POLITICS AND MONETARY POLICY: A CROSS-NATIONAL
AND TIME SERIES ANALYSIS

THESIS

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By

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This research proposes that monetary policy is more than a technical economic policy. Since it is politically controlled, political variables should affect it. In this analysis, the monetary policies of France, Italy, the United Kingdom, and West Germany are described in detail. Political variables potentially affecting this policy are reviewed. Political variables, such as political party in power, electoral competition, electoral cycles, and political instability, are employed in a time series regression analysis of monetary aggregates. Various economic variables are also included to aid model specification. While cross-national variations occur in monetary policy determination, this research shows that political parties follow ideologies in monetary policy-making. Other political variables are not strongly related to monetary aggregates.
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CHAPTER I

MONETARY POLICY: AN INTRODUCTION

Introduction

Recently there has been an increase in the literature dealing with public policy. While in the past political scientists tended to ignore the policy-making and implementation process, in the 1970s and 1980s there has been an exponential growth in the field of public policy. Comparative state policy research became the vogue in the late 1960s and 1970s1 and later, in the 1970s, the field of cross-national comparative policy research began to mushroom.2 This opened up a new quantitative field with little structure but many possibilities.


Foremost in the field of comparative policy research has been the analysis of economic policy-making. While the knowledge of the interrelatedness of economics and politics dates back to the Greeks, this fact seems only recently to have been rediscovered in much of the political science public policy research. Seminal studies by Tufte and Hibbs concerning governmental implementation of economic policy has resulted in a growing volume of quantitative literature on the political business cycle. These analyses have led to related research, such as Cowart's studies of monetary and fiscal policies and inquiries into the effect of economic conditions on political popularity. Even Andrian's work comparing the economic policies of several nations has been well-received.

Few have conducted research on monetary policy. Cowart's work accompanies Woolley's analysis of monetary

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instrumentation, and Albritton attempts to refine Woolley's work. The absence of studies of monetary policy points out a problem with comparative policy research: because so little research is conducted in any one sub-area, comparative policy research is still in an experimental stage and no agreed-upon theory of the policy-making process has even been approached. Much of the literature tends to be atheoretical and there is much discontinuity in the field. Unlike more mature theoretical areas such as political development or voting behavior, a comparative policy analysis must often be an experimental exercise based on little prior research. This analysis of monetary policy is a good example of a research topic in comparative public policy with very little prior literature to rely on. While it is experimental, it does employ relevant material from the vast literature on economic policy-making which is available.

In this thesis, three major tasks will be undertaken: (1) a description of monetary theory and how this relates to its use in Britain, France, Germany, and Italy; (2) an inspection of possible relations between politics and monetary

policy; and (3) an analysis of political variables and their statistical relationships with monetary policy outcomes.

As an introduction to the specifics of monetary policy, a description of the economic breadth of this policy will be performed in Chapter I. In describing the monetary policy process in these four nations, the instruments which these countries use will be the major focus. The cross-national differences which exist in the use of these instruments for monetary policy manipulation will be emphasized. Also covered will be the different goals of monetary policy in relation to overall economic activity within an economy. The use of monetary policy for demand management and management of domestic and foreign financial markets will also be discussed.

Possible political variables which may affect monetary policy will be considered in Chapter II. Monetary policy will be examined in view of the political context in which it is made. Also included in this section is a presentation of cultural and economic determinants of monetary policy.

Chapter III contains the hypotheses tested in this study. Also contained in this section is the research design of this thesis and descriptions of the data which are utilized for the purpose of testing the hypotheses.

In Chapter IV, an analysis of certain political variables and their effect on monetary policy outcomes will be performed. These variables include (1) the political party
in power; (2) political party competition; (3) governmental stability in a nation; and (4) electoral cycles. To operationalize monetary policy, both aggregate credit and the money supply will be used as indicators of the policy and, therefore, as the dependent variable. Time series regression analysis will be employed to analyze the data. The purpose of this analysis is to test hypotheses relating these variables over time in order to control for confounding effects which a cross-sectional study may not be able to do.

Monetary policy as a device for controlling the economy may be highly affected by political activity. As a result, it becomes useful to examine what these impacts may be. In the turbulent economies of the 1970s, monetary policy has had a rebirth as an important economic policy. Following the 1960s and the success of governments in fine tuning their economies, the next decade was marred by high inflation, high unemployment, and low economic growth. Hence, the ideas of the monetarists (i.e. inflation is primarily a monetary phenomenon) have gained much legitimacy. In Britain, for example, Margaret Thatcher accepts Friedman's view that monetary policy should be the major role of the government in the economy. In the United States, similar

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7For an illustration of these ideas, see Milton Friedman, "The Role of Monetary Policy," American Economic Review, LVIII (March, 1966), 1-17.
problems have brought shifts in economic emphasis. Many questions have been posed by economists concerned with whether the role of monetary policy in demand management is of primary or secondary importance. But few answers have been discovered concerning the political causes and consequences of monetary policy.

Considering the highly technical nature of monetary policy, it is easy to understand why it has been studied primarily by economists concerned mainly with its theoretical and empirical effect on the economy. This is very analogous to past study of judicial policy in political science. Originally, research concerning judicial decisions was often based on written law, but now many political scientists study judicial behavior. Today, many consider monetary experts to be technocrats who make decisions solely based on sound economic theory. But it can be argued that monetary authorities are no different from judges in that they make decisions based on personal values and political considerations. Because the political nature of monetary policy is so evident, it is important to consider how monetary policy operates in a political system.

While the political aspects of monetary policy are often overlooked, it has been observed by some that this policy is made in a political arena. Many have assumed that politics turns monetary policy into an irresponsible instrument used by the government to aid itself in
reelection. Others have contended that the independence which many monetary authorities have from monetary control has caused undue stagnation in the economy. Obviously there is no consensus on how this policy is or should be made. Those who feel that independence of the monetary authorities from governmental control is essential in order to keep the policy from becoming politicized often value a policy which is tough against inflation and politically undesirable. Those who feel more political control is necessary over the policy commonly value politically controlled decision-making and emphasize curtailing unemployment. These differing views are contingent on the values held by the observer. For example, Friedman has suggested that laissez-faire be the rule in an economy except for monetary policy. Here the government should step in to regulate the money supply without any electoral or democratic control over the policy. Monetary policy should be regulated by experts who make technical decisions.


9 This is discussed in Lawrence S. Ritter and William L. Silber, Money (New York, 1977), pp. 105-107.

concerned only with this control. These conceptions that monetary policy should either be totally independent of politics or totally subservient to the government often reflect little knowledge of the actual policy-making process. Do independent banks tend to contract the money supply or hold interest rates higher than do politicized banks? Do different political parties with contrasting ideologies exert different pressures on the decision-making processes of this policy? While these questions have been contemplated, little evidence has been presented which suggests any answers.

Monetary policy significantly affects a society's allocation of values. Changes in the manner in which monetary policy is approached have very real consequences to the distribution of resources among certain groups in society. For example, a tight money policy which slows down the growth rate of the money supply and raises interest rates can place a disproportionate burden on the construction industry and other industries which must rely heavily on borrowed funds for survival. Any time these policies are implemented, certain groups within society are going to lose real income. Groups may also gain from tight money policies. Those with much capital wealth are aided by tight money policies during times of inflation. Monetary policy

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takes place in a political arena because of these qualities, and any investigation should attempt to uncover systematic relationships which exist between political variables and monetary policy.

Monetary policy promises to be important in the 1980s. In the future, how will society know if monetary policy is being used to redistribute values from one group to another or if it is being employed to stimulate or stabilize the economy? Both reasons may apply, resulting in some ambiguity in establishing political motives behind policy actions. Monetary authorities and politicians may have two goals when making policy: to render the economy acceptable and to satisfy certain constituency groups. Often, these goals are not inconsistent. As monetary policy becomes more important in managing the economy, these questions become more significant.

Monetary Theory

Monetary policy may be used for demand management of the economy, the management of domestic financial markets, and the management of international financial markets. In fact, when monetary policy is used, all three of these will be affected, although the policy may be intended to influence only one of these areas. There is an interaction of the policy outcomes, and these goals and this interplay may produce unpredictable, varying effects. This problem
will be explained in more detail later. In order to enact monetary policy, there are several instruments which may be employed: (1) the central bank may buy or sell government securities; (2) the central bank may change reserve requirement ratios which are imposed on banking institutions; (3) the central bank may change the discount rate; and (4) the government may impose direct credit, interest, and foreign transaction controls. Among these are very specific instruments which a central bank or government may enact. These are very broad categories. For example, within the category of discount rate policy, one may find a normal discount rate, a punitive discount rate, and an emergency discount rate.

Before discussing the manner in which monetary policy may influence the policy goals, it would be beneficial to outline how these monetary instruments are employed. In purchasing and selling government securities, a central bank may be performing one or two functions. Any time debt is sold, the bank is performing the role of debt manager and the debt is being sold in order to finance the national government. This role is essential in most industrialized nations because of the emphasis which has been placed on Keynesian economics since World War II. Any time this instrument is used for debt management purposes, it may affect the overall monetary picture even though it is being used for non-discretionary purposes. The reason for this is that selling or buying of securities affects bank liquidity. If
the central bank sells securities on the open market, this reduces bank liquidity because money is funnelled from the public, and hence, the banks, to the government. There is then less cash available to the banks and therefore a drop in liquidity. Central bank purchases of securities have the opposite effect. Money will be distributed to the public, and the banks will have more liquidity. Affecting bank liquidity is the goal of the central bank when using monetary policy for discretionary reasons. In some nations, central banks may only sell securities to banking institutions. This affects monetary policy and bank liquidity in another manner. Because these transactions affect bank reserves, any decision to buy or sell these will affect bank lending capabilities. One problem with this instrument is that often the goal of debt management clashes with the objective of monetary control. If a government decides to sell its debt, then the money supply will be contracted, all other things equal. Therefore, the central bank must realize this problem and take other action if necessary. There is one more consideration a central bank must make when using this instrument: whether to sell long-term or short-term securities. Short-term debt is better suited to discretionary policy-making while long-term securities are primarily used for debt-management since the purchase and sale of these would not be conducive to short-range monetary policy usage. In sum, securities transactions have some
problems in being used for discretionary policy-making. But the flexibility of this instrument makes its use inviting to central banks.

Reserve requirements, like security transactions, act to affect bank liquidity. These ratios are placed on banking institutions by the central bank in order that a certain percentage of bank liabilities are held in reserve. In the past, these ratios have been used in order to force a bank to keep a certain percentage of deposits in reserve, but recently these ratios have often been required on loans, thereby acting as credit controls. These reserves are usually placed in non-interest-bearing accounts of the central bank. Therefore, if a bank attempts to increase its deposits or loans, it is punished by being forced to place more of its assets in the non-interest-bearing reserve account. The method in which this instrument operates is simple. If the central bank chooses to reduce bank liquidity, it may raise the reserve ratio. When this occurs, the banking institution must place more of its assets in the non-interest-bearing account of the central bank which reduces the bank's ability to lend. The opposite effect occurs if the ratio is lowered; more assets are made available because assets are freed from the account of the central bank. While this instrument appears to be a favorable one to use in affecting bank liquidity, it does have a basic problem due to its efficiency as a monetary regulator. This
policy tends to be very blunt in its impact. Because of its dramatic effect on the amount of bank reserves that are affected, it has a strong impact on bank liquidity and monetary policy. A small change in the reserve ratio may have tremendous impact on a bank's lending capacity. Therefore, reserve ratios are changed in small increments in order that overall monetary policy does not drastically change. For these reasons, reserve ratios are rarely changed after initially being implemented. When ratios do change, their function often is to control commercial banks from forming excess reserves from external sources. The reserve ratio also has the function of replacing deposit insurance in nations which do not have any kind of deposit insurance. This requirement prevents a bank from holding too many deposits without the proper reserves. In conclusion, reserve requirements are strong policy instruments which may be used in order to influence monetary policy.

