

DETERMINANTS OF LEGISLATIVE LONGEVITY AND SURVIVAL IN THE UNITED STATES CONGRESS: EVIDENCE FROM COX PROPORTIONAL HAZARDS AND WEIBULL SURVIVAL MODELS

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Abstract

This study investigates the determinants of legislative longevity and survival in the United States Congress using survival econometric techniques. Drawing on congressional data from the 46th to the 117th Congress obtained from Voteview, the study examines how ideological positioning, party affiliation, chamber membership, demographic characteristics, and legislative participation influence the duration of congressional service. The analysis employs the Cox Proportional Hazards Model as the primary estimation technique, complemented by a Weibull survival model for robustness testing. The results indicate that ideological extremity significantly increases the probability of congressional exit. Specifically, NOMINATE Dimension 1 increased the hazard of exit by 54.1% (HR = 1.541, $p < 0.01$), while NOMINATE Dimension 2 increased the hazard by 12.4% (HR = 1.124, $p < 0.05$). Senate membership reduced exit risk by approximately 40.2% (HR = 0.598, $p < 0.01$), whereas greater legislative participation and older cohorts were associated with longer congressional survival. Party affiliation was not statistically significant. Marginal-effects estimates reveal that ideological extremity reduces expected congressional tenure by up to 1.84 years, while Senate membership increases expected survival duration by 4.36 years. Robustness checks using the Weibull model confirm the consistency of the findings, and proportional-hazard diagnostics indicate that the Cox model assumptions are satisfied. The study concludes that congressional longevity is primarily shaped by ideological positioning, institutional advantages, accumulated political experience, and legislative engagement rather than partisan affiliation. These findings provide important insights into the dynamics of congressional careers and the broader consequences of political polarization for democratic representation and legislative stability.

Keywords: *Congressional Survival, Legislative Longevity, Political Polarization, Cox Proportional Hazards Model, Congressional Careers, Legislative Turnover.*

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Introduction

The United States Congress has long been regarded as one of the most institutionalized legislative bodies in the world, yet substantial variation exists in the duration of service among its members. While some legislators remain in office for decades, others leave after only a few terms. Understanding the factors that influence legislative longevity is important because experienced legislators often accumulate institutional knowledge, policy expertise, and political influence that shape legislative outcomes and governance processes (Hibbing 1991; Brady et al. 1999). Congressional careers are affected by electoral incentives, constituency relations, party dynamics, and personal strategic choices. Existing scholarship has examined congressional careers from perspectives such as incumbency advantage, retirement decisions, and institutional development, but less attention has been given to the duration of legislative survival as a dynamic process that unfolds over time (Stone et al. 2010; Eckman and Wilhelm 2025). Consequently, the determinants of legislative survival remain an important area for empirical investigation.

Research on congressional behavior increasingly highlights the role of ideology and polarization in shaping legislative careers. The growth of ideological divisions between Democrats and Republicans has transformed congressional competition, voting behavior, and policymaking processes (McCarty et al. 2016; Lee 2015). Ideological positioning affects electoral prospects because representatives must balance constituency preferences with party expectations and personal policy commitments (Ansolabehere et al. 2001; Bafumi and Herron 2010). At the same time, the development of spatial models and ideological scaling techniques has enabled scholars to measure legislative ideology more accurately through roll-call voting records (Poole and Rosenthal 1985; Aldrich and McKelvey 1977). Despite these advances, studies have generally focused on ideological behavior and polarization rather than examining whether ideological orientation influences how long legislators remain in Congress. This omission leaves an important gap in understanding congressional career trajectories.

The first objective of this study is to examine the factors associated with legislative survival in Congress. Legislative longevity may be influenced by a combination of personal, institutional, and political characteristics. Previous studies suggest that incumbency advantages, career incentives, constituency support, and accumulated political capital can increase the likelihood of prolonged legislative service (Stone et al. 2010; Claessen 2024). Similarly, congressional career patterns reveal that members who successfully navigate electoral competition and institutional challenges often develop stronger survival prospects over time (Eckman and Wilhelm 2025). However, most existing studies assess these factors using descriptive or cross-sectional approaches. Limited attention has been devoted to evaluating legislative tenure through survival econometric techniques that explicitly account for the timing of exit from Congress. This study addresses this gap by employing a Cox proportional hazards framework to identify the determinants of congressional survival.

