practically insignificant disadvantage in general elections. This pattern raises two possible explanations. One is that candidate-level differences that are salient in primary elections become less consequential in general elections, where party labels become the primary determinant of candidate choice. Another is that primaries screen out the working-class candidates who differ most from non-working-class candidates, leaving general-election nominees who resemble their non-working-class counterparts more closely than working-class primary contenders do.

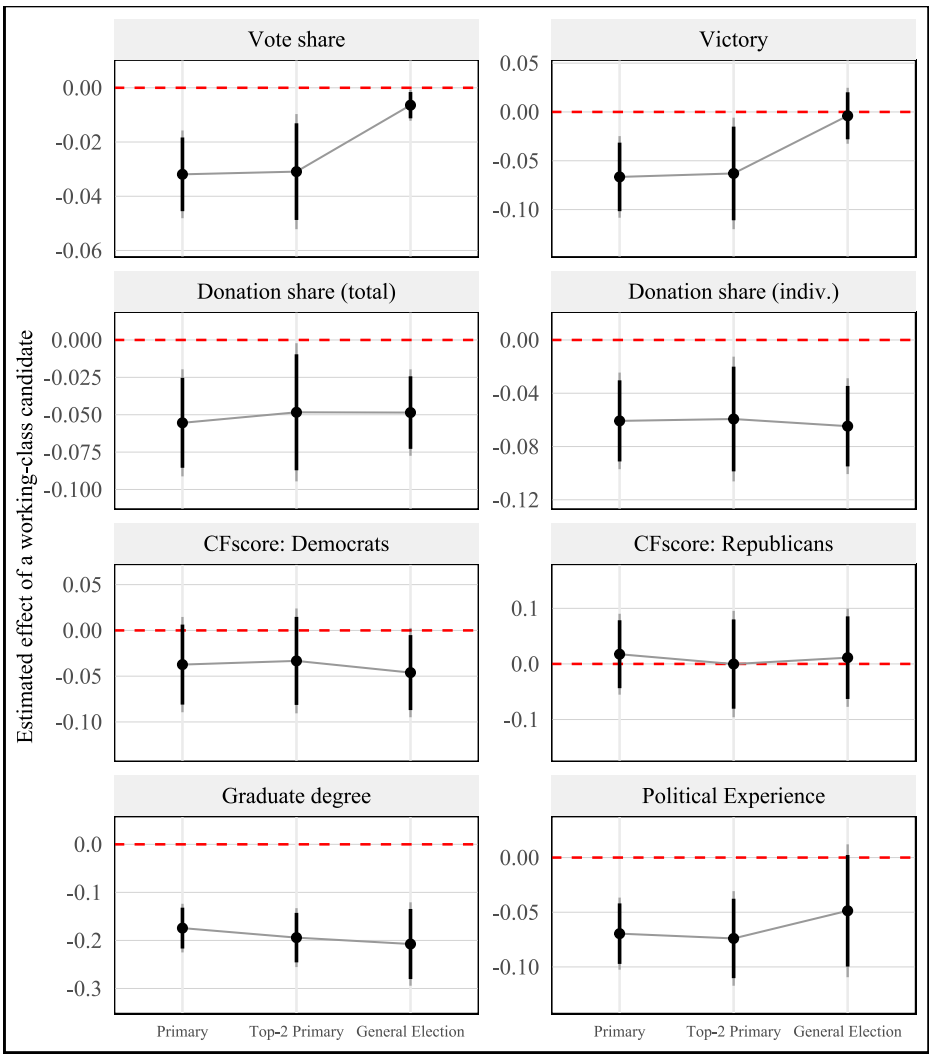
To evaluate these explanations, we compare working-class and non-working-class candidates at three stages of the electoral pipeline: viable primary candidates, top-two primary finishers, and general-election nominees. We examine electoral outcomes, including vote share and victory, along with candidate characteristics that may be filtered through the nomination process (credentials and ideology) and donor support. As discussed above, these characteristics and resources are associated with electoral success; in Appendix Figure A.12, we confirm that credentials and related backgrounds predict stronger electoral performance and greater donor support in our own data.

If primary elections screen out working-class candidates with electorally disadvantageous characteristics, then gaps in those characteristics should shrink among general-election nominees. If instead, however, candidate-characteristic gaps and fundraising disadvantages persist even as electoral penalties fade, the pattern would be more consistent with party labels attenuating the electoral consequences of class-linked disadvantages than with primary-stage screening alone.

Figure 2 presents the results. The first row summarizes the electoral pattern from the previous sections: working-class candidates underperform in primaries, including among top-two finishers, but at the general-election stage the vote-share penalty falls to 0.6 percentage points and the victory penalty disappears.

The second row turns to donor support, measured as candidates' share of campaign contributions in the primary and general election using data from the Database on Ideology, Money in Politics, and Elections (DIME) (Bonica, 2024). Unlike the electoral penalty, the fundraising gap persists after nomination. Among viable primary candi-

FIGURE 2: Differences in Working-Class Candidate Electoral Outcomes and Characteristics across the Electoral Pipeline, U.S. Congress 2010–2024



Notes: Each point is the coefficient on a working-class candidate indicator (25%+ of the pre-political career in a working-class occupation) from a separate regression of the labeled outcome at three stages: viable primary candidates (>5% of the primary vote), top-two primary finishers, and general-election nominees. Primary-stage models include district-party, year-by-party-by-chamber, and number-of-candidates fixed effects, with standard errors clustered by district-party. For contest-level outcomes at the general-election stage (vote share, victory, donation share), estimates use the main-text trichotomous working-class specification with district and year-by-chamber fixed effects and standard errors clustered by district (Table 1); candidate-level and trichotomous specifications produce nearly identical general-stage estimates (Table A.25). Candidate attributes—ideology, graduate degree, and prior political experience—are estimated at the candidate level at every stage, comparing working-class and non-working-class co-partisans within the same district over time. All models control for district incumbency and candidate gender; general-stage models also control for candidate race. Donations are candidates' within-contest contribution shares in the relevant election window, using primary-window contributions at the primary stages and general-window contributions at the general stage. CFscore is estimated separately by party and standardized; other outcomes are in natural probability or share units. Thick bars are 90% confidence intervals, thin bars 95%. Negative values indicate that working-class candidates score below non-working-class co-partisans.

dates, working-class candidates receive 5.5 percentage points less of total contributions and 6.1 percentage points less of individual contributions. Among general-election nominees, the corresponding gaps are 4.9 and 6.5 percentage points. These estimates show that working-class candidates continue to face resource disadvantages even after they become nominees. Appendix Table A.22 shows that this gap is concentrated among individual donors rather than PACs, and is especially pronounced among large individual donors, who tend to be much wealthier than small donors (Bouton et al., 2022). This pattern is consistent with the idea that working-class candidates receive less support from donor networks dominated by affluent individuals.

The third row examines candidate ideology using standardized, party-specific CFscores. Working-class Democrats are slightly more left-wing than other Democrats, and this gap is roughly constant across the pipeline. Working-class Republicans do not differ ideologically from other Republicans at any stage. Ideology therefore does not appear to explain the primary disadvantage overall. If extremity is rewarded in primaries but penalized in general elections (Hall, 2015; Handan-Nader et al., 2026), the leftward positioning of working-class Democrats would predict stronger primary performance and weaker general-election performance, the opposite of what we observe. Working-class Republicans also face a similarly sized primary disadvantage despite showing no ideological difference from their co-partisans. Nor does ideology support a screening explanation for the absence of a general-election disadvantage. If primaries selected working-class Democrats whose ideological positions more closely resembled those of other Democrats, the ideological gap should narrow among general-election nominees, but it does not. Party-specific ideological effects remain possible, but ideology cannot explain the common primary disadvantage across parties or its disappearance in general elections.

CFscores capture candidates' broad ideological positioning on a single left-right scale, but candidates with similar scores may differ in the groups and conflicts they emphasize in their campaigns. To capture these differences in campaign emphasis, we also measure candidates' use of pro-worker rhetoric on campaign websites using a dictionary of terms referring to workers and unions.[16] We find that working-class candidates use more pro-worker rhetoric than non-working-class candidates, and this gap is no smaller among general-election nominees than among primary candidates (Appendix Figure A.15). Al-

[16]See online Appendix Section A.7 for details, including the phrases included in the dictionary

though we do not estimate the electoral consequences of this rhetoric, this persistent difference in campaign messaging provides additional suggestive evidence against the screening account.

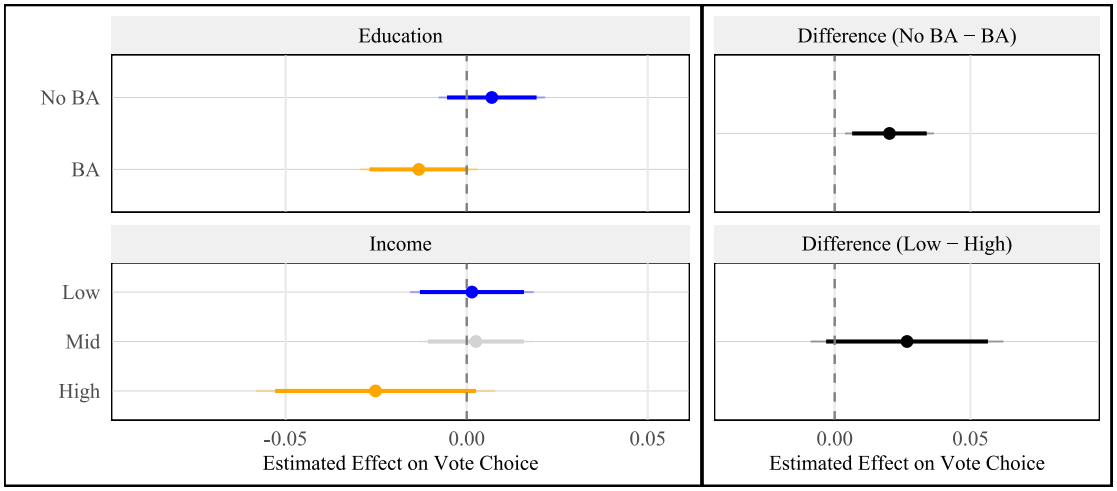
The final row examines two candidate credentials: graduate education and prior elected office. These measures capture observable traits that may signal experience or qualifications. If primary elections screen for working-class candidates with stronger electoral credentials, these gaps should narrow among general-election nominees. We find only limited evidence of such convergence. Working-class candidates remain less likely to hold graduate degrees at every stage, and while the gap in prior elected office narrows somewhat among general-election nominees, it remains negative. These patterns suggest that primary elections do not eliminate key observable differences between working-class and non-working-class candidates.

7.1 Voters Respond Differently to Working-Class Candidates

The evidence above shows that working-class nominees remain distinct from other nominees even as their aggregate general-election penalty largely disappears. This pattern still leaves open how to interpret the near-zero aggregate effect. Party labels may limit the electoral consequences of class-based differences, but this does not necessarily mean that candidate class becomes irrelevant to voters. Aggregate effects can conceal heterogeneous responses: working-class candidates may gain support from voters with less education or lower income while losing support from more affluent or highly educated voters, producing little net effect on vote share.

To examine this possibility, we use respondent-level data from the Cooperative Election Study (CES) between 2010 and 2024, restricted to validated voters in U.S. House elections who chose a major-party candidate. We use the same symmetric treatment coding as in Table 1, with positive values for a working-class Democratic nominee facing a non-working-class Republican and negative values for the reverse. The outcome is an indicator for voting for the Democratic candidate, so this coding estimates whether nominating a working-class candidate changes support for that candidate's party. We interact this treatment with respondent education and income to test whether working-class candidacy has different effects across class-linked voter groups. Because the CES does not include respondent occupation, we follow Carnes & Lupu (2021) and use education

FIGURE 3: Effect of Nominating a Working-Class Candidate on 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's party. The treatment is coded symmetrically by party, as in the main general-election analysis. The left panels show group-specific effects by respondent education and income. The right panels show differences across respondent groups: No BA minus BA and low income minus high income. Positive differences indicate that working-class candidates receive relatively more support from voters with less education or lower income. Models include controls for respondent age, gender, and race, candidate race and gender, district incumbency, and district and year fixed effects, with CES common-content weights. The sample includes approximately 173,000 respondents in the education models and 154,000 in the income models, linked to U.S. House elections between 2010 and 2024. Thick bars indicate 90% confidence intervals and thin bars 95%.

and income as proxies for respondent class. The models include respondent demographics, candidate race and gender, district incumbency, district and year fixed effects, and CES common-content weights; full specifications are reported in Appendix Section A.6.1. Figure 3 presents the results.

The left panels show the estimated effect of nominating a working-class candidate within each respondent group. The right panels show the main quantity of interest: the difference in that effect across groups. Positive estimates indicate that working-class candidates receive relatively more support from voters with less education or lower income than from college-educated or higher-income voters. This is the pattern we find. The education difference is positive and relatively precise, while the income difference points in the same direction but is less precisely estimated.

These results suggest that candidate class remains politically meaningful even among general-election nominees. The near-zero aggregate penalty does not appear to reflect the disappearance of class-based voting. Instead, it appears to mask offsetting patterns of support: working-class candidates receive relatively more support from voters with less education and, more tentatively, from lower-income voters, while receiving less support

from college-educated and higher-income voters. This pattern is difficult to reconcile with the view that meaningful differences between working-class and non-working-class candidates are fully screened out before the general election. It is more consistent with the view that class continues to shape voter response, but that its aggregate electoral consequences are limited in general elections.

8 Conclusion

What happens when working-class candidates run for office? We find that they face substantial disadvantages in primary elections but perform roughly as well as other candidates in general elections. Among viable primary candidates, working-class candidates receive about 3 percentage points less vote share and are roughly 7 percentage points less likely to win. By the general election, however, these penalties largely disappear: parties that nominate working-class candidates receive only 0.6 percentage points less vote share, with no detectable effect on victory. Electoral barriers therefore matter, but they are concentrated before and during the nomination stage rather than in general elections.

Why do working-class candidates achieve near parity in general elections despite facing substantial disadvantages in primaries? We considered two explanations. Under primary-stage screening, nominating contests eliminate the weakest working-class candidates, leaving only those most competitive in general elections. Under party-label attenuation, working-class nominees continue to carry class-linked disadvantages, but party labels reduce their electoral consequences after nomination. Our evidence is more consistent with the second account. Working-class nominees remain less likely to hold elite credentials, raise less money, and, among Democrats, are somewhat more left-wing. They also continue to draw different levels of support from voters by class. Yet the aggregate general-election penalty is small and has no detectable effect on victory. This pattern fits poorly with a simple screening story in which primary elections eliminate the relevant differences between working-class and non-working-class candidates.

