ARE FEDERAL PROGRAMS IMMORTAL?
Estimating the Hazard of Program Termination

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Two perspectives on program longevity inform work on the life cycle and political control of federal programs. One set of work represents programs as immortal and implies that elected officials face severe problems controlling programs. A second set of work claims that programs face pressures that lead to termination. A single empirical feature—the hazard of program termination over time—distinguishes these mutually exclusive perspectives. A survival data analysis strategy is applied to a sample of federal credit programs to estimate this hazard. The data indicate high risks of termination early in the life of a program and lower risks as programs age. Further, the types of new programs that are terminated—programs that rely on direct loans or are housed in independent agencies—influence the long-term structure of federal intervention in capital markets.

Keywords: *federal credit programs; program termination; duration models; program evolution*

Are government programs immortal? Theoretical work on public sector programs seems to offer two very different yet equally well-developed answers to this question. One set of research emphasizes the hazards of the environment in which programs function and the challenges that (particularly new) programs confront (classically; Barnard, 1940). Another set of research emphasizes the obstacles that reform-minded politicians or fiscal conservatives face in attempting to abolish public sector programs (see Daniels, 1997). Certainly both perspectives cannot be descriptively accurate. Either programs face

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the credible risk of termination or they do not. These two perspectives can thus be distinguished by the answer to a single empirical question: Are hazards of termination highest at program creation (implying that older, surviving programs are difficult to terminate), or does the probability of termination increase over time (implying vulnerability for older programs)? Estimation and description of the hazard of termination for a sample of federal programs should answer this question.

Using data on federal credit programs from 1975 to 2001, I identify programs existing in 1974 and all programs that were created and terminated during this 26-year period. Although the theoretical focus is program survival rather than agency survival, the empirical objective is consistent with questions that motivated Herbert Kaufman's (1976) classic work on the longevity of federal agencies. What features of programs explain survival over time? Are older programs more or less vulnerable to termination? One objective of this article is to capitalize on a relatively new methodological approach—survival data analysis or event history analysis—to learn about the duration of federal programs. With the exception of the work by Carpenter (2000) and Carpenter and Lewis (2002), empirical work on termination has neglected the role of time in the hazard of program termination. The methodological approach adopted for the article permits a straightforward summary of the risk of program termination as a function of program age and, therefore, some empirical leverage over the link between time and the likelihood of survival.

The article proceeds in three parts. First, I outline the theoretical basis for expectations of program persistence and the expectations of program failure—the two competing perspectives on program longevity—and introduce empirical work on program termination. Second, I describe the structure and organization of the federal credit programs and available data on the scope and activities of these programs. Finally, I test specific expectations about program survival to determine what explains program duration and if, in fact, younger programs or older programs are more likely to face the threat of termination.

Overall, the data indicate that programs face an increasing hazard of termination in the first few years of the program and lower risks of termination over the long run. These results have important substantive implications for the development of credit programs as well as theoretical implications for descriptions of the bureau life cycle and

problems of political control of bureaucracy. Substantively, programs located in cabinet departments (rather than independent agencies) and programs that use loan guarantees (rather than direct loans) face a lower risk of termination. Over time, the cabinet department guarantee programs dominate other types of federal credit programs. The implications for theories of political control and program oversight are also important. Descriptions of program change and external control that emphasize low long-run hazards of termination are consistent with the experience of federal credit programs. The credit program data suggest that long-run problems of drift in program mission or drift in the preferences of legislators do not increase the risk of program termination. Termination is most likely to be observed in the short run, near program creation, as elected officials shape for the long run the portfolio of programs operated by the federal government.

THEORIES OF PROGRAM PERSISTENCE AND TERMINATION

EXPLAINING PROGRAM PERSISTENCE

A number of approaches to the study of American politics are consistent with the idea that government programs are difficult or impossible to terminate. Theories of governmental decision making, the budget process, and broader descriptions of institutional change incorporate a fairly robust explicit or implicit endorsement of incrementalism. Compounding the obstacles implied by incremental change, much of the work on political control of the bureaucracy identifies mechanisms of ex ante control, which make programs difficult to update ex post.

Incrementalism conspires to protect programs in a number of ways. First, it is difficult to use slowly changing budgets to credibly threaten termination or to undo past legislative choices. Uncertainty and limited information about policy alternatives also overwhelm attempts to radically reorganize existing organizational forms. The search for alternative policies implied by program termination places demands on the informational capacity of elected officials and the result may be retention of the status quo or nominal change to program structure or

objectives (Lindblom, 1959). Broader theories of institutional change suggest that uncertainty over the consequences of change may deter strategic actors from disturbing stable and predictable patterns of resource distribution (Knight, 1992). Certain but moderately suboptimal performance may be more attractive than uncertain prospects for improved performance with a new program. Strategic, cognitive, and procedural barriers therefore make it unlikely that elected officials will expend resources to terminate established programs.