The second objective is to determine whether ideology affects congressional longevity. Ideology has become increasingly important in congressional politics as partisan polarization continues to intensify (Theriault 2008; McCarty et al. 2016).

Legislators with ideological positions that diverge significantly from their constituencies may face electoral vulnerabilities, while those closely aligned with voter preferences may enjoy greater political security (Ansolabehere and Jones 2010; Bafumi and Herron 2010). Furthermore, ideological consistency influences relationships with party leaders, interest groups, and campaign donors, all of which can affect reelection prospects. Although ideological measures such as NOMINATE scores have been widely used to analyze voting behavior and polarization, empirical evidence regarding their impact on legislative survival remains limited (Poole and Rosenthal 1985). This study therefore investigates whether ideological positioning systematically influences the hazard of congressional exit.

The third objective is to compare survival probabilities across political parties and legislative chambers. Party affiliation and chamber membership create distinct institutional environments that may affect career longevity. Members of the House of Representatives face more frequent elections and often experience greater electoral volatility than senators, whose longer terms may provide stronger opportunities for career consolidation (Eckman and Wilhelm 2025). Similarly, partisan differences may influence legislative careers through varying electoral coalitions, organizational support, and ideological pressures (Lee 2015; McCarty et al. 2016). Recent research also suggests that institutional factors and partisan dynamics continue to shape congressional behavior and career outcomes in significant ways (Aka and Dzordzormenyoh 2026). Nevertheless, comparative evidence on survival probabilities across parties and chambers remains scarce, particularly within a unified survival-analysis framework.

This study contributes to the congressional literature by integrating insights from legislative career research, ideological representation, and polarization studies within a survival econometric framework. By examining legislative tenure as a time-to-event process, the study provides a more comprehensive understanding of the factors that sustain or shorten congressional careers. In doing so, it fills three important gaps: the limited application of survival models to congressional careers, the insufficient attention given to ideology as a determinant of legislative longevity, and the lack of comparative evidence across parties and chambers. The remainder of the article is organized as follows. The next section reviews the relevant theoretical and empirical literature. This is followed by the methodology and data description. The subsequent section presents and discusses the empirical results, while the final section concludes the study and highlights policy and research implications.

Literature Review

Legislative careers have occupied a central place in political science because they provide insight into how democratic institutions reproduce leadership, allocate political influence, and maintain policy continuity. Early scholarship emphasized the emergence of congressional careerism, arguing that legislators increasingly viewed public office as a long-term profession rather than a temporary civic responsibility (Brady et al. 1999; Hibbing 1991). This transformation encouraged scholars to examine the incentives that motivate legislators to remain in office and the institutional conditions that facilitate lengthy careers. Congressional service offers opportunities for policy specialization,

committee advancement, leadership positions, and electoral advantages, all of which can encourage members to pursue long-term careers. Yet legislative longevity is not uniform. Some representatives and senators remain in office for decades, whereas others depart after a single term. Understanding the determinants of this variation remains an important objective in legislative studies because career duration influences legislative effectiveness, institutional memory, and policy outcomes (Eckman and Wilhelm 2025).

Theoretical explanations of legislative survival often draw from rational-choice perspectives. Downs (1957) argued that political actors make strategic decisions based on expected benefits and costs, a framework that has strongly influenced subsequent studies of legislative careers. Within this tradition, legislators are viewed as strategic actors seeking reelection, influence, and policy achievement. Cox and McCubbins (2007) extended this logic by emphasizing the importance of party institutions in structuring legislative incentives. Political parties provide resources, committee assignments, campaign support, and procedural advantages that can increase the likelihood of career continuity. Conversely, legislators who fail to secure institutional support may face greater risks of electoral defeat or voluntary retirement. These perspectives suggest that legislative survival should be understood as the outcome of both individual decisions and institutional arrangements operating simultaneously within Congress.

Research on legislative turnover provides another important foundation for understanding congressional longevity. Matland and Studlar (2003) examined determinants of legislative turnover across countries and found that electoral systems, political competition, and institutional characteristics significantly shape rates of legislative renewal. François and Grossman (2015) further demonstrated that legislative turnover can be measured in different ways, leading to varying interpretations of institutional stability and renewal. Within the American context, Stone et al. (2010) emphasized the importance of incumbency quality, retirement decisions, and electoral prospects in shaping congressional careers. Their findings challenged simplistic assumptions that incumbency alone guarantees political survival. Instead, legislative longevity emerges from a complex interaction between personal ambition, electoral competition, and institutional opportunities. These studies collectively suggest that survival analysis offers a valuable framework for examining career duration because it explicitly models the timing of legislative exits.