Two main limitations qualify this interpretation. First, we cannot fully distinguish party-label attenuation from positive selection on unobserved characteristics. Working-class candidates who reach the general election may be unusually talented, ambitious, or skilled campaigners relative to the broader population of potential working-class can-

didates, consistent with work showing that barriers to entry can generate positive selection among underrepresented groups (Anzia & Berry, 2011; Ashworth et al., 2024). Our evidence shows that many observable differences between working-class and non-working-class candidates persist after nomination, but unobservable differences may also contribute to the disappearance of the primary-election penalty.

Second, we measure occupational background using campaign materials, which may reflect strategic self-presentation. Candidates may exaggerate, omit, or reframe working-class experience, and such patterns could bias our estimates if they differ between winners and losers. Future research should examine how candidates signal class identity through occupational biographies, campaign rhetoric (Devine et al., 2025), or visual self-presentation (Lenz & Lawson, 2011), and whether working-class candidates' fundraising disadvantage reflects ideological distance from wealthy donors, exclusion from professional networks, or other class-linked barriers.

The broader implication is that working-class underrepresentation is not produced primarily by general-election voters rejecting working-class nominees. The largest class imbalance appears before individuals enter the candidate pool, and the clearest electoral penalty appears in primaries. Once working-class candidates secure a nomination, they perform roughly as well as other nominees. But this parity does not mean that class-linked disadvantages have disappeared. Working-class nominees still possess fewer elite credentials, receive less donor support, and attract different patterns of voter support. The electoral pipeline therefore narrows the representation of working-class Americans before the general election, while party labels limit the consequences of those disadvantages only after the nomination has already been won.

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Online Appendix: What Happens When Working-Class Candidates Run for Office?

Appendix Contents

A.1 Data Construction and Sample Statistics

This section describes how we located campaign websites, retrieved archived pages, extracted occupational histories, and converted those histories into the occupational categories used in the analysis. It also reports coverage and coding-reliability statistics and presents archived examples showing how occupational information was extracted and coded.

A.1.1 Campaign Website Collection and Occupational Sources

Collection universe and campaign websites

The data-collection universe contains major-party U.S. House and Senate candidates from 2010 through 2024 who either appeared in a general election, including uncontested general elections, or received more than 5% of the vote in a contested primary with at least two candidates above that threshold. We exclude candidates from states using nonpartisan primaries and third-party and independent candidates. This produces 11,616 candidate-year records representing 8,102 distinct candidates. Campaign websites and archived pages were collected by election cycle, while occupational histories were consolidated at the candidate level.

We first searched Ballotpedia for each candidate's campaign website. When Ballotpedia did not provide a website, research assistants searched Politics1, Google, Vote Smart, news coverage, and other election-reference sources. We located a campaign-website URL for 10,939 candidate-years, or 94.2% of the collection universe. Coverage was 98.5% among general-election candidates and 89.5% among viable candidates who did not advance beyond the primary.

Retrieving archived pages

Campaign websites often become unavailable or change after an election. We therefore queried the Internet Archive's Wayback Machine for archived versions of each located website. For each candidate-election, the scraper prioritized the capture closest to and preceding the relevant election date. When no such capture was available within 100 days, it applied a predetermined sequence of fallback windows extending no more than 200 days before or after the election. The complete selection rule and page-classification

code are included in the replication materials. Each selected page remains linked to its timestamped Wayback URL, allowing the source and capture date to be inspected directly.

Among the 10,939 candidate-years with a located website, 9,375, or 85.7%, yielded at least one usable archived capture with nonempty extracted text. Another 402 candidate-years without a usable archived capture had been copied by research assistants while the website remained active. Across the full collection universe, 83.3% of candidate-years produced usable campaign-website text from one of these channels.

For general-election candidates, we evaluate timing relative to the general election; for candidates eliminated in the primary, we use the primary date. Among the 9,164 candidate-years with a usable capture from the relevant election stage, the median capture occurred five days before the election. Ninety-three percent of captures predated the election, 96.6% fell within 100 days of it, and 98.3% fell within 200 days.

Identifying and extracting occupational information

The scraper downloaded each campaign website's home page and pages likely to contain biographical information. It identified biography pages when the page title or URL contained one of four terms: "bio," "about," "meet," or "story." This approach captured common variants such as *biography*, *about-me*, and *meet-jane*. It identified a biography page for 4,971 of the 6,556 candidates processed through the scraper, or 75.8%.

Research assistants reviewed the collected pages for the remaining 1,585 candidates. In many of these cases, occupational information appeared on the home page or on a page with an unconventional title. In total, campaign-website material provided occupational information for 5,647 of the 6,556 candidates, or 86.1%. For candidates whose campaign websites did not provide this information, we used the alternative public sources described in the next section.

For each candidate, we recorded every occupation mentioned in the collected biographical material using the source's own wording. We retained details needed to distinguish among occupational categories, such as whether the candidate owned, managed, or worked for a business. Education credentials were recorded separately.

Occupational coverage and sources

When campaign websites did not provide usable occupational information, we searched Ballotpedia biographies and Candidate Connection responses, Vote Smart, LinkedIn, official government biographies, social-media profiles, and news coverage. We applied the same extraction procedure to every source.

Combining campaign websites and these fallback sources, we coded at least one occupation for 7,533 of the 8,102 candidates in the collection universe, or 93.0%. Campaign websites contributed occupational information for 85.9% of coded candidates. Another 14.1% were coded exclusively from non-website sources, primarily Vote Smart and Ballotpedia. Table A.1 reports the complete source breakdown.

TABLE A.1: Sources of Coded Candidate Occupations

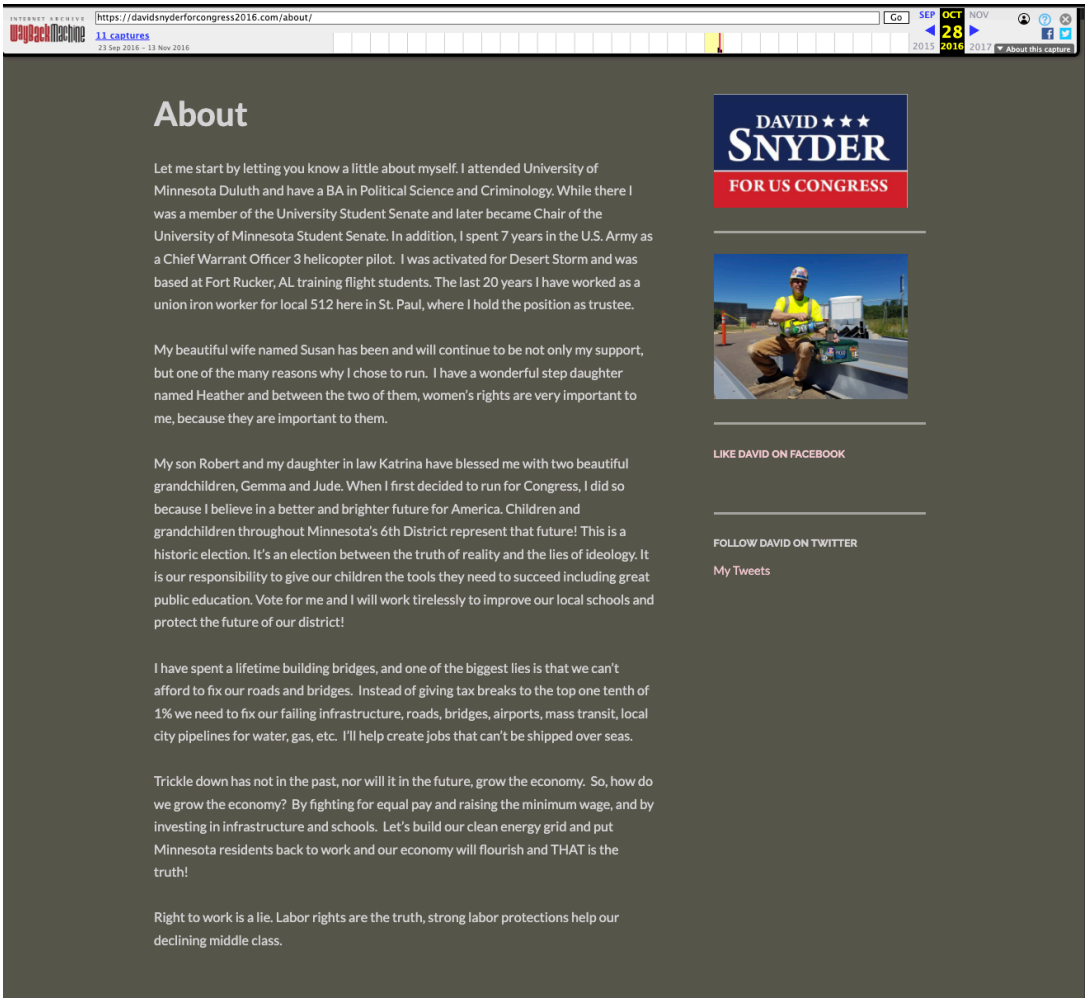
Source	Candidates	Share
Campaign website only	5,664	75.2%
Campaign website plus another source	808	10.7%
Non-website sources only	1,061	14.1%
Total	7,533	100.0%

Note: This table reports the sources of candidates' coded occupational histories. An additional source is counted alongside a campaign website only when it supplied an occupational category absent from the campaign-website material. Among candidates coded exclusively from non-website sources, Vote Smart supplied 540 histories, Ballotpedia supplied 467, LinkedIn supplied 41, and other public sources supplied 13.

Archived source examples

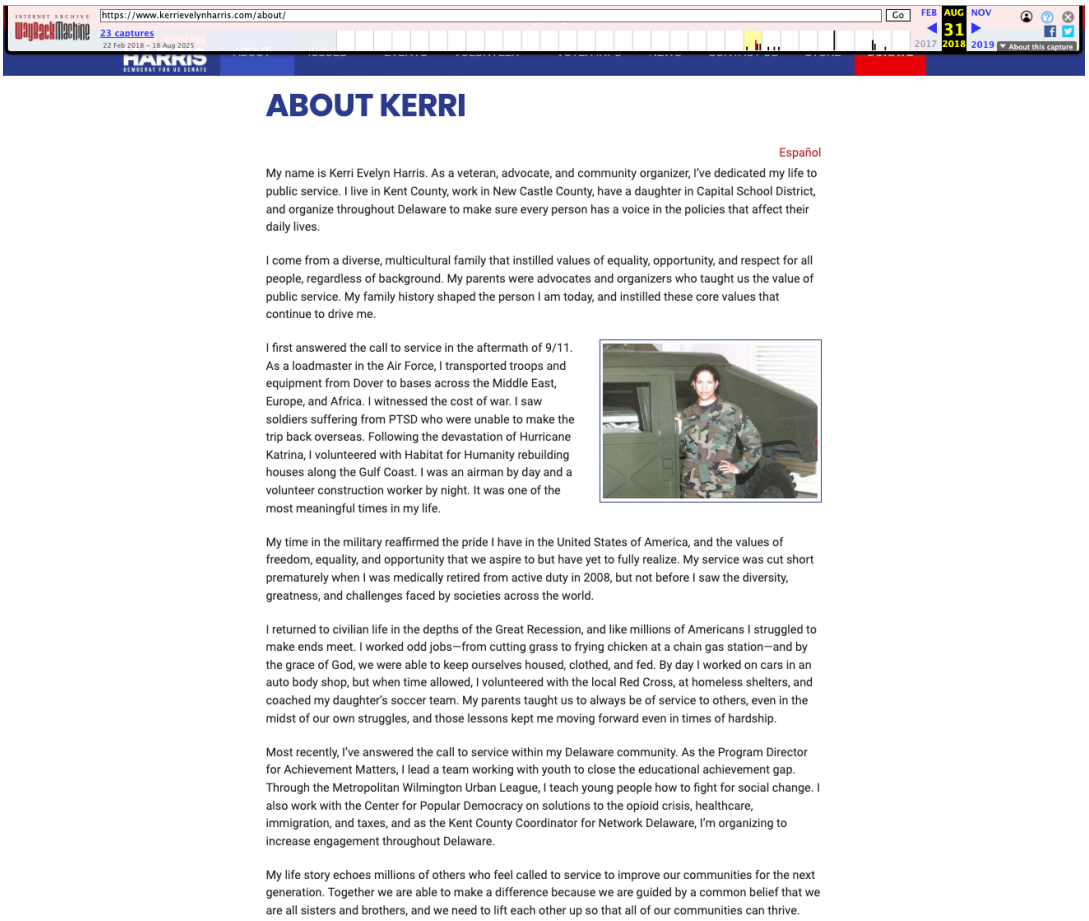
Figures A.1 and A.2 show how archived campaign material was converted into the occupational histories used in the data. We selected examples from different election cycles that contain both working-class and non-working-class occupations. Each figure displays the archived page and Wayback timestamp, followed by the extracted occupations and assigned categories. These examples show the link between the original source text and the coded records. The reliability exercises following the figures assess reproducibility across larger samples.

FIGURE A.1: Archived Campaign Biography and Occupational Coding: David Snyder, 2016



Note: This figure shows David Snyder's archived campaign biography and its Wayback timestamp. The coded occupations are U.S. Army service (Military or law enforcement) and union ironworker for Local 512 (Working-Class). One of two coded occupations is working-class, producing a working-class proportion of 0.50.
Archived source: `http://web.archive.org/web/20161029002353/https://davidsnyderforcongress2016.com/about/`

FIGURE A.2: Archived Campaign Biography and Occupational Coding: Kerri Evelyn Harris, 2018



Note: This figure shows Kerri Evelyn Harris's archived campaign biography and its Wayback timestamp. The coded occupations are Air Force service (Military or law enforcement); cutting grass (Working-Class); frying chicken at a chain gas station (Working-Class); auto-body-shop work (Working-Class); program director for Achievement Matters (Service-based professional); operations director at the Metropolitan Wilmington Urban League (Service-based professional); Kent County coordinator for Network Delaware (Service-based professional); and Center for Popular Democracy (Politician or staff member). Three of eight coded occupations are working-class, producing a working-class proportion of 0.375.
Archived source: `http://web.archive.org/web/20180901113921/https://www.kerrievelynharris.com/about/`

A.1.2 Occupational Classification and Coding Reliability

Classifying occupation strings

We classified extracted occupations using an adapted version of **?**'s (**?**) coding schema. Table A.2 reports the narrow categories used to construct the broad occupational groups presented in the analysis.

TABLE A.2: 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; Hospital/medical services administrator; Politics, government, or public relations consultant; Leadership or management consultant; Scientific or health care consultant; Other consultant
Business executive	Executive of a medium- or large-sized business; Owner of a medium- or large-sized business; Bank owner/banker; Media executive, publisher, or media owner
Small business owner	Owner of a small/local business; Contractor
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
Political Officeholder (Pre-Congressional)	Officeholder: local government; Officeholder: state government
Service-based professional	Elementary/secondary school teacher; Elementary or secondary school administrator; College professor (except law schools); Law school professor; College administrator; 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

Coding reliability

We assessed whether an independent application of the coding rules reproduced the classifications used in the analysis. The author first recoded every occupation for a random sample of 100 candidates without observing the production codes. Candidate-level working-class classifications agreed in 98% of cases, with Cohen's $\kappa = 0.90$. The correlation between the two independently calculated working-class occupation shares was

0.92.

