Structural Choice and Political Control of Bureaucracy: Updating Federal Credit Programs

Kevin Corder

A fundamental problem in democratic politics is control of bureaucracy. Elected officials, handicapped by limited information and uncertainty about policy outcomes, face obstacles to the effective oversight and control of public sector agencies. Agency decision makers have the incentive and the capacity to exacerbate or exploit an often substantial informational advantage over legislative or executive monitors. Considerable attention has been given to the scope of this problem, and a substantial empirical literature has emerged that attempts to identify and measure the effects of various types of political control mechanisms—the role of agency structure, administrative procedures, appointments, budgets, reorganization, and passive forms of political control.

Much of the empirical work that is the basis for evaluation of the instruments of political control, especially the work informed by statistical modeling, is based on the observation of regulatory agencies: the Federal Trade Commission, the Securities and Exchange Commission, the Environmental Protection Agency, and the Nuclear Regulatory Commission. Work that suggests that political control problems are not problematic, particularly the congressional dominance literature pioneered by Weingast and Moran (1983), is almost entirely grounded in the performance of regulatory agencies. This narrow empirical focus may miss important features of the large number of agencies that do not engage in regulation

and instead deliver transfer payments, provide services, or intervene in capital markets.

As an alternative to regulatory agencies, the growing and diverse federal credit programs would seem to offer an ideal set of programs with which to test expectations for and experience with political control of bureaucracy. The federal credit programs are somewhat exceptional since program outputs are directly comparable: agency activity is measured by the volume of lending and guarantee activity. The large number of programs permits direct comparison of the outputs of programs operating in a variety of structural contexts and serving different types of constituencies. Using direct lending and loan guarantee and insurance activity from fifteen federal credit programs, I investigate how variation in program structure affects responses to instruments of political control.

The essay proceeds in three parts. First, I locate this project in a broader literature on political control of the bureaucracy with a particular focus on ex ante *structure and process* controls. Second, I describe the federal credit programs and the agencies that are the subject of the essay. Finally, I estimate and discuss five models of federal credit activity: time-series cross-sectional models of direct and loan guarantee activity at the program level for a sample of Cabinet departments, independent agencies, and government-sponsored enterprises. The credit programs overall reveal a much more active and interested Congress than the extant literature on political control suggests. In contrast to the regulatory agencies that have informed much of the empirical work on political control of bureaucracy, the credit programs are routinely reorganized, relocated, and updated to reflect current needs and demands. Specific and highly tailored legislative instructions, either amendments to statutes or indirect instructions embedded in larger legislation, are effective and expedient instruments of political control. Canonical correlates of agency behavior—party control of the White House and changes in the budget, for instance—affect program outputs (especially direct lending) less than the reform and reorganization activities that originate in Congress.

The Problem of Political Control

A substantial empirical and theoretical literature informs our understanding of political control of bureaucracy. No observer could make the case, however, that there is any consensus in this literature about either the general effectiveness of efforts at political control or the effect of par-

ticular instruments of control. At one level, is it not even clear if elected officials manage to exercise any control whatsoever. Wilson (1989) and other students of agency behavior note that elected officials face obstacles to the exercise of political control. Agency professional norms or culture, the ambitions and preferences of agency leaders, and the tremendous advantages of agencies in controlling information flow to elected officials all conspire to blunt efforts of elected officials to influence agency policy choices. In contrast, Calvert, McCubbins, and Weingast (1989) and other students of the American Congress claim that agency policy choices can ultimately be traced back to the preferences of elected officials. Despite substantial uncertainty at a number of critical decision points, elected officials monopolize the few resources (money and statutory authority) that can decisively influence or constrain the policy choices of agency leaders. As a consequence, agency leaders respond to changing preferences in the Congress or the White House in an effort to avoid budgetary sanctions or statutory penalties. Elected officials thus exercise an important but often overlooked passive form of control over agencies and have recourse to active control alternatives on the rare occasions when they are required. Given that both perspectives emphasize the absence of overt efforts to control agency behavior, it has been challenging to determine which perspective is a more accurate description of Congress-bureau relationships.

Proponents of both perspectives emphasize the distinction between ex ante and ex post efforts to exert control over policy outcomes. Ex post control describes the instruments of control that contemporary political actors can bring to bear upon agencies that are resistant to change: appointments, statutory change, and budget sanctions and incentives. Ex post controls exploit a fairly well developed monitoring system in the Congress that, while not necessarily generating optimal outcomes, creates opportunities for elected officials to advocate particular policy choices (Aberbach 1990). Skeptics note that responses of members of Congress to agency failures are somewhat constrained by existing agency structures, since legislative updates to structure are costly and time consuming (see Moe 1984). Empirical work investigating the utility of ex post control has generated mixed results. Wood and Waterman (1994) observe agency behavior in a variety of contexts responding to instruments of active political control—the shared appointment and budget choices of Congress and the White House. But Eisner and Meier (1990) reveal how long-term

changes in the organization of bureau activity, and not ex post executive or congressional control, drove changes in the Antitrust Division of the Department of Justice during the Reagan administration.