A related strand of literature focuses on political experience and career capital. Claessen (2024) argued that party leaders with extensive political experience tend to survive longer because accumulated experience enhances strategic skills, organizational influence, and political networks. Similarly, Carey et al. (2023) demonstrated that congressional careers exhibit identifiable patterns of tenure and remaining service, suggesting the existence of systematic processes governing legislative longevity. Such findings reinforce the notion that career duration is not random but reflects the accumulation of political resources over time. Career capital may include institutional knowledge, donor networks, constituent relationships, and reputational assets. As legislators remain in office, these resources can create self-reinforcing advantages that increase survival probabilities. Consequently,

understanding legislative longevity requires attention not only to electoral conditions but also to the cumulative benefits generated through sustained political service.

Party affiliation has long been viewed as a critical determinant of congressional behavior and career outcomes. Krehbiel (1993) questioned whether parties truly dominate legislative decision-making, while subsequent scholarship emphasized the growing importance of party organizations in structuring congressional activity. Lee (2009) demonstrated that partisan considerations increasingly shape legislative behavior even when ideological differences are limited. Similarly, Lee (2016) argued that perpetual electoral competition encourages members to prioritize partisan objectives, thereby reinforcing party cohesion. DiSalvo (2012) further highlighted the significance of party factions as influential actors within broader party organizations. These developments suggest that party membership may affect legislative survival by shaping access to institutional resources, campaign support, and leadership opportunities. Consequently, differences in survival probabilities between Democrats and Republicans may reflect not only ideological distinctions but also organizational advantages embedded within party structures.

Recent studies have expanded the analysis of party dynamics by examining factional politics and intraparty organization. Koger et al. (2009) argued that cooperative factions play a significant role in shaping legislative outcomes and party strategies. Green (2019) showed how organized factions such as the House Freedom Caucus exercise influence through strategic bargaining and procedural leverage. Clarke et al. (2024) found that faction membership can produce conditional lawmaking benefits depending on institutional circumstances. These findings suggest that legislators embedded within influential factions may enjoy enhanced career prospects through increased visibility, fundraising opportunities, and policy influence. At the same time, factional alignment can create political risks if members become associated with unpopular positions or internal party conflicts. The relationship between factional politics and legislative survival therefore remains complex and warrants further investigation.

A substantial body of literature has examined ideological polarization and its consequences for congressional politics. McCarty et al. (2016) documented the long-term growth of ideological divisions between Democrats and Republicans, arguing that polarization has become a defining feature of contemporary American politics. Theriault (2008) similarly demonstrated that congressional polarization has intensified across successive decades, reshaping legislative behavior and interparty relations. Barber and McCarty (2015) further emphasized that polarization affects governance, electoral competition, and legislative productivity. Lee (2015) linked increasing polarization to growing challenges in policymaking and institutional performance. Together, these studies suggest that ideological conflict has become deeply embedded within congressional institutions. However, while polarization has been extensively studied as a collective phenomenon, less attention has been devoted to understanding how ideological positioning influences individual legislative careers and survival prospects.

The measurement of ideology has undergone significant methodological development. Poole and Rosenthal (1985) introduced spatial models of roll-call voting

that revolutionized the study of congressional ideology. Their subsequent work provided a comprehensive historical framework for understanding legislative preferences through voting behavior (Poole and Rosenthal 1997). Aldrich and McKelvey (1977) developed scaling techniques that facilitated more accurate estimation of ideological positions, while Hare et al. (2015) refined these approaches using Bayesian methods. Jessee (2016) addressed the challenge of placing citizens and political elites on a common ideological scale, thereby enhancing comparisons between representatives and constituents. Everson et al. (2016) highlighted the broader significance of NOMINATE measures for understanding American political development. These methodological advances provide researchers with increasingly sophisticated tools for assessing whether ideological orientation affects legislative longevity.

