Legislative Funneling in Hawai'i: A Survival Analysis of Bill Passage in the 2025 State Legislative Session

Legislatures are often described as a chaotic civic stew of grandstanding, high-stakes votes, and backroom deals among consequential public officials. These aspects of the legislative process likely do exist, but they obscure the procedural realities of introduction, committee actions, debate, amendment, votes, testimony, and vetoing that largely govern the process. This distinction offers a helpful line between legislative studies done by the field of political science and the field of policy studies. How bills are filtered, delayed, amended, displaced, or allowed to die are the procedural pivot points that determine legislative outcomes. The legislative process is not merely a chaotic stew; it is a series of consequential steps that form an institutional funnel.

Hawai'i offers a particularly useful case for examining the process. It has many advantages that allow analysis of procedural aspects. First, it has a compressed annual session with a clearly defined legislative calendar made up of a structured sequence of deadlines, referrals, crossovers, readings, and a mandated requirement to pass a budget within the session. Hawaii is also, for the most part, a one-party state. Thus, there is generally less contention and restructuring of the procedural rules process that is more notable in other states and especially at the national level. Further, Hawaii's legislature's bicameral structure can facilitate depth of analysis; that which can be done at the Senate or House level or at the combined level. This paper will look at the combined legislative level.

This paper should be viewed as a contribution to both political science and policy studies, however, with a primary orientation toward policy studies. The former has led on legislative studies, while the latter has lagged. While the political science literature has focused on issues of divided government, party aspects, roll-call behavior, and legislative effectiveness, it has largely

missed opportunities to understand deeper structural mechanisms that influence overall legislative system dynamics. In contrast, policy studies focus more on policy problems, their proposals, the rules that govern them, and methods to achieve outcomes. Put simply, political science has focused on the application of politics within the legislature, while policy studies offer the opportunity to study legislatures as systems interlinked to other components such as the executive branch, political parties, and the publics they serve**.**

This article also seeks to clarify the language used to describe bill passage. Existing literature often uses a variety of terms such as legislative productivity, legislative efficiency, or winnowing. Each term captures part of the phenomenon but misses the fundamental process underway in legislatures. Productivity and effectiveness emphasize normative views of outputs. Winnowing describes an elimination process without specification of the institutional mechanisms enabling it. This study, in contrast, uses the term funneling to emphasize bill passage as a staged process of procedural filters that progressively narrow. Funneling better aligns theory with the reality of the legislative bill passage process, from introduction through the various chokepoints to a bill's terminal point of either death or transformation into a governor-signed law.

Using the bill data from the Hawai'i State Legislature's 2025 session, this paper examines bill survival across legislative stages. The legislative stages are those defined and set forth by Hawaii's State Legislature. This paper will first describe the scale of legislative attrition, then use survival analysis to assess when bills face the greatest risk of elimination. This study is, for the most part, an attrition analysis. The findings suggest that bill passage is not a binary process, but instead largely governed by a staged process with observable procedural variables that induce funneling. This approach can provide a foundation for future research into

procedural, stage-based variables. Potential procedural stage-based variables include committee referral, agenda control, testimony, bill type, media influence, and sponsorship.

Literature Review:

Historical Theoretical literature

The English American-based literature is devoid of a theory on legislative mechanics, specifically, how legislatures function and what internal and external factors can improve or degrade their functioning. Instead, the main theories that provide guidance come from twentieth-century work on policy stages. Those are John Kingdon's policy stream framework, Lasswell's policy stages, and Anderson's policy steps. The late-twentieth-century critiques of earlier work should serve as a guide for future research on the policymaking process, specifically regarding researcher orientation. Specific critiques to view are Peter DeLeon's views.

John Kingdon's policy stream framework views the policy process holistically as three streams (political, problem, policy) converging during brief windows of change. Kingdon states that there are four distinct stages: agenda setting, the specification of alternatives, authoritative choice among specified alternatives, and implementation. Kingdon's view of policy was broad. He and many others of his time saw the policy process as chaotic and fluid. Kingdon borrowed the garbage-can model from Cohen, March, and Olsen's 1972 article about organizational chaos.[1] While Kingdon accurately saw the policy formation process in all its complexity, he fails to provide a theory or framework narrow enough to allow analysis of legislatures. The policy process does encompass the mixture of actors, actions, context, and outputs of the legislature, but, in most democratic forms of government, the legislature is a systematic central facilitator for policy formulation. One must first identify the internal mechanisms and relationships among the system's relevant parts before operationalizing their qualitative analysis of the broader

policymaking system. Kingdon accurately observes the outward chaos of the process while ignoring the cold procedural internals of the legislative process.