Even if elected officials decide program termination is attractive, the actual costs of termination may be high. One common theme in the literature on political control of bureaucracy is to offer ex ante explanations for the persistence of particular patterns of bureau behavior —structural choices made at the creation of an agency or program create important constraints and incentives that condition future program outputs (see Moe, 1989). Successful coalitions of legislators (and organized interests) place obstacles to the disturbance of new programs thereby preserving legislative gains for the future. Obstacles may take a variety of forms including stacking the deck—structuring access to agency resources and decision makers in a way that privileges particular political interests or hard wires particular agency behavior (Macey, 1992 McCubbins, Noll, & Weingast, 1987). Contemporary legislators face the twin challenges of constructing coalitions to support new programs and undoing the work of previous coalitions.

More concretely, the interests that secured previous support for programs may, in fact, have the power to obstruct termination. deLeon (1983) described the obstacles faced by proponents of efforts to terminate the Department of Energy. In her work on social security, Weaver (1982) described tensions between demand-side incentives for program growth or decay and supply-side incentives. Mature government programs are wholly supply driven and mechanisms of control are weak or difficult to sustain (Weaver, 1982, pp. 16-17). Demand from citizens and elected officials may lead to new programs, but public sector managers and interest groups that benefit from the program ensure that the supply of resources flowing to them increases over time. Niskanen (1971) outlined the incentives that compel public sector mangers, in particular, to preserve and even expand program activ-

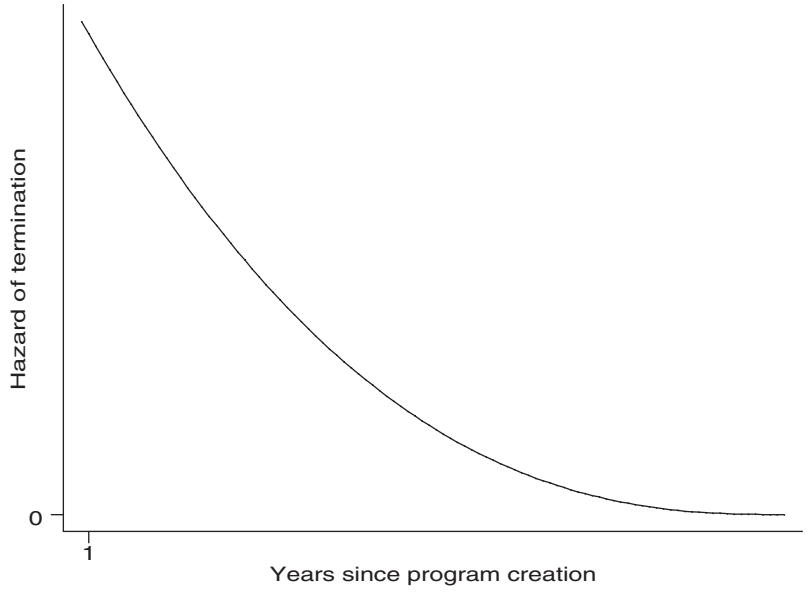

Figure 1: Expected Hazard of Termination: Program Immortality

ities and budgets. Gulick (1937) described how, absent the "purifying influence of competition" (p. 43), a governmental unit may persist long after its technology or objectives become obsolete. From a variety of perspectives, then, government programs are not simply immortal but practically invulnerable. The empirical implication is clear: The hazard of termination should decline over time as programs establish ties with constituents and institutionalize program practices and budgets. Specifically (and more strongly) the hazard of program termination should decline monotonically over time. A monotone declining hazard function is reproduced as in Figure 1.

Evolutionary perspectives, which also imply program persistence, have informed work on public sector organizations for nearly 70 years. Most of the evolutionary explanations appeal to the experience of organizations (bureaus in cabinet departments or independent

agencies) rather than particular public sector programs. Barnard (1940) suggested that observed organizations represent the end product of a harsh evolutionary process: A few hardy, older organizations coexist with a large number of organizations that are to be short lived. Simon, Smithburg, and Thompson (1950) reached similar conclusions: They described the public sector as a kind of organizational equilibrium. From these early perspectives, older organizations are persistent but younger organizations are not. Older organizations can marshal resources and constituents to protect long-term commitments to the programs that the organization manages. More recent work on organizations describes a similar logic of survival. Downs (1966) made the explicit claim that "the older a bureau is, the less likely it is to die" (p. 20). Downs suggested that bureaus face initial challenges to promote the social functions they were created to serve. Bureaus that successfully meet these challenges become, over time, secure in status and resources. Kaufman (1976) concluded that successful agencies are likely to be either highly rigid or highly flexible, depending on the stability of their niche. Inflexible organizations with an unstable environment will be terminated. Flexible organizations that fail to adapt to a stable environment will also be terminated.