We repeated this exercise for 50 candidates with at least one working-class occupation. Agreement was 92%, with $\kappa = 0.77$.

We also audited 900 individual occupation strings, sampling 100 from each of the nine broad occupational groups. Agreement ranged from 59% for business executives to 89% for lawyers and was 81% for working-class occupations. After reweighting the groups to match their prevalence in the full data, category agreement was 74.4%, with $\kappa = 0.71$. The candidate-level exercises show how these occupation-level disagreements affect the paper's main classification: working-class status agreed for 98% of the random candidate sample and 92% of the oversample.

TABLE A.3: Reliability of Occupational Coding

Validation sample or occupational group	N	Agreement	Cohen's κ
Panel A: Candidate-level working-class classification			
Random candidate sample	100	98.0%	0.90
Candidates with working-class occupations (oversample)	50	92.0%	0.77
Panel B: Occupation-level category agreement			
Business employee	100	67.0%	
Business executive	100	59.0%	
Farm owner or manager	100	76.0%	
Lawyer	100	89.0%	
Military or law enforcement	100	88.0%	
Service-based professional	100	60.0%	
Small business owner	100	78.0%	
Technical professional	100	84.0%	
Worker	100	81.0%	
Population-reweighted overall	900	74.4%	0.71

Note: This table reports agreement between the production occupation codes and a blind author recode using the same 67-category instrument. Panel A reports agreement on candidate-level working-class classification. Panel B reports the share of occupation strings assigned to the same broad occupational group in the blind recode. The occupation-string sample contains 100 strings from each group. The final row reweights the groups according to their prevalence in the full occupation data. Category-specific values of Cohen's κ are not reported because each category was sampled separately based on its production classification.

A.1.3 Candidate Sample and Descriptive Statistics

TABLE A.4: Rate of Missing Occupations by Election Stage, U.S. Congress 2010–2024

	Viable primary (>5%)		**Top-two primary finishers**		**General-election candidates**	
Year	N	% Miss.	N	% Miss.	N	% Miss.
2010	1,136	10.4	802	2.5	749	1.1
2012	1,028	5.0	785	1.8	727	1.1
2014	803	5.9	624	2.1	669	0.9
2016	903	6.5	674	1.5	696	1.1
2018	1,292	8.8	905	3.2	729	0.7
2020	1,179	5.2	844	1.8	748	1.1
2022	1,311	3.4	885	1.2	731	1.0
2024	945	5.0	715	5.5	752	4.0
Total	**8,597**	**6.3**	**6,234**	**2.4**	**5,801**	**1.4**

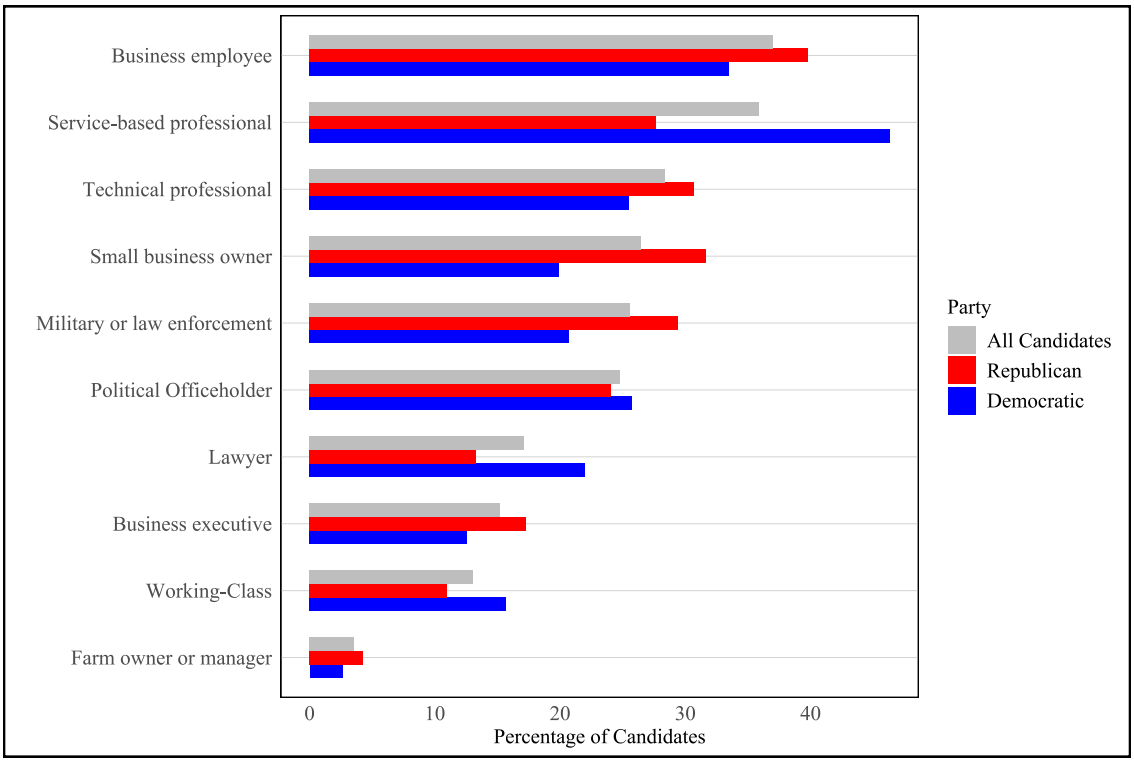
Note: This table reports occupation-data missingness by election year for three candidate- cycle analysis samples. Each cell gives the number of candidate-cycles (N) and the percentage with no coded occupation. Viable-primary candidates received more than 5% of the vote in a contested partisan primary with at least two viable candidates. Top-two primary finishers placed first or second in a contested partisan primary. General-election candidates competed in contested general elections. States and years using nonpartisan primaries are excluded. Candidates running in multiple election cycles contribute one observation per cycle.

TABLE A.5: Descriptive Statistics by Candidate Class Background (General-Election Candidates, 2010–2024)

	Not Working-Class (N=5506)	**Working-Class** (N=466)	**Overall** (N=5972)
Party			
Democratic	2711 (49.2%)	271 (58.2%)	2982 (49.9%)
Republican	2795 (50.8%)	195 (41.8%)	2990 (50.1%)
Office			
House	5057 (91.8%)	432 (92.7%)	5489 (91.9%)
Senate	449 (8.2%)	34 (7.3%)	483 (8.1%)
Competitiveness			
Safe Democratic	975 (17.7%)	99 (21.2%)	1074 (18.0%)
Competitive	1950 (35.4%)	158 (33.9%)	2108 (35.3%)
Safe Republican	1099 (20.0%)	85 (18.2%)	1184 (19.8%)
Missing	1482 (26.9%)	124 (26.6%)	1606 (26.9%)
Incumbency			
Same Party Incumbent	2572 (46.7%)	217 (46.6%)	2789 (46.7%)
Open Seat	729 (13.2%)	51 (10.9%)	780 (13.1%)
Other Party Incumbent	2205 (40.0%)	198 (42.5%)	2403 (40.2%)
Year			
2010	703 (12.8%)	58 (12.4%)	761 (12.7%)
2012	682 (12.4%)	66 (14.2%)	748 (12.5%)
2014	664 (12.1%)	57 (12.2%)	721 (12.1%)
2016	656 (11.9%)	74 (15.9%)	730 (12.2%)
2018	707 (12.8%)	45 (9.7%)	752 (12.6%)
2020	703 (12.8%)	59 (12.7%)	762 (12.8%)
2022	700 (12.7%)	52 (11.2%)	752 (12.6%)
2024	691 (12.5%)	55 (11.8%)	746 (12.5%)

Note: General-election candidates, U.S. House and Senate, 2010–2024. Excludes states and years using nonpartisan primaries. Working-class status is the 25% non-political-elected occupation threshold. Candidates with a missing occupation are excluded. Competitiveness is the prior-cycle two-party presidential vote share (Safe $\geq$60%, Competitive, Safe $\leq$40%). Percentages are calculated within class columns and describe the composition of each class group.

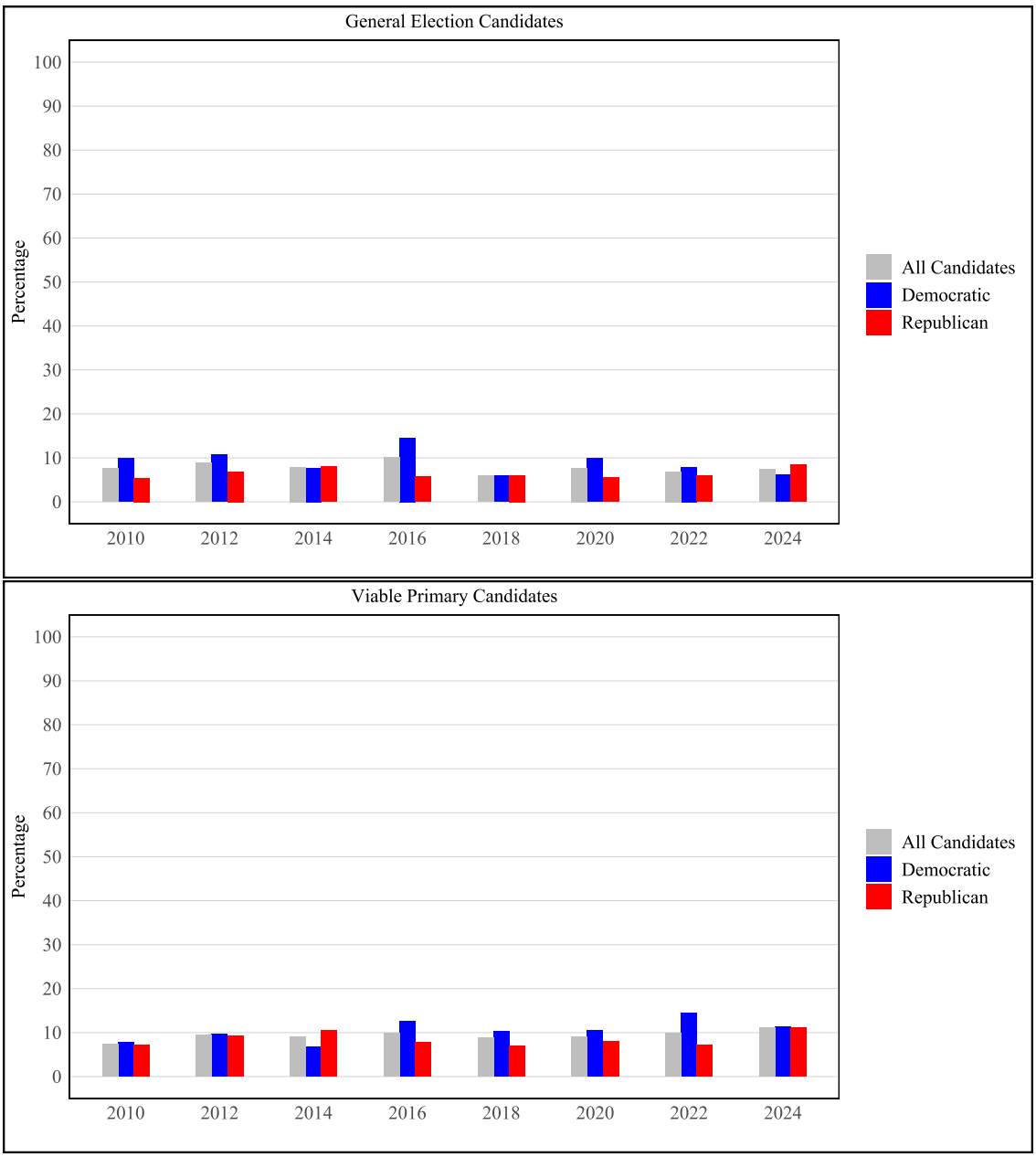
FIGURE A.3: Occupations Held by Viable Primary Candidates, US Congress 2010-2024



Note: This figure displays the share of viable primary candidates who have ever held a job in one of the ten broad occupational categories from Carnes (2013). The viable primary sample comprises candidates who received more than 5% of the primary vote in a contested partisan primary with at least two such candidates.

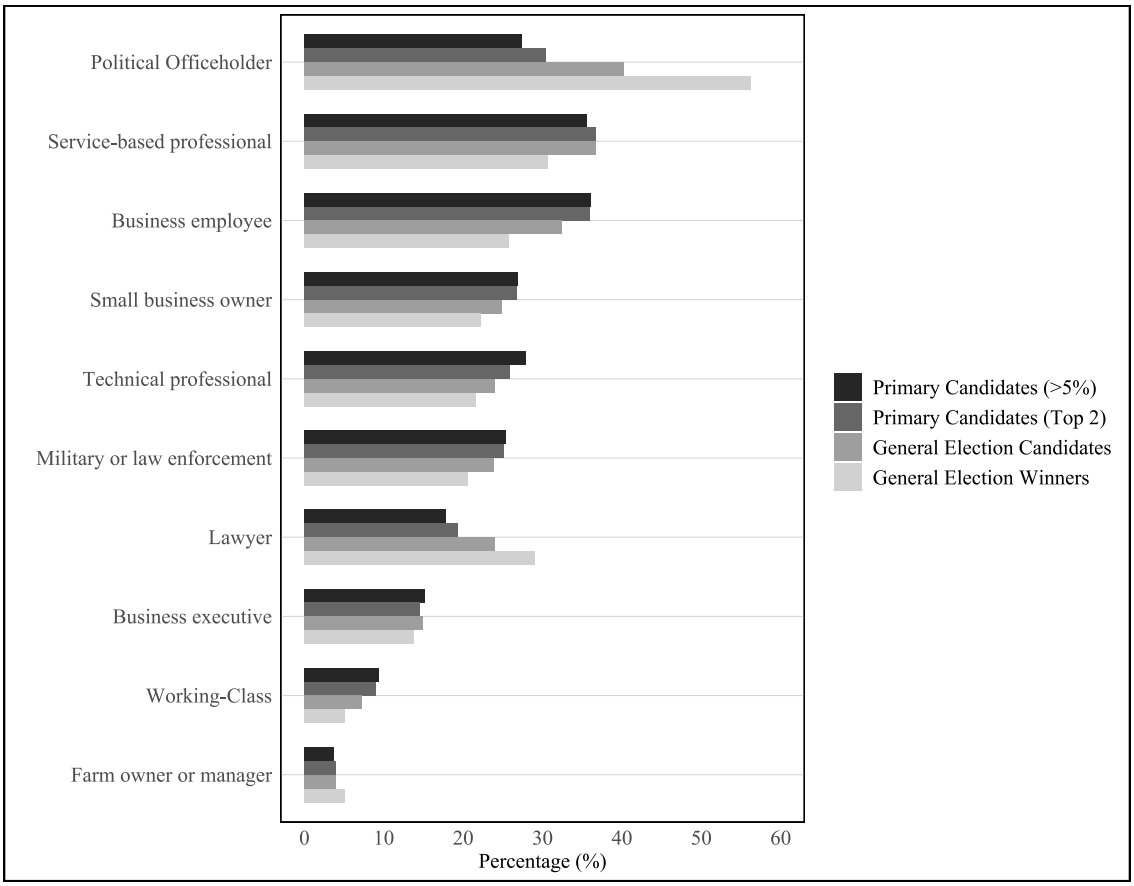
Figure A.3 shows the percentage of all Congressional primary election candidates (2010–2024), receiving at least 5% of the primary election voteshare, who held at least one job in each of the 10 broad occupational categories. The most common backgrounds are business employees, followed by service-based professionals (e.g., teachers, professors, non-profit executives) and then technical professionals. Candidates with a working-class job are the least numerous, apart from farm owners, with roughly 13% having at least one working-class job in their career. This share remained relatively stable from 2010 to 2024 (see Figure A.4). There are also notable partisan differences: service professionals, lawyers, and workers are more Democratic, while business executives and military or law enforcement lean Republican.