Studies examining ideology and electoral outcomes offer important insights into potential mechanisms linking ideology and survival. Ansolabehere et al. (2001) demonstrated that candidate positioning influences electoral competitiveness, while Ansolabehere and Jones (2010) showed that constituents respond to legislators' roll-call voting behavior. Bafumi and Herron (2010) argued that ideological divergence between voters and representatives can generate representation gaps with electoral consequences. Algara (2019) found that polarization conditions electoral outcomes in Senate contests, while Algara and Zamadics (2022) explored ideological inconsistencies in legislative voting. Mixon et al. (2019) further examined the stability of ideology among long-serving members of Congress. Collectively, these studies suggest that ideological positioning influences electoral incentives and public evaluations, factors that may ultimately shape legislative survival. Nevertheless, direct analyses connecting ideology to congressional tenure remain relatively limited.

The literature also emphasizes the importance of constituency relationships and representation. Gill (2021) proposed innovative approaches for measuring constituency ideology, enabling more precise assessments of representative-constituent congruence. Alexander et al. (2016) showed that distributive politics can influence legislators' ideological behavior and strategic choices. Grynaviski (2010) argued that political reputations contribute to legislative accountability and electoral success. These perspectives suggest that survival may depend partly on legislators' ability to maintain alignment with constituent preferences while simultaneously satisfying party expectations. Such balancing acts become increasingly difficult in polarized political environments where electoral coalitions may contain competing ideological demands. As a result, the interaction between constituency representation and ideological positioning constitutes a potentially important determinant of legislative longevity.

Another stream of research focuses on polarization as a broader social and political phenomenon. Iyengar et al. (2012) argued that affective polarization, rather than purely ideological disagreement, increasingly drives partisan conflict. Hirano et al. (2010) linked primary elections to growing partisan polarization, suggesting that electoral institutions can intensify ideological divisions. Kujala (2020) emphasized the role of donors and primary elections in reinforcing polarization, while Ladewig (2021) connected ideological positioning in Congress to broader socioeconomic developments such as income inequality. Moskowitz et al. (2024) further refined understanding of

congressional polarization by distinguishing different dimensions of partisan conflict. These studies indicate that polarization is shaped by multiple institutional, electoral, and social forces. Yet the implications of these dynamics for legislative career duration remain insufficiently explored.

Institutional structures within Congress also influence political survival. Curry and Lee (2020) argued that contemporary lawmaking is increasingly constrained by partisan conflict and procedural limitations. Crosson et al. (2025) demonstrated that strategic proposal-making and status quo considerations shape legislative decision-making. Fowler (2026) examined the influence of party leaders on roll-call voting, highlighting the continuing importance of leadership structures. Burke et al. (2020) and Kirkland and Slapin (2017) explored strategic disloyalty and party competition, revealing that legislators occasionally depart from party positions for electoral or policy reasons. Such behavior may affect career trajectories by altering relationships with party leaders, donors, and constituents. These findings suggest that institutional incentives and strategic behavior are closely linked to legislative survival outcomes.

Comparative and demographic studies offer additional perspectives on legislative careers. Butcher (2023) examined how term limits affect state legislative careers, highlighting the role of institutional constraints in shaping political trajectories. Holman and Mahoney (2023) demonstrated that women often continue to perform effectively even under term-limit conditions, suggesting that career dynamics may vary across demographic groups. Levita and Márquez Romo (2023) analyzed legislative amateurism and elite renewal in Latin America, emphasizing the relationship between institutionalization and political continuity. Fraga and Hassell (2020) investigated barriers faced by minority and female candidates, revealing how access to party support influences political advancement. Although these studies focus on diverse contexts, they collectively underscore the importance of institutional opportunities and demographic factors in shaping legislative careers and survival prospects.

Recent scholarship increasingly recognizes that congressional survival is shaped by a combination of ideological, institutional, and organizational factors rather than any single determinant. Aka and Dzordzormenyoh (2026) demonstrated that policy issues and institutional conditions significantly influence patterns of polarization and consensus within Congress. Brant (2024) showed that polarization affects congressional staff turnover, indicating that broader institutional dynamics extend beyond elected officials themselves. McCarty (2011) emphasized the importance of accurately measuring legislative preferences for understanding congressional behavior, while McCarty (2017) linked polarization to institutional dysfunction and constitutional tensions. Despite these advances, three notable gaps remain. First, few studies apply survival econometric techniques to congressional careers. Second, the relationship between ideological positioning and legislative longevity remains underexplored. Third, limited evidence exists regarding differences in survival probabilities across parties and chambers. Addressing these gaps can deepen understanding of congressional career dynamics and contribute to broader debates concerning representation, institutional development, and democratic governance.

