THE DETERMINANTS OF FEDERAL SPENDING FOR THE 
ADMINISTRATION OF JUSTICE

THESIS

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF ARTS

By

Gina Gabriano, B.A.
Denton, Texas
December 1998

This study develops and empirically tests a model of the determinants of federal spending for crime-fighting policies. An inter-disciplinary approach to building the model is utilized that merges ideas from budgeting, policy analysis and criminology. Four factors hypothesized to impact federal spending for the administration of justice are operationalized as eight variables and tested using ordinary least squares regression analysis on time series data. The factors hypothesized to impact federal spending in this area are economic constraints imposed on government spending, the ideological makeup of Congress and the president, the actual crime rate, and the public's attitude toward crime. Five of the eight variables demonstrated statistical significance at the .10 level or better.
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Our government today is larger, more powerful and more involved in societal issues than ever before. There is also a bigger national debt. Since our government has grown, government spending has exploded. In this century, we have realized a 4,300 percent increase in aggregate government spending (Buchanan 1977, 7). In an era when the government is responsible for addressing many social problems, yet is concerned about balancing the budget, it is reasonable to ask how it decides which programs get what. Because of the nature of entitlements, laws that promise the government will pay specific amounts of money to individuals who meet certain criteria, the decision to spend has sometimes already been established. How much is spent on entitlements depends on the number of individuals who meet the criteria. However, other programs are more complicated because the decision to spend money is not established and how much is not predetermined by a set of criteria. If these types of programs become laws, they are called appropriation acts, laws that give governmental agencies permission to spend or contract to spend specific amounts of money during the coming year or years (Wildavsky 1992, 9).

One such area of the budget is the administration of justice. Protecting citizens from crime is a Constitutional principle we expect our government to uphold. We rely on our government for protection from and solutions to everything from the heinous, juvenile crimes to the sophisticated, white-collar crimes that plague our nation. Hundreds of
policies have been drafted and billions of dollars have been spent in order to address the crime issue. Since crime is an on-going problem, governments continue to spend a lot of time and money to address this issue. What influences the federal government's decision to spend money in this area? This research project develops and tests a theory of federal spending for the administration of justice, anticipating that the theory could be generalizable to other domestic spending areas.

The federal budget represents how much money the federal government intends to spend on its commitments. These commitments are in the form of either entitlements or appropriation acts as mentioned above. The bottom line for each type of commitment is either a federal outlay or a federal grant. The Constitution grants budgetary power to Congress, which has the authority to levy taxes and appropriate funds in accordance with legislation. Simply put, the Congress ensures that commitments of the federal government are honored in the federal budget.

In reality, the budgetary process is not that simple. History has changed this process, creating new implications and complications. Prior to 1921, the executive branch was kept out of the budgetary process. The Constitution does not grant budgetary authority to the executive branch, and there did not seem to be a need for it. However, as the nation grew, the government and its responsibilities grew. People lost faith in the way Congress handled the budget, and in 1921, the Budget and Accounting Act was enacted to carve out an executive role and establish executive initiative. The point of having an executive role is to overcome the piecemeal process by which Congress put budgets together and ensure that formal attention is given to total spending (Wildavsky
1992, 57). The 1921 act requires the president to submit an annual budget to Congress. It created the Bureau of the Budget (renamed the Office of Management and Budget [OMB] in 1970) to aid the president with this new duty (Schick 1995, 35).

The executive budget that remains today has several implications. First, the internal process is more complicated as more people and information are added. Second, even though the president cannot initiate legislation, nor does the Congress have to abide by his budget submission, presidential priorities do affect federal spending patterns. Finally, since the president's budget takes aggregate spending into account, the realization of finite resources affects federal spending patterns.

Just as the budgetary process changed, scholarly research in this area tries to take account of those changes. Budgetary research was once dominated by one theory, incrementalism. This theory describes budgeting as a highly internalized process that makes marginal adjustments to the previous year's budgetary base (Wildavsky 1964, 15). Empirical findings supported this notion (Wildavsky 1964, Fenno 1965). However, incrementalism's simplistic view of the budgetary process left many scholars dissatisfied. By the mid-1970s, a theory of macrobudgeting emerged. This theory describes the budgetary process as centralized and primarily concerned with aggregate levels of spending (LeLoup 1988, 25). Macrobudgeting considers the limited budgetary resources due to fiscal policy and overall budgetary philosophic considerations. In addition, it views budgetary decisions as the process of allocating the total budget among various agencies (Auten, Bozeman, Cline 1984, 504). This theory tries to capture the impact of such centralizing tendencies as the executive's role in budgeting and the passage of the Congressional Budget
and Impoundment Control Act of 1974. Just as the 1921 act created an executive role that paid attention to total spending, the 1974 act created the Congressional Budget Office (CBO) and provided a budget resolution that allows Congress to vote on the size of the deficit, total spending, and budget priorities (Schick 1995, 37). Even though macrobudgeting tendencies are now in practice, a complete transformation from incrementalism to macrobudgeting has not taken place. Thus, scholars realize the need to merge these two theories to better explain the factors that influence government spending.

This research project goes further than reconciling the two budgetary theories on federal spending. These two theories are mostly concerned with the economics of budgeting. To understand federal spending patterns more fully, one must understand the process that leads to spending decisions. Aaron Wildavsky (1992) describes the budget process as a policy-making process that results in governmental commitments. This view implies that there are more than just economic factors at work on the budgetary process. The budget links what the government does with the amount of resources necessary to do it. Therefore, this project considers research from the policy analysis subfield.

This subfield of political science focuses on the processes of decision making, the substance of decisions, and the results of decisions. Policy analysts are interested in who or what influences policy and when or how. To better understand the policy process, analysts divided it into several cyclical stages, meaning that policies are constantly being evaluated, changed, and re-evaluated. In addition, scholars have categorized policies differently to analyze them better. While the process is constant, the relationships among key people and the environment differ depending on the stage of the process and the type of policy. Key
players change slightly from stage to stage, the relationships range from stable to unstable, and the degree of conflict ranges from low to high. The environment includes both the internal and external framework. While the internal environment refers to the actual process and structure of the government, the external environment refers to any economic, social, or political pattern or event that sets the context in which all policy decisions are made (Ripley 1985, 38).

This research project utilizes some of these ideas from policy analysis. Crime fighting is taken as a specific policy type and the people relevant to crime-fighting policies are considered. As a result, a specialized framework is constructed in which to consider those factors relevant to crime-fighting policies. Criticisms of analyzing a specific policy area are that the research tends to be subjective, atheoretical and nongeneralizable (Sabatier 1995, 12). The goal of this project is to build a theory-driven model that is generalizable to other domestic spending areas of the budget. This essay attempts to merge the ideas from policy-making and budgetary research to build a model that captures the significant factors in federal crime expenditures.

By merging policy analysis and budgetary research, non-economic as well as economic influences on the budget can be considered. The inclusion of non-economic factors helps capture the political nature of the budget process. The politics of budgeting raises several interesting questions. First, is the budget simply a technical and efficiency-driven process? Should it be? How open is the American budgetary process to external influences? Is the budget process constrained by limited resources? With these questions
in mind, this research project considers the political implications of federal spending on crime fighting.

Even though policy analysis research and budgetary research provide much insight into the factors that influence federal spending decisions, it would be remiss not to review analyses by criminology researchers considering the topic of this analysis. Much of the research on crime analyzes human behavior, rather than budgetary allocations for the administration of justice. The idea is that if policy makers understand criminal motivations, they are better able to draft legislation that addresses the crime issue. The problem is that there are many theories of criminal behavior and not much verifiable knowledge as yet. Criminology researchers continue to produce studies with inconclusive results, which leads to a lack of consensus (Bernard 1990, 330).