FIGURE A.4: Share Working-Class Candidates by Year, US Congress 2010–2024



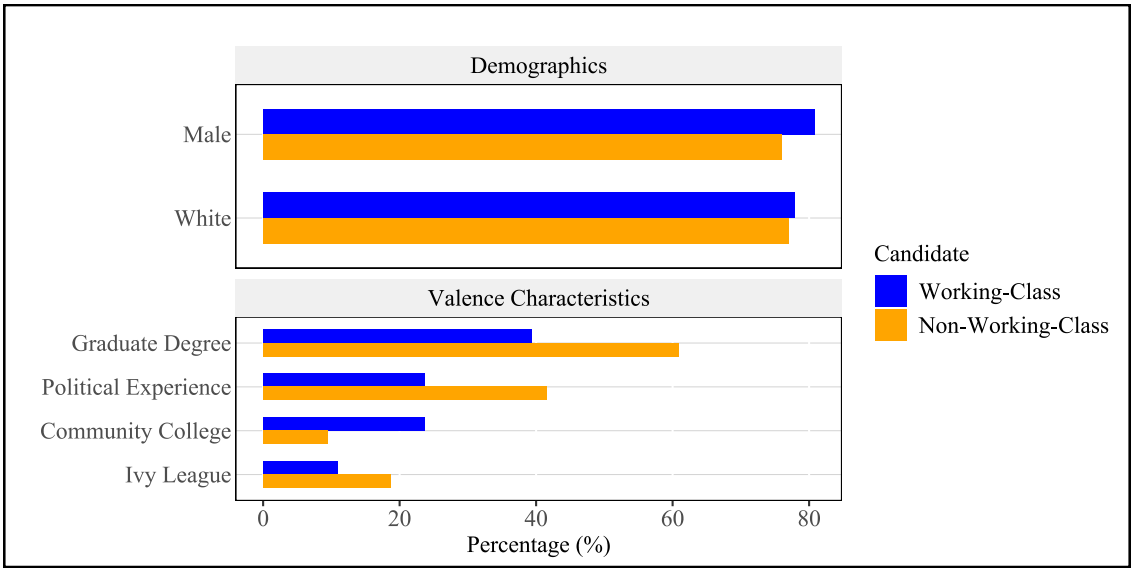
Note: These figures display the share of candidates whose occupational history is composed of 25% or more working-class jobs, by year, among general election candidates (top) and viable primary candidates who won more than 5% of the primary vote (bottom).

FIGURE A.5: Occupational Backgrounds Across Congressional Election Stages, US Congress 2010-2024



Note: Share of candidates at each election stage who have ever held a job in each occupational category. Stages run from the broadest (viable primary candidates, >5% of the primary vote) to the narrowest (general election winners). "Political Officeholder" counts only those who held elected office before entering Congress; "Working-Class" uses the 25% occupational threshold.

FIGURE A.6: Demographics and Valence Characteristics of Viable Primary Candidates, by Candidate Class, US Congress 2010-2024



Note: This figure compares the average prevalence of demographic, educational, and political characteristics between working-class and non-working-class viable primary candidates (those who won more than 5% of the primary vote) for US House or Senate from 2010 to 2024.

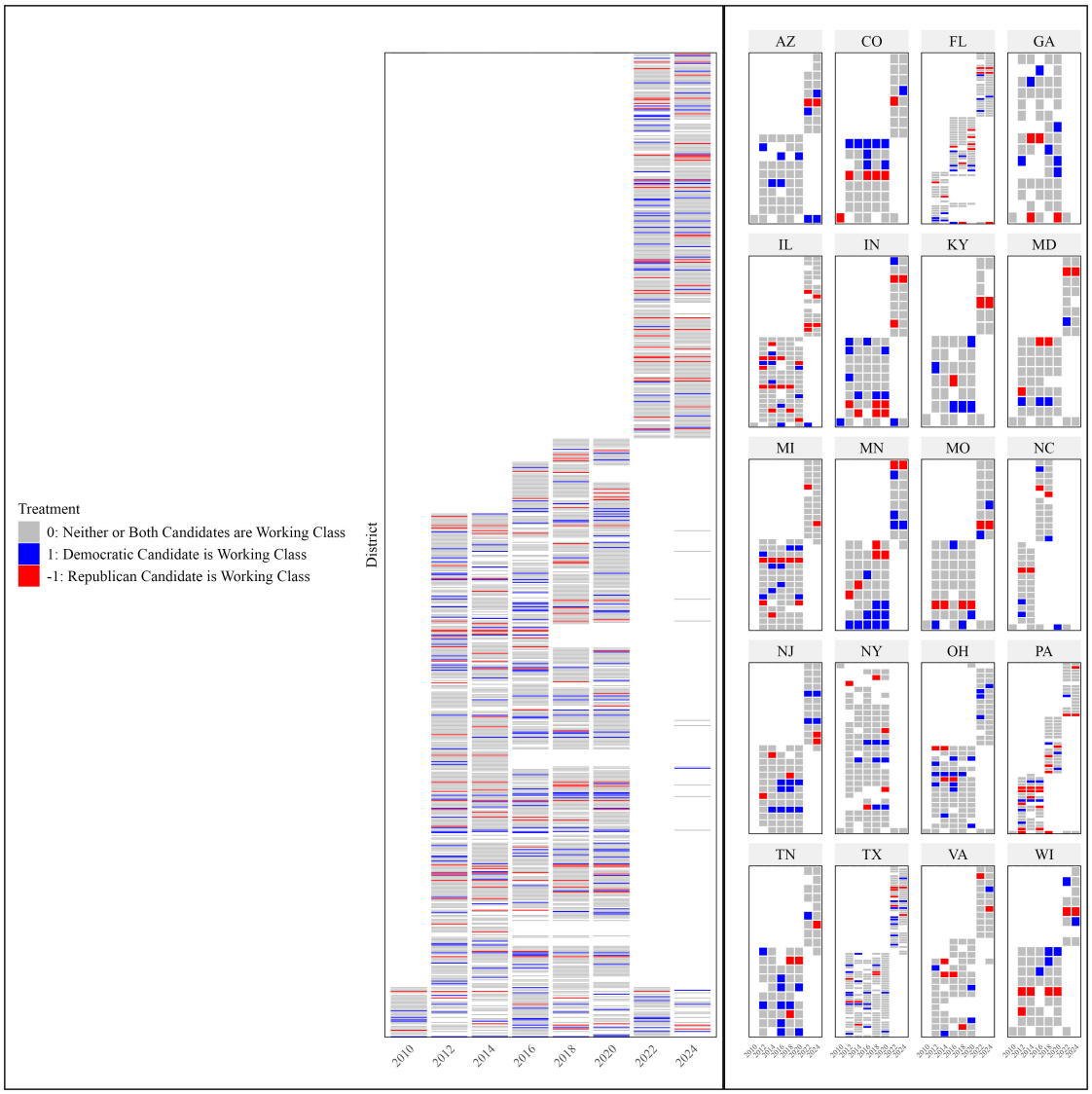
A.1.4 Constructing the General Election Panel Dataset

Our general-election panel begins with Democratic–Republican U.S. House and Senate contests from 2010 through 2024. We exclude states and years using nonpartisan primaries and races without occupational classifications for both nominees. Because the design relies on within-constituency comparisons over time, we retain constituencies observed in at least two contested general elections. House districts are defined separately within each redistricting period, while Senate constituencies are states.

The final panel contains 2,314 constituency-year observations across 704 constituencies, each observed in 2 to 8 elections.

Figure A.7 visualizes the dataset. Each row is a district; each rectangle represents a district-year, color-coded by treatment. Missing data appear blank. About a third of the districts receive treatment in at least one of the eight elections. The only districts that see observations across all eight elections (from 2010 to 2024) are at-large congressional districts and senate seats.

FIGURE A.7: Treatment Variation Plot for All Congressional Districts and Top 20 States, US Congress 2010–2024



A.2 Main Results: General Election

A.2.1 Model Specification

Let j index congressional constituencies, defined separately within each redistricting period; t election years; and o chamber (House or Senate). The fully controlled specification is

$$Y_{jt} = \beta_0 + \beta_1 \text{WorkingClass}_{jt} + \beta_2 \text{PartyInc}_{jt} + \beta_3 \text{White}_{jt} + \beta_4 \text{Male}_{jt} + \lambda_j + \tau_{ot} + \varepsilon_{jt}.$$

- **Dependent Variable (Y_{jt}):**
  - **Vote Share:** The Democratic candidate's share of the two-party general-election vote, measured from 0 to 1.
  - **Victory:** An indicator equal to 1 if the Democratic candidate won the general election and 0 if the Republican candidate won. These specifications are linear probability models.
- **Independent Variables:**
  - **WorkingClass$_{jt}$:**
    - 1: Only the Democratic nominee is working-class.
    - -1: Only the Republican nominee is working-class.
    - 0: Both or neither nominee is working-class.
  - **PartyInc$_{jt}$:** 1 if only the Democratic nominee is an incumbent; -1 if only the Republican nominee is an incumbent; and 0 if both or neither nominee is an incumbent.
  - **White$_{jt}$:** 1 if only the Democratic nominee is White; -1 if only the Republican nominee is White; and 0 if both or neither nominee is White.
  - **Male$_{jt}$:** 1 if only the Democratic nominee is male; -1 if only the Republican nominee is male; and 0 if both or neither nominee is male.
- **Fixed Effects:**
  - **Constituency (λ_j):** Fixed effects for each House district or Senate seat, defined separately within each redistricting period.
  - **Year $\times$ Chamber (τ_{ot}):** Year-by-chamber fixed effects.
- **Standard Errors:** Clustered by constituency.

Because the dependent variable is measured from the Democratic Party's perspective and the independent variables are signed by party, β_1 represents the average change in a party's electoral performance when it nominates a working-class rather than a non-working-class candidate. Appendix Section A.2.2 relaxes the implicit restriction that this association is the same for Democratic and Republican nominees.

Table A.6 reports our main general-election specification with the full set of coefficients, including the incumbency, race, and gender controls in Table 1.

TABLE A.6: 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	-0.007*	-0.006*	-0.006*	-0.006	-0.004	-0.004
	(0.003)	(0.003)	(0.003)	(0.017)	(0.015)	(0.015)
District Incumbency		0.027***	0.026***		0.081***	0.075***
		(0.002)	(0.002)		(0.015)	(0.016)
White			0.003			0.009
			(0.002)			(0.015)
Male			-0.002			0.010
			(0.002)			(0.013)
N	2314	2314	2261	2314	2314	2261
Year × Chamber FE	X	X	X	X	X	X
District (State) FE	X	X	X	X	X	X

Note: Coefficients from the main general-election model (Table 1), with the incumbency, race (White), and gender (Male) controls reported. Each is coded trichotomously: +1 if only the Democratic candidate has the characteristic, −1 if only the Republican, and 0 otherwise. Columns 1–3 are vote share, columns 4–6 victory; both fixed effects and standard errors clustered by district as in Table 1.

A.2.2 Alternative Specifications and Heterogeneity by Party

Our preferred specification uses signed trichotomous measures that record which party has a characteristic relative to its opponent. This coding matches the district-year unit and two-party outcomes, incorporates both nominees, and produces a single party- neutral working-class estimate. We use analogous measures for district incumbency, race, and gender, then test whether our conclusions depend on their functional-form restrictions or the contest-level unit of analysis.

We first replace the signed working-class measure with three mutually exclusive indicators for contests in which only the Democratic nominee, only the Republican nominee, or both nominees are working-class. Contests in which neither nominee is working-class form the omitted category. This specification allows the association between working-class candidacy and electoral performance to differ by party and separates both-worker from neither-worker contests. Table A.7 estimates own-party vote-share penalties of 0.8 percentage points for Democratic working-class nominees and 0.5 percentage points for Republican working-class nominees. The difference between these estimates is statistically insignificant ($p = 0.590$). The both-worker coefficient, identified from 19 contests, is also statistically indistinguishable from zero. A joint test does not reject the restrictions imposed by the signed trichotomous specification for vote share ($p = 0.388$) or victory ($p = 0.228$).

TABLE A.7: Effect of Nominating a Working-Class Candidate on General-Election Outcomes, by Nominee Combination, U.S. Congress 2010–2024

	Vote Share	Victory
	(1)	(2)
Democratic Working-Class Nominee	-0.008*	-0.013
	(0.003)	(0.016)
Republican Working-Class Nominee	0.005	-0.005
	(0.005)	(0.029)
Both Nominees Working-Class	0.018	0.139
	(0.018)	(0.120)
District Incumbency	0.026***	0.074***
	(0.002)	(0.016)
White	0.003	0.010
	(0.002)	(0.015)
Male	-0.002	0.011
	(0.002)	(0.013)
N	2261	2261
Year × Chamber FE	X	X
District FE	X	X

Note: This table reports district-year regressions using the same 2,261 contested general elections as the full-control specification in Table A.6. The dependent variables are the Democratic nominee's two-party vote share and an indicator equal to one if the Democratic nominee wins. The Democratic, Republican, and both-nominee working-class variables are indicators, with neither nominee working-class as the omitted category. Because the dependent variables measure Democratic outcomes, the Republican-only coefficient has the opposite sign from its effect on the Republican nominee's own outcome. District incumbency, White, and Male retain the signed trichotomous coding used in Table A.6. All models include district and year-by-chamber fixed effects. Standard errors are clustered by district. $^{+}p < 0.1$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

We next retain the preferred working-class measure but replace each signed trichotomous control with indicators for its underlying nominee combinations. The category specification includes separate variables for Democratic-only, Republican-only, and both-nominee cases, with neither-nominee cases omitted. This allows Democratic and Republican incumbency, race, and gender to have asymmetric associations with the Democratic outcome and distinguishes cases previously combined at zero. As Table A.8 shows, the working-class vote-share coefficient changes only from -0.0064 to -0.0066. The victory coefficient changes from -0.0039 to -0.0057 and remains statistically indistinguishable from zero.