Ex ante control describes choices about agency structure and procedures made at the creation of the agency—choices that place constraints upon contemporary actors and preserve the choices of the legislative majority responsible for creating the agency. Ex ante controls include structural choices such as the length and frequency of appointments or administrative procedures that privilege particular constituents. Ineffective ex post controls could be the function of effective ex ante design (see Horn and Shepsle 1989). Agencies may be "hardwired" to pursue a particular set of goals or respond to a particular set of interests. Moe (1989) claims that past choices about the structure of agencies determines, in some ways, contemporary policy choices. Macey (1992) describes how agency structure affects the influence of groups over agency choices as well as the types of experts that influence agency choices. McCubbins, Noll, and Weingast (1987) identify the central role of procedural constraints on outcomes of agency policy choices. Despite the promise of procedural controls, ex ante control has been difficult to demonstrate empirically. Balla (1998) finds that ex ante controls (implemented through strict control of the notification and comment process) failed to privilege target groups. Spence (1999b) does identify important effects of procedural (and structural) controls in the decisions of the Federal Energy Regulatory Commission but notes that it is unclear whether these effects were the consequence of intentional forward-looking choices made by legislative actors.

Overall, the empirical work investigating ex ante controls has focused on procedural at the expense of structural choices. Some basic questions are ripe for investigation. What are the effects of agency structure on agency performance? How is agency structure updated or contested? Although we presume that, by design, government-sponsored enterprise are somewhat insulated from the demands of elected officials, precious little empirical work has investigated even these basic expectations about how structural choices affect agency responsiveness. This essay is an effort to add to our understanding of how agency structure (distinguished from agency procedure) can affect agency activity over time and, further, how changes in this structure can be an instrument of political control.

The Federal Credit Programs

The federal credit programs directly or indirectly influence the allocation of capital to targeted groups of borrowers. Indirect mechanisms may take the form of guarantee or insurance of new loans or mortgages or secondary market purchases of existing loans or mortgages. Direct lending takes the form of conventional loans or mortgages with the government as primary lender. Some agencies include lending as a one of a number of tools to provide support for some constituency; other programs are the exclusive focus of an agency. These various federal credit programs are implemented through a variety of administrative and fiscal arrangements. Some agencies are small components of Cabinet-level departments, some are independent agencies, and others are privately held government-sponsored enterprise (GSEs).

Members of Congress actively monitor the activities of the federal credit programs, make frequent minor changes to program authority and scope, and occasionally subject programs to broad reorganization. Farm credit programs were restructured financially and organizationally in 1987. Musolf (1991) uses the reorganization of the Farm Credit System to illustrate how reform of GSEs has largely ignored broader administrative and fiscal implications of GSEs and instead focused on the particular needs of borrowers in affected sectors. The veteran's housing program and rural electrification program were moved from independent agencies to existing or new Cabinet departments. The Federal Home Loan Bank Board was abolished in 1989. One of the primary financing mechanisms for a majority of the federal credit programs, the Federal Financing Bank (FFB), was created in 1973 and abolished in 1986. The federal student loan program was started in a Cabinet agency, expanded via a government-sponsored enterprise in 1972, and will be completely privatized by 2008. The reorganization of these diverse programs makes the general point: members of Congress routinely review and reform the federal credit programs.

Despite the large size and continuing activity of the federal credit programs, a relatively small literature investigates their development and impact. Bosworth, Carron, and Rhyne (1987) describe the origins and performance of a number of federal credit programs with the particular objective of highlighting the real role of subsidies in a few of the programs. Ippolito (1984) describes the special accounting and control

problems introduced by the credit programs. Meier, Polinard, and Wrinkle (1999) find that farm credit programs are linked to objective economic conditions (farm debt and farm income) but that ongoing systematic influence of program outcomes by presidents and members of Congress is limited. The major exceptions are direct statutory changes to existing programs. Lowi singles out the various cooperative-based federal credit programs that aid agriculture as an overt "private expropriation of public authority" (1969, 68).

Total outstanding loans of the federal credit programs are reported quarterly in the *Treasury Bulletin.* For the analysis that follows, a sample of fifteen programs was selected from more than one hundred programs represented in the quarterly reports. The sample programs include the largest subsidy programs to the household, corporate, and farm sectors of the economy. Total outstanding loans for the entire federal government and each program in the sample are reported in table 1.

The focus of the essay is the change over time in these outstanding loans. If outstanding loans increase, then the program is increasing the level of capital for the target sectors (through the creation of new loans directly or through the subsidy of new private loans). If outstanding loans decline, then the program is decreasing the level of capital for the target sector. This decrease may be caused either by selling existing loans on the private market (each sale diminishes available private capital) or decreasing the volume of new loan activity (new loans fail to keep pace with the maturity of existing loans). The empirical challenge appears to be straightforward. What influences the aggregate lending activity of the programs that we observe? How and to what extent do elected officials exercise meaningful control, through structural choice or other influences, over these programs?

Explaining Lending Activity over Time

Overview

A number of different factors influence the growth of the federal credit programs: structural characteristics of the agencies, features of the financial markets, changes in the broader economy, and variable characteristics of the political process outside of the agency (election calendar, budget allocation, party of the president). The expected effects of each set of characteristics—and measures for each—are described in turn. The

structural features are given primary attention since these features are both established ex ante and updated ex post through acts of Congress.