Of all of the activities of a central bank, the function of lender of last resort may be of most importance. Discounting policy is directed at the cost of borrowing money from the central bank. The discount rate is the interest rate which the central bank charges banking institutions for extra funds. These funds increase bank liquidity, and, therefore, a raise in the discount rate is designed to make this service unattractive to banks and prevent bank liquidity from growing. This policy differs
greatly from country to country and depends on the individual bank's need for extra funds. In nations where banks rarely need extra assets, this instrument is of little importance. Where much rediscounting is performed, changes in the discount rate can be a very effective monetary instrument. In any system, this policy does have at least some psychological importance. The discount rate often acts as a price leader in that it aids banking institutions in setting their own interest rates. Rediscounting is more important in countries which have highly developed financial structures. In those nations with less developed financial systems, price rationing is not as significant as direct rationing because the availability of credit is the important aspect in whether a bank lends or receives funds. Also, discount policy is interrelated with reserve requirement ratios. If these ratios are stringent, discounting may gain in importance because of the varying need of banks to borrow from the central bank. When much lending of last resort is present, a change in the discount rate can be a potent instrument of monetary policy.

Ceilings and controls on bank lending have become commonplace during the 1970s. With simultaneous inflation and unemployment, nations have sought to fight inflation through measures which extend beyond the normal market mechanisms. Basically, controls and ceilings are placed on the amount of loans which may be made by a banking
institution. Different ceilings may be placed on different types of loans. For example, consumer loans may be controlled through the manipulation of ceilings while at the same time other loans, such as construction loans, may be left uncontrolled. Through this approach, the government may be able to control the root of the problem (i.e., too much consumer spending which is expanding demand) without hurting industries which are not contributing to the problem. In addition to improving the precision of monetary policy, direct controls may also improve the speed by which officials can influence monetary policy. Whereas reserve ratios must be used early in a cyclical period in order to be effective, direct controls usually have a much shorter lag period in which they affect monetary policy. This has been an important reason for the growth of this instrument's popularity. Another reason for the use of direct controls is that they are often utilized when basic market mechanisms are not operating efficiently. This often occurs when interest rates are not appropriately rationing credit. In this case, ceilings must be used to hold down credit expansion when the demand for credit is inelastic in a financial market which may not be highly developed. Even though direct controls have become popular and have these favorable characteristics, there are still some questions concerning their utility. First, many question whether direct controls
are appropriate in regulating the money supply. If these controls have no positive effect on the economy, then they are useless. Second, there is the problem of efficiency. Since the price mechanism is not being used to ration credit, other, less efficient means are being used, and the allocation of funds will not be totally efficient. A third problem is that many short-term ceilings become long-term controls, and this also adds to the efficiency problem. Any long-term credit control loses its utility as a monetary instrument and becomes a fixture in the economy. Finally, there is always a risk of financial disintermediation. When official controls are enacted, private lending and borrowing which is not controlled may develop. This also hurts the efficiency of the financial system. To summarize this instrument, these are often good measures to employ in order to influence monetary policy if they are not used too often or for too long a period. The main cost to the economy is in terms of efficiency.

Monetary authorities may also place controls on interest rates. These are usually placed on deposit rates in order to channel funds from one type of asset to another. For example, if deposit interest rate ceilings are placed on simple deposits, this may cause more money to be placed in

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treasury bills. Without this ceiling, each of these types of savings would compete for funds in the market place. This instrument can affect bank liquidity. The monetary authorities may wish to hold down the amount of deposits in banking institutions and can do this by preventing banking institutions from paying high interest rates on deposits. When this occurs, fewer people will deposit money in these accounts, and the bank will have less money to lend. While this instrument is often officially employed, it is more often used through oligopolistic agreements.\textsuperscript{13} When one bank raises interest rates, the rest often follow. Nevertheless, direct controls on interest rates are also used. While these controls may be successful at channelling assets and regulating money creation, direct controls on interest rates have had the same problem that direct lending controls have had. There is a loss of efficiency when the public has to shift assets from one type to another in order to gain the highest interest possible. In addition, disintermediation may occur.

Monetary policy is highly sensitive to international financial markets. Because of this, many central banks find it important to regulate foreign transactions directly so that monetary instruments may be used for internal reasons.

\textsuperscript{13}Kumiharu Shigehara, \textit{The Role of Monetary Policy in Demand Management: The Experience of Six Countries} (Paris, 1975), pp. 44-47.
These controls are primarily employed in order to limit either capital inflows or outflows. The major purpose of controls on foreign transactions is to limit the sensitivity of capital flows to shifts in monetary conditions and exchange-rate expectations. If this is not done, domestic monetary policy is complicated. One method of controlling foreign transactions is to use discriminatory reserve requirements on all foreign liabilities and assets held by banking institutions. This would make these deposits less attractive to banks than would otherwise be the case. The central bank may also offer swap agreements at special rates to encourage banks to export many of the inflows which they may obtain. Capital inflows are regulated in this way. Two other methods which may be employed to control foreign transactions are prescriptions for banks' net foreign positions and ceilings on the interest rates which may be paid to non-domestic deposits. Here either the commercial banks are told how many foreign deposits may be held or are prohibited from paying high interest rates on deposits which may be attractive to foreign investors. There are numerous other instruments which may be used to control capital inflows and outflows and these listed here are only a few. These technical instruments tend to be quite effective in protecting the internal financial system from shocks in the international economy.
As has been noted, monetary policy is very complex. Nevertheless, the goals of the policy are relatively simple. Monetary policy concerns the regulation of money and is aimed at regulating interest rates, the money supply, and aggregate credit. Through the use of monetary instruments, these aggregates are controlled and aggregate demand may be manipulated. While there has been much debate in the economic literature over the value of monetary policy versus fiscal policy in demand management, Arthur Okun argues the efficacy of the use of an "eclectic" policy for management of the aggregate economy.\(^{14}\) It is in this dual role that both monetary and fiscal policy are used in most industrial nations. "Indeed, the conditions under which either fiscal tools or monetary tools, taken separately, have zero effect on GNP are merely textbook curiosities rather than meaningful possibilities."\(^{15}\) Therefore, it is important to understand how monetary policy interrelates with fiscal policy in the consideration of aggregate demand management.

In explaining the workings of the macroeconomy, it is useful to look at a circular flow diagram representing the different sectors of the economy and the monetary flows between them. The three main sectors of the domestic economy...


\(^{15}\) Ibid., p. 94.
economy are the business, household, and government sectors. This flow chart represents the various monetary transactions in an economy among the sectors. In Figure 1, a simple version of a macroeconomic flow chart is illustrated with the various transactions labeled. In the macroeconomy, the business sector produces goods which are consumed by the household sector, employs member of this sector, and pays income for these services. Of this income, the household sector consumes, saves, and pays taxes. Of this savings, the business sector borrows at an interest rate which will clear the market. The taxes which the government collects are used for public works and are placed back into the economy. When these transactions are at equilibrium and the interest rate is clearing financial markets, $C \text{ (consumption)} + I \text{ (investment)} + G \text{ (government)} = Y \text{ (income)}$, which is the equilibrium level of income.

While this streamlined chart represents the economy in a simplistic manner, it is important in illustrating what happens to an economy when things go wrong. What occurs when the interest rate does not clear financial markets or if savings does not equal investment? Then problems may occur, and, therefore, $C + I + G$ does not equal the full employment level of income at times. When this situation occurs, the economy may either be stagnant or overheated. For example, if the household sector is holding a great deal of cash or savings, then the supply of loanable funds will
Fig. 1--Circular flow diagram of a domestic economy.
be below actual savings and the desired investment level at the current interest rates and these interest rates will rise. If this occurs, then \( C + I + G = Y \) at a less than full employment level and a stagnant economy will result. If, as Keynesians argued, an injection of funds is used to increase \( G \), then income will be raised back to the full employment level because \( G \) will increase the amount that \( I \) has decreased. Monetarists argue that the most effective method of raising income is by directly affecting the money supply which is highly correlated with income. Hence, if \( C + I + G \) falls short of the full employment level of income, then income should be inflated directly through the expansion of the money supply. There is no need to change \( G \) or \( T \) (taxes) because income can be affected directly.

Diagramatically, the most helpful method of illustrating macroeconomic policy implications is through the use of ISLM analysis. This method poses two points of analysis. One is the IS curve which represents an infinite number of points on a curve in which savings and investment is equilibrated at a certain rate of interest and a certain income level. The LM curve represents an infinite number of points on a curve in which the demand for money (both wealth and transactions demand) equals the supply of money at a given level of interest and income. The use of these curves is merely an extension of the circular flow diagram. Injection, whether fiscal or monetary, may be represented
more easily through their use. When these two curves are plotted on a graph, the intersecting point is the unique income level which occurs at a certain rate of interest. In Figure 2, at all points other than the equilibrium level of 500, the interest rate will not equilibrate savings and investment and money supply and demand. At the 400 level of income, there would be an excess supply of money since money demand at 10 percent is much lower than the money supply at 15 percent interest. At 600, the supply of money would fall short of that demanded. At the 400 level of income, investment would be lower than savings because of the 15 percent interest rate, and at the 600 level, investment would be greater than savings. When a non-equilibrium level of income exists, there is an automatic adjustment process which equilibrates the IS and LM curves to an equilibrium level of income and interest.

How this relates to monetary and fiscal policy is derived from what the IS and LM curves represent and how this policy influences them. When expansionary monetary policy is implemented and the money supply rises, the LM curve shifts to the right because money demand and money supply become larger. When fiscal policy is used and a deficit occurs, the IS curve shifts to the right because savings and investment increase. Therefore, monetary policy affects the LM curve, and fiscal policy affects the IS curve.
If the slope of each of these curves is equal, then the use of either of these policies will have an equal effect on equilibrium income. The only difference will be

![Graph showing IS and LM curves.](image)

Fig. 2--ISLM interest and income levels.

in the equilibrium level of interest. In Figure 3, it is shown that an increase in the money supply will produce the same increase in the equilibrium level of income as an equal increase in the deficit will produce. But in this case,
interest rates fall when monetary policy is expanded while interest rates rise when fiscal policy is used. This occurs because monetary policy creates money, and the greater

\[
\text{IS}_2 \quad \text{LM}_2 \quad \text{IS}_1 \quad \text{LM}_1
\]

supply of money will drive down interest rates in the market. When a deficit occurs because of the use of fiscal policy, this debt is sold to the public. When this happens, this extra debt competes with private debt, and this drives up interest rates.

Fig. 3--Effects of money supply and fiscal policy changes on income and interest.
If these two policies produce the same results, then the answers for government policy-making are simple. The problem with this is that rarely do the IS and LM curves have exactly the same slopes. Therefore, often one policy may be more effective in influencing the aggregate income level than the other policy, and the policies can therefore be used together in order to manage demand. In order to illustrate the differences that the slopes of the curves can make in ISLM analysis, it is useful to employ those "textbook curiosities" of monetary or fiscal impotence which Okun mentions.

When the IS curve becomes very steep, this means that investment demand is insensitive to interest rates. Here investment will take place no matter what the interest rate is. The implication of this, as seen in Figure 4, is that monetary policy will be rendered incapable of influencing equilibrium income to any great extent. With large changes in the money supply, equilibrium income shifts very little. Figure 5 shows that if the government wishes to affect equilibrium income, fiscal policy must be used. Similarly, large deficits in comparison with the money supply will create much greater changes in the equilibrium levels of income in this example.