TABLE A.8: General-Election Estimates with Trichotomous and Categorical Controls, U.S. Congress 2010–2024

	Vote Share		Victory	
	Trichotomous	Categories	Trichotomous	Categories
	(1)	(2)	(3)	(4)
Working-Class	-0.006*	-0.007*	-0.004	-0.006
	(0.003)	(0.003)	(0.015)	(0.015)
Signed trichotomous controls				
District Incumbency	0.026***		0.075***	
	(0.002)		(0.016)	
White	0.003		0.009	
	(0.002)		(0.015)	
Male	-0.002		0.010	
	(0.002)		(0.013)	
Separate category controls				
Democratic Incumbent Only		0.024***		0.114***
		(0.004)		(0.028)
Republican Incumbent Only		-0.029***		-0.047*
		(0.003)		(0.019)
Both Nominees Incumbents		0.016		-0.164
		(0.023)		(0.122)
Only Democratic Nominee White		0.012^{+}		0.017
		(0.007)		(0.038)
Only Republican Nominee White		0.005		-0.005
		(0.005)		(0.020)
Both Nominees White		0.010		-0.009
		(0.006)		(0.028)
Only Democratic Nominee Male		-0.011^{+}		-0.033
		(0.006)		(0.035)
Only Republican Nominee Male		-0.006		-0.056^{+}
		(0.006)		(0.032)
Both Nominees Male		-0.010^{+}		-0.054
		(0.006)		(0.035)
N	2261	2261	2261	2261
Year × Chamber FE	X	X	X	X
District FE	X	X	X	X

Note: This table compares the signed trichotomous controls used in the main specification with separate indicators for their underlying nominee combinations. Each observation is one of the 2,261 contested general elections in the full-control sample. Columns 1 and 3 use the signed district-incumbency, race, and gender measures from Table A.6. Columns 2 and 4 include separate indicators for Democratic-only, Republican-only, and both-nominee cases. The omitted categories are open seats, neither nominee White, and neither nominee Male. The working-class treatment retains its signed trichotomous coding in all columns. The dependent variables are Democratic two-party vote share and Democratic victory. All models include district and year-by-chamber fixed effects. Standard errors are clustered by district. $^{+}p < 0.1$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

Finally, we reorganize the same contests to the candidate level and estimate the working-class coefficient separately for Democratic and Republican nominees. Each observation is one major-party nominee, and the dependent variables are that nominee's own two-party vote share and victory. These models compare working-class and non- working-class nominees within the same party-district over time. Table A.9 estimates vote-share penalties of 0.7 percentage points for Democratic working-class nominees and 0.6 percentage points for Republican working-class nominees. The difference is statistically insignificant ($p = 0.926$). The victory estimates are also small, statistically insignificant, and indistinguishable across parties ($p = 0.952$).

TABLE A.9: Candidate-Level Estimates of Working-Class General-Election Performance, by Party, U.S. Congress 2010–2024

	Vote Share		Victory	
	Democrats	Republicans	Democrats	Republicans
	(1)	(2)	(3)	(4)
Working-Class	-0.007^{+}	-0.006	-0.003	-0.009
	(0.004)	(0.006)	(0.019)	(0.035)
Incumbency	0.034***	0.034***	0.127***	0.078***
	(0.004)	(0.003)	(0.028)	(0.021)
White	0.005	-0.001	-0.003	0.018
	(0.003)	(0.004)	(0.023)	(0.014)
Male	-0.004	-0.001	-0.003	0.023
	(0.003)	(0.004)	(0.017)	(0.021)
N	2261	2261	2261	2261
District-Party FE	X	X	X	X
Year × Party × Chamber FE	X	X	X	X

Note: This table reports candidate-level regressions for Democratic and Republican nominees in the same 2,261 contested general elections used in the preceding tables. The dependent variables are each nominee's own two-party vote share and victory. Working-Class equals one when the nominee satisfies the paper's primary working-class definition. Incumbency, White, and Male are nominee-level indicators. All models include district-party and year-by-party-by-chamber fixed effects. Standard errors are clustered by district. $^{+}p < 0.1$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

A.2.3 Identification and Robustness

Our general-election estimates (Table 1) come from a two-way fixed-effects regression of Democratic vote share on the signed working-class nomination measure, with district fixed effects defined separately within each redistricting period and year-by-chamber fixed effects. District fixed effects absorb time-invariant district characteristics, including baseline partisanship, while year-by-chamber fixed effects absorb election-year shocks common to House or Senate contests. The coefficient summarizes the association between nominating a working-class candidate and the nominating party's vote share. Identification requires that, conditional on the fixed effects and included controls, changes in working-class nomination status are unrelated to contemporaneous district-level vote-share shocks.

Candidate class is election-specific, so districts can enter and leave working-class nomination status across election cycles. The main threat to identification is that parties may nominate working-class candidates when electoral conditions are already changing within the district. In that case, a nomination could appear to affect vote share even if it simply coincided with an ongoing electoral shift.

Because districts are defined separately within each redistricting period, the panels are short. The 704 districts in the estimation sample contribute an average of approximately 3.3 elections each, limiting the number of pre-nomination periods available for any single district. We therefore combine several complementary diagnostics. These analyses examine where changes in nomination status occur, whether nominations follow earlier changes in electoral performance, whether observed changes in district partisanship explain the result, and whether the conclusion changes under a counterfactual estimator for time-varying nominations.

Treatment transitions

Table A.10 clarifies where changes in working-class nomination status occur. Most adjacent election cycles involve no change. When nomination status does change, it almost always involves one party beginning or ending a working-class nomination. Direct switches from a Democratic working-class nomination to a Republican working-class nomination, or vice versa, occur only twice. The observed treatment changes therefore primarily capture one party entering or leaving working-class nomination status rather than a simultaneous switch between the parties.

TABLE A.10: Within-District Treatment Transitions Between Adjacent Election Cycles

Transition	N	%
No change in treatment status	1,184	82.6
Enter Democratic working-class nomination ($0 \rightarrow +1$)	77	5.4
Exit Democratic working-class nomination ($+1 \rightarrow 0$)	82	5.7
Enter Republican working-class nomination ($0 \rightarrow -1$)	47	3.3
Exit Republican working-class nomination ($-1 \rightarrow 0$)	41	2.9
Sign-reversing swap ($+1 \leftrightarrow -1$)	2	0.1
Total	1,433	100.0

Note: This table reports treatment transitions between consecutive election cycles within redistricting-period districts. Treatment equals $+1$ when only the Democratic nominee is working-class, -1 when only the Republican nominee is working-class, and 0 when either both or neither nominee is working-class. The sample contains 1,433 adjacent-cycle pairs.

Prior outcomes

If parties nominate working-class candidates after their electoral position has already begun deteriorating, current nomination status should be related to performance in preceding elections. Following Hassell & Holbein (2025), we regress Democratic vote share one and two cycles earlier on current working-class nomination status. We estimate the relationship using both the signed treatment and separate indicators for Democratic and Republican working-class nominations, ensuring that opposing party-specific patterns do not cancel in the pooled measure.

Table A.11 provides no evidence that working-class nominations systematically follow earlier changes in district vote share. The estimates one and two cycles before nomination are small and statistically indistinguishable from zero under both treatment codings. This weighs against gradual district-level electoral decline as the source of the estimated penalty, although it cannot rule out shocks that arise in the nomination year itself.

TABLE A.11: Relationship Between Current Working-Class Nomination Status and Prior Vote Share, U.S. Congress 2010–2024

Lag	Trichotomous	Four-cell: Dem	Four-cell: Rep	N
$k = 0$ (contemporaneous)	-0.0069 (0.0035)	-0.0076 (0.0041)	0.0066 (0.0055)	2,314
$k = 1$ (one cycle)	-0.0001 (0.0048)	0.0004 (0.0067)	0.0013 (0.0068)	1,433
$k = 2$ (two cycles)	-0.0032 (0.0068)	0.0002 (0.0099)	0.0087 (0.0079)	842

Note: This table regresses Democratic general-election vote share k cycles earlier on current working-class nomination status. All models include district and year-by-chamber fixed effects, with standard errors clustered by district. The trichotomous column uses the signed treatment from the main specification. The four-cell models include separate indicators for Democratic-only, Republican-only, and both-working-class nominations, with neither-working-class nominations as the omitted category; the both-working-class coefficient is included but not displayed. The Republican coefficient remains on the Democratic vote-share scale. The contemporaneous estimate at $k = 0$ is shown for reference.

Presidential lean

The prior-outcome models examine whether nominations follow changes in congressional vote share. We also account directly for observed changes in district partisanship by controlling for lagged Democratic presidential vote share, following Handan-Nader et al. (2026). This measure captures within-period changes in district preferences that district fixed effects cannot absorb.

On the common sample with presidential-lean data, the estimated working-class vote-share difference remains -0.008 with or without the control. The victory estimate is similarly unchanged. The stability of these estimates indicates that changes in district presidential voting do not account for the estimated relationship.

TABLE A.12: Vote-Share and Victory Estimates Controlling for Presidential Lean

	Vote Share		Victory	
	(1)	(2)	(3)	(4)
Working-Class	-0.008*	-0.008*	0.005	0.004
	(0.004)	(0.003)	(0.018)	(0.018)
Presidential Lean		0.370***		1.473***
		(0.058)		(0.392)
N	1650	1650	1650	1650
Year-by-Chamber FE	X	X	X	X
District (State) FE	X	X	X	X
Incumbency, Race, Gender	X	X	X	X

Note: This table reports general-election estimates for the 1,650 races with nonmissing presidential-lean data and complete controls. Presidential lean is the district's lagged Democratic presidential vote share. All models include district and year-by-chamber fixed effects and controls for district incumbency and nominee race and gender. Standard errors are clustered by district.

Electoral trends before and after nomination

We next examine electoral performance immediately before and after a working-class nomination. We estimate separate extensions of the main specification containing a lead or lag of the treatment (Hassell & Holbein, 2025). The lead asks whether a working- class nomination in the next election predicts current electoral performance. It is small and statistically insignificant (-0.004, $p = 0.43$), providing no evidence that vote share was already changing immediately before nomination.

The lag asks whether a working-class nomination in the preceding cycle predicts current performance, conditional on current nomination status. Its coefficient is negative and statistically significant (-0.010, $p = 0.04$), suggesting that the small vote-share difference may persist into the following cycle. Because the lag captures a post- nomination dynamic, it does not provide evidence about electoral conditions before nomination.

TABLE A.13: Effect of Nominating a Working-Class Candidate on General Election Vote Share and Victory, with Leads and Lags, U.S. Congress 2010–2024

	Vote Share			Victory		
	(1)	(2)	(3)	(4)	(5)	(6)
Working-Class	-0.006*	-0.005	-0.008+	-0.004	-0.018	-0.006
	(0.003)	(0.004)	(0.004)	(0.015)	(0.025)	(0.023)
Working-Class (Lag)			-0.010*			-0.038
			(0.005)			(0.024)
Working-Class (Lead)		-0.004			-0.011	
		(0.005)			(0.030)	
N	2261	1474	1491	2261	1474	1491
Year × Chamber 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: This table reports separate models containing a lead or lag of the signed working-class treatment. The lead records treatment in the following election cycle, while the lag records treatment in the preceding cycle. All models include district and year-by-chamber fixed effects and controls for district incumbency and nominee race and gender. Standard errors are clustered by district.

Figure A.8 extends the analysis further back by plotting vote- share trajectories before the first working-class nomination, separately by the nominating party. This separation allows Democratic and Republican pre-nomination patterns to be assessed independently rather than pooled through the signed treatment coding. Democratic vote share changes little during the three cycles preceding a Democratic working-class nomination. Before Republican working-class nominations, Democratic vote share is approximately 1 to 1.5 percentage points lower in the earlier cycles than in the cycle immediately preceding nomination. These estimates are imprecise, however, because only 7 and 12 districts contribute to the two earliest periods, and their confidence intervals include zero. The figure therefore provides no statistically detectable evidence of a systematic pre-nomination trajectory, but the sparse Republican series cannot rule out modest changes.

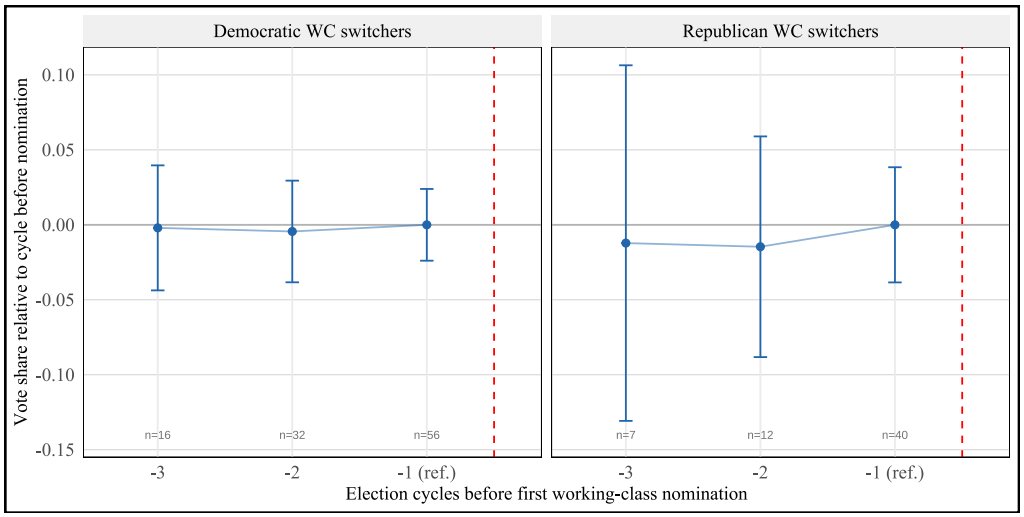
Alternative estimator for time-varying nominations

The two-way fixed-effects estimate combines district-years with different histories of working-class nomination. To examine whether the result depends on how those observations contribute to the estimate, we use the fixed-effects counterfactual estimator developed by Liu et al. (2024). This estimator uses untreated observations to construct the outcomes that treated district-years would be expected to experience in the absence of a working-class nomination.

Because the counterfactual estimator requires a binary treatment, we estimate separate models for Democratic and Republican working-class nominations. Estimating the models separately also ensures that opposing party-specific patterns cannot cancel under the signed treatment coding. In both models, the estimated vote-share differences remain small, and the pre-nomination estimates show no systematic departure from zero. The Republican estimates are less precise because fewer districts experience a Republican working-class nomination.