Structural Characteristics of the Programs

The structural features of federal credit programs vary greatly. The most important structural choice is certainly the status of the program as part of an independent agency, a Cabinet department, or a GSE. In addition to agency status, at least three other structural choices are important for credit programs: authority to borrow directly from the public, authority to lend funds directly to the public, and the presence of ceilings on lending authority. These features are specified at the initiation of the

TABLE 1. Size of the Federal Credit Programs (total and sample), Total Outstanding Direct Loans, and Loans Guaranteed or Insured, 1991 (in thousands of dollars)

Type of Subsidy	Direct	Guarantee or Insurance
Total	484,927,421	989,349,308
Department of Agriculture		
Agricultural Credit Insurance Fund	17,906,040	4,383,448
Rural Housing Insurance Fund	29,246,446	26,965
Rural Electrification and Telephone	37,276,965	782,914
Department of Housing and Urban Development		
FHA Loan Guaranty Fund	9,315,920	378,450,558
Low-rent public housing	84,826	5,253,477
Department of Veteran's Affairs		
Veteran's Housing Insurance Program	3,637,395	53,817,725
Small Business Administration		
Business and investment loans	3,402,436	12,603,641
Export-Import Bank of the United States	8,923,559	5,391,027
Student Loan Marketing Association (Sallie Mae)	9,733,545	21,557,480
Federal National Mortgage Association (Fannie Mae)	124,954,000	—
Farm Credit System		
Banks for cooperatives	10,782,501	—
Farm credit banks (formerly federal land banks and federal intermediate credit banks)	39,811,774	—
Federal Housing Finance Board (formerly Federal Home Loan Bank Board)		
Advances to member banks	83,945,632	—
Federal Home Loan Mortgage Corporation (Freddie Mac)	23,523,889	—

Source: Treasury Bulletin (figures for quarter ending September 1991).

program, and in nearly all cases they are updated over time. Agency structure is not an exclusively ex ante instrument of political control since structural changes are not uncommon. But since costs of change are not trivial, structural choices—especially status as an independent or Cabinet agency—can be persistent.

Type of Agency

Three basic types of agencies implement federal credit programs—Cabinet departments, independent agencies, and government corporations. These agencies vary in the extent to which they are expected to respond to different types of political direction. The newest type of agency, the government-sponsored enterprise, is expected to be relatively unresponsive to efforts at political control. The instruments of political control are weak or nonexistent: appointments are typically restricted to a few members of a larger board, and the corporations are partially or entirely self-funded. Private stakeholders (investors and corporation management) place important and immediate constraints on agency practice. Expectations about the independent agencies and Cabinet departments are less clear. Kaufman (1976) expects the Cabinet departments to be fairly responsive to direction from the White House. Independent agencies require a more direct investment of White House monitoring and suasion to produce compliance with administration demands. For Kaufman, the principal mechanisms of ex post political control—appointments and appropriations—are more effective in influencing traditional Cabinet departments. Rourke (1978) instead expects that independent agencies will be more accommodating of administration demands. Cabinet departments serve a strong and well-organized constituency and pursue a well-institutionalized set of policy goals. Rourke describes how Roosevelt specifically set up the Rural Electrification Administration to bypass the internal politics of the Department of Agriculture. It was anticipated that the agency could be incorporated into the Cabinet department after agency leaders acquired administrative experience and cultivated a supportive constituency.

Since programs in each type of agency are expected to manage political cues in somewhat different ways, separate models of lending activity are estimated in this analysis—models for programs in Cabinet departments, models for programs administered in independent agencies, and a model for programs administered by a GSE. Comparing the effects of

instruments of political control across agency type directly tests for differences in responsiveness. The only clear empirical implication of agency structural choice is that government-sponsored enterprises should be less responsive to political direction, in all forms, than either Cabinet department or independent agencies.

Sources of Funds

Federal credit programs have used three sources to raise capital: traditional appropriations, an exclusive federal intermediary that taps private capital (the Federal Financing Bank), and private investors. The government-sponsored enterprises have unique authority to directly issue debt to private investors. Programs in other agencies are dependent on budget appropriations to lend funds or (prior to 1986) financing through the Federal Financing Bank. Access to the FFB should increase lending and guarantee activity within the independent agencies and Cabinet departments. The abolition of the FFB in 1986 forced managers of independent agency and Cabinet programs to rely on conventional budget appropriations for financing but permitted government-sponsored enterprises to focus on private markets for continued funding.

Direct Lending or Guarantee

Direct lending requires substantial program funding. Lending requires the expenditure of agency resources in exchange for a (tenuous) flow of income in the future. For programs that have a large explicit subsidy, direct lending is the only way to provide capital to targeted borrowers. Programs that do not require very large subsidies can rely on insurance or guarantees. The insurance and guarantees make a somewhat risky loan or mortgage marginally attractive to private lenders. The guarantor agency is not compelled to spend agency resources in the short run and passes costs into the future (costs are contingent on future loan performance). Since direct lending requires resources, direct lending programs should respond immediately to changes in the federal budget. New guarantees, on the other hand, can be extended without fiscal consequences. Further, costs related to past guarantees can be represented as a fait accompli to new political leaders intent on rapidly scaling back agency spending. Decisions about how lending programs are structured—direct or guarantee—should influence the extent of political control through the budget.

Ceilings on Lending Authority

Most federal credit programs have indefinite authorizations (e.g., veteran's mortgage insurance programs are treated as entitlements rather than discretionary spending). Changes in budget allocations are likely to have a small effect on these programs, especially if there is no enforceable ceiling on lending activity. Ripley and Franklin (1980) identify ceilings as important constraints on the lending and guarantee activity of the Export-Import Bank in particular. Review and adjustment of ceilings on lending authority permits members of Congress to monitor the investment decisions of the bank. The initial choice of whether or not programs will be subject to lending ceilings affects the discretion of agency leaders in the future, making it more difficult to expand the program.

Each of these structural features—the existence of a guarantee program, the use of ceilings, and access to the Federal Financing Bank—are used by Congress to direct the expansion or contraction of the federal credit programs. Program management, while permitted substantial discretion over the timing and distribution of credit, faces important structural restraints upon the discretionary expansion of the programs it operates.

Variable Features of the External Political Environment

The incentives and capacity for political control of agency policy choices vary across agencies and over time. As was earlier suggested, the literature on political control focuses particularly on the effectiveness of appointments and budgets—the shared powers of Congress and the president. Four measures related to political control of agencies are included in the program-level models that follow.