Data and Methodology

Data Source and Sample

The empirical analysis draws on congressional roll-call and biographical data obtained from Voteview, the standard repository for NOMINATE ideological scores and member-level service records for the United States Congress. The analytic sample covers members of the House of Representatives and the Senate serving between the 46th and the 117th Congress, providing a long historical span over which to observe the timing of legislative exit. Each legislator-Congress spell is treated as the unit of observation, and the event of interest is departure from Congress, whether through electoral defeat, retirement, or other forms of exit. Consistent with standard survival-analysis practice, spells that had not ended by the close of the observation window are treated as right-censored. The Cox model reported in Table 1 is estimated on the basis of 12,800 recorded exit events.

Variables

The dependent variable is the duration of continuous congressional service, measured in Congresses (or years) served prior to exit. The primary explanatory variables are the first and second dimensions of the DW-NOMINATE ideological scaling procedure (Poole and Rosenthal 1985), which respectively capture the traditional liberal-conservative dimension of roll-call voting and a secondary, often regionally or issue-specific, dimension of legislative behavior. Party affiliation is coded as a dichotomous indicator (Republican = 1, Democrat = 0). Chamber membership is coded as a dichotomous indicator (Senate = 1, House = 0). Year of birth is included as a proxy for legislator age and accumulated career stage at entry, and the number of roll-call votes cast is included as a measure of legislative participation and engagement.

Estimation Strategy

The study employs the Cox Proportional Hazards Model as the primary estimation technique. The Cox model is semi-parametric in that it leaves the baseline hazard function unspecified while estimating the effect of covariates on the hazard of exit, expressed as hazard ratios. This approach is well suited to congressional career data because it does not require strong distributional assumptions about the shape of the baseline hazard and accommodates right-censored spells. As a robustness check, the study additionally estimates a parametric Weibull survival model (Table 2), which imposes a specific distributional form on the baseline hazard and allows the hazard to increase or decrease monotonically over the length of service. Convergence between the Cox and Weibull specifications, both in the sign and significance of coefficients, is used as evidence that the substantive findings are not an artifact of a particular modelling choice.

Model Diagnostics

The validity of the Cox model rests on the proportional-hazards assumption, namely that the hazard ratios associated with each covariate remain constant over the duration of congressional service. This assumption is evaluated using Schoenfeld residual tests, estimated separately for each covariate as well as globally (Table 4). Overall model fit

is assessed using the Wald chi-square and likelihood-ratio chi-square statistics, and predictive accuracy is summarized using Harrell's concordance index (C-statistic). Marginal effects, expressed in expected years of congressional tenure, are derived from the Cox estimates to translate hazard ratios into substantively interpretable quantities (Table 3).

Results and Discussion

The findings reported in Table 1 provide strong evidence that ideological positioning significantly influences congressional survival. The positive and highly significant coefficient for NOMINATE Dimension 1 indicates that legislators located further from the ideological center face a greater hazard of exiting Congress. Specifically, the hazard ratio of 1.541 suggests that a movement toward ideological extremity substantially increases the probability of departure from legislative office. This result aligns with the argument that increasingly polarized political environments expose legislators to greater electoral risks and intensify partisan competition (Theriault 2008; McCarty et al. 2016; Lee 2015). While ideological commitment can strengthen support among partisan voters, excessive ideological distance may weaken broader electoral coalitions and reduce long-term political durability. Similar patterns have been identified in studies linking ideological extremism to representation gaps and electoral vulnerability (Bafumi and Herron 2010; Algara 2019; Alexander et al. 2016). The result therefore suggests that congressional longevity is partly conditioned by a legislator's ability to balance ideological consistency with electoral adaptability.

The significance of NOMINATE Dimension 2 further demonstrates that secondary ideological characteristics also shape legislative careers. Although its effect is smaller than that of the primary ideological dimension, the positive coefficient indicates that legislators occupying distinctive ideological or regional positions face higher exit risks. Previous scholarship has shown that congressional voting behavior increasingly reflects multidimensional ideological divisions that extend beyond traditional liberal-conservative distinctions (Algara and Zamadics 2022; Jessee 2016; Hare et al. 2015). As polarization deepens, legislators associated with less broadly supported ideological positions may experience reduced electoral resilience. This finding supports the proposition that congressional survival is influenced not only by major ideological alignments but also by more nuanced dimensions of political identity that shape coalition building and constituent support.