A variety of other authors have also proposed different variations of the policy process. Lasswell proposed the decision process: intelligence, promotion, prescription, invocation, application, termination, and appraisal.[2] This early-stage model, 1956, would become a starting point for Cairney. Cairney would many decades later clarify to the policy field that Lasswell's stages are not discrete temporal points, but instead better understood as "decision functions" that operate at various levels, times, and context; further Cairney reminds us that Lasswell's policy stages, and early positivist papers mask his normative leanings throughout the entire body of his work.[3]

For those who desire a more descriptive analysis of the policymaking process, Anderson's textbook, *Public Policymaking: An Introduction*, is an instructive read. In his 1975 book, he states that the policy cycle unfolds in the following steps: agenda setting, formulation, adoption/legitimation, implementation, evaluation, termination, or feedback.[4] His process removes some of the abstract language of "intelligence," "promotion," "prescription," and "invocation." Still, it retains Lasswell's view that the policy cycle operates in a much larger context than any specific venue, such as a legislature. His narrowing of the policy clarification of policy stage terminology is helpful but does little to facilitate analysis of the policy process within legislatures.

Thus, for any more detailed analysis of policy formulation with a specific venue, such as legislatures, one should look to Peter DeLeon's 1999 critique. He argues that the stage-based models propagate false linearity, over-aggregation of boundaries, and, most importantly, limited explanatory value.[5] To sum up his argument, stage-based models offer a way to explain the

policy process after the fact. Still, they are of little value for making future predictions or accurately describing them in their many variations. In this sense, his argument echoes Lasswell's forgotten designation of decision functions that operate throughout policy premedieval soup. The identification of decision-based functions would take the form of "cues" in subsequent legislative research.[6] Deleon would argue in a subsequent paper for odds-based approaches.[7] An odds-based approach not only offers an opportunity to confirm variable relationships but also to define mechanisms within policy systems and subsystems. The reader should not construe Deleon's position as a rejection of previous writing; in fact, he goes to great pains in his writings to pay homage to prior academic work on the policymaking stages. Instead, he argues that more modern methods may be more applicable to understanding the policymaking process. Scholars should further situate Deleon's critique within the rise of automated quantitative statistical methods in the social sciences. These methods were simply not as ubiquitous in previous generations. Deleon is a man of his time and an advocate for more detailed and focused analysis of the policymaking process.

Practical Application

What should a contemporary researcher do with the backdrop that there is a wider policymaking process, but the process may need to be better specified and focused to accurately explain the policymaking process in a more ontic rather than phenomenal manner? The answer to this question lies in the basics of research design. Researchers should identify specific venues for sample or case selection rather than analyzing the broader policymaking phenomenon. Ideal venues are those that are central to a place's policymaking process. An example would be at the national level, Congress, the Supreme Court, or various executive branch decision-making bodies are ideal for assessment of defense, foreign relations and monetary policy. Policymakers

can apply the same logic at the state level. Policy that is primarily the purview of the states should be studied via the venues that predominate at the state level. Within those venues, the procedural mechanisms that govern their internal relationships should be the starting point, while acknowledging the limitations. These mechanisms are venue specific. For example, a legislature's rules and procedures will differ from a court or commission's rules and procedures.

Forty-four states have constitutional or statutory requirements to pass a balanced budget within their legislative session.[8] Further, constituents affected by policy and federal compliance mechanisms constrain many legislators more directly at the state and local levels.[9] In contrast, at the national and supranational levels of analysis, constituent pressures and governing mechanisms are broader in scope.

The State of Hawaii procedural literature for policymaking within its legislative venue is the State of Hawaii Constitution, each chamber's rules of procedure, and the session timetable.[10] Of principal concern in any analysis of a state legislature's functioning is the session calendar, which acts as a forcing function that state legislators operate within. All bills in a session must progress through the following stages: Bills introduced, First Lateral, Bills Cross Over, Second Lateral, Third Reading, Measures Decked for Final Reading, Bills that Passed Legislature, Bills Signed by Governor, Governor override.