Changing Preferences at the White House: The Appointment Mechanism

Wood and Waterman (1994) link the appointment of new agency leaders to changes in agency behavior. This strategy—measuring the impact of a new appointee—is effective for distinguishing between the effects of specific leadership changes and other changes in the political environment (control of key committees in Congress or formal statutory changes). Harris and Milkis (1996) identify appointments made by Reagan (Anne Burford at the Environmental Protection Agency and James

Miller III at the Federal Trade Commission) as key components of the effort to roll back regulation. For the federal credit programs, new appointees are expected to influence program activity and the preferences of appointees are likely to reflect the ideological positions of the appointing presidents. Republican presidents support less federal intervention in financial markets; Democratic presidents support more intervention. This ideological difference especially distinguishes the single Democratic president in the sample, Jimmy Carter, from his successor. Presidential appointees can change the balance between fiscal restraint and promotion of lending and guarantees programs. For Cabinet departments, this presidential influence is measured with the simple change in party control of the White House. For independent agencies and GSEs, presidential influence is measured with the appointment of a new administrator or board member after a change in party control of the White House.

A change in party control could lead to a host of other changes that represent attempts to exert political control. Harris and Milkis (1996) describe Reagan administration budget reallocations and innovative use of the Office of Management and Budget to control social regulatory agencies. But the instrument over which the president exerts the most direct control would certainly seem to be appointments. A simple indicator of the party of the president as a measure of program-level change fails to distinguish between passive adaptation of agency practice, the simple appointment mechanism, and other indirect White House tools. This indicator nevertheless permits an assessment of the relative importance of ex ante and ex post political control of agencies.

Congress and the Budget

One powerful if unwieldy instrument of political control is control of the purse. It is possible to obtain the direct funding of particular federal credit programs (or the ceilings for outstanding loans and guarantees in each program) to determine how members of Congress support each program, but these indicators are problematic. Current expenditures are a function of past lending decisions, and expenditures are therefore a reflection of a series of political choices in the past. Authorizations are similarly uninformative since most programs have an indefinite authorization—in the fifteen-agency sample only the Export-Import Bank of the United States and the Rural Electrification Program have ceilings on

lending authority in 1991. Instead of attempting to capture exactly what members of Congress were attempting to direct to particular programs, each program is placed in a broader budget function. If the size of the allocation to farm income security declines, for instance, it is likely that the lending and guarantee activities of the Department of Agriculture credit programs will also decline. If more money is allocated for the advancement of commerce, lending and guarantee activities of the Export-Import Bank and the Small Business Administration should increase.

Budget changes are measured with the fiscal year to fiscal year difference in the amount of money authorized for the relevant budget subfunction.[1] It is expected that agency activity will vary directly with the budget allocation. This relationship should be much stronger for the direct loan programs than for the guarantee programs, as direct lending requires funding in the current fiscal year while guarantee programs pass costs (contingent upon loan performance) into the future.

Congressional Oversight and Action

In addition to budget choices, members of Congress have regular opportunities to monitor and occasional opportunities to reorganize federal credit programs. Credit programs may be addressed and reorganized in the course of broader hearings on agricultural policy, higher education, or veteran's benefits. Since hearings in these subject areas are frequent, it is difficult to use some subset of hearings as a measure of direct interest in or attention to the credit programs. Instead of using hearings, I examine specific instances of legislative action to measure the particular but nonbudget impact of Congress on agency outputs. Basic changes in agency structure or the scope of permissible financial market activity, initiated at the discretion of Congress, influence agency lending and guarantee activity.

Four actions by Congress directly target lending activity of sample agencies: the Agricultural Credit Act of 1987, the Omnibus Budget Reconciliation Acts of 1981 and 1986, and the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA). Each piece of legislation either permitted the addition of new types of loans or debt instruments to the agency portfolio or required the sale of loans in the existing agency portfolio. The Farm Credit System was reorganized under the Agricultural Credit Act of 1987. The 1987 act increased the lending activity of credit banks and cooperatives and reduced the outstanding loans of

the land banks to zero. In the 1981 Budget Reconciliation Act, Sallie Mae was given additional authority to consolidate loans and advance funds to state loan agencies. This extension of authority was soon followed by permission to borrow directly from private investors (instead of acquiring funds from the Federal Financing Bank). Both developments contributed to a rapid expansion of Sallie Mae. Language in the Budget Reconciliation Act in 1986 required the credit programs of the Farmers Home Administration to raise capital by selling loans from the agency portfolio. The same act permitted borrowers to prepay direct loans from the REA if those loans were paid for with private capital guaranteed by the REA.

The total volume of legislation affecting the operation and management of the federal credit programs is large and certainly not fully covered by the major changes just described. In the 1970s, legislation affecting the federal credit programs was summarized annually in a special analysis that accompanied the budget of the U.S. government.[2] More than ten pieces of legislation were reported each year in the early 1970s, and by the end of the decade twenty to thirty bills had been included in the summary. In the early Reagan administration, omnibus budget reconciliation bills were important tools for updating the credit programs. The four acts of Congress identified earlier as major reorganizations affecting sample programs were specifically designed to significantly broaden or reduce outstanding loans of particular federal credit programs. Bills that directly mentioned sample agencies but simply increased existing ceilings on guarantee and insurance activity were excluded. No significant legislation affecting the Export-Import Bank, the Small Business Administration Business Lending Program, or the Veteran's Administration (excepting elevation to Cabinet status) was observed in the sample period. (Both the Export-Import Bank and the Small Business Administration were granted new and broader authority in the 1970s, prior to the collection of quarterly data on outstanding loans and guarantees.)