What happens when the IS curve becomes flat because investment demand is very interest sensitive? In Figure 6, it is shown that the use of a fiscal deficit (IS₂) or
Fig. 4--Effects of money supply changes on interest and income when investment demand is insensitive to interest rates.
Fig. 5—Effects of fiscal policy changes on interest and income when investment demand is insensitive to interest rates.
Fig. 6—Effects of fiscal policy changes on interest and income when investment demand is sensitive to interest rates.
surplus (IS3) renders only small changes in the equilibrium level of income. But the use of monetary policy under these conditions strongly affects income (Figure 7). The same increase in the monetary supply produces a greater increase in income. Therefore, the interest sensitivity of investment demand is the underlying property of the IS curve which suggests fiscal policy's utility.

A great amount of interest sensitivity of the wealth demand for money is represented by a flat LM curve. As the
slope of the LM curve nears zero, interest rate changes will have a greater effect on the demand for money. This means that a small change in the rate of interest will cause the public to drastically change its preference for money. When this occurs, monetary policy loses its potency as a large change in the money supply will lead to only a small change in equilibrium income (see Figure 8).

Fig. 8--Effects of money supply changes on interest and income when wealth demand for money is interest sensitive.
Figure 9 illustrates how fiscal policy would be much more appropriate for managing aggregate demand when the slope of the LM curve nears zero. Here a comparable change in the budget deficit or surplus has a much greater effect on equilibrium income than does monetary policy. What happens when the LM curve becomes very steep because of the lack of interest sensitivity of the wealth demand for money? In this case monetary policy is most potent in affecting aggregate demand, and fiscal policy becomes of little worth.
(see Figures 10 and 11). Therefore, when the public's wealth demand for money is not sensitive to interest rates, monetary policy is the best instrument to use in demand management.

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**Fig. 10**--Effects of money supply changes on interest and income when wealth demand for money is interest insensitive.
Fig. 11--Effects of fiscal policy changes on interest and income when wealth demand for money is interest insensitive.
As has been illustrated, the interest sensitivity of the wealth demand for money and of investment demand is very important in considering what policy a government should employ in demand management. Keynes argued during the Depression that fiscal stimulus was needed because monetary policy was left impotent by a liquidity trap (a highly sensitive wealth demand for money) and very little interest sensitivity of investment demand.\textsuperscript{16} As has been illustrated, the deep depression best illustrates the need for using fiscal policy. In opposition to Keynes's theory, Friedman argues that investment demand is very interest sensitive to interest rate changes and therefore monetary policy is more appropriate.\textsuperscript{17} Okun's less rigid view of an intermixed policy is probably more relevant to most cases. Viewed from this perspective, a crucial question is how and why nations use monetary and fiscal policy in order to manage demand.

The reason a government will use macroeconomic policies is that the equilibrium level of income may not be the full employment income level. If this is the case, the government may use monetary and fiscal policy to change the level of income to the appropriate full employment position. If income is too low, idle resources remain unused and the


\textsuperscript{17}Friedman, \textit{Capitalism and Freedom}, 75-84.
economy will be stagnant. If income is too high, there is too much demand for resources and the economy will become overheated and inflated. These policies act to shift the income level. Fiscal policy is conducted by creating budget deficits or surpluses. Monetary policy is made by using the aforementioned instruments to either tighten monetary policies which involves restricting the growth of the money supply, or loosen monetary policy which expands the money supply. During the last twenty years, nations have found it much easier to use fiscal policy for expansion and monetary policy for contraction. One of the main reasons for this is that taxes are very rigid in democracies and cyclical use of this policy is difficult. Monetary policy, on the other hand, is much more flexible, and it has received the infamous tag of being the policy of anti-inflationary contraction.

The use of macroeconomic policies for demand management is very complicated, and this brief description serves only as an introduction. Nevertheless, the broad effect that these policies have on the economy should be clear. It must not be forgotten, however, that these policies may also be very specific in their impact. For example, expansionary fiscal policies raise interest rates, and will hurt those who rely on borrowed funds. Monetary policies also affect interest rates in a different manner. Also, it should be self-evident from the discussion of the monetary instruments
that many of these can be used for very specific purposes and may therefore affect very specific groups. Since the effect of monetary policy can be either aggregated or localized, this is a very appropriate economic policy to study from a political perspective.

While demand management is by far the most important use of monetary policy, this policy is also employed to manage domestic and international financial markets. Keeping financial markets drag-free and regulating the international market is an important goal which often conflicts with demand management. A central bank, for example, may have to buy securities from the public in order to support the financial market at the same time in which contractionary monetary policies are being used. These two goals obviously conflict in this situation. Also, in times of trade account deficits on the balance of payments, the central bank may raise interest rates to help balance this, even if demand management calls for expansionary policy. Because of these conflicts which may occur, these two goals must be kept in mind when considering monetary policies of the countries in this study.

German Monetary Policy

In Germany, the Bundesbank is in charge of regulating monetary policy. The Bundesbank is the archetype of the
independent central bank and is given virtually complete independence from the government with only the president and vice president of the bank appointed by the government. According to the Basic Law, the Bundesbank is bound only to support general economic policies of the government and to safeguard the economy. While the capital of the bank is publically owned, public ownership gives no direct power to the government. Nevertheless, there is more cooperation between the government and the Bundesbank than these points indicate because the bank serves as an economic advisor to the government. In addition, the Central Bank Council, which makes important monetary decisions, includes some political officials. While these officials have no formal vote concerning monetary policy, they may have input into the decision-making process, and in extraordinary circumstances may even delay important decisions for as long as two weeks if they feel the policy which the bank officials wish to follow is ill-advised. This power is rarely used by politicians, however, because of the prestige and esteem of the Bundesbank officials. Nevertheless, the involvement of politicians in making monetary policy enhances the cooperation which exists between the government and the Bundesbank even though the Bundesbank remains an autonomous entity. The highly centralized nature of the monetary system in Germany allows the Bundesbank to control all major monetary
instruments. With these powers, the central bank has extensive control over monetary policy.

The Bundesbank often varies its discount rate in order to effect monetary changes.\textsuperscript{19} The central bank sets a quota which restricts the amount of rediscounting that any bank may receive, and until the quota is reached, a bank may receive all of the rediscounting it needs at a given rate. Germany is unique in that it also offers Lombard credit which is an advance made to banks for a short period of time by the Bundesbank at interest rates higher than the discount rate. Lombard credit is an important short term, emergency credit since rediscounting has a thirty day minimum charge. Whereas rediscounting is granted by the central bank to the individual banks until the quota allotment is reached. Lombard credit is granted at the bank's discretion. Nevertheless, the Bundesbank often uses Lombard credit as a method of balancing the banks' short-term reserves. Bank discount rates, in conjunction with adjustable quotas, have tended to change upward more readily in cases of contractionary policy than they have been lowered during expansionary policy, indicating that the Bundesbank perceives the use of discount rates to be a better contractionary than expansionary instrument.

\textsuperscript{19}Organization of Economic Cooperation and Development, Monetary Policy in West Germany (Paris, 1973), pp. 35-36.
The Bundesbank used security transactions sparingly in the 1970s as it had in the past.²⁰ Before 1972, banking institutions were the primary buyers and sellers of securities and formed a tightly-knit market where government debt was managed without participation by the public. The Bundesbank has since been more interested in making transactions with the non-banking public. Little evidence for the discretionary use of this policy is evident, probably because the Bundesbank realizes its limitations as a demand management instrument in a very centralized banking system. Since the Bundesbank has other instruments at hand which provide strong control, this less efficient method of controlling monetary policy is not needed.

The changing of reserve requirement ratios has been relied upon frequently by the Bundesbank to affect aggregate demand.²¹ Unlike other banks, the central bank has not found the bluntness of this instrument a disadvantage in administering policy. It adamantly enforces this reserve requirement by withholding interest on required reserves and by charging a penalty of three percent above the discount rate to banks which violate the reserve ratio. The use of this instrument has allowed the Bundesbank to affectively


²¹Ibid., pp. 178-179; and OECD, Monetary Policy in West Germany, pp. 35-36.
control the monetary aggregates and is directed specifically toward bank liquidity; because of this, it is able to control expansion in an efficient manner. The Bundesbank has developed the reserve requirement instrument so fully that the bank now differentiates reserve ratios by category of banking institution and type of deposit. Because of its effectiveness, the Bundesbank has relied on this instrument often.

While Germany has very tight control of monetary policy through the use of conventional market instruments, it uses no formal controls on interest rates and bank lending. Informally, the banks have consistently tied interest rates on deposits and loans to these discount and security rates as a method of affecting the number of deposits in banking institutions. Interest rates are not competitive in Germany; they also lack flexibility which causes the linkage between discount and interest rates to be less efficient. Still, interest rates tend to be controlled indirectly and unofficially by the Bundesbank and the banking institutions.

Germany, like many other countries, controls foreign transactions very rigidly. The German economy has been troubled by excess capital inflows from abroad, and most of its policies are aimed at influencing the net position of

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22Shigehara, The Role of Monetary Policy in Demand Management, p. 41.

23OECD, Monetary Policy in West Germany, pp. 38-39.
foreign banks regarding the Deutsch Mark. Swap arrangements have been employed in order to bring about outflows of dollars, and the DM has been devalued to prevent excess capital inflows. Other policies used by the Bundesbank to control inflows have been (1) discriminatory reserve requirements; (2) taxation of foreign assets held by non-banks; (3) requirements that companies deposit a certain percentage of all foreign loans into non-interest-bearing Bundesbank accounts; and (4) restrictions on interest payments to foreign deposits in German banks. It is clear from this policy list that while Germany has been determined to reduce capital inflows, it has relied on price incentives rather than direct controls for regulation.

British Monetary Policy

The Bank of England, unlike the Bundesbank, has little autonomy and is largely subservient to the government. The Treasury has the authority to ensure that the central bank's actions support the overall economic policies of the British government, and only the Treasury's reliance on the technical expertise provided by the bank's governors allows any retention of autonomy at all. The general direction of policy is mandated by the Treasury while the more technical and minor decisions (as long as they are compliant with

24Bank for International Settlements, Twelve European Central Banks, pp. 97-120; and Holbik, Monetary Policy in Twelve Industrial Countries, pp. 466-468.
general direction) are devolved upon Bank of England officials. If the governors do not perform as expected, they may be removed by the government. While monetary policy is under strict control of the government, it is also very centralized in the Treasury and the central bank.

The Bank of England's rediscounting mechanism is unique. Discount houses, in their role as lender of last resort, act as intermediaries between the central bank and individual banking institutions. The discount houses bid weekly for treasury bill rates to the discount rate. The discount rate is set just above the treasury bill rate thereby allowing the Bank of England to set discount rates indirectly. These rates have frequently acted as important instruments in setting the price of credit through the use of the market, but at other times, they have become secondary to many direct controls implemented by the government. At times when credit controls are emphasized, discount rates tend to serve only a technical, smoothing function and do not contribute to overall demand management. When the market system has been preferred over direct controls, rediscounting has been very important in controlling aggregate credit. For this reason, discount rates must be looked upon as the most important instrument of British monetary policy when direct controls have not been used.

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25 Shigehara, The Role of Monetary Policy in Demand Management, p. 37.
Britain is very active in selling and buying securities, but it is questionable whether many of these transactions are made with the intent to manage the monetary aggregates. The Bank of England's major concern is selling long-term government bonds in order to manage its debt. It usually takes the stance of "leaning into the wind" or responding to the offers of the market, a practice which usually is not conducive to discretionary policy moves. Still, the emphasis on long-term transactions opens the way for counter-cyclical use of short-term securities, although these short-term securities are infrequently used in this manner.

While securities transactions are used sparingly as a demand management tool, reserve ratio changes are probably used less often. In Britain, the Bank of England and the banking institutions have an agreement which requires the banks to hold certain ratios of assets and cash to deposits. Though not enforced by statute, this requirement is followed by all banks. Instead of changing reserve requirements during contractionary policy, the central bank usually calls for "special deposits," which result in changes similar to those which occur by raising the reserve ratio. These

26 For a complete explanation of this, see Holbik, Monetary Policy in Twelve Industrial Countries, pp. 468-524.

"special deposits" act to reduce bank liquidity, and the Bank of England has the discretion of paying or withholding payments to the banking institutions for these deposits.