The evolutionary process described at the level of the agency should also operate at the level of programs. Various descriptions of agency evolution share the essential feature that agencies are created and function in a hostile environment and, further, that specific selection mechanisms (competition, oversight) will result in the termination of weak agencies. Federal programs are subjected to similar selection mechanisms and (as discussed below) face a particularly hostile environment; program termination is common. New programs that face competition from existing programs, invite close scrutiny from Congress, or muster only narrow constituency support may face the prospect of early termination. Programs that can demonstrate support from a powerful constituency or an early reputation for successful performance should persist. Distinctions between the process and frequency of agency termination and program termination are addressed below, but the empirical implication of the evolutionary perspectives on program survival is nevertheless clear. After initial hazards are endured, the hazard of termination should decline over

time. Vulnerable programs fail soon after creation and hardy programs persist. The long-run hazard of termination is small.

EXPLAINING PROGRAM TERMINATION

A second perspective on program longevity, which also has roots in the public choice tradition, predicts that the probability of program termination will increase over time. One set of these explanations emphasizes internal problems of program coordination and control; a second set emphasizes the potential for conflict between program managers and external constituents. Downs (1966, p. 158) described an agency lifecycle with increasing specialization of bureau actors triggering extensive centralized monitoring efforts. These efforts to exert centralized control generate new costs and coordination problems that, over time, reduce the capacity of the bureau to perform its original task. These problems of ossification are especially acute in large agencies with relatively weak external constituencies. Miller (1992, p. 207) identified an "unraveling of expectations" that accompanies increasing hierarchy in organizations. Rules and procedural restrictions weaken informal norms that encourage teamwork and cooperation (labeled by Gouldner [1954] as a *cycle of rigidity*). Bernstein (1955), in one of the earliest descriptions of the process of regulatory capture, also identified an agency lifecycle that culminates in debility and decline. Although these descriptions are informed by observations of agencies and not individual programs, the underlying logic of creation and ossification applies to programs, as well. New programs, rife with contemporary technology, clear goals, and supportive constituents, are transformed over time into highly institutionalized programs with outdated technology, multiple and conflicting goals, and constituents increasingly frustrated with program performance. From this perspective, older programs are likely to become increasingly vulnerable to termination and, over time, are more likely to be replaced by newer program solutions.

External pressures may also lead to program termination. Because each Congress does not create the structure of the bureaucracy de novo, current programs may not represent the needs of contemporary legislators (the problem of legislative or coalitional drift), or managers of a

program may adapt or innovate in ways that frustrate the original architects of the program (bureau drift). These two problems create a trade-off for legislators that design agencies (Horn & Shepsle, 1989; Shepsle, 1992). Legislators can mitigate problems of coalitional drift by giving program managers substantial latitude and by creating institutions that facilitate ex post control. Instead legislators could choose to minimize bureau drift by leaving little discretion for program managers and reducing the influence of external stakeholders. This limits the ability of future legislators to update the functions of the program. As the composition of the legislature and makeup of oversight committees change over time, program outputs become increasingly inconsistent with the preferences of the median legislator. This gap between program outputs and legislator preferences, which grows over time, motivates legislators to seek termination of programs. The operation of both types of drift has the same empirical implication—the hazard of termination of federal programs should increase monotonically over time—as program performance diverges from legislator preferences. This monotone-increasing hazard function is reproduced in Figure 2.

EMPIRICAL WORK ON TERMINATION

CASE STUDIES OF TERMINATION

Compared to work on policy implementation, agenda setting, or the dynamics of responsiveness, the program termination literature is limited. Part of the only sporadic attention to concerns of program termination can be explained by infrequent demands to reduce the size of government and eliminate federal programs. Important work on program termination was motivated by Nixon Administration cutbacks intended to scale back the war on poverty (see Bardach, 1976), instituted again in the 1980s as the Reagan Administration grappled with the large budget deficit (deLeon, 1983) and again in the 1990s after Republicans gained a majority in the House of Representatives (for a thorough summary, see Daniels, 1997). Work from each period laments, to some extent, the lack of a well-developed theory of program termination.