Indirect Congressional Influence

A number of works on regulatory agencies have concluded that agencies passively adapt to changing preferences of members of Congress (notably Weingast and Moran 1983). A measure of congressional preferences—the median first-dimension coordinate of the D-NOMINATE scores for the Senate (described in Poole and Rosenthal 1997)—is included to distinguish the effects of structural choices from the passive updates to agency

lending activity that could follow changes in the composition of Congress. There are a number of alternative measures (e.g., the chamber median for the House of Representatives or the median score for the committees that oversee the agencies charged with implementing the credit programs). In practice, all of these measures are highly correlated and the choice of measure does substantively affect model results. Ultimately, the Senate measure was selected since party control of the Senate changed over the sample period. The chamber median was used since jurisdiction over the credit programs is often unclear and occasionally contested; this is particularly the case for the Farm Credit System, which is monitored by both the Banking and Agriculture committees in the Senate and the various housing programs, which are monitored and updated by the Agriculture and Veteran's Affairs and Banking committees in the Senate. Overall, a more conservative Senate is expected to restrict the growth of credit programs of all types.

Elections

Elections create special incentives for politicians, for delivery of benefits to constituents during election years can shape subjective perceptions of the competence of an incumbent. The simple intuition that politicians have incentives to time benefits to correspond to elections motivates investigations of the so-called political business cycle (Nordhaus 1975), as well as other program-level cycles in benefits and subsidies. Keech and Pak (1989) identify effects from the election calendar on veterans' benefits prior to 1978. Corder (1998) finds substantial election year increases in the lending activity of the Small Business Administration. To control for the effects of elections on the guarantee and lending activity of the federal credit programs, I include a dummy variable for presidential election years and a dummy variable for midterm congressional election years. The magnitude of the election effect should be smallest for the government-sponsored enterprises, privately owned corporations with only weak formal links to the White House.

Economic and Financial Market Conditions

Prime Rate

The interest rate charged to borrowers is one of the most important financial market conditions that affect agency choices about lending as

well as the demand for federal guarantees and insurance. The real prime rate (prime rate less inflation) is an excellent proxy for these borrowing costs. The expected direction of the effect of the prime rate is clear for direct lending and somewhat less clear for guarantee activity. For direct lending, an increase in the prime rate should result in growth in the amount of outstanding loans. For guarantee activity, the federal credit programs are dependent upon private lenders and borrowers applying for guarantee. If the prime rate moves upward, private borrowers may be reluctant to take out new loans. The prime rate should be positively related to direct lending but may be negatively related to guarantee and insurance activity.

Capital Flows

Capital flows into and out of various sectors of the economy should trigger changes in the level of lending and guarantees through the credit programs. Since federal credit programs attempt to divert credit from one sector to another (or at least to increase the level of capital flowing to particular sectors), variation in the flow of capital should be an important consideration for agency managers. If the flow of capital to the household sector, the financial sector, or the farm sector declines, that decline should trigger increased direct lending activity to that sector in the following year.[3]

Income

A final component of agency considerations should be the economic performance of the sector served by the program. Declining real income to particular sectors of the economy—farm income, household income, corporate profits—should lead to increased subsidy activity. Table 2 summarizes the target sectors (and budget subfunction) of each of the sample programs.

One-Time Shocks and Distributed Lags

It is unlikely that the changes in political or economic conditions just described would have an immediate and one-time impact on agency activities. Since the process of loan application and approval is lengthy, agency activities are somewhat persistent in the face of shocks or changes. For that reason, a lag of changes in loans and guarantees outstanding is included in the model. Gujarati (1995) describes this as a

partial adjustment model. The substantive intuition is that there is some long-run equilibrium level of outstanding direct and guaranteed loans in the agency portfolio *given* current economic and political conditions. Changes in the composition of the Congress, budget, prime rate, or economy depress or inflate the desired or optimal level for outstanding loans or guarantees, but the adjustment to the new optimal level is partial in any one year. The observed change in outstanding loans or guarantees is a product of current and past shocks. Interpretation of the coefficients in the partial adjustment model is not substantively different from interpretation in the less general model.

TABLE 2. Sample Program Characteristics

Agency	Budget Subfunction	Sector
Department of Agriculture		
Agricultural Credit Insurance Fund	Farm income	Farm
Rural Housing Insurance Fund	Mortgage credit	Household
Rural Electrification and Telephone	Farm income	Farm
Department of Housing and Urban Development		
FHA Loan Guaranty Fund	Mortgage credit	Household
Low-rent public housing	Housing assistance	Household
Department of Veteran's Affairs		
Veteran's Housing Insurance Program	Veteran's affairs	Household
Small Business Administration		
Business and investment loans	Other advancement of commerce	Corporate
Export-Import Bank of the United States	Other advancement of commerce	Corporate
Student Loan Marketing Association (Sallie Mae)	Higher education	Financial
Federal National Mortgage Association (Fannie Mae)	Mortgage credit	Financial
Farm Credit System		
Banks for cooperatives	Farm income	Farm
Farm credit banks (formerly federal land banks and federal intermediate credit banks)	Farm income	Farm
Federal Housing Finance Board (formerly Federal Home Loan Bank Board)		
Advances to member banks	Mortgage credit	Financial
Federal Home Loan Mortgage Corporation (Freddie Mac)	Mortgage credit	Financial

Source: Guide to the Flow of Funds, Board of Governors, Federal Reserve System; Policy Agendas Project, U.S. Budget Authority Data Set (1947–95).