The placebo and joint pre-trend tests do not reject the absence of a systematic pre- nomination relationship. The equivalence tests do not clear conventional thresholds, however. These diagnostics

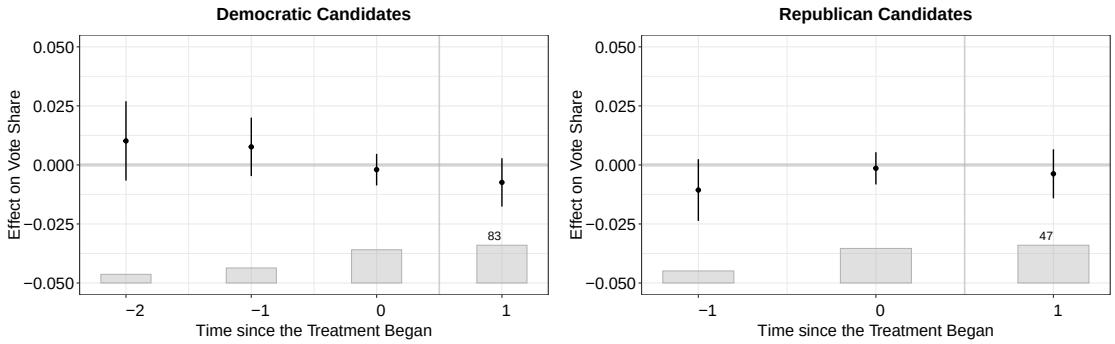
FIGURE A.8: Vote-Share Trends Before a Working-Class Nomination



Note: This figure displays Democratic vote share before districts' first working-class nomination, separately by the nominating party. Vote share is demeaned within election year and normalized to the cycle immediately preceding nomination. Points are across-district means, bars are 95% confidence intervals, and the reported counts are the number of district-years contributing to each estimate.

therefore provide no evidence of a systematic pre-nomination trend, while leaving open the possibility of smaller imbalances that the short panels cannot detect.

FIGURE A.9: Counterfactual Estimates Before and After a Working-Class Nomination



Note: This figure displays period-specific estimates from separate Democratic and Republican counterfactual models. The outcome is the nominating party's vote share. Under the estimator's event-time convention, treatment begins in period 1, so periods at and before 0 are pre-nomination periods. Bars around the estimates are 95% confidence intervals, and the grey bars show the number of treated districts contributing at each event time.

Taken together, these diagnostics provide no systematic evidence that working-class nominations follow an earlier decline in the nominating party's electoral position or that the small main estimate results from the comparisons combined by the two-way fixed- effects estimator. The short panels and the equivalence-test results limit what these analyses can establish, however. The estimates remain conditional on the assumption that changes in nominee class are unrelated to unobserved contemporaneous district-level electoral shocks.

TABLE A.14: Counterfactual Estimator Diagnostics

Party	ATT (FECT)	Placebo p	Pre-trend F p	TOST equiv. p
Democrat	-0.0060	0.77	0.39	0.17
Republican	-0.0018	0.20	0.27	0.34

Note: This table reports diagnostics from separate counterfactual models for Democratic and Republican working-class nominations. The Democratic model contains 1,948 district-years from 590 districts, while the Republican model contains 1,736 district-years from 542 districts. Each sample includes districts that switch into the relevant party's working-class nomination status and districts with no working-class nominations during the panel. Contests with two working-class nominees, districts treated only by the other party, and districts without an observed untreated period are excluded. The models include district and year fixed effects. ATT is the average effect on the nominating party's vote share. The placebo and pre-trend columns report p-values for tests that the pre-nomination estimates equal zero. The TOST column reports the equivalence-test p-value.

A.2.4 Main Results Across Different Types of Districts

Working-class candidates do not underperform in any particular type of general election, whether defined by incumbency or competitiveness.[17] Table A.15 reports the effect of nominating a working-class candidate on general election vote share, subsetting by election type, with district and year fixed effects. Columns 1–3 subset by district incumbency; columns 4–6 by competitiveness, classifying a district as "safe" for a party if its average presidential vote share over the district's redistricting period exceeded 60% for that party. The estimated effect is small and statistically insignificant across all election types. Using victory as the outcome yields no significant effects (Table A.16).

TABLE A.15: Effect of Nominating a Working-Class Candidate on General Election Vote Share, by Election Type, U.S. Congress 2010–2024

	Vote Share					
	(1)	(2)	(3)	(4)	(5)	(6)
Working-Class	-0.004	0.003	0.001	-0.006	-0.005	-0.004
	(0.005)	(0.026)	(0.004)	(0.005)	(0.004)	(0.005)
District Incumbency				0.008	0.028***	0.032***
				(0.005)	(0.002)	(0.007)
N	829	331	1101	504	1132	622
Incumbency				X	X	X
Year FE	X	X	X	X	X	X
District (State) FE	X	X	X	X	X	X
Race and Gender Controls	X	X	X	X	X	X
District Type	Dem. Inc.	Open	Rep. Inc.	Safe Dem.	Competitive	Safe Rep.

TABLE A.16: Effect of Nominating a Working-Class Candidate on General Election Victory, by Election Type, U.S. Congress 2010–2024

	Victory					
	(1)	(2)	(3)	(4)	(5)	(6)
Working-Class	-0.019	0.129	0.005	-0.001	0.012	-0.020
	(0.022)	(0.129)	(0.016)	(0.003)	(0.029)	(0.020)
District Incumbency				-0.017	0.097***	0.035
				(0.017)	(0.021)	(0.021)
N	829	331	1101	504	1132	622
Incumbency				X	X	X
Year FE	X	X	X	X	X	X
District (State) FE	X	X	X	X	X	X
Race and Gender Controls	X	X	X	X	X	X
District Type	Dem. Inc.	Open	Rep. Inc.	Safe Dem.	Competitive	Safe Rep.

[17] For the distribution of general elections by incumbency and competitiveness, see Table A.5

A.2.5 Main Results Across Definitions of Candidate Class

We consider five definitions, from broad to restrictive, based on the proportion of working-class jobs candidates have held, ranging from those who have ever held a working-class job to those whose biographies are composed of 25%, 50%, 75%, and 100% working-class jobs. The estimated effects on vote share are consistently negative and tend to increase as the proportion of working-class jobs increases, ranging from a decrease of 0.6 percentage points to 1.7 percentage points. However, these penalties are small enough that they do not translate into meaningful differences in electoral outcomes: as Table A.18 and the right panel of Figure A.10 shows, the effects on victory are close to zero and statistically insignificant across all definitions.

TABLE A.17: Effect of Nominating a Working-Class Candidate on General Election Vote Share, Across Definitions of Working-Class, U.S. Congress 2010–2024

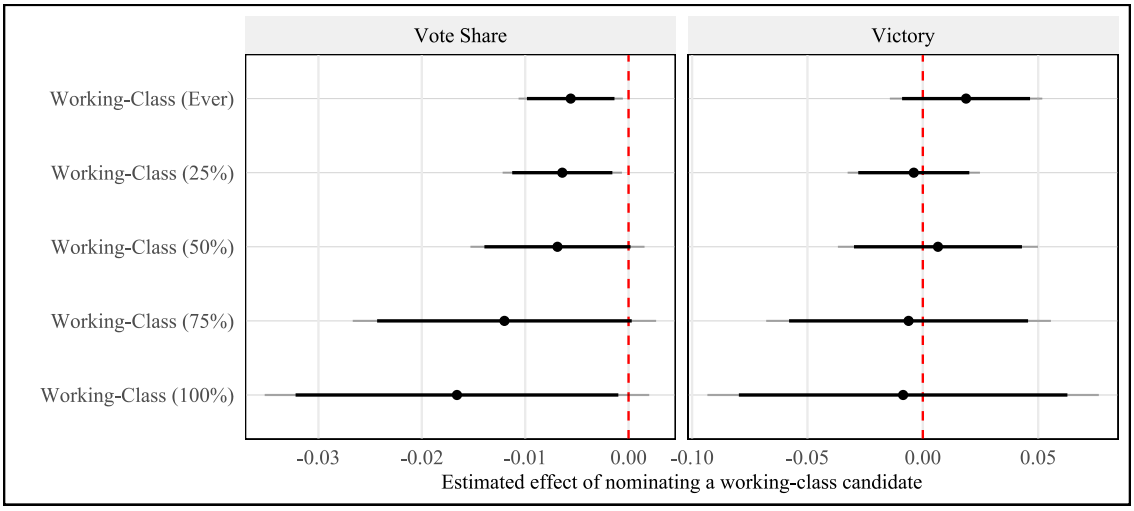
	Vote Share				
	(1)	(2)	(3)	(4)	(5)
Working-Class	-0.006*	-0.006*	-0.007	-0.012	-0.017+
	(0.003)	(0.003)	(0.004)	(0.007)	(0.009)
District Incumbency	0.027***	0.026***	0.027***	0.027***	0.027***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
N	2261	2261	2261	2261	2261
N Workers	281	191	80	29	22
Year × Chamber FE	X	X	X	X	X
District (State) FE	X	X	X	X	X
Race and Gender Controls	X	X	X	X	X
WC Definition	Ever	25%	50%	75%	100%

TABLE A.18: Effect of Nominating a Working-Class Candidate on General Election Victory, Across Definitions of Working-Class, U.S. Congress 2010–2024

	Victory				
	(1)	(2)	(3)	(4)	(5)
Working-Class	0.019	-0.004	0.007	-0.006	-0.009
	(0.017)	(0.015)	(0.022)	(0.031)	(0.043)
District Incumbency	0.075***	0.075***	0.075***	0.075***	0.075***
	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)
N	2261	2261	2261	2261	2261
N Workers	281	191	80	29	22
Year × Chamber FE	X	X	X	X	X
District (State) FE	X	X	X	X	X
Race and Gender Controls	X	X	X	X	X
WC Definition	Ever	25%	50%	75%	100%

Figure A.10 plots the estimated effect of nominating a working-class candidate on general election vote share (left panel) and victory (right panel) across varying definitions of working-class.

FIGURE A.10: Effect of Nominating a Working-Class Candidate on General Election Vote Share and Victory, 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 (left panel) and victory (right panel). The regression model includes district (state) and year-by-chamber fixed effects, as well as controls for district incumbency, candidate race, and candidate gender. 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%). Black bars denote 90% confidence intervals, gray bars 95% intervals.

A.3 Primary Elections

For the primary analysis, let i index candidates and let $c = (d, p, t)$ index primary contests, where d denotes the congressional constituency, p the party, and t the election year. House districts are defined separately within each redistricting period; Senate constituencies are statewide. The index o denotes chamber (House or Senate).

We estimate the effect of working-class candidacy among viable primary candidates, defined as candidates who received more than 5% of the vote in a contested primary with at least two viable candidates. The candidate-level outcome Y_{ic} is either candidate i's share of all votes cast in primary c, measured from 0 to 1, or an indicator for winning the primary. The victory specifications are linear probability models. WorkingClass_{ic} equals one if the candidate meets the 25% working-class threshold and zero otherwise. We control for incumbency and gender and cluster standard errors by district-party. We estimate the two fixed-effects specifications described below:

District-party fixed effects:

$$Y_{ic} = \beta_1 \text{WorkingClass}_{ic} + \beta_2 \text{Incumbent}_{ic} + \beta_3 \text{Male}_{ic} + \lambda_{dp} + \tau_{pot} + \delta_{n_c} + \varepsilon_{ic}.$$

Here, λ_{dp} denotes district-party fixed effects, τ_{pot} denotes year-by-party-by-chamber fixed effects, and δ_{n_c} denotes fixed effects for the total number of candidates in primary c. This specification compares candidates within the same district-party while accounting for party-specific national election conditions and primary field size.

Contest fixed effects:

$$Y_{ic} = \beta_1 \text{WorkingClass}_{ic} + \beta_2 \text{Incumbent}_{ic} + \beta_3 \text{Male}_{ic} + \mu_c + \varepsilon_{ic}.$$

Here, μ_c denotes primary-contest fixed effects, defined at the district-party-year level. This specification compares working-class and non-working-class candidates competing in the same primary.

We estimate these models using two samples. Table 2 in the main text reports results for all viable primary candidates. Table A.19 repeats the analysis after restricting the sample to the top two finishers in each contested primary.

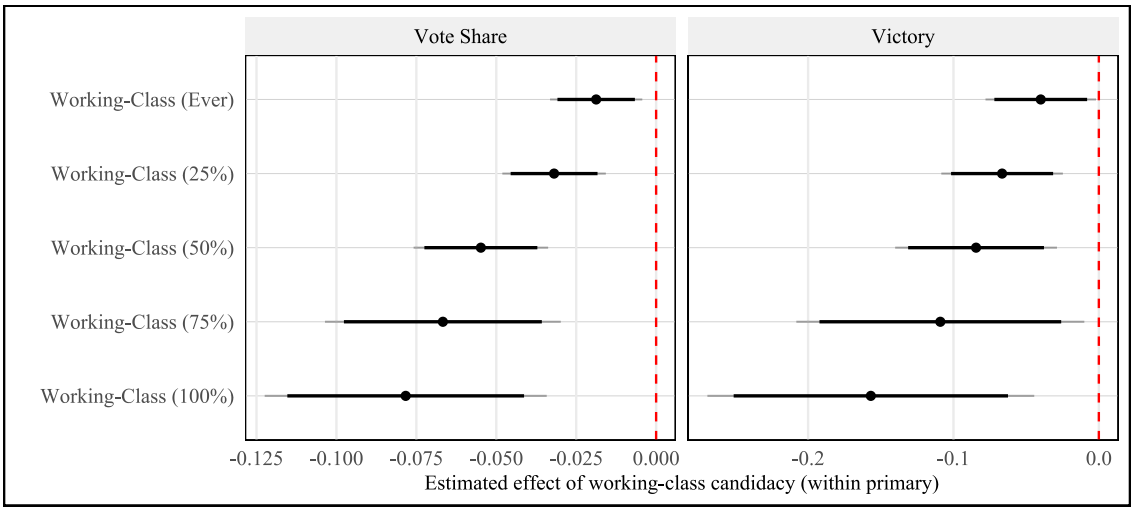
TABLE A.19: Disadvantage of Working-Class Candidates in Contested Primary Elections, Top-Two Primary Finishers, U.S. Congress 2010–2024.