Differing terms

The literature is replete with differing terms for the policymaking process within legislatures. They all center their unit of analysis on bills, but with varying terms such as productivity, effectiveness, and winnowing. All seek to examine bills as they progress through the legislative process. They also seek to regress the bill process through legislatures against various independent variables. A key distinctive feature of these studies, compared to the more

well-known political science literature on roll call votes, is a focus on the legislature's outputs rather than the political actors. However, even these place some emphasis on party control and party dynamics.

Legislative productivity is a term various scholars have used to compare bill passage rates across American Congress sessions. Krutz, Howell, Adler, Cameron, Riemann, Mayhew, and Byung Jun Ahn all use the term. Krutz examines legislative productivity to assess which methods are most likely to achieve legislative success, specifically omnibus bill passage and party control. The role of divided government is also a subject of much debate, particularly from the early 1990s onward, regarding legislative productivity.[11]

Legislative effectiveness is another term found in the literature. The term was first coined in 1960 to explain how senators act in pursuit of their goal to pass bills.[12] Another study from 1979 also uses the term to describe the output of members of Congress, while analyzing their effectiveness in enacting legislation and their likelihood of reelection.[13] Volden and Wiseman would finally define the term as "the proven ability to advance a member's agenda items through the legislative process and subsequently into law."[14] Scholars use the term effectiveness to evaluate individual legislators, whereas they use productivity to assess total legislative output.

Both legislative productivity and effectiveness may at first seem like apt terms for any analysis of the legislative process; however, they carry a normative connotation. Both presume that the purpose of legislatures and legislators is to pass bills. Passing bills is one of a broad set of functions that elected representatives can undertake, but so too is blocking, narrowing, and even repeal laws. Since the 1960s, many conservatives, and even a few liberal scholars, have advocated fewer laws. Hayek has advocated that legislatures enact only a few purposeful, yet broad, laws that can nullify special-interest groups while preserving the broader will of the

people.[15] Others, such as McGinnis and Rappaport, have argued for supermajority legislation that would, by its own requirement for consensus, constrain the volume of bills produced; further, it would force greater debate within legislatures.[16] Current Supreme Court Justice Neil Gorsuch made a forceful argument for the repeal of criminal and administrative laws to restrain government overreach.[17] Even left-leaning legal scholars such as Husak, Herd, and Moynihan have commented on the growing criminalization of everyday life and rising administrative burdens.[18] Taken together, centering legislative activity on "effectiveness" or "productivity" bill production may lead towards normative assumptions that are not universally shared.

Nevertheless, bills are the most prominent manifestation of both the policy process and the legislative process. There is a need for differing terminology that can be the starting point to evaluate the aggregate decision functions of legislatures. The most neutral and apt term in the literature is "winnowing." Winnowing is an agricultural process of using air currents with a filter to remove lighter components of chaff from the heavier components of seeds and grains. Both Jenkins and Krutz use the term to explain which bills survive or die in a legislative session.[19] Jenkins' focus was on four states' bill passage, while Krutz's research was at the congressional level.[20] The findings between Krutz and Jenkins were largely incomparable. This suggests there are significant differences in predictors of bill passage between the national and state levels. Even within the states, Jenkin's notes showed substantial differences between states.

Both Jenkins and Krutz suggest that there are "cues" that are embedded into the process. What they both miss is that bill passage is a multi-stage process. Bills must undergo a gauntlet following introduction. They must be referred to committee(s), then floor votes, then crossover, and sometimes a second crossover, and finally some form of conference vote before arriving at the executive branch leader (president or governor) for signature or veto. Throughout

this entire process, there are various cues both inside the legislative process and from outside of it exerting cues onto legislators to vote for or against a bill. Winnowing is not the most precise term. Instead, the process is more akin to funneling with various screening criteria that are subtly applied at each step of the process in the form of cues.

The distinctions between how bill passage is conceptualized and used for theoretical development matter. Terms such as legislative productivity, effectiveness, efficiency and winnowing each capture part of the phenomenon, but these terms are inaccurate and obscure the phenomenon. Productivity, efficiency and effectiveness both imply that the outcome of a legislature is to produce more laws; this approach is normative. Both terms are often used in the political science literature to suggest that a desired output is faster bill production or greater bill quantity from the legislature. In doing so they obscure the other legislative functions to delay, revise, reject and narrow bills. Winnowing is more neutral, but it still tends to describe aggregate elimination between simply the start point to the end point of the legislative process. Further it suggests that there is turbulent forced separation of less consequential bills and more consequential bills through repetition. Funneling better captures the sequential, procedural and conditional mechanisms that filter bills to form successive screenings that narrow the number of bills down from a large quantity to a chosen few.