The United Kingdom has been very active in imposing direct controls on bank lending.28 These ceilings have not usually been imposed by statute, although there has been some use of penalties on banks for violating the ceilings. Most credit controls have been implemented through voluntary adherence of the banking institutions. The central bank also gives advice to banks concerning where lending should be directed. The credit controls may be targeted against credit which is extended for certain goods and services (e.g. consumer and imported goods). By using these direct credit controls, Britain has attempted to stop investment from falling during contractionary periods. Even though the Bank of England has often relied on stringent credit ceilings, these are often circumvented inadvertently because of frequent use of agreed-upon overdraft facilities by banking customers. Also important in illustrating the British use of credit controls is its wavering use of these direct controls and the market for the purpose of restraining credit in the 1960s and 1970s.

28Gowland, Monetary Policy and Credit Control.
Britain has frequently used controls on foreign transactions. While countries with strengthening currencies must control capital inflows into their banks, Britain has emphasized the limitation of outflows during the last twenty-five years. This policy has consisted of (1) varying securities and discount rates; (2) limiting bank loans to foreign interests; (3) aiding residents who wish to make foreign investments with a favorable return to the United Kingdom; (4) intervening in foreign exchange markets; and (5) making arrangements with other foreign banks for the regulation of monetary flows. Other various methods are employed that are too numerous and too minute to be mentioned here.

French Monetary Policy

The Bank of France works very closely with the Ministry of Finance although there is no statute calling for government intervention in monetary policy. The governors of the bank have broad powers in administering monetary policy, but in some policy areas these powers are decentralized and held by other organs, such as the National Credit Council. The governors are appointed and may be removed by the president of France. Although governmental dictation of policy

29Shigehara, The Role of Monetary Policy in Demand Management, p. 50.

is not bound by statute, presidential power to remove bank officers tends to politicize the bank. Removal powers also give the Minister of Finance great latitude in working with the governors of the bank, however, the reputed competence of these officials allows them to retain some autonomy in decision-making. Like the central bank of Britain, the autonomy of the French central bank is clear when technical decisions are made, but is less noticeable in affecting the general direction of monetary policy set by the Ministry of Finance.

In France, discount rate changes have been frequent and important when banks have relied heavily on rediscounting. Because the banking institutions tend to operate at very low levels of excess reserves, rediscounting influences the banks' liquidity positions. Discount rates have been employed in conjunction with direct ceilings to allow the Bank of France to regulate credit expansion through both the market and direct controls. Discount rates have complemented credit ceilings in this regard. Until 1971, rediscounting was the most important instrument of French monetary policy, but when security rates were raised and became competitive with discount rates, the two policies became similarly used. Discount rates may now be more

important for their psychological effect; changes in rates suggest to the banking institutions the direction which monetary policy is taking and also give banks a tool in setting their own interest rates. For these reasons, the discount rate is an important instrument in France no matter how much rediscounting is actually performed.

The Bank of France's use of securities transactions illustrates how one instrument may be substituted for another. While the bank sells few securities to the public, it sells large amounts to banks in replacement of rediscounting. In 1971, the Bank of France lowered money market security rates below the discount rate making these investments more attractive to banks so that securities became more important in temporary short-term lending. Also included in the 1971 modification was a provision allowing the Bank of France to turn down requests from banks for short-term securities which enables the central bank to regulate reserves in a more stringent manner than discount policy allows. So while open-market operations are not important in France, securities transactions are a weapon of monetary policy.

The Bank of France also changes reserve requirements frequently, primarily so that the banks must rely on central bank credit and the central bank is able to use the price

\[32\]OECD, Monetary Policy in France, pp. 29-32; and Holbik, Monetary Policy in Twelve European Countries, pp. 128-129.
mechanism of discount rates to control credit expansion.\textsuperscript{33} France uses the normal rates against deposits, and in 1971, added ratios against lending, which affects banking institutions which have high lending to deposit ratios. In this way, the Bank of France's reserve requirements are designed to strongly affect credit expansion as well as overall liquidity. In fact, these ratios on lending have acted very much like direct controls. Reserve ratios are made even more important because banks tend to hold few excess reserves, and a change in the ratio will have a dramatic effect. Also, the Bank of France may change the required composition of reserves, acting to change bank liquidity by disallowing certain assets that are held by a bank as reserves. Reserve ratios are also important because there is no insurance on deposits and the reserve requirements serve as protection of depositors in the banking system.

France, like Britain, has a history of implementing direct controls on lending.\textsuperscript{34} Certain investments and lending are usually exempted, while other, more extravagant types of lending are regulated. The government often implements tough sanctions for the enforcement of these ceilings. These sanctions include a requirement that a

\textsuperscript{33}OECD, Monetary Policy in France, pp. 33-35; and Holbik, Monetary Policy in Twelve European Countries, pp. 129-130.

\textsuperscript{34}OECD, Monetary Policy in France, pp. 34-35; and Daniel R. Hodgeman, Selective Credit Controls in Western Europe (Chicago, 1976), pp. 17-28.
bank in violation of a ceiling must place additional assets in non-interest-bearing accounts with the Bank of France, the reduction of rediscounting facilities to a bank, and an increase in the reserve ratio. Specific consumer credit controls have been used which call for minimum down payments and maximum deferred payment time periods. France has encountered problems in the past with financial disintermediation when controls have been used extensively.

France uses both direct regulation and price incentives to control foreign transactions. The two main regulations have been the prohibition on paying interest payments on foreign-held deposits and the direct control of banks' net foreign positions. Other major measures that have been employed are special reserve requirements on foreign-held deposits, special exchange rate controls, and prohibitions on France loans abroad.

**Italian Monetary Policy**

Italy has monetary structures similar to Britain's. The Treasury, through the Interministerial Committee for Credit and Savings (CICR), lays the framework for monetary policy decisions; the Minister of the Treasury is chairman of the committee. The Bank of Italy implements the

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instrument it feels will obtain the desired ends of the CICR, and, in this way, the bank is able to retain some autonomy. The bank also serves as a technical expert with the function of carrying out broad directives of the CICR, and it possesses much prestige as a result of this expertise which allows some influence over governmental decisions. There tends to be much cooperation between the government and the Bank of Italy. This results in a coordinated monetary policy. Also, monetary policy power is centralized in the Bank of Italy and the Treasury.

Italy is a good example of a country which has rarely relied on discount rates in making monetary policy. From 1958 until 1969, discount rates were not changed; only after 1969 did changes become frequent because of high inflation and Italy's need to control outflows of international capital. The reason for the minor role of discount policy is that lending has tended to be insensitive to interest rates because demand has greatly outstripped supply in the financial markets. For this reason, ceilings on bank lending have been the instrument most frequently used for rationing credit. When it has consented to lend banks more than the ceilings permit, the central bank has used advances on collateral as a tool instead of rediscounting; thus, while the Bank of Italy's role as lender of last resort has been

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an important function, its use of discount rates as a rationalizing device has been virtually non-existent. There is also some evidence to suggest that in the 1970s the discount rate grew somewhat in psychological importance, but its potency has not approached the impact that manipulation of rate has in France.

The Bank of Italy is similar to the Bank of England in its activity in the long-term bond market, only in Italy short-term transactions are rare because there is no developed financial market to handle these securities. Short-term transactions that occur are only with banking institutions and not with the public. Italy also faces the problem of debt management versus liquidity creation which has been created by the many deficits that occurred in the 1960s and 1970s. Selling of this debt and the resultant reduction in liquidity tend to be contractionary. Because of all of these problems, security transactions are rarely used for demand management purposes.

The Bank of Italy uses reserve requirements in a manner different from many other central banks. While the ratios rarely change, there have been numerous changes in the assets eligible for use as reserves, changes which theoretically affect liquidity just as a change in the reserve

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38 Holbik, Monetary Policy in Twelve European Countries, pp. 222-223.

ratio would. It is questionable how many of these asset changes have been for discretionary purposes and how many have been used to increase the banking institutions' preferences for bonds. Most of the evidence points to a conclusion that the Bank of Italy has changed the assets eligible for use as reserves in order to force banks to buy long-term debt rather than to affect aggregate credit. It may be concluded further that reserve ratios are not used often by the central bank for demand management purposes.

While the Bank of Italy has had problems in using conventional monetary instruments to control demand, it has been active in its direct control of bank lending. Some controls have been used to control credit expansion while others have been used for structural allocation of resources. All loans which exceed a specified maximum amount must be approved by the central bank. During the period from 1973 to 1975, direct controls were used very heavily as the central bank attempted to stop a seemingly unlimited expansion of credit. The only reason that credit controls have not been used more often is that the Bank of Italy has been attempting to expand demand much of the time. Besides these official controls, the central bank also successfully uses moral persuasion to keep banks from over-expanding lending. Suggestions from the central bank to control

40Ibid., pp. 21-25.
credit have brought a decline in the growth of credit of individual banks. Because of this power of suasion, Italy has found it less necessary to use direct credit controls in normal circumstances than have Britain and France.

Italy has persistently attempted to control capital inflows and outflows because of the instability of its export sector and currency. It controls these foreign transactions in order to protect its official international reserves and domestic liquidity creation. The main target of these policies is stabilization of the Lira. Italy has directly regulated the international position of banking institutions and the non-banking public, although control of these non-banks has been less frequently employed. Also helpful to the central bank is cooperation among international banks and the Bank of Italy in the control of capital transaction on the international market. When the Lira is exceptionally unstable, this cooperation is usually granted by the international community.

Conclusion

This introduction has emphasized that monetary policy is complicated in its implementation and its effect on the economy. Armed with this theoretical understanding of the policy, it is now important to investigate how this policy is affected by the political setting in which it is made.

\[41\text{Ibid.}, \text{pp. 24-25.}\]
CHAPTER II

POLITICS AND MONETARY POLICY

Introduction

As noted in the first chapter, monetary policy decisions may be made by either central bankers who are appointed, technical decision-makers, or by political officials (i.e. a prime minister or finance minister) who are much more responsible to the public due to electoral pressures. Technical experts may be given much responsibility, as in West Germany, or political decision-makers may control the policy as in Britain. Because of this, the importance of politics in this policy-making process may differ cross-nationally. Some political factors which may affect monetary policy-making are (1) the political culture in which the policy must be made; (2) the political party in power; (3) the occurrence of elections; (4) the electoral competition present in a nation; (5) the political stability of a polity; (6) the institutional-structural composition of monetary authority; (7) the effect of interest groups lobbying for favorable policy; and (8) the impact of other public policies of a government.
Political Culture

While political culture is often utilized to explain certain political phenomena, its use is limited because it is not a single variable but a residual one containing many undefined variables.¹ For example, if we find that in the United Kingdom people are more willing to accept a political decision by Parliament than citizens of Italy, then we may want to attribute this finding to the difference in each nation's political culture. We may explain this difference in attitudes with the phrase "the British are much more likely to accept the authority of their political leaders than are the Italians. It is their culture." If this is accepted at face value, then we have made an error: we have attributed differences in political actions to variances in country names. What is really evident is that we have attributed actions of political actors to residual variables which are unknown to us but which are, nevertheless, present. Therefore, if we cannot explain these actions with measured variables we have collected, the residual may in part be due to culture (assuming that our "model" has been correctly specified). Hence, we must be careful in using political culture as an explanation for political activities, and this should only be done after all possible variables have been explored.