	Vote Share			Victory		
	(1)	(2)	(3)	(4)	(5)	(6)
Working-Class	-0.031**	-0.035*	-0.068+	-0.063*	-0.076*	-0.209+
	(0.011)	(0.014)	(0.038)	(0.029)	(0.039)	(0.117)
Incumbency	0.486***	0.526***		0.847***	0.924***	
	(0.008)	(0.008)		(0.012)	(0.012)	
N	6072	6072	1187	6072	6072	1187
Sample	All	All	Open	All	All	Open
District-Party FE	X			X		
Year × Party × Chamber FE	X			X		
No. of Candidates FE	X			X		
Contest FE		X	X		X	X
Gender Control	X	X	X	X	X	X

Note: This table replicates the main primary results (Table 2) on the sample of the top two finishers in each contested primary. Columns 3 and 6 restrict to open-seat primaries. All models control for incumbency, except the open-seat columns, and gender, with standard errors clustered by district-party.

Figure A.11 plots the district-party fixed-effects coefficient on working-class candidacy—columns 1 and 4 of Table 2—for primary vote share and victory, estimated separately across our five definitions of working-class.

FIGURE A.11: Effect of Working-Class Candidacy on Primary Vote Share and Victory, Across Definitions of Working-Class, U.S. Congress 2010–2024



Note: Each point is the working-class coefficient from a separate regression of primary vote share (left panel) or primary victory (right panel), estimated separately across five definitions of working-class—from candidates who ever held a working-class job to those whose pre-political careers were entirely (100%) in working-class occupations. All estimates use the main within-primary specification (columns 1 and 4 of Table 2): a candidate-level working-class indicator with district-by-party, year-by-party-by-chamber, and number-of-candidates fixed effects, clustered by district-party, among viable primary candidates (those receiving more than 5% of the primary vote). Black bars denote 90% confidence intervals, gray bars 95% intervals.

TABLE A.20: Disadvantage of Working-Class Candidates in Contested Primary Elections, by Party, U.S. Congress 2010–2024

	Vote Share		Victory	
	(1)	(2)	(3)	(4)
	Democrats			
Working-Class	-0.035**	-0.043**	-0.080**	-0.099**
	(0.012)	(0.014)	(0.030)	(0.037)
Incumbent	0.526***	0.562***	0.859***	0.922***
	(0.013)	(0.013)	(0.018)	(0.018)
Female	0.099***	0.106***	0.202***	0.221***
	(0.009)	(0.010)	(0.022)	(0.026)
N	3440	3440	3440	3440
	Republicans			
Working-Class	-0.036***	-0.033**	-0.065*	-0.063
	(0.011)	(0.013)	(0.029)	(0.034)
Incumbent	0.472***	0.505***	0.861***	0.928***
	(0.009)	(0.009)	(0.013)	(0.013)
Female	-0.002	-0.001	0.003	0.006
	(0.008)	(0.009)	(0.022)	(0.026)
N	4600	4600	4600	4600
District-Party FE	X		X	
Year × Party × Chamber FE	X		X	
No. of Candidates FE	X		X	
Contest FE		X		X

Note: Each observation is a viable candidate (one receiving more than 5% of the primary vote) in a contested, partisan congressional primary for the U.S. House or Senate, 2010 to 2024, estimated separately by party. The specification matches Table 2: columns 1 and 3 include district-party, year-by-party-by-chamber, and number-of-candidates fixed effects; columns 2 and 4 replace these with a contest (district-party by year) fixed effect. The open-seat columns from Table 2 are omitted because they become too sparse once the sample is split by party. All models control for incumbency and gender, with standard errors clustered by district-party. $+p < 0.1$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

A.4 Donations

Working-class candidates may also struggle to raise 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 & Malhotra, 2020), or from weaker social ties with high-SES donors (Bonica, 2020; Carnes, 2018).

We compile contributions from the FEC, collected from DIME (Bonica, 2024), and include only direct contributions from individuals and PACs to candidate committees. We assign each contribution to an election stage by its date: general-election contributions are those given between the primary and general election dates for that district-year, and primary contributions are those given on or before the primary date. Each candidate's outcome is its share of the corresponding contributions within the contest.

Table A.21 presents the main result, also reported in Figure 2 in the main text. When a party nominates a working-class candidate, it receives 4.9 percentage points less of the two-party donation share. The gap is concentrated in individual contributions (a 6.5 percentage point decrease); the difference in PAC contributions is small and not statistically distinguishable from zero.

TABLE A.21: Effect of Nominating a Working-Class Candidate on Donation Share, by Donor Type, U.S. Congress 2010–2024

	Viable Primary	Top-2 Primary	General Election
All Donations			
Working-Class	-0.055**	-0.048*	-0.049**
	(0.018)	(0.024)	(0.015)
Individual Donations			
Working-Class	-0.061**	-0.059*	-0.065***
	(0.019)	(0.024)	(0.018)
PAC Donations			
Working-Class	-0.011	0.016	-0.014
	(0.031)	(0.041)	(0.015)
Incumbency control	X	X	X
Gender control	X	X	X
Race control			X
District-Party FE	X	X	
Year × Party × Chamber FE	X	X	
No. of Candidates FE	X	X	
District FE			X
Year × Chamber FE			X
N	6,432	5,044	2,129

Note: Each cell is the coefficient on a working-class (25%) indicator from a separate regression of the candidate's within-contest donation share (DIME), at three election stages. The primary-stage columns are candidate-level, with district-by-party and year-by-party-by-chamber fixed effects and a number-of-candidates control, clustered by district-party; the general-election column uses the main-text trichotomous specification, with district and year-by-chamber fixed effects, clustered by district. All models control for incumbency and gender. Reported N is for the all-donations model and varies slightly by donor type with coverage.

Table A.22 shows that the disadvantage among individual donors grows with donor size: it is present across all donor classes but is largest among medium and large donors and weakest, and only marginally significant, among small donors. We classify large donors as those who donate more than $1,000 to the corresponding candidate committee within an election cycle, medium-sized donors as those who give between $200 and $1,000, and small donors as those who give under $200. Since large donors have substantially higher incomes than small donors (Bouton et al., 2022), this suggests the fundraising disadvantage is largely class-based.

TABLE A.22: Effect of Nominating a Working-Class Candidate on Individual Donation Share, by Donor Size, U.S. Congress 2010–2024

	Viable Primary	Top-2 Primary	General Election
Small Donors			
Working-Class	-0.051*	-0.051	-0.036^{+}
	(0.023)	(0.031)	(0.022)
Medium Donors			
Working-Class	-0.077***	-0.070**	-0.062***
	(0.018)	(0.024)	(0.018)
Large Donors			
Working-Class	-0.063**	-0.064*	-0.075***
	(0.021)	(0.028)	(0.019)
Incumbency control	X	X	X
Gender control	X	X	X
Race control			X
District-Party FE	X	X	
Year × Party × Chamber FE	X	X	
No. of Candidates FE	X	X	
District FE			X
Year × Chamber FE			X
N	6,208	4,816	2,114

Note: Each cell is the coefficient on a working-class (25%) indicator from a separate regression of the candidate's within-contest share of individual donations from donors of the given size, at three election stages. Donor size is the donor's cumulative giving to the candidate over the cycle: small ($\leq$\$200), medium (\$200–\$1,000), and large ($>$\$1,000), from DIME. As in Table A.24, the primary-stage columns use a candidate-level within-party specification (district-by-party and year-by-party-by-chamber fixed effects, with a number-of-candidates control, clustered by district-party) and the general-election column uses the main-text trichotomous specification (district and year-by-chamber fixed effects, clustered by district); the fixed-effect and control rows indicate which apply.

The disadvantage also grows with how much of a candidate's career was spent in working-class work. Table A.23 reports the effect on total donation share under five definitions of working-class, from an indicator for any working-class job to thresholds of 25, 50, 75, and 100 percent of the pre-congressional career. The gap deepens steadily across these definitions, from about 4 percentage points for the broadest definition to roughly 17 percentage points for the strictest at the primary stage. At the general election the number of contests featuring a working-class nominee on one side falls sharply as the definition tightens, with only 42 contests identifying the 75% WC estimate and 30 the 100% WC estimate, so the general-stage coefficients for the stricter definitions are imprecise and should be interpreted with caution.

TABLE A.23: Effect of Nominating a Working-Class Candidate on Total Donation Share, Across Definitions of Working-Class, U.S. Congress 2010–2024

	Donation Share		
	Viable Primary	Top-2 Primary	General Election
Working-Class (Ever)	-0.041**	-0.050*	-0.039**
	(0.015)	(0.019)	(0.013)
Working-Class (25%)	-0.055**	-0.048*	-0.049**
	(0.018)	(0.024)	(0.015)
Working-Class (50%)	-0.091***	-0.056	-0.056**
	(0.027)	(0.040)	(0.019)
Working-Class (75%)	-0.175**	-0.125	-0.047
	(0.058)	(0.078)	(0.040)
Working-Class (100%)	-0.167*	-0.159^{+}	-0.009
	(0.075)	(0.094)	(0.054)
Incumbency control	X	X	X
Gender control	X	X	X
Race control			X
District-Party FE	X	X	
Year × Party × Chamber FE	X	X	
No. of Candidates FE	X	X	
District FE			X
Year × Chamber FE			X
N	6,432	5,044	2,129

Note: Each cell is the coefficient on the given working-class definition indicator from a separate regression of the candidate's within-contest total donation share (DIME), at three election stages. Definitions are an "ever" indicator (any working-class job) and 25/50/75/100% of the pre-congressional career spent in a working-class occupation. As in Table A.24, the primary-stage columns use a candidate-level within-party specification (district-by-party and year-by-party-by-chamber fixed effects, with a number-of-candidates control, clustered by district-party) and the general-election column uses the main-text trichotomous specification (district and year-by-chamber fixed effects, clustered by district); the fixed-effect and control rows indicate which apply.

A.5 Differences Across Election Stages

Table A.24 reports the working-class coefficient for each outcome underlying Figure 2, estimated separately at three stages of the electoral pipeline: viable primary candidates (those with at least 5% of the primary voteshare), top-2 primary finishers, and general-election nominees.

TABLE A.24: Differences in Working-Class Candidate Outcomes and Characteristics Across Election Stages, U.S. Congress 2010–2024

	Viable primary	Top-2 primary	General
Electoral outcomes			
Vote share	-0.032***	-0.031**	-0.006*
	(0.008)	(0.011)	(0.003)
Victory	-0.067**	-0.063*	-0.004
	(0.021)	(0.029)	(0.015)
Campaign donations (share)			
Donation total (DIME)	-0.055**	-0.048*	-0.049**
	(0.018)	(0.024)	(0.015)
Donation indiv. (DIME)	-0.061**	-0.059*	-0.065***
	(0.019)	(0.024)	(0.018)
Candidate ideology (standardized)			
CFscore: Democrats	-0.037	-0.033	-0.046^{+}
	(0.027)	(0.029)	(0.025)
CFscore: Republicans	0.017	-0.000	0.011
	(0.037)	(0.049)	(0.045)
DW-DIME: Democrats	-0.025	-0.026	-0.025
	(0.018)	(0.020)	(0.018)
DW-DIME: Republicans	-0.006	0.031	-0.026
	(0.042)	(0.044)	(0.056)
Credentials & background			
Ivy+ degree	-0.064***	-0.080***	-0.073^{+}
	(0.017)	(0.022)	(0.037)
Graduate degree	-0.174***	-0.194***	-0.207***
	(0.026)	(0.031)	(0.044)
Political Experience	-0.070***	-0.074***	-0.049
	(0.017)	(0.022)	(0.031)
N	8,040	6,072	2,261

Note: Full regression estimates underlying Figure 2. Each cell is the coefficient on a working-class (25%) indicator from a separate regression of the labeled outcome at three election stages. Primary-stage estimates, and candidate attributes (ideology and credentials) at every stage, are candidate-level, with district-by-party and year-by-party-by-chamber fixed effects, clustered by district-party. General-stage contest-level outcomes (vote share, victory, and donation share) instead use the main-text trichotomous specification, with district and year-by-chamber fixed effects, clustered by district. All models control for incumbency and gender (and number of candidates at the primary stages; candidate race at the general stage). Ideology (CFscore and DW-DIME) estimates are in standard-deviation units.

Table A.25 reports each general-election estimate from Figure 2 two ways: the candidate-level specification (a working-class indicator with district-by-party and year-by-party-by-chamber fixed effects, clustered by district-party) and the trichotomous main-text specification (the district-level $+1/-1/0$ working-class variable with district and year-by-chamber fixed effects, clustered by district). The two agree closely for the contest-level outcomes (electoral results and donation shares), which the main text reports trichotomously; candidate attributes (ideology and credentials) use the candidate-level estimate, since a trait is a property of the candidate rather than the contest and the trichotomous coding discards the contests in which both nominees, or neither, hold the attribute.

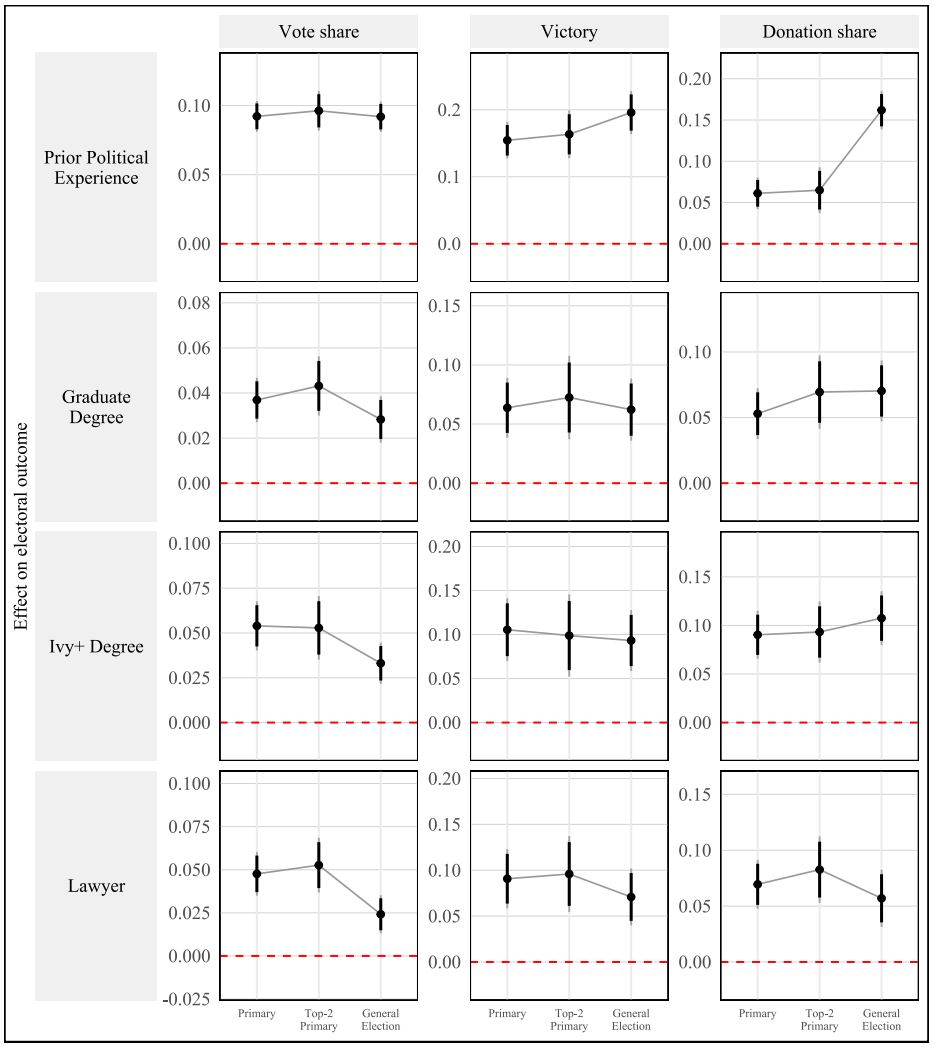
TABLE A.25: General-Election Estimates: Candidate-Level vs. Trichotomous Specification

	Candidate-level	Trichotomous
Electoral outcomes		
Vote share	-0.006^{+}	-0.006*
	(0.003)	(0.003)
Victory	-0.001	-0.004
	(0.018)	(0.015)
Campaign donations		
Donation share (total)	-0.050**	-0.049**
	(0.018)	(0.015)
Donation share (indiv.)	-0.061**	-0.065***
	(0.021)	(0.018)
Candidate attributes		
Ivy+ degree	-0.073^{+}	-0.070
	(0.037)	(0.046)
Graduate degree	-0.207***	-0.190***
	(0.044)	(0.050)
Political experience	-0.049	-0.022
	(0.031)	(0.038)

Notes: $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

The working-class penalty mirrors the returns that elite credentials command. Figure A.12 estimates the effect of prior political experience, a graduate degree, an Ivy-Plus degree, and a legal career on vote share, victory, and donation share across the same three election stages, controlling for incumbency and gender (and race at the general). Each credential predicts stronger performance across outcomes and stages: prior political experience, for instance, raises general-election vote share by about 9 points, the probability of victory by roughly 20 points, and donation share by 16 points, with its donation advantage widening into the general election.