Review of Methods

Scholars have used a variety of methods to evaluate legislative productivity, effectiveness, and winnowing. Quantitative methods are the most common. Also, a variety of variables have been considered, with a few notable instances of reuse across studies. All use publicly available datastores for their samples. All use some form of bill passage as their

dependent variable. Most use some form of control variable to address exogenous variables in the legislative process.

This literature review explicitly excludes case studies and qualitative methods to identify relevant studies that use quantitative approaches. The review aims to assess how others in the field address the topic and to determine whether a fresh approach is possible. Early pioneers, such as Mayhew, employed a simple OLS method.[21] For important enactments, he found no statistically significant relationships between divided or unified government. Scholars have critiqued both his conclusions and his methods. Others, such as Frantzich, Ahn, and Volden, have used the OLS method to measure bill productivity, effectiveness, or winnowing to discern which underlying independent variables may have statistically significant relationships. A challenge with their work is that they have not explicitly articulated how their dataset meets the assumptions required for OLS.

Others, such as Anderson, Krutz, and Howell, devoted a significant portion of their writing to explaining why they chose their regression methods. They all seem to struggle with similar issues. The dependent variable for bill passage is either a count variable or a binary variable, not a continuous variable. Further, if one chooses to use either a count or a binary dependent variable, there is a problem with how to handle the zeros. There will be a significant excess of zeros to ones. This challenge is one of the prime reasons we see various methods, such as Tobit, logit, probit, and poisson, in later work. Table 1 depecits the various quantitative

methods used by authors referenced in this literature review.

Article (Author Year)	Descriptive statistics	chi-squared log likelihood test	Linear regression (OLS)	Logistic regression (Binary)	LPM	Tobit	Probit (Binary)	Poisson / Negative binomial	time series-cross sectional	LOESS
Meyhew (1991)	x		x					x		
Krutz (2000)	x							x	x	x
Howell (2000)	x		x							
Frantzich (1979)	x		x							
Krutz (2005)	x						x			
Anderson et al. (2003)	x	x								
Jenkins (2010)	x			x						
Ahn (2017)	x				x					
Volden et al. (2013)	X		X				x			

Table 1. Author methods from Literature Review

The challenge posed by the dependent variable type is not the only hurdle the authors faced. The datasets for all articles in this literature review do not follow a normal distribution. Only Krutz and Howell modify their model selection to address heteroskedasticity. The legislative process filters out the vast majority of bills within a very short period from the start of a session. Only three (Anderson, Volden, and Howell) out of the nine articles discussed the issues of dispersion in the datasets. All three examined earlier work, such as Mayhew's article that uses OLS, but firmly rejected simple OLS and simple probit/logit methods. This disagreement in the literature is significant: a failure to correctly specify the model causes an understatement of standard errors and biased coefficient estimates, leading to false positives, increased Type I error risk, and a failure to reject the null. Most authors in the literature reviewed did not the standard hypothesis format.

The issue of stacking and pooling sample data is also a challenge within the literature. Mayhew uses a time-series stacked method to enable his repeated OLS regressions; however, this method assumes that each Congress is an independent event, which it is not. Many internal parameters, such as agenda inertia, exogenous shocks (such as wars and recessions), party control, and member carryover due to seniority, are not random. These and many other unexamined aspects of legislatures likely insert untested autocorrelation over time. While Mayhew's analysis is the most obvious candidate for autocorrelation, Volden, Anderson, Jenkins, and Ahn all could have similar issues, too. Only Howell and Krutz go to lengths to address the statistical problems that may arise from stacking and pooling time-series data.

The methodological approaches in this literature review share the focus on bill passage but differ in their modeling approaches. These differences have been the source of much debate. Most agree on the need for control variables to address exogeneity from external political variables, while acknowledging that the literature overwhelmingly supports the role of divided government and party control. See table 2 for a breakdown. Future literature that incorporates time-series data in a stacked or pooled manner, assuming that each legislative session is

independent, should address autocorrelation.