Almond and Powell suggest that there is a "policy culture" which is present in all societies.\(^2\) Political culture may be considered an agenda setter which filters out those policies which are culturally unacceptable. For example, in the United States the nationalization of major industries may never be considered while in Britain there is a history of nationalized industry. Attitudes differ cross-nationally according to the way workers perceive the free market and the government's place in the economy. Also civil liberties differences are often suggested to be the result of political culture.\(^3\)

Political culture may affect monetary policy through its effect on economic policy-making. For instance, a free market culture may prevent the use of direct credit controls. Governments which seldom intervene in the economy generally approach monetary policy differently than those which frequently intervene. For example, in West Germany direct credit controls are not used as frequently as they are in


\(^3\)For a complete study of how political cultures may differ cross-nationally, see Gabriel A. Almond and Sidney Verba, The Civic Culture (Boston, 1965). Other inquiries into political culture which are relevant to this discussion are Edward Banfield, Moral Basis of a Backward Society (Glencoe, 1958); Stanley Hoffman and others, In Search of France (New York, 1963); Edgar Morin, The Red and the White (New York, 1970); and Lawrence Wylie, Village in the Vaucluse (Cambridge, Mass., 1957).
Britain, France, and Italy. Differences in the use of direct credit controls may serve as an example of the type of effects political culture may have on economic policy-making.

A tendency to rely on monetary policy as the primary macroeconomic tool for economic policy-making may also be a result of the political culture of a society. Different economic theories have been offered to explain the importance of monetary policy in managing the macroeconomy. Those who suggest that monetary policy is of greatest importance in demand management are generally free market advocates who oppose substantial government intervention in the economy (see Chapter One). On the other hand, theorists who favor more government intervention to support the economy are more apt to support fiscal and direct control policies in lieu of monetary measures. Therefore, in a political culture where free market attitudes are prevalent, monetary policy may be a more desirable instrument for macroeconomic purposes than fiscal policy. Conversely, where the government is expected to become involved in the economy, monetary policy may only play a partial role in economic policy. In short, the amount of reliance on monetary policy may be due to economic attitudes in society which may differ cross-nationally according to the prevailing political culture in a nation.
Political culture may also affect the economic policy-making agenda for certain economic decisions. Some societies may fear inflation more than unemployment, while others may fear recession. When a nation collectively fears inflation, monetary policy is likely to be much more constrictive than in a society primarily concerned with unemployment. This is a result of a "Phillips Curve" relationship between unemployment and inflation. Because political officials making short-run decisions are aware of this relationship, officials may develop a specific orientation concerning the point on the "Phillips Curve" at which they desire unemployment and inflation to meet. This may have implications for a nation's monetary policy because of its relationship with inflation and unemployment. A population's collective fear of inflation may result in strong monetary constraint in one country while another nation with the same amount of inflation might choose to live with the effects of inflation because it does not want rising unemployment. In short, the trade-off between unemployment and inflation forces society to make choices concerning economic values, and those choices may be strongly linked to political culture.

Political culture may also alter the structure of the institutions which make monetary policy. Since these institutions tend to differ cross-nationally, attention must be given to the effects of political culture on them. Do
democratic values, for instance, result in politically-controlled monetary policy, or does monetary policy require politically-neutral technocrats? This again may be a question of culture. Those who fear that elected officials are too politically involved to provide an optimal monetary policy will value independent policy-making. Furthermore, those nations whose population fears inflation more than unemployment may prefer monetary independence because they believe that politicians will not always be sensitive to inflation. Conversely, those who criticize an independent central bank for not following the "public interest" may want elected political officials to set monetary policy. Thus, a trust in politicians and democratic institutions is a significant aspect of a nation's political culture and may affect the structure of monetary institutions. The public's view of democracy in any society may largely determine whether policy power is placed in an independent body without political control. A society willing to delegate a large degree of responsibility to non-elected public officials will likely select different monetary institutions than those which prefer to withhold such authority.

The discussion in Chapter I concluded that monetary policy-making differs in West Germany, Britain, France, and Italy. In West Germany, the Bundesbank is independent of political control and normal market mechanisms (i.e. discount rate and reserve ratio changes) are used to affect
monetary policy. An examination of the political culture in Germany may provide some reasons for this free market approach. First, democratic institutions are new to Germany relative to Britain and France. Second, Germans are highly sensitive to inflation; it is, in fact, probably the number one economic concern among Germans. The impact of inflation on society during the Weimar Republic in the 1920s may be largely responsible for this concern. This economic conditioning and lack of democratic values has resulted in a policy atmosphere which serves anti-inflationary policies the most.

In contrast to West Germany, Britons expect their government to intervene in the economy, though this practice is still debated frequently. Because Britain has had democratic institutions for a long period, there is general consensus that elected officials should have the power to control monetary policy. Britain's economic history has also been one of boom and depression; and it has, over the years, witnessed strong union and working-class politicization. These conditions have led to economic policies concerned more with reducing unemployment than with controlling inflation. While Germany attempts, through

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economic policies, to reach a point on the Phillips Curve at which inflation is low, Britain has attempted to keep unemployment relatively low.

The effect of political culture and economic history on monetary policy in France and Italy is not as clear as in West Germany and Britain. Both France and Italy have cultures in which citizens are relatively distrustful of government leaders. But this probably does not translate into a distrust of democracy in general. Unlike the Germans, who may be more likely to give up political power in return for a stable economy, the French and Italian publics want their share of political power. The reluctance to delegate power and a high concentration of increasingly politicized working class citizens in Italy has aided in the development of a monetary policy very similar to that made in Britain: a mixture of direct and indirect controls which attempt to minimize the pain of monetary constraint. In Italy, monetary policy resembles the political system in its chaotic, unpredictable character. There is evidence that the implementation of this policy in France and Italy is not affected as strongly by culture as in Germany, but is more likely to be a pragmatic effort at maintaining the economy.
Political Parties

The fact that political parties are formed at all suggests that parties will differ ideologically on some policy matters. Parties are prevalent in all industrial democracies, and two of their major goals are to hold public office and shape public policies. Policies and ideologies differ among parties because each party attempts to gain public office through the support of a majority of voters. If one party is the same as another, the electorate will be unable to differentiate between them or to make a logical choice as to which is more representative of its interests. While Downs suggests that ideologies will converge in two-party systems where the public's ideologies are normally distributed, such perfectly normal distributions rarely occur. If no normal distribution of ideologies exists in a society, parties in a two-party system will still differ on issues which they think may influence voters. Because economic policy is among the most significant controversies in western societies, it is likely to be a matter of disagreement among political parties. Economic policy lends itself to different interpretations which tend to fall on left-right and worker-bourgeois continua. Therefore, it is reasonable to believe that parties within a nation will vary

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in their approaches to monetary policy as they take control of the government.

The relationship between political parties and economic policies has been aptly explored. Kirschen suggests that parties of the left differ extensively from parties of the right on economic issues.\textsuperscript{7} Tufte alleges

the real force of political influence on macro-economic performance comes in the determination of economic priorities. Here the ideology and platform of the political party in power dominate. . . . Political parties differ on what they consider desirable economic policy.\textsuperscript{8}

Tufte first analyzes party manifestos in the United States and confirms his suspicions: political parties adopt different views about the operation of the economy. He finds that the political party in power is the "single most important determinant of variations in macroeconomic performance from one industrialized democracy to another."\textsuperscript{9} He also finds that parties are ideological and that they do follow their manifestos. And as common knowledge suggests, his study substantiates the view that leftist parties keep unemployment lower while rightist parties are more concerned with controlling inflation.

Other scholars find conflicting evidence regarding the theory of left-right economic policy differences. Madsen


\textsuperscript{8}Tufte, \textit{Political Control of the Economy}, p. 71.

\textsuperscript{9}Ibid., p. 104.
finds that in Scandinavian countries, the party in power sometimes, but not always, follows ideological guidelines in making economic policy, but Hibbs, in a simple bivariate model of Britain and the United States finds that unemployment has been lower during Democratic or Labour Party rule. While these findings may tend to substantiate the existence of a relationship between party and economic policy-making, there are still many questions about the differences in the macroeconomic policies of political parties.

Kircheimer's "waning of opposition" hypothesis would suggest that there should be no relationship between party and macroeconomic policy. His view is that normal political differences in modern, post-industrial societies have declined drastically since the first half of the twentieth century. Left-right differences have given way to a redistribution of political values. The importance of electoral competition has declined as parties tended to deliver more and more similar policies and programs. Political actions became similar as consensus, rather than ideology, became most valued. If this has been the case and contemporary

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11 Hibbs, "Political Parties and Macroeconomic Policy."

parties do not really offer alternatives, then it would be expected that economic policy differences would not exist across parties. All parties would adopt similar monetary policies because a consensus would exist about how policy should be made thus a change of party in power would have little impact on policy. Epstein suggests that the decline in opposition of socialist parties has occurred primarily in two-party systems.\textsuperscript{13} Two important factors have contributed to stronger ideological differences among parties in political systems: (1) the prevalence of a strong multiparty system and (2) the presence of a "doctrinal basis" in a party of the right. Epstein concludes that the atmosphere of the political system, and not necessarily the development of a post-industrial society, may best indicate the amount of opposition within a party system.

Rose concurs with the idea that parties do not seem to differ in the management of the British economy.\textsuperscript{14} He finds no difference in the way each party conducts economic affairs, but he does find an underlying trend which explains this phenomenon: the British economy has fared poorly whether under the Labour or Conservative Party. Neither party has successfully managed the economy because forces

\textsuperscript{13}Leon D. Epstein, Political Parties in Western Democracies (New York, 1967), pp. 286-289.

\textsuperscript{14}Richard Rose, Do Parties Make a Difference? (Chatham, New Jersey, 1980), pp. 106-140.
stronger than political parties have created the economic problems. Rose seems to suggest that the British economy is beyond the control of the government, and therefore, neither party differs in its success at economic policy-making.

Cowart actually tests for a relationship between the political party in power and monetary policy.\textsuperscript{15} He hypothesizes that the discount rate will be held in accordance with a party's position on a leftist-rightist dichotomy. He finds that in some cases parties of the left raise the discount rates at lower levels.\textsuperscript{16} In all, he finds that the party in power explains discount rate changes in some, but not all, of the cases he investigates.

With monetary policy, it is expected that the government, following prescriptive economic policies, will adopt one of three types of monetary policy: (1) expansive, (2) contractive, or (3) neutral. Expansive policy is characterized by lower interest rates and a growth in money supply, while contractive policy is evidenced by rising interest rates and a decline in the money supply. Expansive policies are utilized to expand demand and to increase economic

\textsuperscript{15}Cowart, "The Economic Policies of European Governments, Part I: Monetary Policy."

\textsuperscript{16}In this way, Cowart tests a two-tailed hypothesis. Leftist governments may hold the discount rate at higher levels because of contempt for those who use credit. He also suggests that leftist governments may hold the discount rate at lower levels in order to encourage high economic growth and high employment.
output and employment. On the other hand, contractive monetary policy is generally employed to fight inflation by decreasing aggregate demand. Neutral monetary policy advocates monetary growth at a constant rate to preserve a stable, growing economy. The basic premise of neutral policy is that differences in a party's approach to economic policy-making will not be reflected in the ways in which it conducts monetary policy, but will instead be manifested in other policy areas.

The prediction of just how party ideology will affect monetary policy is simple; leftist parties will call for monetary policies conducive to the short-term expansion of the economy in order to assure higher levels of employment. To accomplish this, leftist parties will attempt to expand monetary aggregates to allow for more demand in the economy. Since price stability is not a particularly important goal for leftist parties, they will, in accordance with the "Phillips Curve" tradeoff, tolerate inflation in order to achieve lower employment. The opposite behavior is expected from conservative parties. If inflation is high, a conservative government will contract the monetary aggregates, cut aggregate demand and attempt to curtail inflation by creating some "necessary" unemployment. Thus, the expectation is that monetary aggregates will be held lower by conservative parties and higher by leftist parties.
Electoral Cycles

While the expectation is that in the long-term political party differences should be correlated with monetary policy changes, the prospect of a political business cycle is short-term. Kalecki first hypothesized that the state would use its monopoly over economic policy instruments to its own advantage. He felt that Keynesian economics, which was supposed to eradicate the business cycle, could be misused by politicians to create a political business cycle. This cycle would enhance the government's chances of reelection by generating an improving economy immediately preceding an election. The government, like any other economic actor, would thus utilize its resources in order to gain the highest possible rate of return, in this instance, electoral victory.