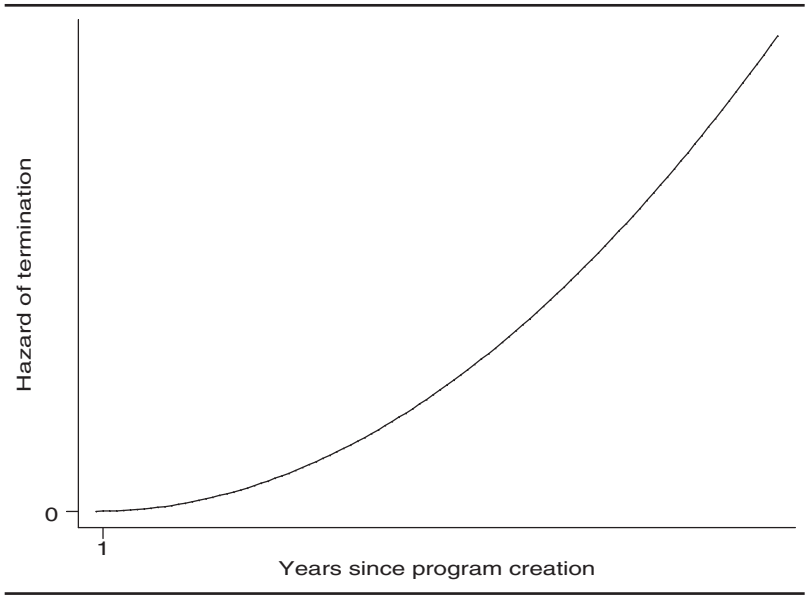

Figure 2: Expected Hazard of Termination: Bureau or Legislative Drift

Two types of research have contributed to our understanding of termination: case studies of particular terminations and statistical models (or less formal comparisons) of the experience of multiple agencies. The case studies of termination use similar reasons and identify similar mechanisms to explain the termination of agencies *and* programs. In a review of termination activity in the 1980s, deLeon (1983) identified financial imperatives, efficiency goals, and ideological goals as justifications for termination of programs (such as the Comprehensive Employment and Training Act program) and agencies (the Community Services Administration). Best, Teske, and Minstrom (1997) evaluated alternative explanations for the termination of the Interstate Commerce Commission. Daniels (1997, 1998) examined the 1994 termination of the Medicaid program in Tennessee; he concluded that strong executive leadership was essential to successful termination. Daniels (1997) concluded a limited number of conditions are consistent with successful termination: change in administrations, ideological opposition, political unrest (electoral or civil), low barri-

ers to termination (minimal effects on constituents), and design for termination (sunset provisions). Some of these conditions imply that termination is something that happens at particular points in time (new administration, unrest), whereas others suggest termination is something that happens to particular agencies (design for termination or low barriers to termination). In this literature, the same types of structural and temporal factors are associated with program termination and agency termination.

COMPARING SURVIVING AND TERMINATED AGENCIES

The investigation of individual program or agency termination can produce only limited insight into the underlying causes of termination. Both surviving and terminated programs or agencies must be examined to understand how variation in agency or program features affects variation in survival rates. This type of analytic strategy is rare in the literature on termination. There have been a limited number of attempts to examine agency survival and termination but much less attention given to the termination and survival of programs. Efforts to examine data on multiple agencies include Kaufman (1976), an extension by Carpenter (2000), and recent work by Lewis (2002) and Carpenter and Lewis (2002). These works focus on agency survival rates and investigate the link between agency characteristics, changes in the Congress or the national economy, and the termination of agencies. Kaufman examined a number of variables that may be associated with agency survival ranging from particular agency features (competition with other agencies, a weak primary constituency) to features of the broader political environment (change in party control of government or prevailing ideology or centralization efforts within departments). Kaufman did not systematically test which of these factors is most important in explaining agency termination, so it is unclear whether agency structure and performance or secular changes in politics and ideas ultimately determine agency survival. Carpenter and Lewis, appealing to the high costs associated with termination, found that large government deficits and a divided government reduce the probability of agency termination.