Article (Author Year)	Divided Government	Notes (operationalization)
Howell (2000)	X	Indicator for divided vs. unified government in productivity models.
Krutz (2000)	X	Macro-political divided-government indicator in omnibus/productivity models.
Krutz (2005)	X	Divided vs. unified government at the issue level (omnibus inclusion).
Jenkins (2010)	X	Divided vs. unified government control in state-legislature enactment models.
Ahn (2017)	X	Dummy for divided government in bill success and legislative time models.
Article (Author Year)	Party/Majority Control Included	Notes (Operationalization)
Frantzich (1979)	X	Member party (D vs. R) in OLS effectiveness models.
Anderson et al. (2003)	X	Majority party indicator; leadership √ó majority interactions.
Jenkins (2010)	X	Chamber party control; % majority-party sponsors; leader sponsors; lead sponsor in majority.
Krutz (2005)	X	Party control and congruence with majority party at the issue level.
Volden et al. (2013)	X	Majority vs. minority status and institutional majority context in LES models.

Table 2. Key variables used in political science papers reviewed for this literature review

Sample & Methods

Sample

The literature reviewed served as a guide but was not deterministic in the choice of method and sample. Congressional-level sample data predominates the literature. Only one study, Jenkins's, relied on state-level data to form a sample. In her findings, she states that there are not only significant differences in predictors of bill survival between the national and state

levels, but also between states. Her astute, but brief, point lays bare the need to expand the literature beyond the national level.

Another challenge with sample selection is the span of parameters. Many political scientists have sought to draw their samples from congressional data sources fused with other political science data sources to incorporate variables not indigenous to the sample source. An excellent example is the divided government variable. This variable is not native to the congressional database; thus, its inclusion would require merging datasets. This practice, while common, can pose challenges for those seeking to reproduce the research.

To minimize data fusion from different sources, this study selected a simple sample. The 2025 Hawaii State legislature bills dataset for each step of the bill process was the dataset. The data source was the Hawaii State Legislature 2025 Reports and List tool. The tool organizes bills by each step in the legislative process from introduction to final governor's signature. An Excel document was exported for each step in the process. The variables used were organic to the tool. No outside data or variables was used. The data sample was extracted from the legislature's website after the legislative session concluded and the sign-or-die date for the governor had passed.

Methods

There are a variety of methods available to study the legislative process. Before turning to the statistical methods used in this paper, it is useful to briefly unpack both the methods commonly used in the literature and the approach used here. Ordinary least squares (OLS), logit/probit, Tobit, and Poisson models are all common statistical methods in the legislative literature. Each seeks to estimate the relationship between a dependent variable and one or more

independent variables. The dependent variable is the outcome being explained, while the independent variables are some of the factors expected to influence that outcome.

OLS is a regression method used when the dependent variable is continuous. Logit and probit models are used when the dependent variable is binary, i.e., 0 or 1. Tobit models are used when the value is censored in some way. Some common ways data become censored include bounding at the zero point on a scale, such that all dependent outcomes can be only positive numbers or only negative numbers. Another way Tobit is commonly applied is when the data have thresholds or piecewise breaks due to structural or regime-related system changes. Finally, Poisson methods enable regression with a dependent variable that is of a count type, i.e., 1, 2, 3. These are the common statistical methods from the literature.

Survival analysis takes a different approach. While many prior regression models compare bills that were introduced with bills that ultimately passed, survival models examine when bills die or survive over time. The Kaplan-Meier estimator describes the probability that a bill remains alive across time or across legislative stages. This study uses two related survival specifications. The first treats bill death or attrition as the event of interest to identify when bills are most likely to leave the legislative process. The second reverses the event coding and treats bill passage as the event of interest in order to compare which bill types reach the successful legislative endpoint at higher or lower rates. These methods are useful for studying internal legislative dynamics because they allow researchers to identify when, during the legislative session, bills are most likely to die or survive.