A study by Nordhaus, linking the electoral and business cycles in the United States, stands at the forefront of contemporary political business cycle research. Nordhaus looks at the employment-inflation "Phillips Curve" trade-off over a number of years and finds a cycle in which unemployment, a macro-indicator of economic health, is


usually reduced prior to elections. Correspondingly, after elections, inflation rises because of the inevitable trade-off. Tufte extends the argument of a political business cycle even further. One problem Nordhaus has in his analysis is that he uses only economic outcomes (e.g. inflation and unemployment) as dependent variables in his study. Because public officials may fear the link between macro-economic policy and policy outcomes is tenuous, Tufte argues that governments will funnel excess transfer payments into the economy prior to an election.\textsuperscript{19} This action will have both direct and indirect effects on voter expectations. As Kalecki suggested, a government will use essentially all possible instruments at its disposal to enhance its electoral chances.

Much of the political business cycle literature is based on the underlying assumption that economic conditions affect the popularity of the government. This question has been widely researched with mixed findings.\textsuperscript{20} The

\textsuperscript{19}Tufte, Political Control of the Economy, pp. 29-44.

assumption must be accepted because politicians would not try to manipulate the economy at the time of an election unless such actions resulted in additional popularity (votes). Furthermore, the amount of electoral support a government gains is important; if only small gains accrue from a large upward swing in economic activity, there may not be enough gain to encourage economic manipulation. On the other hand, if much could be gained from a relatively small change in the economy, then it may be expected that politicians will endlessly attempt to manipulate the economy just before an election.

If governments attempt to stimulate the economy near the time of an election, different instruments may be used. For instance, taxing and spending policies might be used to spur economic activity. A tax cut during an election year or increased spending for public programs near an election can stimulate the economy. Or, as Tufte suggests, transfer payment increases may be used directly or indirectly to stimulate buying power. Frey and Schneider indicate that this has occurred in West Germany, and Tufte cites evidence of this in the United States. A government may also use monetary policy as an economic stimulant. Because variation in the money supply has important consequences for interest rates, an expansive policy may produce short run economic

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growth. While lags exist in both the implementation and the effect of many taxing and spending programs, monetary policy (through the use of monetary instruments) may be implemented in less time and will have more immediate consequences. This occurs because monetary policy is more direct in affecting financial markets and economic behavior.

The expectation with monetary policy is simple: immediately before elections, governments, trying to stimulate the economy by following the logic of the political business cycle, will expand monetary aggregates (money supply and aggregate credit) to increase demand and heighten the expectations of the electorate. Because monetary policy is a moderately direct economic instrument, it would be expected that this policy would be useful in expanding the economy. This should hold true regardless of party in power, although leftist parties might be expected to expand monetary policy more than rightist parties. Tufte has described this type of electoral cycle in which parties weigh ideology and electoral strategy.\(^2\)

While party and electoral cycles are important, a third intervening factor explaining the use of monetary policy may be suggested. The degree of political competition in a system should affect the economic policy of a party in power since strong competitive pressures act to force governments

\(^2\)Tufte, *Political Control of the Economy*, pp. 71-104.
to broaden popular support. Gaining support through alternative economic policies is more important to governments when there is strong electoral pressure from another party or parties. For example, in a nation with relatively weak political party competition, the party in power will find it unnecessary to use economic policies to gain support because reelection can generally be gained without using this strategy. In contrast, a small anticipated margin of electoral victory may cause the government to use economic policies to enlist the support of "swing" groups in society.

A large amount of electoral competition will produce a more important role for "have nots" in deciding what type of economic policy is to be made. Since the political "have nots" are in the lower socioeconomic bracket of society, they are usually the first to become unemployed when a recession develops in an economy. While governments are able to weather a lack of support due to poor economic conditions when there is little electoral competition, they will not be able to ignore these "have not" voters if electoral competition is high. If a recession develops, these voters will move to the opposition party. Since only a few votes separated the two opposing parties prior to this shift, the opposition party may be able to overtake the governing party in the next election after the shift of dissatisfied voters. Hence, a government in a highly competitive political system will have electoral problems if
a recession develops and must therefore keep unemployment low.

Since recession and high employment usually hurt a government's popularity, one would expect more expansionary monetary policies in countries with high political party competition because this policy would enable a nation's economy to alleviate any recessionary tendencies. Where competition is lower, political parties should not have to rely on popular economic policies to retain power. In this situation, a party will have much more latitude in using monetary policy for contractionary reasons.

Political Stability

Salvati suggests that a major cause of inflation and monetary instability in Italy has been a lack of political stability. Because governments have consistently lasted less than one or two years, no consistent economic policy has been pursued over the long-run. Salvati therefore suggests that in order to implement an anti-inflationary policy which consists of stable monetary policy, a long-term economic policy must be developed. This cannot be done if government instability is so great that no coherent policy may be shaped by cabinet ministers who have no vision of the future. Furthermore, changing cabinets may approach economic

policy in different ways; one cabinet may approach anti-inflationary policy through direct credit controls, while another government may use high discount rates as a policy maneuver. Since each of these policies needs time to become effective, a change in cabinets and monetary philosophy may result in negating policies.

Salvati also suggests that political instability has resulted in a public administration which is inadequate for handling economic policy-making. "[Such a] system has been very malleable in the short run: that is, incapable of rigid responses and unable to discipline demands in the name of well-defined priorities."24 Because cabinet instability tends to paralyze the political process, bureaucrats and central bankers will be relied upon to make policy in times of instability. Since decisions by public administrators tend to be rigid and guided by inertia, economic policy changes will rarely occur in a nation faced with cabinet instability. Hence, if inflation exists, a situation which would normally indicate that contractionary monetary policy is needed, bureaucrats may be hesitant to curtail monetary growth. They may continued instead to pursue the same path of monetary expansion which had preceded the inflation. With the advent of economic planning, as is evident in France, rigid policy may be even more pronounced during

24Ibid., p. 45.
unstable periods because bureaucrats are given a large amount of latitude when planning is utilized. While bureaucratic decision-making does not have to be static, political decision-making has a tendency to be more dynamic.

A political system which has no continuous leadership in economic affairs will have little resolve to institute strong anti-inflationary policies. If a government foresees itself in power for only a year, tight monetary policy as a weapon against inflation will likely be shunned because this policy requires sacrifices in the short run and success only in the long run. What politician would be willing to accept this sacrifice knowing that another administration may gain the benefits? Tight monetary policies may also be a factor in cabinet instability. If a finance minister decides to contract monetary policy, recession and government failure may result. The succeeding finance minister may expand monetary policy fearing a similar backlash. In this way, cabinet instability should lead to monetary expansion; because political sacrifices are made in any attempt to slow down the inflation rate, the unstable polity will have particular difficulty implementing a long-term anti-inflationary policy. Therefore, monetary policy will tend to be expansionary at times of political instability.
Monetary Structures

Structural differences in monetary institutions occur cross-nationally and may produce policy deviations. Both Woolley and Albritton assume such variance in their investigation of comparative monetary policy. Woolley analyzes two different aspects of central banks and monetary policy: (1) the complexity/selectivity of monetary policy; and (2) the concentration of monetary policy. He determines that one can estimate the amount of autonomy that a central bank possesses by considering these two variables.

Complexity acts to politicize monetary policy because it creates policy which may be directed at a single segment or group in society. "By increasing the salience of policy for affected groups, complexity should increase the number and intensity of groups mobilized to influence policy choice." Simplicity enables a central bank to remain autonomous from outside influences because of lower group mobilization and a more technical constitution of policy. Concentration refers to the extent of monetary policy control which is held by the central bank. While some banks


27This concept appears to refer to the directness of instrumentation as well as to simplicity.
hold all of the reins of monetary instrumentation, others share control with the government and other monetary institutions. Thus, the more concentrated the instrumentation in the central bank, the more politicized the bank itself is likely to be since all responsibility for policy-making resides with the bank. On the other hand, when instrumentation is dispersed, a central bank is able to claim less policy responsibility and thereby circumvent some controversy. So, by examining the degree of complexity and concentration, we should be able to ascertain the degree of autonomy of any central bank. This will create a spectrum from the most autonomous, with little complexity and low concentration, to the most politicized, consisting of high concentration and complexity.

Albritton extends Woolley's work by formulating a "government power to influence policy" index.28 He essentially adds to Woolley's findings by including the institutional governmental authority over monetary policy, a variable Woolley purposely excludes. Complexity, concentration, and government authority are all united in Albritton's index.

Theoretically these structural variables appear significant. But how much do these variables really matter in distinguishing politicized and autonomous central banks?

28 Albritton, "Structures of Monetary Policy in the EEC."
It seems questionable that more complex monetary instruments result in less autonomy for a central bank in determining monetary policy because many minor instruments may be used for technical reasons not associated with the overall control of monetary policy. The presence of these instruments may lead to the conclusion that a country has complex monetary instrumentation when these minor instruments are actually of little consequence. If these minor instruments are of little use to these groups, they may have no impact on the amount of access the government or interest groups have in making of monetary policy. Woolley probably considers credit controls to be most important in association with complexity. Actually, credit controls are easily accessible to politicians and interest groups because they may be used as particular policies, so, these controls do seem to follow this complexity hypothesis. Instruments such as open market operations and selectivity of reserve requirements may have more use in technically adjusting financial markets than in helping certain interest groups or in following government directives. Except for direct controls, all monetary policy tends to be very technical, so interest groups may be more likely to lobby for results than for the use of any one monetary instrument.

The use of concentration in this analysis may also be misleading. Woolley suggests that less concentration of instruments results in less autonomy for central banks.
This is suggested without regard for direct governmental control over monetary policy. It seems that the reason many nations, such as the United Kingdom and Italy, have dispersed policy-making mechanisms is that government agencies share policy powers with the central bank. In these countries more political control exists, rather than less, as Woolley's theory would suggest. Therefore, the institutional governmental authority, which Albritton works into the analysis, may be a much more important political variable than either complexity or concentration.

Governmental authority over monetary policy and over the central bank is important because it differs substantially across nations. Italy, Britain, and France each have central banks with less than full autonomy which requires them to work in cooperation with the government's treasury. In each of these three nations, overall monetary policy is guided by the government while the technical aspects of the policy are carried out by the central banks. In contrast to this arrangement, the German Bundesbank is very independent. By statute and by the Basic Law, the Bundesbank is free to make policy as it wishes and is only loosely bound to support the basic economic policies of the government while safeguarding the currency. Traditionally, the Bundesbank has led economic policy of Germany by advising the government on economic matters. Through inspection, we can see that the Bundesbank has tended to use more powerful
instruments (i.e. reserve requirements) while central banks in France, Britain, and Italy have used more politicized instruments, such as the credit controls.

Interest Groups

Also important in considering central bank autonomy is a bank's relationship with interest groups. While Woolley suggests that complexity and concentration may contribute to lobbying efforts, he does not explain which interest groups try to affect central bank decisions or how they attempt to make changes. Obviously banking institutions are interested in affecting monetary policy because they are most directly affected by decisions of central banks, and banking institutions may be the only interest group which tries to affect policies directly. Other groups, such as unions interested in issues such as unemployment, may try to affect monetary policy through governmental channels (e.g. ministries of labor) in nations where central banks are controlled politically, but this is indirect lobbying. Whereas unions are interested in unemployment, they may attempt to affect more direct policies, such as public employment programs rather than monetary policy per se. Studying the effects of interest groups on monetary policy could be very fertile, since there seems to be little evidence presently linking these groups with central banks. Utilizing interest groups in an analysis of monetary policy
involves problems of operationalization, theory, and measurement. First, which groups or bodies constitute an interest group and which do not? Furthermore, is government lobbying of a central bank also to be included as an interest group activity? Second, what policy differences should we expect with interest group involvement in monetary policy? What course is this policy expected to take as groups seek to influence decision-making? Finally, how do we measure the amount of interest group involvement in this policy area? These problems make it more difficult to ascertain the absolute effect of interest groups on monetary policy.