Some criminology research has been done in the specific area of public spending on crime policies. However, none of the essays I reviewed on public spending and crime policies used any concepts from budgetary or policy analyses. The problem is not so much what does get consideration, as what does not get consideration. Economic factors and key people to the budgetary process are left out. Despite these problems, what can be used is the notion that the environment, in these cases crime rates, may be important to spending decisions.

The following section reviews the relevant literature in the areas of budgeting, policy analysis and criminology. By combining ideas from all three areas, I then build a model of federal spending for the administration of justice. The results are analyzed and discussed, followed by the conclusions drawn from this research project.
CHAPTER 2

LITERATURE REVIEW

Introduction

This chapter describes and analyzes the theoretical body of literature on the American budgetary process and policy-making. Limited research has been done in federal crime-fighting expenditures. However, the theoretical literature provides many clues to building such a model. Moreover, some of the research from criminology can aid in developing this model. This chapter begins by analyzing the two main schools of thought regarding the budgetary process, and the recent attempts to combine these schools. It then discusses several theories on policy making in the American system. Finally, it discusses the criminology literature in an effort to merge the various ideas presented.

Theories of Budgeting

In 1940, V.O. Key asserted that budgetary analyses lacked a theory to drive them. He recognized the need for a broad theory that included both the incremental and centralizing elements of the federal budgetary process (Key 1940, 1144). Budgetary research, however, has been dominated by two schools of thought that are only beginning to converge in the way that Key urged on budget scholars more than 50 years ago. Incrementalism, or microbudgeting, and top-down, or macrobudgeting are the two major theories from which a new theory is developing. Lance LeLoup defines incrementalism as follows (1988, 23):
"It concentrates on the parts, not the whole. It defines budgeting as a bottom-up process of making marginal adjustments in budgets, based on the stable roles of participants and political bargaining that results in minimal changes in budgets from year to year."

Macrobudgeting, on the other hand, concentrates on spending totals. It is best described as a centralized, top-down process that is primarily concerned with aggregate levels of spending (LeLoup 1988, 25). Since each theory is primarily a tool for analysis, neither one completely describes the budgetary process. However, the movement toward combining elements from both theories that has emerged in the current research is a step toward creating a tool of analysis that will more completely describe this complex process.

Incrementalism became the dominant budgetary theory in the mid-1960s with efforts by Aaron Wildavsky (1964) and Richard Fenno (1965). They studied the interaction of agencies and Congress and the resulting appropriations decisions. The conclusion was that budgeting is incremental, not comprehensive, because agency budgets are based on last year's budget and are rarely viewed as a whole (Wildavsky 1964, 15). Thus, the primary focus of incrementalism is on marginal adjustments to the previous year's budgetary base. It assumes that these marginal increments are determined by internal processes and therefore, external factors are of little relevance (Auten, Bozeman, Cline 1984, 503). In the mid-1970s, scholars began to question the validity and integrity of incrementalism as a tool of analysis despite empirical findings that supported it.

The major criticism of incrementalism is that it does not take account of the changes in budgeting that have occurred throughout this century. Scholars agree that the two fundamental changes that occurred this century were the creation of the executive budget,
followed by the demise of the balanced budget. First, the annual budget changed from a Congress-dominated responsibility to one in which both Congress and the president have dominant roles (Schick 1995, 33). Since the Constitution gives Congress the authority to levy taxes and appropriate funds in accordance with legislation, the executive branch was kept out of the process until the Budget and Accounting Act of 1921, which carved out an executive role and established executive initiative. Franklin D. Roosevelt is an early example of a president who really used executive initiative. Faced with the Great Depression, he redefined the role of the government in general and the presidency specifically. Through FDR, the government became actively involved in the economy of the country. With the passage of the National Industrial Recovery Act (1933) and the Agricultural Adjustment Act (1933), FDR, early in his administration, locked in to the New Deal and economic nationalism (Davis 1986, 122). However, it was not until 1968 that legislation on crime took on this national characteristic. Lyndon B. Johnson signed the Omnibus Crime Control and Safe Streets Act (1968), the most comprehensive set of crime proposals sent by a president to Congress ever (Congress and the Nation 2, 323). It was not until 1984 under Ronald Reagan that another presidential crime initiative equally as comprehensive was passed into law (Congress and the Nation 6, 698). Today, presidents are expected to be involved in legislative and budgetary decisions. Incrementalism does not adequately capture the executive budget.

The second change to budgeting that occurred was the demise of the balanced budget after the Vietnam War. Unlike previous post-war patterns, federal spending was not
reduced and emphasis on balancing the budget did not return. Keynesian economics became the dominant economic philosophy. The Keynesian premise states that:

"The goal of policy should be to balance not the budget, but the economy. The government should adopt the levels of spending, taxing, and borrowing that will produce acceptable levels of GNP, inflation, and unemployment" (Wildavsky 1992, 147).

The waning of budget balancing produced yearly deficits, which has led to a huge national debt. As a result, interest in balancing the budget has returned with legislative efforts to centralize and control deficit spending. The 1998 budget was the first budget to produce a surplus since 1969. Both of these changes, the executive budget and the demise of the balanced budget, contribute to the importance of including top-down factors in budgeting analyses.

Three pieces of legislation passed in this century are crucial to understanding and analyzing the transformed budget process. First, the Budget and Accounting Act of 1921 establishes the executive budget system that remains today. The point of having an executive role is to overcome the piecemeal process by which Congress put budgets together and ensure that formal attention is given to total spending (Wildavsky 1992, 57).

The 1921 act requires the president to submit a budget to Congress each year. It created the Bureau of the Budget to help the president carry out this new duty (Schick 1995, 35). Under the 1921 Act, agency requests for funds are reviewed by the OMB meaning, in effect, that the executive branch decides how much will be requested (Schick 1995, 35).

Not to be outdone, Congress passed the Congressional Budget and Impoundment Control Act of 1974, which created the Congressional Budget Office (CBO) and provided a budget
resolution that allows Congress to vote on the size of the deficit, total spending, and budget priorities (Schick 1995, 37). The president still submits his yearly budget, but now Congress may rely on its own budget resolution.

Last, Congress passed the Balanced Budget and Emergency Deficit Control Act of 1985, commonly called the Gramm-Rudman-Hollings (GRH) Act, to try to balance the budget by progressively reducing annual deficits and by canceling funds if the projected deficit exceeded the limit (Schick 1995, 39). This legislation has been much criticized. First, this concept of balancing the budget caused so much controversy that certain entitlements, such as social security, veterans’ benefits, and food stamps were exempt from budget reductions (Straussman 1988, 109). Also, some critics argue that the law was inherently defective. For example, it did not require that the actual deficit be within the annual limit, only that the projected deficit be within the annual limit (Schick 1995, 39). This led to manipulation of budget estimates and accounting tricks, instead of real savings and deficit reduction. Despite the lack of success of the GRH act, the trend toward budgeting at the aggregate level is still prevalent. This centralizing trend in the budget process led budget scholars to consider macrobudgeting factors in their analyses.

Macrobudgeting describes a centralized, top-down process concerned with aggregate levels of spending, and budget totals. Macrobudgeting theory includes two important principles. First, it takes into consideration that there are limited budgetary resources due to fiscal policy and overall budgetary philosophic considerations. Second, it views budgetary decisions as the process of allocating the total budget among various agencies (Auten, Bozeman, Cline 1984, 504). Macrobudgeting as a tool of analysis began
in the late 1970s. Congressional budget scholars were first to use it to study Congress because the implications for macrobudgeting were so clear in the 1974 act. However, it was not until the 1980s that the executive branch received scholarly attention, in part because of the dominance of incrementalism and also because more changes to the budget process occurred then.