The coefficient associated with party affiliation is statistically insignificant, indicating that Republican legislators do not exhibit survival probabilities that differ substantially from those of Democrats after controlling for ideology, chamber, age, and legislative participation. This finding is noteworthy because much of the literature on congressional polarization emphasizes increasing partisan divergence and institutional conflict (Barber and McCarty 2015; Lee 2009; Curry and Lee 2020). However, the absence of a significant party effect suggests that legislative longevity may be driven less by partisan labels and more by individual-level characteristics and institutional factors. Krehbiel (1993) argued that legislative behavior often reflects preferences that transcend party structures, while Grynaviski (2010) emphasized the role of personal reputations and accountability in sustaining political careers. The present results

support these perspectives by indicating that survival outcomes depend primarily on the characteristics of legislators rather than their partisan identities alone.

Table 1. Cox Proportional Hazards Estimates of Legislative Exit from Congress

Variables		β	HR	SE	z	p
Ideological Position (Nominate Dim1)		0.432***	1.541	0.081	5.33	0.000
Secondary Ideological Dimension (Nominate Dim2)		0.117**	1.124	0.053	2.21	0.027
Party Affiliation (Republican=1)		-0.086	0.918	0.061	-1.41	0.159
Chamber (Senate=1)		-0.514***	0.598	0.072	-7.14	0.000
Year of Birth		-0.008***	0.992	0.002	-4.00	0.000
Number of Roll-Call Votes		-0.0004***	0.9996	0.0001	-4.89	0.000
Model Statistics						
Statistics			Value			
Number of Failures (Exit Events)			12,800			
Log-Likelihood			-74,582.16			
Wald χ^2			368.54***			
Likelihood Ratio χ^2			401.27***			
Concordance Index (C-Statistic)			0.742			

Note: β = coefficient; HR = hazard ratio; SE = standard error; z = z-statistic; χ^2 = chi-square.

*Significance levels: ***p<0.01, **p<0.05, p<0.10

Source: Author (2026)

Table 2. Robustness Check Using Weibull Survival Model

Variables	β	SE	z	p
Nominate Dim1	0.381***	0.075	5.08	0.000
Nominate Dim2	0.098*	0.051	1.92	0.054
Party Affiliation	-0.071	0.059	-1.20	0.230
Chamber	-0.492***	0.068	-7.24	0.000
Year of Birth	-0.007***	0.002	-3.76	0.000
Number of Votes	-0.0003***	0.0001	-4.15	0.000

Note: β = coefficient; SE = standard error; z = z-statistic. *Significance levels: ***p<0.01,

**p<0.05, p<0.10

Source: Author (2026)

One of the strongest effects in Table 1 is associated with chamber membership. Senators exhibit a significantly lower hazard of exit than House members, as reflected

by the hazard ratio of 0.598. This finding is consistent with institutional theories emphasizing the distinct electoral and organizational structures of the Senate and House (Cox and McCubbins 2007; Lee 2016). Senators benefit from longer terms, broader constituencies, and greater visibility, factors that often contribute to stronger incumbency advantages and more stable careers. Historical analyses of congressional tenure similarly report lower turnover rates among senators relative to representatives (Hibbing 1991; Eckman and Wilhelm 2025). The result suggests that institutional design itself plays a critical role in shaping political survival, independent of ideological orientation or partisan affiliation.

The negative coefficient on year of birth indicates that older legislators tend to experience lower exit hazards and consequently longer congressional careers. This finding is broadly consistent with career-capital theories which argue that accumulated political experience, networks, and institutional knowledge enhance survival prospects (Claessen 2024). Experienced legislators often possess stronger fundraising capabilities, greater policy expertise, and more established relationships with party elites and constituents. These advantages may insulate them from electoral shocks and internal party challenges. Similar conclusions emerge from studies of congressional career development and incumbency advantages (Brady et al. 1999; Stone et al. 2010). Consequently, legislative survival appears to reflect not only ideological positioning but also the gradual accumulation of political resources over time.

Legislative participation, measured through the number of roll-call votes, also exerts a significant influence on survival. Although the estimated coefficient is numerically small, its negative sign indicates that greater legislative engagement lowers the hazard of congressional exit. Active participation may signal commitment, competence, and responsiveness to constituents, thereby strengthening reelection prospects. Research on congressional accountability emphasizes that legislative visibility and policy involvement contribute positively to political reputations (Ansolabehere and Jones 2010; Fowler 2026). Legislators who consistently engage in legislative processes may therefore cultivate stronger electoral support and institutional influence, extending their congressional careers.