PROGRAM TERMINATION

Efforts to compare the experience of a number of programs (rather than agencies) are rare. Factors that affect the probability of termination—the power of constituents, the impact of time, and the efficacy of alternative mechanisms of political control—should affect programs and agencies in qualitatively similar ways. However, for work that seeks to draw on the experience of multiple organizations over time, distinctions between different levels of analysis—departments, bureaus, agencies, or programs—is important. In a rare example of work comparing the experiences of federal programs, Natchez and Bupp (1973) used federal budget data to demonstrate the remarkably diverse experiences (or success rates) of federal programs. They found that incremental models of the budget process, principally tested at the level of the agency, are wholly unsatisfactory for explaining turnover and change at the level of programs. Simply put, experience with termination varies so much across different levels of government that it is difficult to sustain the theoretical claim, implicit in the case studies, that similar processes or dynamics can explain the termination of programs, agencies, and executive departments. Termination of executive departments is exceedingly rare thereby implying that qualitatively different mechanisms explain why departments are terminated. The novelty of termination of executive departments also forecloses much empirical investigation of competing explanations for termination. Independent agency and bureau turnover is less rare, and it is somewhat unclear exactly how rare. Kaufman (1976), examining bureaus within executive departments, uncovered few examples of termination (27 of 421 agencies). The data examined by Kaufman indicate no more than five agency terminations in 1 year (five in 1953) and no agency terminations in 30 years of a 50-year record. In a broader survey, Lewis (2002) observed 251 agency terminations in a 52-year period, 1946 to 1997.

Cabinet departments may escape termination and the termination of agencies may be somewhat rare, but the termination of programs is relatively common. As reported below, more than 120 federal credit programs alone were terminated in the period from 1974 to 2000. The higher frequency of termination observed for programs permits that

substantial empirical leverage be applied to questions of how program type influences survival prospects. These terminations offer an opportunity to learn about the types of programs that are likely to be terminated and how biases in termination may structure the long-run portfolio of programs in the public sector. The higher frequency and shorter mean time to failure of programs is particularly useful for evaluating the characteristics of an evolutionary process and identifying the types of programs that are likely to emerge as winners over time. The process of termination may differ for agencies and programs and the attributes of successful programs and agencies may differ, but insights into duration dependence and survival rates, based on program data, can clearly be instructive as to how the functions of the public sector change over time.

FEDERAL CREDIT PROGRAMS

WHY FEDERAL CREDIT PROGRAMS?

The federal credit programs share some features that make them especially convenient for investigating questions about program termination: Termination events can be specified using identical criteria across programs, and the credit programs operate in a variety of structural contexts and across a variety of functional areas. The credit programs reflect a wide array of government objectives and powerful constituencies: prospective home buyers, small business enterprise, students, hospitals, nonprofit schools, institutions of higher learning, veterans, farmers, railroads, and maritime shippers. The programs range from the massive to the relatively small, some originated in the Roosevelt Administration, and others have very brief life spans (the Hybrid Vehicle Loan Guarantee Program). The programs all share the same core function—to divert capital to privileged borrowers—and use similar types of lending instruments. It is this feature of federal credit programs—that programs share the same function and outputs but nevertheless serve diverse constituents in different departments and agencies—that makes them attractive for testing competing theoretical claims about program survival. The federal credit programs are also of considerable substantive importance. Total lending activity, in

the form of direct loans and indirect guarantees, accounted for nearly $350 billion in fiscal year 2002. The federal credit programs account for a substantial commitment of public sector resources and shape the flow of capital to competing borrowers. Any bias in terminations that shapes the portfolio of credit programs has important implications for the types of borrowers that are to receive public subsidy in markets for credit and capital.

DATA

Indicators of program activity used for this project are entries in the *Catalog of Federal Domestic Assistance* (*CFDA*). The *CFDA* provides an exhaustive list of all active credit programs exclusive of the off-budget agencies (the Export-Import Bank) and the secondary market programs of government-sponsored enterprises (GSEs). Federal credit programs described in the *CFDA* span the cabinet departments, are components of a number of independent agencies, and account for the primary activity of one agency, the Small Business Administration (SBA). The sample includes all credit programs existing in 1974 and all programs created after 1974. Termination was identified as the date of last entry in the *CFDA*. After that, date applications for loans or guarantees were not accepted under the program. Outstanding obligations of the program remain under agency stewardship, but no new obligations are added after the termination date. This termination standard has important implications for the construction of the program sample. Because GSEs only act in the secondary market and there are no applications for loans or guarantees by borrowers (and no entry in the *CFDA*), these programs are not included in the sample. The programs included in the sample cover all the programs implemented by independent agencies and administered by the cabinet departments. The number of programs created, terminated, and surviving through 2001 is reported in Table 1.

SURVIVAL AND TERMINATION OF FEDERAL CREDIT PROGRAMS

Based on the termination literature and the broader research on program growth and decay, a number of observable features of the federal

TABLE 1
Credit Program Termination, 1974-2001

Total programs	216
Programs created after 1974	140
Programs terminated	120
Average age of surviving programs	33 years
Average age of terminated programs	15 years

credit programs should influence survival times. For this article, in addition to estimating the properties of the hazard function, I focus on three types of variables that should affect program survival: the lending instrument, the target of subsidy, and the placement in a cabinet department or independent agency.