Two significant budgetary changes occurred in the 1980s. First, the trend toward packaging, which means putting taxing, appropriating, authorizing, and debt limitation bills together in one piece of legislation, reinforced centralization and fostered macrobudgeting (LeLoup 1988, 27). Packaging resulted in the acceptance of some top-down budgeting within Congress by putting more pressure on Congress to avoid gridlock and pass legislation without crippling amendments. Second, the relationship between Congress and the president on budgetary matters that emerged in the 1980s is more macro-oriented than ever before. The Senate Majority Leader and Speaker of the House now negotiate with the president on overall decisions concerning the relative size of defense, domestic discretionary, and entitlement spending, deficits, and revenues (LeLoup 1988, 28).

Empirical research in the 1970s and 1980s included macro-level factors by considering and analyzing the idea of trade-offs among policy objectives. To include the idea of trade-offs means that when studying spending patterns of defense policy, for example, patterns of domestic and fiscal budgetary policies must be considered as well. A 1983 study created the Competing Aspiration Levels Model (CALM) to statistically represent the sources of tension in the budgetary process. The research focused on the presidential budgetary process for the years 1955-1980 to capture how budgetary trade-offs
were decided. The study found that individuals in each policy area (defense, domestic, and fiscal) primarily focus on their own matters, but expenditure desires are tempered by the realization of budgetary constraints (Fischer and Kamlet 1984, 370).

In 1987, another study expanded the use of the CALM model by examining both the congressional and executive budgetary processes. The analysis includes the relative influence of fiscal pressures, political variables, economic fluctuations, program-specific spending pressures, and spending pressures in other programs on budgetary outcomes. The results indicate that both micro- and macro-level factors impact budgetary outcomes. However, Kamlet suggests that future budget analyses should examine different spending categories separately because he found some variables to have more or less importance depending on the policy area. For example, defense spending more so than any other area of the budget is constrained by pressures for expenditures in other programs (Kamlet and Mowery 1987, 169). Since the defense budget is a big percentage of the overall budget, it makes sense that defense is affected the most by the issue of available resources.

Finally, a 1974 study developed a model to predict government expenditures at the agency level. Political, economic and social variables were used to determine what affects an agency’s budgeting behavior. The study concluded that for a federal agency, the budget process is highly internalized and generally little influenced by the outside world (Davis, Dempster, and Wildavsky 1974, 448). However, certain types of agencies are more susceptible to outside influences than others. Crime-fighting expenditures was put in the general services category, which was found to be subject to considerable outside impact from environmental variables (Davis, Dempster, and Wildavsky 1974, 450).
The major criticism of top-down budgeting is that there is now too much scholarly attention given to it at the expense of incrementalism (LeLoup 1988, 37). While top-down tendencies are now in practice, the budget is not completely explained by macrobudgeting. While the realization of finite resources tempers government spending, not every item on the budget can possibly be reviewed. Therefore, government officials use last year’s budget to decide spending for the current year’s budget, which reflects incrementalism. Thus, trying to balance both theories is the most desirable solution to capture what is really going on in government.

Despite attempts to control the budget by centralizing the process and paying attention to aggregate levels of spending, the budget continues to grow. Understanding government growth is important because even after adjusting for inflation, budget scholars are left with explaining a 4,300 percent increase in aggregate government spending in this century (Buchanan 1977, 7). And this analysis is more than 20 years old now. In 1929, federal spending consumed 3.1% of the gross national product, compared to 23.1% by 1980 (Rabushka 1982, 334). Such economic factors as the rising cost of public services, increases in income, and a growing population account for about half of government spending over this century (Borcherding 1977, 56). Some researchers suggest that bureaucrats are also partly responsible for perpetuating government growth. They wish to secure their own positions by increasing appropriations to their agencies. Empirical evidence supports the hypothesis that bureaucrats’ pay, power and prestige are positively related to increasing federal expenditures (Borcherding 1977, 60). The bureaucratic framework, then, is built to increase spending rather than be efficient. Other research
suggests that because bureaucrats are rational actors and their voter turnout rate is substantially higher than the population at large, they have been able to perpetuate government growth (Bush and Denzau 1977, 90). However provocative the concept, Bush and Denzau assume that bureaucrats provide the swing vote, yet fail to prove it. Other non-economic factors besides bureaucratic influence, then, must be considered to fully explain federal spending patterns. While the economic factors and bureaucratic influence will be included, the model in this analysis is not limited to them.

To understand federal spending patterns, one must understand the process that leads to spending decisions. Aaron Wildavsky (1992) describes the budget process as a policy-making process that results in conflicting commitments. Federal spending is the result of two kinds of laws, including appropriations acts and entitlements. Appropriations acts are laws that give governmental agencies permission to spend or contract to spend specific amounts of money during the coming year or years. Entitlements are laws that promise the government will pay specific amounts of money to individuals who meet certain criteria (Wildavsky 1992, 9). The result is a budget that represents various governmental commitments to individuals and agencies. The budget, then, links what the government does with the amount of resources necessary to do it.

Since this project is a political study of budgeting, the meaning of politics in the context of budgeting must be clarified. A 1993 essay discusses five ways of viewing politics in the budget, which includes reformism, incrementalist bargaining, interest-group determinism, process and policy making. First, reformism argues that politics should be kept out of budgeting. Budgeting should be technical and efficiency-based, not based on
opinions and priorities. This view is overly simplistic; ignoring the political aspects of budgeting will not help us understand the process. Second, incrementalist bargaining suggests that microbudgeting is valid in that negotiations take place among routine actors, and that conflict is limited because everyone gets something and no one gets too much (Rubin 1993, 198). Just as microbudgeting is criticized, incrementalist bargaining does not take account of any external factors that may affect the process. The third view states that interest groups are dominant actors in the budget process, and as such, conflict is high because various coalitions are defending various interests (Rubin 1993, 198). It may be an overstatement to say that interest groups are the dominant actors in the budget process. This view may overlook the importance of the internal actors and processes. Fourth, the politics of process suggests that the branches of government, interest groups, and the public are all slaves to the process. The players and their strategies may or may not be important depending on what the budget process allows. With this view, the American budgetary process must be analyzed in terms of its openness to a variety of influences. The final view states that the politics of budgeting centers in policy debates. By allocating funds to particular programs, the budget decides federal, state and local priorities (Rubin 1993, 199). This view captures the spirit of macrobudgeting by suggesting that the federal government must decide priorities because budgetary resources are limited. None of the theories address the relationship between Congress and the president concerning budgeting. Given the recent trend to split power at the national level between Republicans and Democrats, the politics of these types of reconciliatory efforts should be considered.
Recognizing the politics of the budget is crucial to constructing a model that explains federal spending patterns. The next section provides the political context of the budget process by reviewing the relevant work in the area of policy making. Understanding the players, as well as environmental issues that affect policy making helps build a model of the budgetary process that includes both economic and noneconomic factors.

Theories of Policy Making

In 1959, Charles Lindblom developed a theory of policy making. He described it as limited, noncomprehensive change representing mutual adjustment through successive limited comparisons (Lindblom 1995, 115). Lindblom argues that comprehensive change on complex policy issues cannot be practiced because it requires intellectual capacities that men do not possess. Therefore, he suggests that given the limits of knowledge, “simplifying by limiting the focus to small variations from present policy makes the most of available knowledge” (Lindblom 1995, 121). He calls this method of policy making successive limited comparisons, or the branch method because policies are continually built out from existing policy by small degrees. This method describes an incremental policy-making process.