Policy Effects

Monetary policy-making can also be affected by other economic policies of a government. For example, fiscal policies may affect interest rates and open market policies, incomes policies may reduce the inflationary push on the money supply, and energy policies can maintain international monetary stability in conjunction with other foreign trade policy. Because monetary policy is not independent of these other policies, the formulation of this policy is partly contingent upon how these other policies are conducted.

A budget deficit places pressure on monetary policy. When a deficit occurs, it must be financed in one of two ways: either government debt must be sold to the public or
the debt must be monetized. When government debt is sold, the debt must compete for funds in the open market. For example, if the rate of return on most money investments of similar risk is twelve percent, the government, through the issuance of treasury bills or some other debt form, must be willing to pay comparable rates in order to sell this debt. When this bidding occurs, the cost of selling debt will climb, and the result is higher interest rates. Therefore, selling of the debt affects monetary policy by creating higher interest rates.

What happens when debt is not sold to the public but is instead monetized? The money supply is affected because more capital is injected into the economy through the government sector. While selling debt tends to contract the money supply, monetizing the debt is expansionary. Because running a budget deficit will result in one of these two scenarios, a deficit always affects monetary policy. Furthermore, there is almost always a mixed response to a budget deficit; even if the government plans on selling enough debt to cover a deficit, some of the debt may have to be monetized in the name of expediency. When the government may be concerned that selling excess debt will crowd out too much investment, it may be forced to sell some of the debt and monetize the rest.

Two economic scenarios may lead to two different monetary policy prescriptions when a deficit occurs. If
aggregate income is at a full employment level, a deficit is ill-advised; when a deficit occurs at full employment, monetary authorities following economic theory will contract policy. On the other hand, if a deficit occurs during a low economic growth period, the deficit should lead to monetary growth. A common feeling among many politicians and laymen is that a deficit will always lead to monetary expansion but this is only necessarily true when deficits are used properly in compliance with economic theory. An improperly used deficit will usually lead to monetary contraction when an economy is at full employment.

Incomes policies may affect monetary policy by eradicating the inflationary push on the money supply because when inflation develops, the money supply must grow at a faster rate in order to remain at the same real rate. If an incomes policy freezes wages and prices, this inflationary push on the money supply will be lowered, allowing the money supply to stabilize. An incomes policy may also have a delayed effect on the money supply. When a wage and price freeze is lifted, an inflationary push may result in rapid expansion of the money supply. Furthermore, if the money supply were increasing substantially during a wage-price freeze, a lifting of the freeze may result in even more inflation and greater monetary growth. Therefore, while the short-term effect of an incomes policy is to
stabilize the money supply, the long-term effect may be an expansion of monetary policy.

Energy policies may also affect monetary policy. Because Western European nations rely heavily on oil imports, an energy program is important in stabilizing a country's balance of payments. The balance of payments may affect the money supply and interest rates. Excess imports caused by energy dependency may force a nation to run a capital account surplus to balance the overall international ledger. This surplus may result in contractionary monetary policy in a nation because monetary flows will be moving out of the domestic economy. Fluctuations in the international economy may be the most important exogenous factor affecting domestic monetary policy.²⁹

A nation's monetary policy may also be affected by other countries' monetary policies. For example, policies in Western European nations are very dependent on United States policy because of the nature of international monetary interactions. When the United States raises interest rates, these rising rates place monetary pressure on other economies because international money will flow into the United States. As a result, European nations are forced either to raise interest rates or to allow their international

reserves to deplete. Conversely, expansionary monetary policy in the United States may flood Europe with excess funds, thereby contributing to world-wide monetary expansion.

European dependence on the United States for international financial leadership also results in monetary dependence in Western Europe. When the United States decided to "float" the dollar on the international market in the early 1970s, Europe could only follow suit. The float later resulted in unstable exchange rates in Europe which tended to destabilize monetary policy because European nations were so heavily dependent on the international market. Floating exchange rates made international management easier but further complicated domestic economic policy. Because international economies may affect domestic policy-making, monetary policy in open economies is strongly linked to independent factors in the international economy.

Conclusion

Monetary policy is a complex policy which may be affected by political, environmental, and economic factors. While economists ordinarily consider the economic factors political scientists must not ignore the economic while considering political factors. Any model explaining monetary policy should therefore attempt to include all possible factors which may affect monetary policy whether those
factors have been traditionally in the political science or the economics realm.
CHAPTER III

RESEARCH DESIGN AND DATA

Propositions

The complexity of monetary policy as illustrated in the preceding chapter suggests three types of relationships which may exist between monetary policy and several different independent variables. First, monetary policy may be explained by certain independent political variables within a system. These variables are of foremost concern in this analysis. Second, certain cross-national differences in monetary policy-making may be explained by system variation. Finally, economic variables also affect monetary policy. The exclusion of variables relating economics and monetary policy would, in effect, render a model incomplete.

Political Variable Hypotheses

In this analysis, four relationships between political variables and monetary policy will be tested. Political parties are expected to follow their ideologies and pursue monetary policies in congruence with their economic values. Before elections, governments are expected to expand monetary policy because of their desire to expand the economy before an election. This monetary growth should occur
during the six months preceding elections. High electoral competition will force a government to expand monetary policy more often than it contracts it. Finally, political instability will result in greater monetary growth. These four formal hypotheses which are to be investigated in this analysis are as follows:

Hypothesis 1: Parties of the left tend to expand monetary aggregates to a greater extent than parties of the right.

Hypothesis 2: The higher the level of electoral competition, the greater the magnitude of monetary expansion.

Hypothesis 3: Monetary growth will be greater six months prior to elections than at other times.

Hypothesis 4: Political instability produces greater monetary expansion than at times of political stability.

Cross-National Variation

There are two system variables which are expected to affect monetary policies of different nations. The institutional structures in which monetary policy is made and the political culture of a nation may enable some explanation of cross-national variation in monetary policy. Autonomy of a central bank should result in less political manipulation of monetary policy. For example, in a nation which has a central bank with a large degree of autonomy, political officials may not be able to manipulate monetary policy as suggested in the previous hypotheses linking political variables and monetary policy. Central bank
subordination to political officials, on the other hand, may allow such manipulation to occur. Furthermore, it has been suggested that structural variables which result in autonomous central banks may also lead to monetary constraint; central bankers tend to possess conservative economic values, monetary policy may follow conservative, contractionary guidelines in nations where central bankers are autonomous and hold most monetary powers.

Just as most monetary structures help explain policy outcomes, political culture may also add to the explanation of cross-national variation in monetary policy. Primarily, political culture may dictate cross-national differences in the usage of monetary policy for contractionary purposes. Those cultures in which inflation is considered a primary economic evil may employ monetary contraction more often than those nations which consider unemployment to be of utmost importance. Political culture may affect this choice of economic priorities. Furthermore, countries with political cultures supporting a "market ideology" may also be willing to employ monetary policy as a contractionary instrument more often than nations without this ideological preference.

\[1\] Woolley, "Monetary Policy Instrumentation and the Relationship of Central Banks and Governments."
Economic Hypotheses

Four economic variables are expected to affect monetary policy: (1) inflation; (2) economic growth; (3) the balance of trade; and (4) budget deficits (or surpluses). Inflation will lead to greater monetary growth by placing pressure on the money supply and interest rates to grow in relation to inflation. This push should especially occur during times of cost-push inflation. On the other hand, it may be expected that high inflation rates will result in a government's policy move to counteract inflation with contractionary policy. Therefore, expectations surrounding inflation and monetary policy are two-fold: if no contractionary policy move is made, inflation will result in monetary expansion; but if inflation causes the government to contract monetary policy, lower monetary growth will result.

Economic growth may also affect monetary policy. Here economic growth is utilized as a surrogate variable representing employment levels and economic capacity. As an economy grows, the money supply must grow correspondingly in order to compensate for this overall growth in employment levels and economic capacity. It is also expected that the trade balance will be related to monetary policy. A positive trade balance should expand monetary policy because a negative balance on the capital account will usually accompany a trade surplus. Because politicians will often attempt to adjust the overall balance of payments, a positive trade
balance will generally result in expansionary monetary policy. Finally, deficits may also lead to expansionary policy. Because central bankers must often monetize government debt, deficits will often lead to monetary growth. Of course all of these variables tend to be interdependent instead of independent of each other. Inflation may result from high economic growth and deficits, a trade balance may be dependent upon economic growth, and economic growth may be dependent upon the deficit. While these interrelations may need to be modeled more specifically in economic analyses, the inclusion of these variables is for purposes of specification rather than the estimation of specific parameters.

Nations

Four industrial nations are employed in this analysis: West Germany, the United Kingdom, Italy, and France are selected as representative, European industrial countries. Industrial nations are used for economic policy reasons. Monetary policies in these nations are relatively similar because of the similarities in economies and political systems. While "most different systems" designs are often more appropriate for many comparative analyses,² "most similar systems" designs are appropriate for policy

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Because policies differ considerably among industrial and pre-industrial societies, a comparison of policies among these different nations may be impossible. In fact, policies in extremely different systems may only slightly resemble one another. For example, monetary policy in West Germany is very similar to that of most other Western European nations whereas monetary policy in Pakistan may have a whole different meaning because the country lacks developed financial markets and has a backward economy. All four of the nations employed in this study have relatively large economies, and their monetary policies are similar enough to assure comparability. Monetary institutions and instrumentation are also comparable. Furthermore, as Teune suggests, policy studies are not meant to be used to generalize to the universe, but are, instead, used to build theory contingent upon special circumstances. Therefore, similarity was the primary consideration in choosing nations for use in this study.

Methodology

The statistical technique employed in this analysis of monetary policy is time series regression analysis. The time span of this study is 1953 to 1979 with 108 quarters. This time period was chosen for three reasons: (1) this is
a post-war period in which economies were expanding and no major interruptions are evident in economic policy-making; (2) this long period enables regression analysis to be performed with greater confidence;\(^4\) (3) data for this period were readily available and were generally equivalent in meaning over the selected time span; and (4) the length of this period provides for a significant amount of variance in the variables used in this analysis.

Time series regression analysis is employed primarily because of the dynamic nature of monetary policy. While cross-sectional analysis is useful when relationships are static over time, monetary policy is always changing and therefore calls for a research design which will account for this change over time.\(^5\) Regression analysis is a useful technique to employ when data are arranged in a time series because it allows multivariate coefficients to be computed when cases are ordered sequentially. One problem often present in time series regression analysis is autocorrelation.

\(^4\)While multiple regression analysis may be performed using as few as twenty cases, the more cases which are included in a model results in more consistent parameter estimates. It is always best to use as many time points as the data and theory allow. For more on this point, see Richard McCleary and Richard A. Hay, Jr., Applied Time Series Analysis for the Social Sciences (Beverly Hills, 1980), pp. 17-20.

Wonnacott and Wonnacott discuss this problem in detail. 6 One of the assumptions underlying ordinary least squares regression is that corresponding error terms of different observations have no relationship with each other. When a relationship occurs, this is called autocorrelation. When autocorrelation exists in OLS regression models, the result is a bias in the standard errors of the regression coefficients and hence, statistical significance tests which are imprecise. This may lead to the acceptance of a parameter as significant, when it actually lacks statistical significance. 7

In the analyses which follow in the next chapter, Yule-Walker equations are utilized to test for the presence and magnitude of autocorrelation. This equation simply estimates different orders of autocorrelation in a regression model. 8 The Cochrane-Orcutt method is then employed in models which show evidence of significant levels of autocorrelation. 9


8 The equation is presented in McCleary and Hay, Applied Time Series Analysis for the Social Sciences, pp. 135-136.

This technique corrects for the presence of first-order autocorrelation. After the use of Cochrane-Orcutt, the estimates of the equation (and their significance tests) should both be accurate and unbiased.