Lending instrument (direct loan or guarantee). Direct lending programs may be more vulnerable to termination. The costs of direct lending programs are easy to monitor and can be quite high. Guarantee program costs are somewhat hidden; actual program costs related to loan losses are both difficult to project and not even realized until years after the subsidy is extended to the borrower. Ippolito (1984) described how (prior to credit program reform in the 1990s) accounting conventions and budget reporting requirements made it difficult to assess the subsidy embedded in guarantee and insurance programs. Guarantee programs, with fairly visible benefits but highly uncertain costs, should therefore be more difficult to terminate than direct loan programs that have large and visible costs.

Constituency. Credit programs serving corporations, cooperatives, and financial institutions should be more difficult to terminate than credit programs that provide capital to individuals. Most corporate subsidies attract support from a trade association or professional association that can actively promote continuation of the subsidy. Collective action problems are more likely to frustrate efforts to promote supply-side expansion of subsidies to individuals. Credit program survival rates should reflect the advantages of institutionalized actors exerting influence to protect a stream of subsidized capital to particular sectors of the economy.

Administration by an independent agency. Kaufman (1976) described independent agencies (particularly independent regulatory commissions) as somewhat insulated from political control. If a credit program is placed in a cabinet department, program managers are subjected to the budget scrutiny and appointment influence that politicians can use to influence the distribution and supply of credit. Insulation, via reduced appointment influence or other forms of bureau autonomy, reduces the level of political control over subsidies. This insulation could affect survival rates in one of two ways. It could be the case that insulated agencies are less vulnerable to the gamut of political controls—appointments, budgets, and program termination. It could also be the case that, because members of Congress have less influence over appointment and resource allocation in independent agencies, they are more likely to use the instrument of program termination to structure intervention in capital markets.

MODELING PROGRAM DURATION

Survival data analysis offers a convenient empirical strategy to identify features of federal programs that contribute to early termination or program duration. Prominent in biostatistics, survival data describe the time that an entity (patient or program) comes under observation, the time the entity failed (patient death or program termination), and attributes of the entity during the period of observation. The empirical objective is to model the time to failure for each entity under observation. Unlike canonical regression modeling strategies, time is a variable explicitly included in the model. Box-Steffensmeier and Jones (1997) provided an introduction to the modeling framework and described the application of duration analysis to political science questions ranging from durations of war to the career paths of members of Congress. For a thorough technical introduction, see Hougaard (2000).

Survival data analysis has several advantages over a canonical regression approach (a simple logistic for survival or termination, for instance, or a regression of program duration that simply measured time to termination for programs that are terminated). Most importantly, the modeling approach directly incorporates information about

programs that survive beyond the last period of observation (the problem of right censoring). Characteristics of both survivors and terminated programs contribute to the likelihood function that is evaluated to estimate parameters of the hazard function. Second, the modeling approach permits a direct assessment of duration dependence—if the probability of program survival depends on the number of years since the program was created and if the hazard of termination increases over time (positive duration dependence) or declines over time (negative duration dependence). A simple logistic regression of program survival or termination does not capture information on varying times of duration.

Survival analysis requires several modeling choices—most importantly, the choice between a parametric or nonparametric statistical modeling approach and the appropriate functional form of the hazard function for a parametric approach. The hazard function describes the probability of program termination in each period after program creation. A variety of functional forms can be used to approximate this hazard function. For an important class of commonly used models, the hazard function is assumed to be monotonic (either strictly increasing over time or strictly decreasing over time). Theoretically, the probability of program survival could, in fact, initially increase (as program activity crowds out existing subsidies or program implementation faces unexpected obstacles) and then decline (as operating procedures are established and affected interests realize the gains of program activity). This possibility suggests that a monotonic hazard function is not appropriate. Carpenter (2000) introduced nonmonotonic hazards (and nonlinear extensions of these models) in an analysis of the data from Kaufman (1976).

A nonparametric approach (such as the Cox proportional hazards model) permits estimation without assuming a distributional form for the hazard function (requiring a more weak and testable assumption of the proportionality of hazard across programs and time). The nonparametric approach does not, however, permit a convenient graphical representation of the underlying hazard of program survival. Results reported below (and the graph of the hazard function) are based on a log-logistic distribution of the hazard function—a conventional way to introduce nonmonotonic hazards in a linear survival model. The log-logistic approximation for the hazard function is one

TABLE 2
Federal Credit Programs Survival
(Dependent Variable: Mean Time to Termination)

Explanatory Variables		
Independent agency	–0.385*	(0.23)
Direct lending program	–0.65**	(0.21)
Corporate borrower	–0.29	(0.21)
Constant	3.74**	(0.15)
Scale parameter (natural log of γ)	–0.312**	(0.76)
Log likelihood	–261.26	
Likelihood ratio	22.8	
Probability > $\chi^2(5)$	0.00	

NOTE: Total number of terminations = 120. Estimates from STATA 7.0. Log-logistic distribution of hazard function. Standard errors are in parentheses.
*$p < .10$. **$p < .05$.

of a broader class of accelerated failure time models where the effect of covariates can be interpreted substantively to mean the increase or decrease of time to program termination.