More recently, a theory of nonincremental policy making has developed in the literature. Paul Schulman argues that incremental policy making does not describe every kind of policy making; rather some policy undertakings are large scale and demand comprehensive decisions. These nonincremental policies have three primary characteristics. First, the public puts pressure on the federal government to do something in an area deemed insufficiently organized to address the perceived problem. This initial stage
in called underscaling (Schulman 1995, 129). However, this initial stage can quickly turn into overscaling due to the fleeting nature of public opinion (Schulman 1995, 130). If public opinion shifts to another issue, then governmental activity exceeds demand. Public support wanes, making it difficult for the agency to continue justifying its position. Second, nonincremental policy is unstable due to continual underscaling and overscaling. Finally, nonincremental policy is indivisible, which means that the issue cannot be adequately addressed in piecemeal fashion. The issue requires large-scale, all-or-nothing commitments, the opposite of what Lindblom argued was possible. While these two theories may not encompass every kind of policy making, they require the policy scholar to consider the basis from which policies are made.

The policy analysis subfield of political science focuses on the processes of decision making, as well as the substance and results of decisions, perhaps at the expense of formal theory. Policy analysts are interested in who or what influences policy and when or how. To better understand the influences on policy, analysts have broken down the process into several stages including agenda building, formulation, implementation, evaluation, and impact (Ripley 1985, 94). The stages are cyclical, meaning that policies are constantly being evaluated, changed, and re-evaluated, much like the theory Lindblom set forth (Ripley 1985, 47). The process is constant but the players and the environment differ depending on the stage of the process and the type of policy. While scholars have categorized policies differently, they recognize that the main purpose of a policy typology is for analysis, and that not every policy will fit neatly into a category. Randall Ripley’s typology includes four domestic policy types and three foreign policy types. He names the
four domestic policy types distributive, competitive regulatory, protective regulatory and redistributive; and the foreign policy types structural, strategic, and crisis (Ripley 1985, 60). For the purposes of this essay, only the relevant domestic policy types are reviewed.

Crime fighting fits best into the protective regulatory category, which is comprised of policies that protect the public by setting the conditions under which various private activities can or cannot take place (Ripley 1985, 66). However, since the 1960s, crime fighting has an element of distributive policy making. This type of policy requires the government to support desirable activities in the form of a subsidy (Ripley 1985, 60). Included in this category are general grants, money given to states or localities for general purposes. Therefore, since the federal government has given grants to the states for the purpose of crime fighting since 1967, it must be considered a hybrid with elements of both protective regulatory and distributive policies.

Analyzing the relationships and influences of protective regulatory and distributive policies provides a specialized framework in which to consider those factors relevant to crime fighting policies. Criticisms of analyzing a specific policy area are that the research tends to be subjective, atheoretical and nongeneralizable (Sabatier 1995, 12). The goal of this essay, however, is not to build a model so specialized that it only applies to crime-fighting policies. Rather, the goal is to build a theory-driven model that is generalizable to other areas of the budget. This essay attempts to merge policy-making and budgetary research to build a model that captures the significant factors on federal crime expenditures and may be expanded to other domestic expenditures.
Policy analyses are not confined to the institutional factors of the process, such as Congress, the president, or the bureaucracy. Policy researchers recognize the need to include external environmental factors, as well as the relationships among the various players in the policy process. Thus, the internal and external environments plus relationships among players are essential to policy analysis. First, the internal environment refers to the actual process and structure of the government. Second, the external environment includes a wide variety of factors, from unemployment to international terrorism, that have policy consequences. The external environment is any economic, social, or political pattern or event that sets the context in which all policy decisions are made (Ripley 1985, 38). Finally, relationships vary according to type of policy and stage of the process. Principal players change slightly from stage to stage. Relationships range from stable to unstable, and the degree of conflict ranges from low to high. For example, during the formulation stage, members of Congress, executive agencies and consumer groups are the principal players for protective regulatory policy types. The relationships are unstable and the degree of conflict is moderate. However, during the implementation stage, the bureaucrats and consumer groups become the principal players. The relationships continue to be unstable and the conflict is moderate with some outbursts (Ripley 1985, 84).

The concept of issue networks has been used to describe the relationships among players that influence policy making. An issue network is a group of individuals who share knowledge on certain aspects of policy (Heclo 1995, 48). What they do is "complicate calculations, decrease predictability, and impose considerable strains on those charged with government leadership" (Heclo 1995, 49). Defining who these individuals are is difficult as
network participants constantly change and vary according to policy area. Using this concept as a tool for analysis could prove difficult as it does not clarify the players, the process, or relationships. Instead of defining the policy process, this concept complicates it beyond analysis. Therefore, this research project uses more standard ideas of policy making, such as policy typologies and stages of the policy process.

As stated above, crime fighting is a hybrid with elements of both protective regulatory and distributive policies. The implications of such a hybrid are that public opinion, crime rates, Congress and the president are all relevant factors to federal expenditures on crime policies. The model in this analysis uses public opinion on crime instead of interest group pressure because of the nature of the issue. While there are interest groups pursuing specific goals within the crime-fighting arena, the situation is unique here in that there are no pro-crime or anti-crime groups competing with each other for resources to pursue their goals. The more interesting question concerning this issue is whether the mass public influences governmental decisions.

Research suggests that public opinion does have a role in policy making. Some research suggests that public opinion guides the agenda setting stage by setting limits on the realm of possibilities to solve national dilemmas, but that it is rarely coherent enough to affect debates among policy specialists over which possibilities should be seriously considered (Kingdon 1995, 107). Therefore, the more unified and intense public opinion is on a given national dilemma, the more likely it will make that dilemma a priority on the national agenda. As stated earlier, since Congress cannot consider every item on the budget, perhaps it focuses on those items considered agenda priorities. Other research
suggests that public opinion represents a national mood to which elected officials respond (Stimson, MacKuen, and Erikson 1995, 544). Stimson describes public opinion as dynamic, as public sentiment changes over time. His research found that large-scale shifts in public opinion produce large-scale shifts in government action (Stimson, MacKuen, and Erikson 1995, 559). Since government officials tend to respond to a national mood, perhaps this research supports the idea that public opinion guides the agenda setting stage of the policy process. The problem with the methodology used in this research to code public opinion is that it was somewhat subjective. Answers to public opinion polls were coded to come up with a percent liberal public opinion. Even though this methodology could be problematic, it is the best measure of public opinion in the research so far.

This model takes account of the effect the crime rate has on federal expenditures for the administration of justice. The crime rate provides the external context in which crime policies are considered. Even though the crime rate fluctuates, the general trend of crime is that it is on the rise. Thus, the increasing crime rate legitimizes the need for government to spend money on crime-fighting policies.

These first two factors, public opinion and the crime rate, are brought together by the media because people rely on the media for most of their information about current events (Wright 1985, 12). Critics charge that the media disproportionately cover crime stories, which leads the public to believe that the situation is worse than it really is (Wright 1985, 21). Research has shown that this claim may not be entirely true. Even though crime news receives ample coverage compared to other types of news, it does not prevent other news coverage from expanding at times of major activity, such as elections (Graber 1980,
42). Also, crime news was generally found to be factual rather than analytical in nature. Thus, people are left to draw their own conclusions (Graber 1980, 83). Individuals, then, use the media in ways that suit their own experiences, needs, and expectations (Graber 1980, 115).