Models and Estimates

Estimation Strategy

Direct lending and guarantee activity for fifteen programs are used to estimate the responses of program management to changing economic and political conditions. Five panel models are estimated—guarantee activity and direct lending activity for the Cabinet departments and the independent agencies and direct lending of government-sponsored enterprises.[4] The dependent variable in each instance is the standardized level of real loans outstanding for each program.[5] Each series begins in 1975, after the initial establishment and early growth of the GSEs, and ends in 1991, the final year in which quarterly lending activity is reported in the *Treasury Bulletin.*

The modeling approach adopted is fairly conventional: program outputs are treated as a linear function of a subset of variables expected to influence agency policy choices. Two methodological issues merit particular attention: estimation with panel data and simultaneity. The panel structure of the program data offers more information than a single series or a single cross-sectional sample, but it also presents a methodological challenge. Both heterskedasticity and serial correlation complicate the estimation of model parameters. There are a number of alternative estimation strategies that could be used to recover the parameters of the model. Beck and Katz (1995, 1996) compare the performance of ordinary least squares (OLS) with panel-corrected standard errors and feasible generalized least squares (GLS). Hsiao (1986) describes less general fixed effect approaches (OLS with dummy variables). Ordinary least squares with panel-corrected standard errors accounts for the correlation of error both within and across panel units and appears to offer a substantial improvement over alternative methods. However, introduction of a lagged dependent variable creates new complications in this context. Estimates of coefficients in the panel model are inconsistent since the lagged dependent variable may be correlated with the error term. This correlation can stem from both serial correlation and the unit effects that are incorporated in the error term (especially in panels with many cross sections and few time periods). The credit program panel is marginally time dominated, so unit effects are not highly problematic, but inconsistency could be introduced by means of serial correlation. Using conventions described in Greene (2000), a Lagrange multiplier test for serial correlation is reported for each

of the models. Serial correlation is only problematic in the annual models of programs in Cabinet departments, so it is appropriate in most cases to use the simple OLS estimator with panel-corrected standard errors.

The remaining methodological consideration, the problem of simultaneity, can be particularly problematic when ultimate outcomes of agency policy choices are selected as the dependent variable. If ultimate outcomes are modeled as a function of congressional actions *and* congressional actions are responses to these same outcomes, then independent OLS estimates of either relationship would be biased and inconsistent. The dependent variable in the models is not the ultimate outcome—the volume and price of capital for particular borrowers—but an intermediate policy instrument (lending and guarantee activity). It is likely that structural changes to the credit programs are a function of ultimate outcomes—high interest rates, declining capital, or declining sector income. These real and visible credit market problems both affect agency decisions about the volume of lending and motivate Congress to broaden agency lending powers. This suggests that structural changes and measures of financial market performance could be collinear but that the simultaneity will not frustrate the use of a single-equation OLS approach to estimating the impact of structural choices on agency lending activity.

Estimates

Independent Agencies

Table 3 reports model estimates for programs administered by independent agencies. The structural features of the agency—access to the federal financing bank and ceilings on lending activity—have the expected effects. The effects of ceilings described by Ripley and Franklin (1980) are higher for the direct lending programs than for the guarantee programs in similar agencies. Access to the FFB permitted higher levels of lending and guarantee activity—the average liability of an independent agency direct lending program was $11.0 billion higher before the termination of the FFB. Critics of FFB financing feared that agencies could use the bank as an alternative funding source outside the direct control of Congress. The independent agencies were able to expand the pool of loans and guarantees more rapidly when FFB financing was an alternative.

Contrary to expectations derived from the work of Kaufman (1976),

election cues and other measures of political influence affected independent agencies to a greater extent than it affected Cabinet departments (or the GSEs). Direct lending activity increases during presidential election years. Guarantees expand during both presidential and midterm election years. Major legislative initiatives also expanded secondary market intervention of the GSE Sallie Mae and direct lending to agriculture during midterm election years (1982 and 1986). The link between the preferences of elected officials and agency guarantee activity extends to more direct measures of political influence. The levels of outstanding

TABLE 3. Capital Market Intervention: Independent Agencies

Dependent variable: Standardized real agency loans outstanding		
Explanatory Variables	Direct Loans	Guarantees
Act of Congress (legislation)	n/a[a]	n/a[a]
Financed through Federal Financing Bank	1.37**	1.12**
	(0.48)	(0.42)
Ceilings on lending authority	−0.750**	−0.970**
	(0.37)	(0.35)
Cost of capital (real prime rate)	0.016	0.105**
	(0.06)	(0.04)
Sector income (lagged net income)	−0.288*	0.142
	(0.15)	(0.14)
Capital flow into sector (lagged net liabilities)	0.156	0.173
	(0.13)	(0.11)
Presidential election year	0.577**	0.468**
	(0.23)	(0.19)
Midterm election year	−0.113	0.547**
	(0.23)	(0.18)
Party of president (Republican)	−0.290	−0.513**
	(0.25)	(0.19)
Congressional ideology	−0.741	−4.38**
	(2.99)	(2.22)
Budget subfunction allocation (annual first difference)	0.032	−0.320**
	(0.12)	(0.13)
Lagged dependent variable	0.296	0.420**
	(0.18)	(0.10)
Constant	−0.244	−0.780**
	(0.51)	(0.37)
R^2	.48	.58
Lagrange multiplier test for first-order serial correlation	1.24	0.04

Note: Panel-corrected standard errors are in parentheses.
$^*p < .10$ $^{**}p < .05$
[a]No major legislation.

loans and guarantees are much lower under Republican presidents. Guarantee program activity is also linked to changes in the ideological composition of the Senate (a proxy for broader changes in congressional preferences). Outstanding guaranteed loans decline as the Senate becomes more conservative. The magnitude of the effect of congressional preferences is marginally smaller than the effect of presidential influence. Average outstanding liabilities contract by $15 billion under a Republican president and by $11 billion when congressional ideology shifts consistently with the changes in the Senate in 1981 (when the chamber majority shifted from Democratic to Republican). No corresponding effect is observed in the direct lending activity of the independent agencies.