FIGURE A.12: Estimated Effect of Elite Credentials on Electoral and Fundraising Outcomes Across Election Stages, U.S. Congress 2010–2024



Note: Each point is the coefficient on the credential shown (estimated one at a time) from a separate regression of the labeled outcome, at three election stages. The specification is candidate-level throughout: primary stages use district-by-party and year-by-party-by-chamber fixed effects with a number-of-candidates control (clustered by district-party), and the general stage uses district and year-by-chamber fixed effects (clustered by district); all models control for incumbency and gender, and the general additionally for race. Donation share is the candidate's within-contest share of total (individual and PAC) DIME contributions in the window matching each stage. Thick bars are 90% confidence intervals, thin bars 95%

A.6 Voters

We use respondent-level CES data from 2010 to 2024, restricted to House elections (to avoid double-counting vote choices) and to validated voters who chose a major-party candidate. Because the CES does not record occupation, we proxy respondent class two ways: by education (no four-year college degree) and by household income: low (<$50,000), middle ($50,000–$150,000), and high (>$150,000). The outcome is an indicator for voting for the Democratic candidate. The education models cover roughly 172,900 respondents and the income models 153,800.

All results in this section come from the specification below, estimated separately for each definition of working-class and each class proxy. Because the candidate-class treatment is symmetric across parties, the "WC Candidate" coefficient gives the effect of a party nominating a working-class candidate on support for its own candidate, and the "WC Candidate × Class" interaction gives how much larger that effect is for working-class respondents (a positive interaction means working-class candidates draw relatively more support from working-class voters). The tables below report these coefficients directly. The figures show the same models: the left panels plot the effect of nominating a working-class candidate within each respondent group, and the right panels plot the difference between those groups, which is the interaction term reported in the tables.

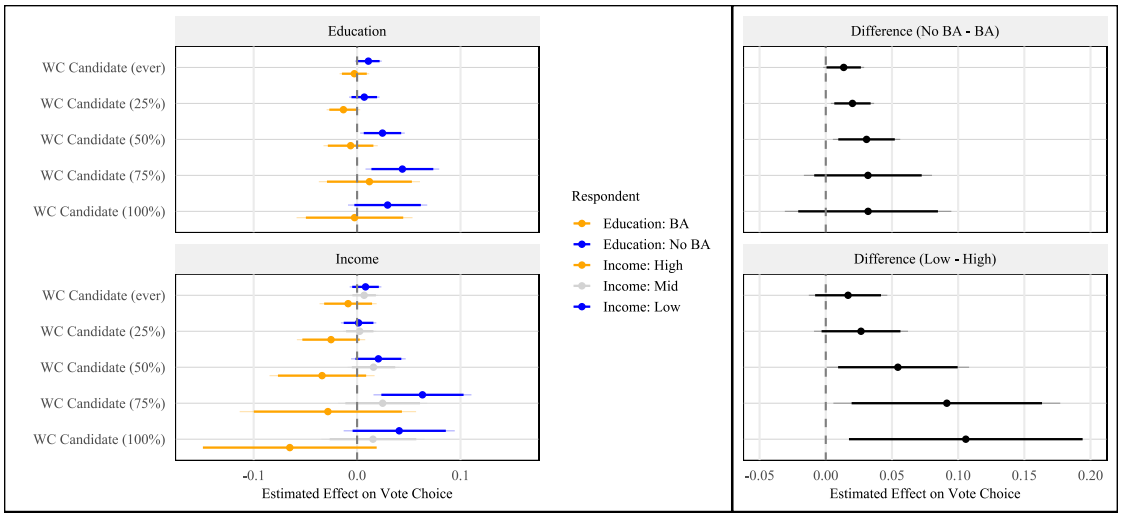
A.6.1 Respondent-Level Analysis - Model Specification

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

- **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.
- **Weights:** CES cumulative common-content weights.
- **Standard Errors:** Clustered at the district-year (election) level.

Figure 3 (main text) shows these interactions for our preferred 25% definition. Figure A.13 shows the pattern holds across all five definitions and strengthens as candidates are more thoroughly working-class, and Tables A.26–A.27 give the full estimates by education and income.

FIGURE A.13: Effect of Nominating a Working-Class Candidate on Vote Choice by Respondent Class, Across Definitions of Working-Class



Note: All five definitions of working-class (ever; 25/50/75/100% of the pre-political career). Left panels: the within-group effect of nominating a working-class candidate, by respondent education and income; right panels: the between-group difference (β_3). Specification as in Section A.6.1. Thick bars are 90% confidence intervals, thin bars 95%.

TABLE A.26: Effect of Working-Class Candidate Definitions on Democratic Vote Choice: Respondent Education

	Vote Choice				
	Candidate Working-Class Definitions				
	(1)	(2)	(3)	(4)	(5)
WC Candidate	-0.003	-0.013	-0.006	0.012	-0.002
	(0.007)	(0.008)	(0.013)	(0.025)	(0.029)
WC Candidate x No BA	0.014+	0.020*	0.031*	0.032	0.032
	(0.008)	(0.008)	(0.013)	(0.025)	(0.032)
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***	-0.077***	-0.077***	-0.077***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
White (Respondent)	-0.266***	-0.266***	-0.266***	-0.266***	-0.266***
	(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	172886	172886	172886	172886	172886
District FE	X	X	X	X	X
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%

Note: Effect on Democratic House vote, interacting each working-class definition with respondent education (no BA vs. BA). Specification and controls as in Section A.6.1. $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

TABLE A.27: Effect of Working-Class Candidate Definitions on Democratic Vote Choice: Respondent Income

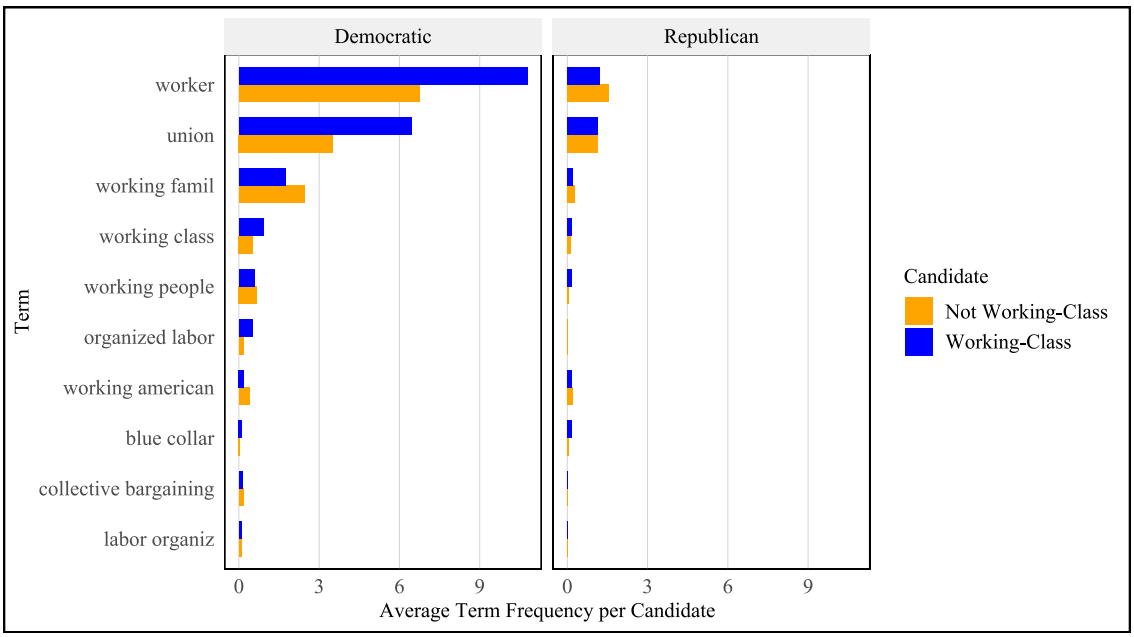
	Vote Choice				
	Candidate Working-Class Definitions				
	(1)	(2)	(3)	(4)	(5)
WC Candidate	-0.009	-0.025	-0.034	-0.028	-0.065
	(0.014)	(0.017)	(0.026)	(0.044)	(0.051)
WC Candidate x Low Income	0.017	0.027	0.054*	0.091*	0.106*
	(0.015)	(0.018)	(0.027)	(0.044)	(0.054)
District Incumbency	0.035***	0.035***	0.035***	0.034***	0.035***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Low Income (Respondent)	0.016*	0.016*	0.016*	0.016*	0.016*
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
White (Respondent)	-0.258***	-0.258***	-0.258***	-0.258***	-0.258***
	(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	153812	153812	153812	153812	153812
District FE	X	X	X	X	X
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%

Note: As in Table A.26, interacting each definition with respondent income, grouped as low (under $50,000), middle ($50,000–$150,000), and high (over $150,000). High income is the omitted reference; the table reports the low-income interaction, with the middle-income terms estimated but not shown.

A.7 Campaign Rhetoric

Because the donation-based scores capture ideology along a single dimension, working-class candidates may differ in other respects, such as the rhetoric they emphasize. We therefore test whether they make more rhetorical appeals to the "working class." To do so, we construct a dictionary of terms commonly used to refer to working-class people and calculate the frequency of each term on candidates' campaign websites, captured as close as possible to the general election of that year. To ensure terms are used in the intended context (for example, excluding "Soviet Union" for "union" or "hard worker" for "worker"), we manually review all occurrences in their surrounding context, retaining only instances with the expected meaning and a positive association; this process also removes negative references. Figure A.14 presents the average frequency per candidate, showing that "worker" is the most common term, followed by "union," and that across nearly all terms working-class candidates use them more frequently than non-working-class candidates.

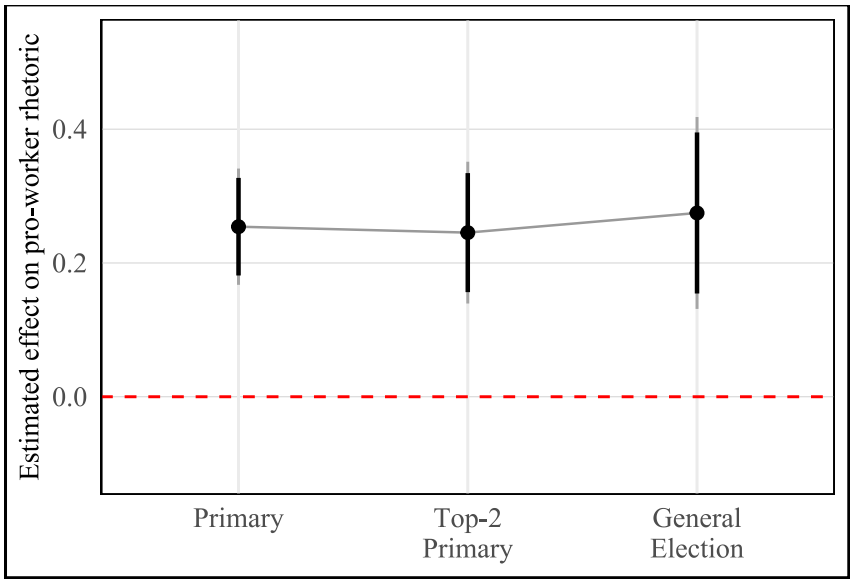
FIGURE A.14: Average Frequency of Pro-Worker Words by Candidate Class, on Websites of Top-2 Primary Candidates, U.S. Congress 2010–2024



Note: Average per-candidate frequency of each of the ten most common pro-worker dictionary terms, among top-2 primary finishers, by candidate class (working-class, 25% definition, vs. not) and party. Frequency is total term occurrences divided by the number of candidates in each class-by-party cell, so candidates without qualifying website text count as zero. Occurrences are matched in context and manually screened to retain only the intended, positive meaning.

To formally estimate how much more prevalent this rhetoric is, we regress the logged count of pro-worker terms on a candidate's website on working-class status, controlling for website length, incumbency, and gender, with district-by-party and year-by-party-by-chamber fixed effects. Figure A.15 plots the estimated working-class gap at each stage. Across all three stages, working-class candidates are consistently and significantly more likely to use pro-worker rhetoric than otherwise-similar co-partisans, and the gap is stable from the primary through the general election, so it is not screened out as candidates advance. The estimates, about 0.25 to 0.27 in logged counts, imply that working-class candidates use roughly a quarter to a third more pro-worker terms than comparable candidates.

FIGURE A.15: Pro-Worker Rhetoric Among Working-Class Candidates Across Election Stages, U.S. Congress 2010–2024



Note: Each point is the coefficient on a working-class (25%) indicator from a separate regression of the candidate's pro-worker rhetoric—the log of one plus the count of pro-worker dictionary terms on the candidate's website, controlling for log website length—at three election stages: viable primary candidates, top-2 primary finishers, and general-election nominees. Models include district-by-party and year-by-party-by-chamber fixed effects and controls for incumbency and gender, clustered by district-party. Thick bars are 90% confidence intervals, thin bars 95%.