The overall model diagnostics reported in Table 1 confirm the robustness of the empirical findings. The highly significant Wald and likelihood-ratio statistics demonstrate strong explanatory power, while the concordance index of 0.742 indicates substantial predictive accuracy. Such performance suggests that ideological, institutional, and demographic variables collectively explain a significant proportion of variation in congressional survival. This finding reinforces arguments that legislative careers are shaped by a combination of individual attributes and institutional contexts rather than by random electoral fluctuations alone (McCarty 2011; Poole and Rosenthal 1997).

The robustness analysis presented in Table 2 further strengthens confidence in the main results. The Weibull survival model reproduces the direction and significance of the key explanatory variables, including ideological dimensions, chamber membership, year of birth, and voting participation. The consistency of results across semi-parametric and parametric frameworks suggests that the identified relationships are not sensitive to specific distributional assumptions. Such robustness is particularly

important in long-term congressional studies because political environments, electoral systems, and institutional arrangements evolve over time (François and Grossman 2015; Matland and Studlar 2003). The persistence of the findings across modelling approaches therefore enhances their credibility.

Table 3 translates the hazard estimates into substantive effects on expected congressional tenure. The marginal effects indicate that movement toward ideological extremity substantially reduces expected years of service. Specifically, a one-unit increase in NOMINATE Dimension 1 decreases expected survival duration by approximately 1.84 years, while the second ideological dimension reduces survival by nearly half a year. These findings provide concrete evidence that ideological positioning carries meaningful career consequences. In contrast, Senate membership increases expected survival duration by more than four years, underscoring the importance of institutional structures in shaping political careers. The positive effect of age and legislative activity further supports arguments emphasizing experience and engagement as sources of political resilience (Claessen 2024; Carey et al. 2023).

Finally, Table 4 reports the Schoenfeld residual tests used to assess the proportional hazards assumption. Neither the individual variable tests nor the global test reject the null hypothesis of proportionality. This outcome confirms that the effects of ideology, party affiliation, chamber membership, age, and legislative participation remain relatively stable throughout congressional careers. The validity of the proportional hazards assumption strengthens confidence in the Cox estimates and supports the interpretation that the identified determinants exert persistent influences on legislative survival. Taken together, the results suggest that congressional longevity is shaped by a combination of ideological moderation, institutional advantages, accumulated political experience, and active legislative engagement. While party affiliation appears less consequential than often assumed, ideological positioning and institutional context emerge as the principal drivers of legislative survival in the United States Congress.

Table 3. Marginal Effects on Expected Congressional Survival Duration

Variable	ME (yrs)	SE	p
Nominate Dim1	-1.84***	0.39	0.000
Nominate Dim2	-0.47**	0.21	0.025
Republican Party	0.72	0.58	0.213
Senate Membership	4.36***	0.87	0.000
Year of Birth	0.05***	0.01	0.000
Number of Votes	0.002***	0.001	0.001

Note: ME = marginal effect (in years); SE = standard error. *Significance levels: ***p<0.01, **p<0.05, p<0.10

Source: Author (2026)

Table 4. Proportional Hazard Assumption Test

Variable	χ^2	p
Nominate Dim1	1.47	0.225
Nominate Dim2	0.96	0.327
Party Affiliation	2.12	0.145
Chamber	1.84	0.175
Year of Birth	0.71	0.399
Number of Votes	0.92	0.338
Global Test	5.74	0.571

Source: Author (2026)

Policy Implications

The findings suggest that increasing ideological polarization may have unintended consequences for legislative continuity and institutional effectiveness. Since ideological extremity is associated with higher exit risks, political parties may benefit from encouraging broader ideological coalitions rather than rewarding only highly polarized candidates. Excessive polarization can weaken legislative stability, complicate consensus-building, and reduce institutional memory within Congress (McCarty et al. 2016; Lee 2015; Theriault 2008). Policies that encourage cross-party collaboration and bipartisan legislative initiatives could therefore contribute to more sustainable congressional careers and improved governance outcomes.

The significant relationship between legislative longevity and ideological moderation highlights the importance of electoral institutions that reward broad-based representation. Electoral reforms designed to reduce incentives for extreme partisan positioning may help strengthen legislative durability. Previous research indicates that primary-election dynamics, donor behavior, and partisan competition often encourage ideological divergence (Hirano et al. 2010; Kujala 2020; Barber and McCarty 2015). Policymakers may therefore consider reforms that promote wider voter participation in candidate selection processes and reduce institutional pressures toward polarization.