Federal budget priorities are strongly and inversely related to guarantee activity. Agency managers expand guarantee activity when Congress reduces the allocation to the relevant budget subfunction. The program thus incurs few current costs but transfers the contingent liability for the guaranteed lending to the future. The impact of the budget implied by the estimates is not that the budget signals to program managers to expand or contract subsidy activity but that program managers simply use loan guarantee programs (rather than direct loans) to influence capital flows when budget resources are scarce.

The link between economic conditions and program outputs is consistent with expectations. Aggregate lending activity is countercyclical. Guarantee activity increases when the cost of capital increases, and direct lending activity expands as sector income declines. But neither direct nor guarantee programs respond as expected to changes in the flow of capital. As outstanding liabilities (borrowing) contract, the independent agencies do not act to increase the flow of capital to affected sectors. Despite the failure of some of economic controls to predict lending activity as expected, each of the models summarized in tables 3, 4, and 5 explains a substantial part of the variation in program lending activity.

Cabinet Departments

Results for Cabinet department programs are displayed in table 4. The residuals from the models are highly serially correlated, so the OLS estimator is inconsistent and inference is problematic. Overall, the selected controls and structural characteristics explain very little of the volume of lending activity of these programs. Ex ante structural features of the program only marginally affect program outputs. Only a single

structural feature—access to the Federal Financing Bank—is statistically significant. This result is consistent with the estimates reported for independent agencies and suggests that restricting access to capital, accomplished with the termination of the FFB, reduced the growth rates of the federal credit programs in Cabinet departments and independent agencies. Ceilings did not curtail lending and guarantee activity. Major changes in lending and guarantee activity are instead a direct consequence of a limited number of statutory changes (particularly changes in the agricultural credit programs). The guarantee programs in the

TABLE 4. Capital Market Intervention: Cabinet Departments

Dependent variable: Standardized real agency loans outstanding		
Explanatory Variables	Direct Loans	Guarantees
Act of Congress (legislation)	1.05**	0.826**
	(0.21)	(0.20)
Financed through Federal Financing Bank	−0.345	0.442**
	(0.27)	(0.14)
Ceilings on lending authority	−0.146	0.146
	(0.12)	(0.13)
Cost of capital (real prime rate)	−0.049	0.069**
	(0.03)	(0.02)
Sector income (lagged net income)	0.027	−0.151**
	(0.06)	(0.05)
Capital flow into sector (lagged net liabilities)	0.115*	0.035
	(0.07)	(0.05)
Presidential election year	−0.067	0.066
	(0.13)	(0.09)
Midterm election year	−0.086	0.117
	(0.13)	(0.09)
Party of president (Republican)	0.285	0.246**
	(0.20)	(0.129)
Congressional ideology	1.12	−3.17**
	(1.95)	(1.22)
Budget subfunction allocation (annual first difference)	−0.065	0.036
	(0.07)	(0.06)
Lagged dependent variable	0.412**	0.640**
	(0.13)	(0.057)
Constant	0.237	−0.958**
	(0.457)	(0.28)
R^2	.66	.82
Lagrange multiplier test for first-order serial correlation	17.35**	8.76**

Note: Panel-corrected standard errors are in parentheses.
$^{*}p < 10$ $^{**}p < .05$

Cabinet are, like independent agency lending activity, countercyclical. Guarantees are expanded as the cost of capital increases and sector income declines.

Tables 3 and 4 highlight likely consequences of moving a program from an independent agency to a Cabinet department. Cabinet departments are more likely than independent agencies to be the target of direct congressional actions intended to update program activity. The Cabinet department programs are given more specific direction to accommodate new classes of borrowers or to transfer funds across loan programs. Cabinet programs are less responsive than independent agencies to electoral politics but, like programs in independent agencies, lending volume decreases as more Republicans enter the Senate. The effect of a Republican appointee on Cabinet guarantee programs is unexpected: a Republican White House is associated with modestly higher levels of guarantee activity in the Cabinet department programs. Congress faces a trade-off with elevation to cabinet status: more opportunities for direct control but lower levels of response to both economic and political changes that would be expected to stimulate lending activity.

The Cabinet agency models indicate that congressional action in the form of legislation is a key tool for affecting program outputs. This is somewhat unsurprising given the history of reform and reorganization of federal credit institutions. But this source of congressional control has been neglected in the literature on political control of the bureaucracy. This neglect is either by assumption (legislation is too costly) or reflected in empirical tests (where effects of congressional ideology rather than congressional action are examined). Program outputs of the direct lending programs do not reflect passive adaptation by agencies to a changing Congress. Instead, members of Congress do, in practice, overcome problems of scarce resources and collective action to pass legislation that directly affects outputs of the credit programs.

Government-Sponsored Enterprises

Table 5 reports estimates for the government-sponsored enterprises. The direct lending component of the enterprises responds in expected ways to the costs of capital, but, like the direct lending activity of the Cabinet department programs, it reinforces changing levels of borrowing (rather than counteracting declines in available capital). The estimates reveal one important difference between the GSEs and the credit programs located

in the Cabinet and independent agencies. The effects of an important structural change are quite different. When Congress abolished the Federal Financing Bank as a source of capital, rules for the use and acquisition of private capital were liberalized for the GSEs. After these rules for access to private capital were relaxed, the GSE programs expanded. Elimination of the FFB set the stage for the expansion of the GSEs relative to programs in the Cabinet and independent agencies.