Choice of the log-logistic approximation was empirical and based on two features of the data. First, this functional form for the hazard function outperforms a number of alternatives based on Akaike's Information Criterion (AIC), an indicator of model fit. Second, this functional form is indicated by evaluating the coefficients of a generalized gamma approximation for the hazard function. The ancillary parameters from the generalized gamma distribution indicate that the hazard function is nonmonotonic, thereby foreclosing the use of a Weibull or exponential distribution to approximate the hazard function. The model results reported in Table 2 are robust to alternative distributional assumptions that accommodate nonmonotonic hazards —the log normal or the generalized gamma.

RESULTS

CHARACTERISTICS OF TERMINATED PROGRAMS

Effects of program characteristics on program survival are summarized in Table 2. Two of the three covariates had significant effects on

survival time: lending instrument and administration by an independent agency.

Programs operated by independent agencies are terminated earlier than programs operating in cabinet departments. This suggests that insulation from canonical mechanisms of ex post political control—specifically, the absence of strong appointment and budgetary influence—may create incentives for members of Congress to terminate independent agency programs as an alternative means of control. If we consider termination as one of a number of alternative mechanisms of political control of federal programs, then, contrary to claims in Kaufman (1976), independent agencies are no less vulnerable to the exercise of political control. It is simply the form of political control (program termination) that distinguishes programs in independent agencies from programs in cabinet departments. It could also be the case, consistent with Rourke's (1978) description of the fledgling Rural Electrification Administration, that independent agencies lack the well-established core constituency that can promote and defend programs from termination.

Programs that rely on direct lending instruments are also at higher risks for termination. As suggested above, direct lending can be very costly. Guarantees are less immediately expensive and costs are difficult to observe. Constituents that benefit from guarantee programs have a high incentive to oppose program termination, and immediate benefits of termination (potential savings) are low. Guarantee and insurance costs are passed to the future (contingent on the failure of insured loans), so a terminated guarantee program saves money in the future, but obligations to current borrowers must still be met. Program termination creates immediate costs for potential borrowers, but generates no savings in the short term.

The estimates have important long-run implications for the broader structure of federal credit programs. Programs that share features associated with high-duration times—administration by cabinet departments and use of the guarantee—would be expected to make up a larger proportion of credit programs over time. Cabinet department loan guarantee programs should dominate other types of federal credit programs in the long run. The sample data indicate that, measured in

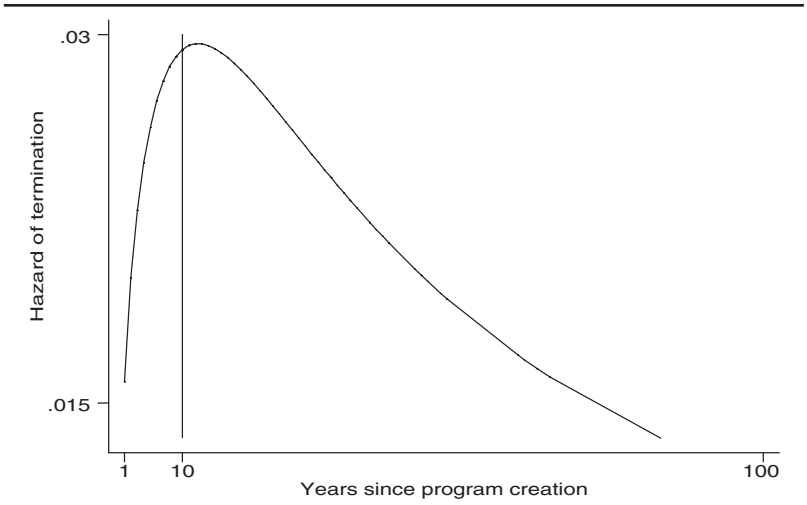

Figure 3: Estimated Hazard of Termination: Federal Credit Programs

program years, the guarantee programs of the Department of Agriculture (DoA) and the Department of Housing and Urban Development (HUD) account for fully half of all federal credit program activity from 1974 to 2001. More than 80% (92 of 111) of these programs offer subsidies to individual borrowers. Table 2 suggests, contrary to expectations, that corporate borrowers are no more likely to secure the survival of their federal credit programs than individual borrowers. The HUD and DoA guarantee programs that make up half of the federal credit programs are, in fact, subsidies to individual borrowers, albeit borrowers that are either well organized (farmers) or well represented by financial institutions that have a stake in federal subsidies to borrowers (banks and homeowners). These numerically large and well-organized classes of borrowers benefit from a termination bias that favors department guarantee programs.