This study employs two quantitative methods. First is descriptive statistics to define the scale and general shape of the data. Second was the two variations of the standard survival model, the Kaplan-Meier and the estimated hazard Function ratios. Using all three made sense

for three main reasons. First, to sidestep many of the differences of opinion on how best to regress bill passage against other independent variables in the dataset. Second, there is an acknowledgment that the qualitative literature and practical knowledge of the legislative process suggest that models that view it as a series of stages or as a complex adaptive system are a better fit than simple logit or OLS models that view bill passage as a one-step or one-way function. Survival models are a better fit to align with the reality of the legislative process. Third, by modeling bill survival over the legislative session and the legislative stages it must progress through, follow-on analysis can be done to develop a deeper understanding of internal legislative functions that affect bill survival within each stage. Some prime examples are the role of committee hearings, testimony, media coverage, and in-session political donations. None of these is likely to be totally deterministic of aggregate bill survival in a legislative session but may be during specific stages. Taken together, these methods should not only help answer questions but also set the stage for further research.

The first method was a simple bar chart. At each stage, as defined by the Hawaii State Legislature clerk's office, this study summed the number of bills alive at the start of the stage. All bill data came directly from the Hawaii State Legislature website, including the reports and the list tab. Then, each bill list was put into separate tabs and workbook tabs. Each legislative stage had its own tab. Finally, the workbook data plotted into a bar graph.

The two variations of a survival model were estimated using Stata software. The start date was the opening day of the legislature, and the stop date was the sign-or-die date by the governor. Weekends, holidays, and spring break were not censored in the dataset. Actual session activity, such as floor votes and committee hearings, does at times diverge from the official session calendar; this is especially true as the session draws to a close. State holidays and spring

break also often suspend committee hearings and floor votes to allow state workers to observe the holidays. Nevertheless, legislators and their staff do continue to work during these periods. Also, towards the end of the legislative session, lawmakers often hold floor votes late into the evening and on weekends. The independent variables were all attributes assigned by the website Reports and Lists tool. No pooling, mixing, or transformations of data sources were done.

Taken together these three methods analyze bill survival from a unique perspective. Descriptive statistics and survival analysis aid in a deeper understanding of the legislative process, which goes beyond simple binary and count models that permeate the literature. Finally, due to the availability of the data and the various analysis tools, others should be able to replicate this study to confirm its conclusions.

Findings

This paper's findings are in two main parts. First is the shape of the legislative process as deduced from descriptive statistics. Second is survival analysis. Both provide insight into the Hawaii legislative process in 2025.

The first finding is that the legislative process is a stepwise attritional funnel. A funnel might not seem like an obvious and valuable insight. However, it can enable further modeling of the process and comparisons of legislative funnels between years and across other state legislatures. The shape of the decrease is generally monotonic, with the bill's survival either remaining the same or decreasing; reference Figure 1. Secondly, there are minor kinks in the shape of the decline, suggesting that specific stage transitions may result in significant differences in survival rates. Further, these kinks in the rate of decrease likely indicate that the decline should be modeled piecewise. A piecewise line would also suggest that there are internal dynamics within each legislative stage that merit individual study. In sum, the descriptive

statistics not only confirm the obvious insight that the process is a funnel but also suggest that further research into each stage is needed to accurately compare and eventually simulate legislative behavior across the entire session.

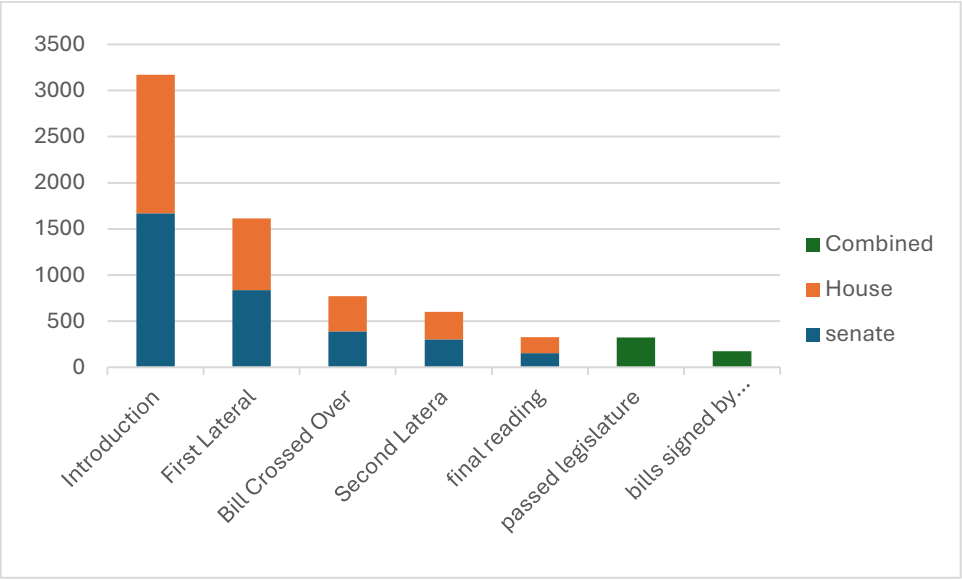
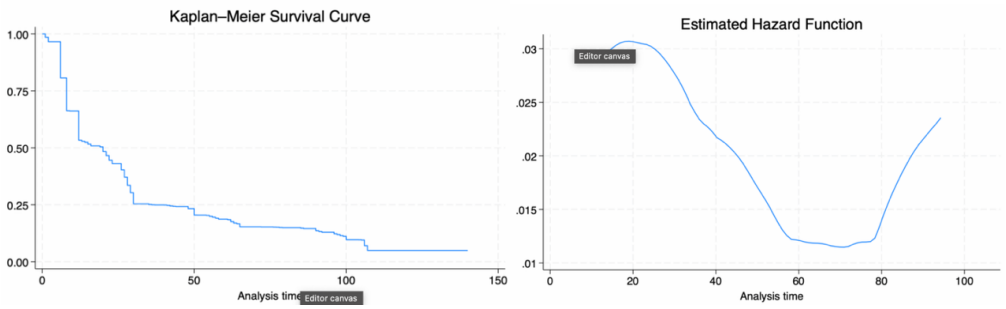