Like the independent agencies, the GSEs expand lending activity during election years. This result is inconsistent with the expectation of minimal opportunities for political control over these quasi-public agencies.

TABLE 5. Capital Market Intervention: Government-Sponsored Enterprise

Dependent variable: Standardized real agency loans outstanding	
Explanatory Variables	Direct Loans
Act of Congress (legislation)	0.345**
	(0.09)
Financed through Federal Financing Bank	−0.229**
	(0.12)
Ceilings on lending authority	n/a
Cost of capital (real prime rate)	0.052**
	(0.02)
Sector income (lagged net income)	0.094*
	(0.05)
Capital flow into sector (lagged net liabilities)	0.229**
	(0.04)
Presidential election year	0.260**
	(0.10)
Midterm election year	0.007
	(0.10)
Party of president (Republican)	−0.051
	(0.13)
Congressional ideology	−0.438
	(1.02)
Budget subfunction allocation (annual first difference)	−0.047
	(0.04)
Lagged dependent variable	0.676**
	(0.06)
Constant	−0.246
	(0.20)
R^2	.83
Lagrange multiplier test for first-order serial correlation	.24

Note: Panel-corrected standard errors are in parentheses.
$^{*}p < .10$ $^{**}p < .05$

The expected increase in net secondary market purchases during an election year would be in excess of $10 billion. But the restriction of GSE activity to transactions in direct, private loans that are without guarantees has important consequences for the extent of political control over agency activity. With the exception of Sallie Mae, the GSEs purchase or advance only nonguaranteed loans. Model estimates for lending activity of independent agencies and Cabinet departments reveal that political influence is most visible for the guarantee rather than the direct lending programs. This result extends to the GSEs, for GSE advances or purchases of loans do not vary as either the partisanship of appointees or the ideological composition of the Congress changes. Like the independent agencies and the Cabinet department direct lending programs, only structural choices by Congress and elections affect the volume of lending activity by these private corporations. This result suggests that decisions about how lending is to be subsidized, directly or through guarantees or insurance, are more important than decisions about the type of agency that will ultimately administer the program.

Conclusion

What do the federal credit programs collectively tell us about political control? First, program structure matters. The presence of some very basic structural effects is a clear indicator that ex ante instruments of political control can operate as expected: ceilings and funding sources have substantial effects on program growth. Second, congressional decisions both to reorganize existing programs (under FIRREA or the Agricultural Credit Act) and to terminate the FFB reveal that structural choices are not permanent. Members of Congress act to update the structure of the credit programs. Six decisions by Congress—four legislative updates to the lending practices of credit programs, termination of the Federal Financing Bank, and the creation of the Department of Veteran's Affairs—account for the major structural changes observed for these fifteen programs over a sixteen-year period. Finally, the choice of policy instrument, direct loans or loan guarantees or insurance, also matters. Loan guarantee programs are more responsive to measures of political influence and appear to be more amenable to political control by elected officials.

The federal credit programs, located in a variety of agencies, offer a distinctive avenue for investigating the effects of structural choices. Federal credit programs are updated and reorganized frequently. Legislation

affects the terms of loans, eligible borrowers, and the allocation of agency resources across guarantee, insurance, and direct lending programs. In the case of federal credit programs, structural controls complement shared powers of appointment and budgets. This general feature of credit programs—structure is altered by contemporary actors—suggests that variation in agency structure needs to be more broadly incorporated into the political control literature. The observed structural changes challenge some presumptions of the extant political control literature. Reorganization is patently inconsistent with any description of members of Congress as disinterested or passive. Reorganization also compels us to question the existence of high and unmanageable costs of statutory change. Members of Congress dissatisfied with the capital market outcomes can reform the program to address contemporary needs.

These types of change in program structure blur the distinction, in practice, between ex post and ex ante instruments of political control. Agency structure is conventionally identified as an instrument of ex ante control. Structure is fixed at agency creation and difficult to manipulate. Instead, the federal credit programs indicate that the Congress updates structural features. Agency structure is updated ex post. The federal credit programs instruct us that this type of ambitious and expensive rehabilitation of agencies is not uncommon. Reorganization and direct instructions, like appointments and budgets, are credible instruments of political control that are used in the American context with surprising frequency.

Notes

1. Budget data are extracted from the Policy Agendas Project, U.S. Budget Authority Data Set (1947–95). The data used here were originally collected by Frank R. Baumgartner and Bryan D. Jones with the support of National Science Foundation and are distributed through the Center for American Politics and Public Policy at the University of Washington. Neither the foundation nor the original collectors of the data bear any responsibility for the analysis reported here.

2. "Special Analysis F, federal credit programs," Budget of the U.S. government, various fiscal years.

3. All data on sector income and capital flows are extracted from the quarterly *Guide to the Flow of Federal Funds* published by the Board of Governors of the Federal Reserve System. Capital flows are lagged one period in order to avoid problems of simultaneity. The prime rate series is available from the Federal Reserve Economic Database, Federal Reserve Bank of St. Louis.

4. Only a single government-sponsored enterprise, Sallie Mae, conducts secondary market operations with guaranteed loans. There are insufficient degrees of freedom to estimate the model with the limited annual data.

5. Each program series is standardized to have a mean of zero and a standard deviation of one. This permits comparison across programs of different size. With the exception of Sallie Mae, the standardized series are trend stationary.