CHARACTERISTICS OF THE HAZARD FUNCTION

The parametric hazard function for the credit program data, estimated using the model coefficients in Table 2, is displayed in Figure 3.

The hazard function summarizes the probability of program termination in each year. Increasing hazards indicate higher probabilities of termination.

The hazard of termination increases markedly over the first 10 years of program life and then decays very slowly over time. New programs are most likely to be terminated 4 to 12 years after creation. Individual program experience is, of course, consistent with this estimated hazard. Four of the 120 observed terminations occurred after only a single fiscal year (three DoA programs and an SBA currency fluctuation economic injury loan program). Half of the observed terminations occurred when programs were in existence less than 10 years. One quarter were terminated after 10 years. The remaining quarter were in existence for more than 20 years. There does appear to be an initial threshold beyond which program termination is less likely. New programs face a threatening environment; older programs become more immune to termination. This hazard function, indicating increasingly perilous beginnings followed by increasing stability, is consistent with the somewhat neglected literature on agency evolution that emerged nearly 70 years ago. Further, the shape of the hazard function is directly inconsistent with theories of program decay or coalitional drift that imply increasing hazards of termination over time. These theories are simply not supported by the experience of the federal credit programs.

The hazard of termination, although declining over time, remains above zero for more than 80 years. In the case of federal credit programs, private financial intermediation offers a real alternative to public subsidy. The presence of a private alternative effectively places a limit on how poorly an agency can operate (exposing program managers to an element of competition). If federal borrowing becomes more expensive than private borrowing, no borrowers will tap into federal capital. This suggests that some real, if modest, hazard of termination is likely to persist for these programs. Financial market innovations that reduce the private cost of borrowing may make the federal subsidy program unattractive to potential borrowers. This distinctive aspect of federal credit programs also indicates the need for the estimation of program hazards for the broader variety of federal programs that provide subsidies or services in different forms than loans and guarantees, especially entitlement and regulatory programs.

CONCLUSION

In a direct empirical test of competing perspectives on program longevity, expectations of program persistence—long-run declining hazards of program termination—were supported. This result has a number of important theoretical implications.

First, the political control problems lamented by Lowi (1969) and somewhat discounted by Kaufman (1976) do seem characteristic of federal credit programs. The risk of program termination does diminish over time. Older programs are clearly not immortal but are less likely to be terminated than newer programs

Second, legislative drift or bureau drift, if it occurs, does not lead to termination. In the period from 1975 to 2001, a period of substantial changes in the House and Senate and a period of substantial innovation in domestic financial markets, federal credit programs faced a decreasing hazard of termination over time. Established programs became, with each year of survival, more immune to the threat of termination. In addition, expectations of unraveling or ossification, which also imply that time takes a toll on program survival, are unfounded. Termination of older programs remains a very unlikely event.

Reflecting on the expectations of classical work on program growth and decay, Barnard (1940), Downs (1966), and Kaufman (1976) appeared to offer an accurate assessment of the initial hazards and later stability of federal programs. New programs face, for several years, growing hazards of failure. The risk of program termination (and the attendant credibility of threats of termination for elected officials) declines over time. Early in the life of a program, threats of termination can be a useful instrument for elected officials interested in structuring or reforming the bureaucracy. This claim seems to be straightforward: Terminations occur and elected officials certainly influence what agencies or programs are terminated. But this observation does not inform much of the work on political control of bureaucracy. The direct power of appointment and budget tools are typically represented as the most important mechanisms for ex post control of the bureaucracy. The threat and use of termination should be added to the repertoire of control mechanisms that are available to elected officials. The utility of termination simply declines rapidly over time.

After a multiyear probationary period has passed, the threat of termination for most programs becomes less credible.

The bias in termination experience across federal credit programs — the higher probability of termination for programs in independent agencies and programs using direct lending—suggests that program termination is a very important instrument for controlling the long-run portfolio of programs maintained by the government. Modest differences in the short-run experience of programs create large long-run differences in the types of programs that are observed. The cumulative effects of short-run bias in termination produces a portfolio of programs heavily biased toward programs that share characteristics of early survivors. The importance of program termination as an instrument for shaping the bureaucracy may be severely underestimated.

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