To understand how Congress influences the budget process, one must understand what influences congressmen. Fortunately, research has contributed to our knowledge of congressional influences. Elections, constituents, and political parties are all major congressional influences. First, most scholars agree that the main objective of legislators, or any political candidate, is winning elections (Jacobson 1993, Hall 1993, Hinich and Munger 1995). A congressional candidate relies on support from various groups to win an election and as a result develops many loyalties to his political party, interest groups, and his constituents, for example. Once in office, a congressman's desire to be reelected causes him to structure the institution and its policy outputs in ways that do not harm his reelection chances (Alford and Brady 1993, 141). Second, constituents also influence congressional behavior. Richard Hall (1993) asserts that committee assignments are important to the Congressman's career because being on the right committees allows him to best serve his constituency, which in turn helps him get reelected and allows him to make good public policy and acquire influence within Congress. Finally, there are two schools of thought concerning political parties. One view states that political parties are secondary to other influences; therefore, partisan considerations and motivations do not fully explain policy actions (Eldersveld 1995, 313). The second view, which is the one that this analysis uses, states that voter decisions on which party should govern determine the basic direction of
public policy (Eldersveld 1995, 316). In other words, the ideology of the politicians shapes the substance of policy. Political parties are important in the sense that they stand for an ideology, or at least a consistent set of organizing principles, which influences policy making. Ideology, then, can be described as a force that both legitimizes and constrains the governing body (Hinich and Munger 1994, 107). Therefore, a legislator is influenced by his party because he determines what is important to him by choosing a set of organizing principles by which to be legitimized and constrained.

Presidential influence on policy making must also be considered to have a more complete understanding of the forces at work on the budgetary process. Research suggests that the president's role in policy making should be analyzed by taking into account constitutional limitations. Even though the Constitution does not grant the president power to draft legislation, his influence in policy making is not non-existent. Scholars have analyzed presidential influence on policy making by determining when and how the president affects the various steps in the legislative process. Research has shown presidential influence to be minimal during the developmental stage of policy making (Jones 1994, Schroedel 1994). Given constitutional restraints, this finding is not surprising. However, the president seems to have influence during the agenda-setting stage of the legislative process. Given the multitude of issues, the president acts as the designator of which policies will be addressed and hence sets the agenda (Jones 1994, 181). He prioritizes by concerning himself with issues of high importance (Schroedel 1994, 183). To push his agenda through, he engages in coalition-building. The president must cooperate and compromise with members of Congress to get his policies through the process.
Research supports this claim by finding that the president needs the support of key congressional actors (i.e. committee chairs) to get his initiatives enacted more so than congressional actors need the president (Schroedel 1994, 182). Since the president does influence the policy-making process, especially at the agenda-setting stage, the argument for party identification that is stated above must be considered here as well. The president's party identification is indicative of what is important to him because the political party represents a consistent set of organizing principles that both legitimizes and constrains this governing official (Hinich and Munger 1994, 107). Also, party identification typically gives the president a minimum number of votes in Congress on which he can build a majority.

The above discussion on public opinion, crime, Congress and the president provides much insight into the non-economic factors of spending decisions. However, I think it would be remiss not to review analyses by criminology researchers considering that the topic of this analysis is federal spending on crime policies. The next section reviews the relevant criminology research in an attempt to more completely understand the influences on federal spending decisions for crime policies.

Crime Research

This section reviews the literature in the area of criminology. Much of the research on crime analyzes human behavior to better understand why individuals engage in criminal activity. The idea is that if policy makers understand criminal motivations, they are better able to draft legislation that addresses the crime issue. However, there are many theories of criminal behavior and not yet much verifiable knowledge because there
has been a lack of consensus among criminology researchers who produce studies with inconclusive results (Bernard, 1990 330).

Several problems have slowed scientific progress in this area. First, scholars have differed in their placement of criminology as the proper domain of sociology or political science. Edwin Sutherland (1883-1950) claimed that criminology was the proper domain of sociology and his research reflected this view as no non-sociological factors were considered (Laub and Simpson, 1991, 1402). On the other hand, Eleanor and Sheldon Glueck chose an interdisciplinary and scientific approach to their research (Laub and Simpson, 1991, 1404). Since the Gluecks' work posed a threat to the sociological claim on criminology, their work was either ignored or criticized by many sociologists for many years. Today, criminology researchers have to make up for lost time.

Another factor that has slowed scientific progress is the dominance of the theory of positivism. It is problematic for a couple of reasons. First, there are several types of positivism theories, including biological, psychological, economic and sociological. Scholars cannot agree on which version is correct and continue to study each type separately (Gottfredson and Hirschi 1990, 83). Second, scholars of positivism theory reject the idea of choice. By following the notion of determinism, they assume that acts have causes, which leads to “endless distinctions among behavioral categories and generates apparent interest in the countless permutations and combinations of units and their properties” (Gottfredson and Hirschi 1990, 82). Wilson argues that criminologists have spent too much time studying the causes of crime. Instead of determining the countless reasons why individuals engage in criminal activity, he thinks criminologists
should determine what the government can do to reduce the crime rate (Wilson 1985, 49).

He takes a practical standpoint, much like policy analysts. He offers that government should spend money on deterrence measures and keeping the wicked people from the innocent people (Wilson 1985, 260). Positivism, then, creates confusion and gets scholars off track. Thus, reconciling criminology as a social or political issue and the dominance of positivism has slowed scientific progress for criminology.

Some research has been done in the specific area of public spending on crime policies. One study sought to explain the relationship between crime rates and public expenditures for police protection. The research was problematic because it did not set forth a theory from which it built its model, nor did it incorporate any ideas from budgetary or policy analyses. While a positive relationship between crime rates and expenditures was found, the results are suspect due to the modeling techniques (Greenwood and Wadycki 1976, 361). The concern lies with the factors left out of the model, not those included in the model. Another study that sought to explain the relationship between urban crime and police protection developed a theory-driven model, but again, did not use any concepts from budgetary or policy analyses. The model relies solely on the determinants of crime to explain the determinants of public spending on crime (McPheters and Strange 1974, 382). Even though this study found a positive relationship between crime rates and spending, its results must also be suspect due to its modeling techniques (McPheters and Strange 1974, 392). Despite problems with criminology research methods, what can be used is the notion that the environment, in
these cases crime rates, may be important to spending decisions. This research project, then, utilizes more ideas from budgetary and policy analyses.
CHAPTER 3

BUILDING THE MODEL

Introduction

In the previous section, I explored the theoretical research in the areas of budgeting and policy making, as well as the research on crime. For this research project, I combine the efforts of these three areas to build a theory-driven model that helps explain U.S. federal crime expenditures. Each area provides relevant information that will help build a more complete model of federal expenditures on crime policies. Both the merits and faults of each area are examined below.

First, recognizing the merits and faults of both incrementalism and macrobudgeting is crucial to understanding federal expenditures. Incrementalism recognizes and incorporates the internal process. It defines the influential players within government and describes the budgetary process as incremental and highly internalized. What incrementalism fails to recognize are the influences within the governmental framework that are outside of the process. For example, it does not consider presidential influence on federal expenditures because the president does not have a formal constitutional role in the process, aside from deciding whether to sign a budgetary resolution into law. Also, it does not consider the influence of legislation that has forced governmental players to look at total spending because in doing so, the whole notion of incrementalism is called into question. Macrobudgeting, on the other hand, recognizes and incorporates these kinds of influences.
while maintaining the importance of the internal process. It considers presidential influence and the effects of relevant legislation. Macrobudgeting is able to do this because it is not restricted by incrementalist tendencies. However, macrobudgeting is not complete because it fails to measure the influence of external factors, such as the social environment in which spending decisions are made. It is from policy analyses that this research project takes the idea that external factors influence spending decisions. Policy analysts have long considered the factors outside of government that influence governmental players and thus, the internal process. However, this research project cannot completely utilize models from policy analyses because in doing so economic variables, such as unemployment, and the idea of finite resources would be left out. The combination of factors from both budgetary research and policy analyses, however, leads to a more complete model. Finally, from criminology research this analysis uses the idea that crime rates and federal spending on crime policies are positively related in the long term. Criminology research, however, is more focused on the substance of policies and not on whether those policies will get funded.

Theory

Since the crime rate and money spent on the administration of justice generally keep increasing, it seems worthwhile to analyze what influences federal spending in this area. This research project combines ideas from budgetary research, policy analyses, and criminology research to build a specific model that explains the determinants of federal expenditures on crime policies.