Figure 1. 2025 Hawaii Legislative Session Bills by Legislative Stage

The survival analysis further confirms that the legislative process is a funnel. The Kaplan-Meier survival curve shows a steep initial decline; by day 25, over 50 percent of the bills have died. The Estimated Hazard function adds to this analysis by showing that the instantaneous risk of death is highest in the first twenty-five days. After twenty-five days, it declines and plateaus around the 60-to-80-day mark before rapidly accelerating into the last two and a half weeks of the session. Both graphs support the notion that early and late-session engagement are critical to ensuring a bill survives. Reference Figures 2 and 3. Further research into the causes of legislative filtering or funneling would be best conducted at the early and late stages.



Figures 2 & 3: Bill survival curve and Hazard Function for the 2025 Hawaii Legislative Session.

Other essential aspects of the legislative session likely affect bill survival. First is the number of committees assigned to the bill for referral. Bills with one committee assignment have a 10 percent chance of survival, those assigned to two have a 5 percent chance, and those assigned to three committees have a 3 percent chance. Only those assigned to four committees had a higher survival rate; however, only six bills were assigned to those committees. The roles and factors related to bill referral in and out of committees should be studied to understand better the cues that facilitate transitions to and from committees. Lasswell's decision function that facilitate policy stage transition are likely to be better understood via deeper research into legislative committees.

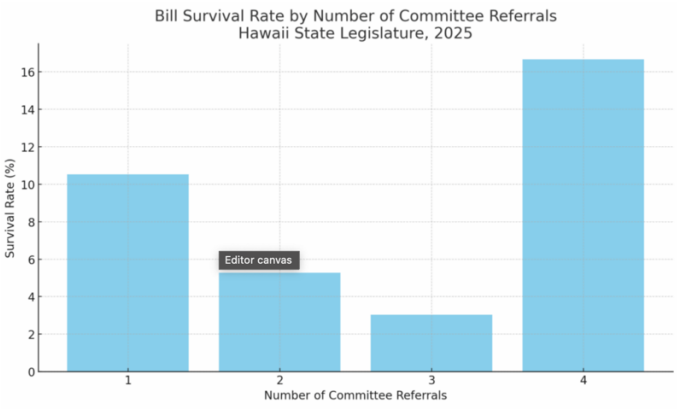


Figure 4. Bill Survival Rate by the Number of Committees r=Referred

There are other interesting aspects worth noting. If the binary variable is flipped to use the Hazard ratio to measure bill passage instead of death start differences in bill passage rates become apparent. First is the effect of budget-related bills These bills have the highest Hazard ratio and are statistically significant. Their survival likely hinges on two main factors. First, Hawaii's constitution mandates that the legislature pass a budget by the end of the session. Second, many of the budget bills are part of the governor's package. Other bill types are highly likely to survive, such as those related to appropriations, programs, taxes, and services.