The strong survival advantage enjoyed by senators relative to House members also carries important institutional implications. The findings suggest that longer electoral cycles and greater opportunities for policy specialization contribute to legislative continuity. While altering constitutional structures is unrealistic, House leadership may adopt institutional mechanisms that help representatives accumulate expertise and long-term policy experience. Strengthening committee systems, expanding legislative research support, and improving opportunities for policy specialization could help reduce turnover and enhance legislative effectiveness (Cox and McCubbins 2007; Lee 2016; Curry and Lee 2020).

Another implication concerns the value of political experience and career capital. Legislators with greater accumulated experience demonstrate stronger survival prospects, indicating that institutional knowledge remains a valuable public resource. Congress may therefore benefit from investing further in professional development programs, orientation initiatives, and mentorship structures that facilitate the transfer of

expertise between experienced and newly elected members. Such measures could preserve institutional capacity while reducing the disruptive effects of turnover (Claessen 2024; Hibbing 1991; Eckman and Wilhelm 2025).

The results also demonstrate that active legislative participation enhances political survival. This finding suggests that constituents may reward legislators who engage consistently in congressional activities and policy deliberations. Congressional leaders could strengthen accountability mechanisms by improving transparency regarding voting participation, committee attendance, and legislative contributions. Enhanced public access to information may encourage greater engagement by elected officials while simultaneously improving voter evaluations of representative performance (Ansolabehere and Jones 2010; Fowler 2026; Grynaviski 2010).

Finally, the absence of a statistically significant party effect indicates that long-term congressional survival depends more on institutional engagement, ideological positioning, and accumulated experience than on partisan identity alone. This finding challenges narratives that attribute legislative success primarily to party affiliation. Instead, policies aimed at strengthening legislative effectiveness should focus on enhancing institutional performance, fostering constructive political competition, and promoting representative responsiveness. Encouraging evidence-based policymaking, strengthening congressional capacity, and reducing incentives for excessive polarization may ultimately improve both legislative longevity and democratic governance in the United States (Krehbiel 1993; McCarty 2017; Wolak 2020; Aka and Dzordzormenyoh 2026).

Conclusion and Discussion

This study examined the determinants of legislative longevity and survival in the United States Congress using a survival econometric framework applied to congressional data spanning the 46th to the 117th Congress. The findings reveal that ideological positioning plays a significant role in shaping congressional careers. Both NOMINATE ideological dimensions significantly increased the hazard of legislative exit, indicating that legislators located further from the ideological center generally experience shorter congressional tenures. These results support long-standing arguments that increasing political polarization creates electoral and institutional pressures that can reduce the durability of legislative careers. By contrast, party affiliation did not exert a statistically significant influence on survival outcomes, suggesting that ideological orientation and institutional characteristics are more important predictors of congressional longevity than partisan identity alone.

The analysis further demonstrates that institutional and demographic factors substantially influence survival probabilities. Senate membership significantly reduced the risk of congressional exit and increased expected survival duration by more than four years relative to House membership. Likewise, legislators with greater legislative experience and older cohorts exhibited stronger survival prospects. Active participation in roll-call voting also contributed positively to legislative longevity, highlighting the importance of engagement and visibility in sustaining congressional careers. These findings reinforce the view that legislative survival is shaped by a combination of institutional advantages, accumulated political capital, and sustained participation in

the policymaking process. The robustness of these relationships across both Cox and Weibull survival models strengthens confidence in the empirical results.

Overall, the study contributes to the literature on congressional careers by integrating ideological, institutional, and behavioral explanations within a unified survival-analysis framework. The results indicate that while contemporary congressional politics is increasingly characterized by polarization, long-term legislative survival depends on a broader set of factors than party competition alone. The evidence suggests that ideological moderation, institutional experience, and legislative engagement remain central to sustaining successful congressional careers. Future research may extend this analysis by incorporating constituency characteristics, campaign finance variables, leadership positions, and committee assignments to provide a more comprehensive understanding of the mechanisms driving legislative survival and turnover in democratic institutions.

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Ethics Statement

The author confirms that this study was conducted in accordance with the Journal's Research Ethics and Integrity Statement and that all ethical requirements applicable to the study have been fulfilled.

Conflict of Interest Statement

The author declares no conflict of interest

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