Since federal expenditures on the administration of justice generally keep increasing year after year, it is tempting to use models from microbudgetary research. These ideas are
important to budgetary analyses and are utilized. However, based on the literature, I have concluded that the internal process, and incremental and economic factors are insufficient to fully explain federal spending on crime policies and, therefore, more factors must be considered.

By combining factors from incrementalism and macrobudgeting, current research has expanded the internal process to include presidential influence on budgeting. In doing so, the current research does not ignore the influence certain pieces of legislation may have on the budgetary process.

As stated in the previous section, if the budget links what the government does with how much it will cost, combining ideas from both policy analysis and budgetary research seems not only logical but necessary. Policy analyses provide useful concepts for this research project. Policy analysts have organized the policy-making process into stages by type of policy. While the process remains constant, the players and the environment vary according to type of policy. This is an important concept for this research project. Policy typologies suggest that different factors may influence different types of policies. For budgeting, this means that different areas of the budget may be influenced by different factors. Thus, even though some factors may vary from spending area to spending area, the main concept remains the same that key players and the environment, which may vary, must be taken into consideration.

As determined in the previous section by using a policy typology, administration of justice is a hybrid with elements of protective regulatory and distributive policies. What this means for the model is that the influences of public opinion, crime rates, Congress and
the president must be included. First, the research suggests that public opinion influences policy making. Public opinion is dynamic and as the public's mood shifts, so does government policy (Stimson, MacKuen, Erikson 1995, 559). Since this research project analyzes the determinants of federal spending on crime over time, it seems wise to include public opinion in this manner. Second, the crime rate provides the context in which decisions to spend money on the administration of justice are made. Since the crime rate is generally increasing, this legitimizes the need for government to spend money in this area. Finally for Congress and the presidency, the literature suggests that the ideological makeup of these two branches of government influences the types of policies that will be pursued. The political party of a representative or the president represents the ideology of that individual and thus, what is important to him. Party identification, then, is useful to this model for its potential to predict which party members, Democrats or Republicans, make crime a priority issue.

The theory outlined above suggests several propositions for federal spending on crime-fighting policies. First, federal spending may depend upon real economic constraints imposed upon the government. This proposition assumes government officials recognize that there are limited budgetary resources that must be allocated among various agencies. Second, federal spending may depend upon the ideological makeup of both Houses of Congress and the president. Third, federal spending may depend upon the actual amount of crime. If the crime rate remains high, government spending to resolve this problem is justified. Finally, decisions on whether to spend federal money may depend upon public sentiment on the issue. The assumption here is that public opinion does influence which
dilemmas become priorities on the national agenda. If the public cares about this issue, then federal expenditures for crime fighting are considered justified.

**Operationalizing the Dependent Variable**

This research project is concerned with the determinants of federal expenditures on crime-fighting policies. Thus, the dependent variable for the model is a combination of federal outlays and federal grants to the states from the Department of Justice. Since the budget can be viewed as the result of a policy-making process, using federal outlays and grants as the dependent variable should provide insight into what influences crime policies. The numbers were gathered from the *Statistical Abstract of the United States* for the years 1949 through 1994. The category 'Department of Justice’ refers to police protection, corrections, judicial and legal costs. The data were adjusted to represent constant 1987 dollars.

**Operationalizing the Economic Factors**

The economic factors in this model are represented by unemployment, inflation and the annual budget deficit, which are considered constraints on government spending. These factors represent macrobudgetary influences on federal expenditures. This analysis will use unemployment, inflation and the annual deficit to model the idea of finite resources that must be allocated among various agencies. Unemployment rates for the years 1949 through 1994 are obtained from the Bureau of Labor Statistics. Inflation for the years 1949 through 1994 is measured by calculating an annual average from the Consumer Price Index (CPI). The annual deficit figures for the same years (1949-1994) are obtained from the *Statistical Abstract of the United States*. The data are adjusted to represent constant 1987 dollars.
Operationalizing the Internal Factors

The internal factors in this model are represented by the government players in the budgetary process. The influences of both houses of Congress, the president and the bureaucracy are measured. For the influences of both houses of Congress and the president, party identification is utilized. The assumption here is that Republicans are more likely than Democrats to make crime-fighting a priority. The number of Democrats and Republicans in the House of Representatives and the Senate for the years 1949 through 1994 are included in the model. Also for the same years, the party identification of the president is coded 0 for Democrat and 1 for Republican. The reason for including the members of Congress is obvious, given their constitutional role in policy making. However, the literature suggests that the president has influence in this area as well. Due to the Budget and Accounting Act of 1921, a role for the president in the budgetary process was carved out. Therefore, his influence is measured.

Bureaucratic influence is measured as well. The literature suggests that the bureaucracy’s influence on the budgetary process stems from their desires to secure jobs by increasing appropriations. Bureaucratic incrementalism is a bit trickier to measure. In this analysis, I measure it by taking the value of crime-fighting spending in the previous period. In other words, the inclusion of a lagged endogenous dependent variable has substantive meaning for this project.

Operationalizing the External Factors

The external factors in this model are represented by the crime rate and public opinion. As stated in the previous section, the external environment consists of any
economic, social, or political pattern or event that sets the context in which all policy decisions are made (Ripley 1985, 38). For this analysis, the crime rate represents the magnitude of the social pattern that sets the context in which spending decisions are considered. The crime rate is measured by using statistics from the Uniform Crime Report for the years 1949 through 1994. Both property crimes and violent crimes are used separately as a measure of crime.

As the literature suggests, public opinion may influence government policy. Thus, Stimson's public mood variable is included in this model to see if it influences spending decisions for crime-fighting policies. The assumption here is that the more conservative public opinion is, the more concerned the public will be about crime-fighting. I measure the public mood by using Stimson's percent liberal findings for public opinion polls for the years 1949 through 1994.

The next section discusses the methodology used and the results of my model to measure the factors that influence the federal government's decision to spend money for the administration of justice.
CHAPTER 4

METHODOLOGY AND RESULTS

This chapter explores the methodology involved in testing the hypotheses developed in the last chapter, discusses the method of estimation, and presents the results of this study. I test my hypotheses using time-series data, which present some potential problems when estimating with ordinary least squares (Ostrom 1990; Hendry 1980; Granger and Newbold 1974). For example, the variables may be mean nonstationary, which may potentially lead to spurious findings if some variables trend together. Also, the model may suffer from residual autocorrelation, which violates an assumption of OLS regression.

First, the independent variables were tested for mean nonstationarity, which occurs when a data series that trends over time does not regularly cross its mean or initial value. Dickey-Fuller unit root tests (Dickey and Fuller 1979) provide a rigorous, statistical test of the potential for nonstationarity. Table Two provides the results of Dickey-Fuller tests for each of the variables in this analysis in undifferenced and differenced forms. Differencing time-series data is commonly used to achieve stationarity (Bowerman and O’Connell 1993). A differenced variable takes the following form:

\[ Y_t - Y_{t-1} = \alpha \]

Where \( Y_t \) is the contemporaneous data series, \( Y_{t-1} \) is the lagged series, and \( \alpha \) is a constant (which is stationary). The Dickey-Fuller and Augmented Dickey-Fuller results in Table Two indicate that all of the independent variables are nonstationary in their undifferenced forms.
form, but that they all achieve stationarity with the first-differenced form. Therefore, the most appropriate method of estimation is to use the differenced forms of the variables.¹ One must be careful to correctly interpret analyses with such data because the coefficients will indicate the impact of a one-unit change in the independent variable on a change in the dependent variable.