Bill Type	Hazard Ratio	95% Confidence Interval	P-value
Budget-Related Bills	1.865	(1.387, 2.506)	0
Constitutional Amendments	0.435	(0.265,0.713)	0.001

Table 3. Hazard Ratios for Budget Related Bills vs Constitutional Amendments

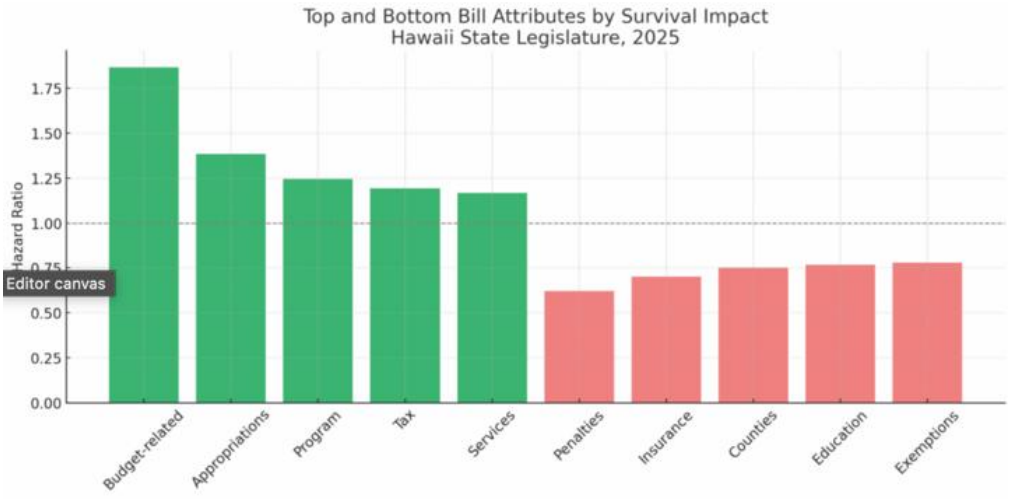


Figure 5. Estimated Hazard Ratios for Bill Passage by Bill Type

In contrast to budget-related bills, constitutional amendments have the lowest hazard ratio and are also statistically significant. A likely reason for this stark difference is unclear and worth further research. One conjecture is that constitutional amendments–due to their significance-

quickly galvanize opposition from a wide range of constituency groups. Other bill types that were less likely to survive were those related to penalties, insurance, counties, education, and exemptions.

Conclusion

The research should add to the existing literature in several important ways, first, by demonstrating that the legislative process is a funnel. Second, it indicates that internal aspects of legislative sessions influence legislative funneling. Third, this research adds to the literature by analyzing the issue from a fresh methodological angle. Taken together, others should consider revising their models and conclusions to incorporate or address internal legislative processes and variables.

Terms such as winnowing, efficiency, or productivity do not fully capture the essence of what occurs in the legislative session. In legislative sessions, the process involves consistent elimination at various legislative stages. The descriptive statistics firmly support this conclusion for the Hawaii State Legislature in 2025. While additional research is needed to confirm whether funneling is consistent and to what degree across time, context, and various legislatures, it is likely a safe assumption that funneling is pervasive.

While many researchers use external variables to examine relationships in how the legislative branch functions, one example is the use of divided government or party-control variables. This literature begins the conversation about relationships among internal legislative variables. These internal relationships within the normal legislative process should be a starting point, not an afterthought, for much of the research on how legislatures function within the broader policy-making process. This point is critical because of the need to accurately specify models of legislative activity in such a manner so as to avoid spurious conclusions.

Others have used various methods to look at the differences between the number of bills introduced and those that have become law or at least exited the legislative branch at the session's end. Those models have used variations on OLS, Tobit, and logit/profit methods. The use of survival analysis opens the aperture by reorienting the analysis toward understanding the relevant internal relationships within legislatures, rather than external variables. A better understanding of the appropriate internal relationships will aid future analysis of external effects on the overall functioning of the legislatures.

In sum, this research should add to the ongoing dialogue about legislatures. This literature refines how we label the phenomena of how legislatures process bills. It further orients the research toward internal relationships that may affect bill processing. Through the orientation on internal relationships, there may be a better understanding of how legislatures function and how external variables modify their functioning. Those future answers about legislatures will not only improve future models but, hopefully, enable a robust discussion about how best to facilitate and protect democratic institutions.

ENDNOTES

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