Residual autocorrelation may still present problems in this analysis, even after differenceing for stationarity. Specifically, autocorrelation presents problems with inefficient estimates, erroneous forecasting, and invalid significance tests for coefficients (Granger and Newbold 1974, 111). A number of difference methods may be used for testing for and correcting autocorrelation. The most commonly used test is the Durbin-Watson test. Although the Durbin-Watson test is routinely used in political science, it is limited to testing for first-order autocorrelation. To test for higher-order autocorrelation, the Breusch-Godfrey test determines the joint probability that lags if the error terms are correlated with the contemporaneous values, but does not indicate the most problematic lag.

If one assumes first-order autocorrelation, a number of maximum-likelihood routines are available for estimating the model, including the Cochran-Orcutt, Hildreth-Lu

¹ All the independent variables in this study are continuous except the presidential party variable, which was not differenced.
and Prais-Winston methods. Initial trials of the model were run using the Prais-Winston method, but the autocorrelation parameter was insignificant. This finding is corroborated with the Durbin-Watson test, which indicates no first-order autocorrelation. Subsequent Breusch-Godfry testing, however, indicates some higher-order autocorrelation, which suggests that those maximum-likelihood routines are inappropriate for this model. Another means of estimating a model with such problems is through the use of ARIMA models (Autocorrelated Integrated Moving Averages), but such advanced techniques are beyond the scope of this project. Therefore, a simplified version of this method retains the use of OLS regression by incorporating the appropriate lag of the dependent variable on the right-hand side of the equation. An examination of the autocorrelation and partial autocorrelation functions indicates that the most appropriate lag of the endogenous dependent variable is three time periods.

The presence of autocorrelation in a model suggests that the total impact of the independent variable is exhibited on the dependent variable not just at one time point, but across a number of time points. In other words, a change in an independent variable not only has an initial impact on the dependent variable, but also a decreasing impact in future time periods. Thus, to calculate the total long-term impact of an independent variable, the following formula is used:

\[ \text{Total Impact} = \sum_{i=1}^{n} \text{Impact}_i \]

2 The Prais-Winston procedure is typically the preferred method because its slightly more sophisticated technique keeps all the observations in the analysis, whereas the other two eat a degree of freedom.
\[ \beta_{LT} = \frac{\beta_2}{1 - \beta_1} \]

Where \( \beta_{LT} \) is the long-term effect of the independent variable on the dependent variable, \( \beta_2 \) is the regression coefficient of the independent variable and \( \beta_1 \) is the coefficient of the lagged endogenous dependent variable.

As with any OLS regression analysis, multicollinearity presents potential problems for this project, especially since many of the independent variables measure similar concepts. A correlation matrix of the independent variables is presented in Table Three. As suspected, the correlation between House partisanship and Senate partisanship is high, as is the correlation between violent crime and property crime, although to a lesser extent. Because the partisan mix of the Senate is significant in a univariate regression on federal crime spending, whereas the House partisanship variable is not, the House variable is excluded from final analysis. It should be noted that in previous trials of the model, the House variable was substituted for the Senate variable but did not achieve statistical significance.

Similarly, univariate tests of the two crime indicators suggest that violent crimes are a more important consideration for policy makers than property crimes. Thus, the property crime rate variable is not included in the final analysis. Again however, it should be noted that its inclusion in early trials of the model did not achieve statistical significance.

Finally, inflation and the budget deficit appear highly correlated in this analysis. Though the correlation of .55 is under the standard rule of .60, it could potentially cause problems. However, since the correlation is technically less than the industry standard for
concern, I opt to run the regression with both variables included. Multicollinearity is technically a limited-data problem; meaning there is not enough independent variability in the independent variables. Hopefully future analyses of federal spending with more data points (and thus a greater chance for independent variance) will be able to more fully investigate these relationships.

The discussion in the previous chapter suggests the following general model specification for testing my hypotheses:

\[ Y_t = \alpha + \beta_1 \text{Mood}_{t-1} + \beta_2 \text{Prez}_t + \beta_3 \text{Senate}_{t-1} + \beta_4 \text{Infl}_{t-1} + \beta_5 \text{Unemp}_{t-1} + \beta_6 \text{Viol}_{t-1} + \beta_7 \text{Def}_{t-1} + \beta_8 Y_{t-3} \]

Where:

- \( Y_t \) = federal spending on crime; differenced
- \( \alpha \) = the regression constant
- \( \beta \)'s = regression coefficients; \( \beta_8 \) is the adjustment parameter of the coefficients
- \( \text{Mood}_{t-1} \) = percentage of population identifies as left of political center; differenced; lagged
- \( \text{Prez}_t \) = dummy variable for party of the president; coded 1 for Republican years
- \( \text{Senate}_{t-1} \) = percentage of Democrats in Senate; differenced; lagged
- \( \text{Infl}_{t-1} \) = U.S. inflation rate (annual average); differenced; lagged
- \( \text{Unemp}_{t-1} \) = U.S. unemployment rate (annual average); differenced; lagged
- \( \text{Viol}_{t-1} \) = Rate of violent crimes per 1,000 population; differenced lagged
Def$_{t-1}$ = Annual government budget surplus or deficit (deficits = $s$); differenced; lagged

All of the independent variables, except the presidential party variable, are lagged one period under the assumption that, because federal crime spending is part of the annual budgetary process, the impact of current events would not become evident until the following year. The presidential variable was not lagged under the more strict assumption that presidents can manipulate current budgets (for example, by using his Constitutional power to veto). In early tests of the model, I used a lagged presidential variable, which showed a statistically significant impact. However, multicollinearity problems suggest that not lagging this variable is best.

Table Five shows that the model performs well. Five of eight variables are significant and in the anticipated direction. An $R^2$ of .44 is also significant, although the adjusted $R^2$ is a more modest .29 because the three variables in the model do not seem to explain variance in crime spending. Most importantly, the results support some aspects of the budgetary theories, policy analysis, and crime research, demonstrating the importance of merging ideas from these three areas.

First, policy makers are certainly aware of the economic limitations placed on them. Every $1$ billion increase in the federal government budget deficit leads to a $4.6$ million decrease in federal crime expenditures. Similarly, a $1$ percent increase in the inflation rate decreases federal crime expenditures by about $168$ million. This finding also supports the theory of macrobudgeting, which takes into consideration that there are limited budgetary resources. Policy makers seem less interested in the unemployment rate, however, which
was statistically insignificant in this analysis. Perhaps policy makers gauge their economic constraints with only a few key indicators. Since unemployment often mirrors inflation - usually one goes up when the other goes down - the jobless rate may be a redundancy from a policy maker's perspective.

Second, two of the three internal factors proved significant. The presidential variable proved significant as Republican presidents typically increase crime-fighting spending by about $395 million over their Democratic counterparts. Dummy variables for the years that Lyndon B. Johnson and Ronald Reagan were president were inserted into the model to explore this finding further. Johnson was chosen because his presidency falls in the time period when incrementalism was the dominant theory. Reagan was chosen because his presidency falls in the time period when macrobudgeting arose in the scholarly research. The idea here is to examine whether these theories reflect the budgeting behavior of these presidents. The dummy variables proved insignificant. This finding indicates that Johnson is no more likely than other Democrats to increase crime spending and Reagan is no more predisposed than other Republicans to increase crime spending. This result also supports the idea that partisanship plays an important role in the budgetary process.

Interestingly, the partisan makeup of the Senate does not play a significant role in this aspect of the budget, despite the fact that is was significant in the univariate analyses. It may be that partisanship is less important to members of Congress than the crime rate in their home district.

The third internal factor represents a somewhat elusive link between bureaucratic incrementalism and the budgetary process. The link is elusive because it comes at a non-
intuitive lag. Typical time-series analyses include just one lag of the dependent variable on the right hand side of the equation to account for potential autocorrelation. But as discussed above, the autocorrelation in this model comes not after one lag, but after three. Typically, analysts are not provided with any theoretical rationale for expecting any particular lag structure: “theory is generally imprecise about the lag structure to be used and typically says nothing about the time-series properties of the residuals” (Granger and Newbold 1974, 119). Therefore, we are left to spontaneously search for the most appropriate lag structure for achieving white noise in our residuals. Such a process was used in this analysis to arrive at the three-period lag of the endogenous dependent variable, as described in the methodology section above. The length of the lag is a bit unusual, but the implication of this finding is unmistakable. Policy changes take several years to fully implement; a policy decision made today has implications for crime-fighting budgets several years down the road.

Because of the length of the lag in this analysis, the total long-term impact of the independent variables is actually substantially higher than what one might expect from the coefficients reported in Table Five. To get a sense of these differences, I report in Table Five the coefficients for each statistically significant variable from the regression along with the long-term coefficients. To appreciate this difference, we can examine the impact of the total number of violent crimes. The initial impact of that variable is that for every increase of 1,000 crimes, the federal government spends an additional $5 million. However, after the total effect of that 1,000-crime increase is incorporated, the budget increases by $7.7 million. Thus, conceptualizing incrementalism as the long-term effect of policy decisions
that take time to implement allows us to explore not just whether incrementalism occurs, but how and to what extent. Incrementalism occurs but within a macro-level framework, meaning marginal adjustments are made while recognizing the finite nature of the government's financial resources.

Finally, I tried to capture the external factors with two variables. The first variable, Stimson's public mood variable, captures the trend over time in the partisan nature of public attitudes, operationalized by using Stimson's percent liberal findings for public opinion polls. Interestingly, this variable is statistically insignificant in the model, as it was in the univariate test (Table Four). Maybe the public mood is already being captured by the partisan mix in Congress and by the party identification of the president. These findings are inconsistent with those reported by Stimson, McKuen and Erikson (1995) in their more general analysis of federal policy making. Future analyses of crime expenditures would do well to explore this finding further.

The second variable, violent crime, is statistically significant. I used the total number of violent crimes in the United States, as an indicator of the need for spending in this issue area. The results show that for an increase of 1,000 violent crimes, federal spending on crime increases by about $5 million. The lack of significance of property crimes suggests that policy makers focus on more high-profile crimes. As stated above,

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3 For comparison, note that the number of violent crimes in 1994 was 1,864,168, so an increase of 1,000 violent crimes is less than .1 percent of the 1994 total.
critics argue that the media disproportionately cover crime stories in the news. Perhaps the media also disproportionately cover violent crime stories. Future research on crime expenditures would do well to investigate this potential link between crime reporting and the policy making process.

The results show that combining ideas from budgetary research, policy analysis and criminology to model federal expenditures on the administration of justice is worthwhile. Each discipline, budgetary research, policy analysis, and criminology research, had something to contribute. From the budgetary research, the inclusion of the annual deficit, inflation, the bureaucracy and the President were significant. However, it was from policy analysis that I operationalize presidential influence by using party identification. Finally, from both policy analyses and criminology research, I include the effect of violent crime rates on federal spending for the administration of justice.
CHAPTER 5

CONCLUSIONS

This research project analyzes the influences on the government's decision to spend money for the administration of justice. By using an interdisciplinary approach, I built a model that helped determine some of these factors. Ideas from budgetary research, policy analysis, and criminology research are used to construct my model. This approach proved helpful, as each discipline had something to contribute.

Of the economic variables, two were statistically significant. As the federal government's budget deficit increases, federal expenditures on crime decrease. Similarly, an increase in the inflation rate decreases federal crime expenditures. The unemployment rate, however, was statistically insignificant in this analysis. These findings support the theory of macrobudgeting, which takes into consideration that there are limited budgetary resources. Also, these findings support the notion from policy analysis that the environment in which governmental decisions are made has policy consequences.

Of the internal variables, two proved significant. The presidential variable indicates that Republican presidents increase crime-fighting expenditures more so than do their Democratic counterparts. However, the partisan makeup of the Senate does not play a significant role in this aspect of the budget. The significance of the presidential variable supports the macrobudgetary theory that perhaps there is a top-down element to the budgetary process. This result also supports the idea that partisanship plays an important
role in the budgetary process. Also, the influence of the bureaucracy is significant. This finding indicates that perhaps there is an element of incrementalism to the budgetary process.

Of the external variables, violent crime proves statistically significant. This finding supports the notion that the environment in which governmental decisions are made has policy consequences. Even though the public mood variable is insignificant, I would not exclude it from future analyses. Perhaps public opinion matters more in some other areas of federal spending.

The results of this issue-specific budgetary analysis can be useful to criminology and policy analysis scholars, as well as budget scholars. For criminology and policy analysis scholars, this analysis adds to verifiable knowledge. For budgetary scholars, this analysis has implications beyond the administration of justice. Future budgetary research may want to explore other domestic spending areas.

In addition, the results of this analysis indicate that merging ideas from budgeting, policy and crime analyses is worthwhile. Each discipline has something to contribute. From the budgetary research, the inclusion of the annual deficit, inflation, and the bureaucracy were significant. The idea to include a presidential variable came from both budgetary and policy analysis research. From a budgetary standpoint, the presidential variable proved to be an important macrobudgetary consideration. From a policy analysis standpoint, it made sense to operationalize presidential influence by using party identification. Finally, from both policy analyses and criminology research, the external
environment, violent crime rates, proved to be an influential factor on federal spending
decisions for the administration of justice.

Thus, this research project explains some of the factors that are important to
federal spending for the administration of justice by merging ideas from budgetary
research, policy analysis and criminology in the model.
APPENDIX A

TABLES
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Table Two: Results of Dickey-Fuller Unit Root Tests

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Note: All of the variables in their differenced form meet the Dickey-Fuller t-test criteria of less than -2.62. For more information regarding Dickey-Fuller critical values, see Enders (1995), 419.
Table Three: Correlation Matrix of the Independent Variables

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Note: Only the Violent Crimes and President variables are significant in univariate tests. Also, bivariate time-series regressions must meet stationarity assumptions, just like the overall model. In each of these cases, the null of stationarity fails to be rejected in a Durbin-Watson Test. To reject both positive and negative first-order, autocorrelation, the DW critical value must fall between 1.344 and 2.66.
### Table Five: Regression Results

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<th>T Value</th>
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</thead>
<tbody>
<tr>
<td>Inflation</td>
<td>-16801.150</td>
<td>6413.544</td>
<td>-2.62</td>
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<tr>
<td>Unemployment</td>
<td>-59.040</td>
<td>81.582</td>
<td>-0.72</td>
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<tr>
<td>Annual Deficit</td>
<td>0.005</td>
<td>0.0003</td>
<td>1.86</td>
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<tr>
<td>Presidential Influence</td>
<td>394.994</td>
<td>189.480</td>
<td>2.09</td>
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<td>Influence of the Senate</td>
<td>-262.495</td>
<td>2388.329</td>
<td>-0.11</td>
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<tr>
<td>Bureaucratic Influence</td>
<td>0.380</td>
<td>0.148</td>
<td>2.42</td>
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<tr>
<td>Public Mood</td>
<td>37.714</td>
<td>36.727</td>
<td>1.03</td>
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<tr>
<td>Violent Crimes</td>
<td>0.005</td>
<td>0.002</td>
<td>2.39</td>
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<tr>
<td>Regression Constant</td>
<td>-202.635</td>
<td>153.287</td>
<td>-1.32</td>
</tr>
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</table>
APPENDIX B

ILLUSTRATIONS
Figure One: U.S. Crime Rate
Figure Two: U.S. Expenditures on Crime

Dollars (in billions)

Year
REFERENCES