Data

**Measures of Monetary Policy**

In choosing representative variables for economic concepts, many political scientists (and economists) have turned to economic outcomes as representation of the policy intentions of public officials. While little work has been conducted concerning monetary policy, much research has focused on the question of political effects on macroeconomic policies. The question of whether governments manipulate policy instruments to gain more electoral support has been approached primarily from the output side; in looking at inflation, unemployment, and economic growth, policy instruments have largely been overlooked. Hence, political scientists have often observed economic outcomes

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10 For examples of this type of analysis see Nordhaus, "The Political Business Cycle"; and Hibbs, "Political Parties and Macroeconomic Policy."

11 Exceptions to this include Cowart, who has investigated budget surpluses and deficits as well as discount policy, and Tufte, who analyzed transfer payments, along with economic outcomes, in his analysis. Tufte, Political Control of the Economy; Cowart, "The Economic Policies of European Governments, Part II: Fiscal Policy"; and Cowart, "The Economic Policies of European Governments, Part I: Monetary Policy."
instead of specific policies. This approach to economic policy assumes a highly responsive economy if a linkage between politics and policy outcomes is to be drawn.

On the other hand, there may be dangers in using only instruments as indicators of policy motives. This may be evidenced by Cowart's use of discount rates as indicators of monetary policy. Since open market operations, reserve requirement ratios, and direct credit controls may all be employed to affect this policy, the use of the discount rate as the sole judge of monetary policy direction may be misleading. Italy's lack of use of the discount rate as a method of changing monetary policy during the 1960s represents this problem.⁰¹² If using the discount rate as the indicator of this policy, one may incorrectly assume that Italy had a very stable monetary policy during the 1960s when Italy's reliance on other policy instruments during this period actually suggests otherwise.⁰¹³ This illustrates the problem with single instrument analyses. Even if the discount rate were the most important monetary tool in all nations (which it is not, as the case of Italy and the United States illustrates), the bank rate would still have to share monetary powers with these other instruments. Since using a sole instrument cannot represent the total

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⁰¹²Italy only changed the discount rate once during the 1960s. OECD, Monetary Policy in Italy, p. 23.

⁰¹³Ibid., pp. 21-25.
policy, using the discount rate as a dependent variable may not represent monetary policy intentions adequately.

In order to circumvent the problems of validity present when using either policy outcomes or single policy instruments to represent monetary policy, this analysis will employ monetary aggregates (the money supply and aggregate credit) as dependent variables.14 The utility of this may be illustrated in two ways: (1) aggregates are more amenable to control by governmental actors than are inflation and unemployment and (2) they broadly represent the use of monetary instruments because instruments are used to regulate the money supply and aggregate credit. Monetary aggregates fall between the two extremes in representing monetary action; they are not as tenuous in representing policy as outcomes are, but they are more flexible and less cumbersome to employ than would be all of the monetary instruments in an analysis. Furthermore, in the 1960s and 1970s western nations have turned to monetary aggregates as major targets of monetary policy.15 And even though interest rates were usually monetary targets in the 1950s,

14The measure M1 is utilized to represent the money supply. While much controversy exists in economics concerning the best measure of the money supply, M1 is the only possible measure for this analysis since no other measure is available for the entire period from 1953-1979.

15Officially, West Germany sets money supply targets and France, Italy, and the United Kingdom attempt to regulate aggregate credit.
the effect of monetary policy at that time still included the growth or constraint of these aggregates.

There are some problems in using monetary aggregates as dependent variables representing monetary policy. First, high interest rates which are indicative of contractionary monetary policy may have paradoxical effects on the money supply. While high interest rates do curtail lending, these rates may also draw international money into a nation's economy. High interest rates will attract overseas investment and therefore may act to expand the money supply.

Second, the use of M1 may be theoretically misleading at times. Because other monetary measures such as M2 and M3 may be expanding at times when M1 is contracting, the use of M1 may indicate an opposite policy move than is actually occurring. This situation may result from a move by the public into time deposits from demand deposits.

Three measures of the money supply and aggregate credit are utilized. The analysis uses absolute values of these dependent variables, real values, and differenced values. Real values are valuable in realizing monetary effects beyond those which are caused by inflation. Through dividing the dependent variable by inflation, this real value may be computed. Economists often use real rates when analyzing economic data because inflationary effects may be of secondary importance. Differencing of the dependent variables enables an analysis of change, instead of an
analysis of levels. Differencing is especially important in de-trending data, and since the money supply and aggregate credit have tended upward over this twenty-seven year period, the differenced results of the analysis are especially important.

**Independent Determinants of Monetary Policy**

Political variables were all coded appropriately to fulfill the requirements of regression analysis. The political party in power was coded zero for a leftist government and one for a rightist party.\(^{16}\) Determination of codes was based on the major party in a coalition or the orientation of the entire coalition. In France, the party of the president was coded where applicable.\(^{17}\)

Political stability was operationalized through the use of ministry of finance stability. Total cabinet instability may not always be a good indicator of actual instability because often new cabinets comprise the same

\(^{16}\)In dichotomizing all parties obviously some problems exist. Dichotomization was performed with the aid of Conrado, *The German Polity*; Rose, *Politics in England: An Interpretation for the 1980s*; and William Safran, *The French Polity* (New York, 1977). In a time series design, one must remember that equivalency over time, and not necessarily across nations, is the most important concern.

\(^{17}\)The constitution of the French Fifth Republic was adopted in 1958 and provides for a president with substantial powers. The Fourth Republic provided for a parliamentary government. Because of this, the coding scheme had to be changed in the middle of the series.
ministers as preceding cabinets. Cabinet turnover in France and Italy represents this phenomenon well. Therefore finance ministers, who are in charge of economic policy, were utilized in judging stability for the purpose of this study. When a change occurs in the finance ministry, a code of one was given. All other quarters without change were coded zero.

At times of elections, codes of one were used and at other times zero was coded as the value of the election variable. Coding provides for monetary growth to begin six months prior to an election. A period of six months was important because of time lags which exist in the linkage between monetary policy and economic response. Because expansion of monetary policy must occur over a period of time before it may be accepted as expansionary policy, a long time period here is justified. For example, a six month period of monetary growth is expansionary even if a two-week period within this six months shows contractionary tendencies. Only over a substantial period of time may a policy's direction be realized. A longer period of time would not be appropriate because of the lack of standard election dates in parliamentary regimes. Also, it is

18MacRae approaches the concept of political instability through the use of cabinet turnover. Duncan MacRae, Parliament, Parties, and Society in France 1946-1958 (New York, 1967).
expected that there will be some overlap in monetary growth for three months after an election due to monetary inertia.

In West Germany, Italy, and Britain the electoral competition variable was measured by subtracting the voting percentage of the major governing party from fifty. This computation was also performed for French Presidential results. Deviations across time then enable a rough measure of competition change. With pre-presidential French competition, parties were divided by a left-right differential and the difference between the sum of votes of the majority and fifty was used as the indicator for this variable. This was performed because of the number of parties and the complexities of coalitions in pre-Fifth Republic France.

The party in power, stability, and competition measures were all lagged one time period. This was performed because two types of lags exist. First, a political lag is evident in the implementation of monetary policy instruments and second, an economic lag between the time these instruments are employed and the time monetary aggregates are affected is present.

Also included in the regression equations are economic variables which require no elaborate coding scheme since all are interval level data. The consumer price index of each country was utilized to represent inflation and the Gross National Product to represent economic growth. The budget deficit of each nation was computed by subtracting
public expenditures from total revenue. By subtracting imports from exports the trade balance was computed. Since the inclusion of these variables in regression equations is solely for the purpose of specification and since the results are not central to this analysis, this analysis employs different time lags for these variables and will ultimately utilize those equations in which these economic variables are most significant. In this way, the models may be completely specified.

Sources of Data

The International Monetary Fund's Financial Statistics was the source of all of the economic variables. The money supply, aggregate credit, the consumer price index, GNP, the trade balance, and the budget deficit were collected from this source. The sources for finance ministry stability were Rulers and Governments of the World, Vol. II and the New York Times Index. Electoral data for the competition and election variables was collected from The International Almanac of Electoral History.

19See Wonnacott and Wonnacott, Econometrics, pp. 312-313, for problems which misspecification causes.


CHAPTER IV

DATA ANALYSIS

Hypotheses formulated in Chapter III are tested in this chapter. Results from this analysis will be presented in sections evaluating political and economic variable effects on monetary policy. Cross-national variation in monetary policy determination will also be explored. Time Series regression analysis is used to test relationships between political and economic variables and monetary policy. Using multiple regression analysis, regression coefficients and significance of parameters will be analyzed. From this analysis two major indicators of relationships will emerge: (1) unstandardized regression coefficients and (2) significance tests.

The unstandardized regression coefficient (the slope, or b-value) of each independent variable indicates the effect on the dependent variable produced by an independent variable and predicts the change in the independent variable resulting from a unit change in the dependent variable. This statistic results in a real-world interpretation. For example, if the b-value of the party parameter in this analysis were 1.5 when money supply was the dependent variable, the slope might be interpreted such that a unit of
change in party (which in this case would be a change from a leftist party to a rightist party) was proportionately related to 1.5 money supply units. If the b-value were negative, this might be interpreted as a one unit change in party and a 1.5 decline in money supply. Because the slope has this real-world interpretation, it is a very good measure of a relationship between two variables when other variables are controlled for.

Statistical significance tests compute the probability that the slopes of a particular model occurred by chance. The main pitfall of using slopes is that magnitudes within an equation are not necessarily comparable because the slope is a function of the unit of measure of the dependent variable and independent variable. For example, one unit of measure might be dollars while another variable might be an index measure. While b-values of any magnitude may occur, significance tests are affected by the standard error of a slope which indicates how tightly the model fits a partial regression line. Therefore, the interpretation of unstandardized regression coefficients without significance tests may often be meaningless. T-ratio significance tests employed in these analyses may also measure relative effects within each model. The magnitude of the T-Ratio serves as an indicator of significance levels. A .05 level of significance is employed in this analysis as an indicator of whether a variable is significantly related to a dependent variable.
The .05 level of significance (which suggests that a certain relationship could occur by chance in only five of 100 cases) is a good rule to follow. A significance level lower than this means that a relationship is even more significant. While this .05 rule is employed, significant levels approaching, but not actually at this mark will be judged as near significance since the .05 level is an arbitrary value.

Likewise, the value of R-squared, the coefficient of multiple determination, indicates the total explained variance in a model, and is used to determine the overall fit of a model. The R-squared may indicated if a model is specified correctly or not since a low amount of explained variance may point out a specification error. When a meaningful independent variable has been left out of an equation, the R-squared may be low, indicating this misspecification.

Several assumptions about regression analysis were tested concerning the level of data employed, multicollinearity, and linearity of the data. The requirement of interval level data is satisfied (see Chapter III). Second, simple correlations illustrate that there is some multicollinearity present in the absolute and real economic independent variables. The inflation rate, gross national product, and deficit of all indicate that multicollinearity exists in models utilizing these real and absolute money values. Most simple correlations between these variables ranged above the critical level of .8. Therefore, in models representing
absolute and real money values in this analysis only inflation is used as a representative variable for these three economic factors. In differenced equations, the inflation rate, GNP, and deficit are not significantly collinear and full models are used. Furthermore, significant multicollinearity is not evident between any other variables in the analysis. While critical multicollinearity may be defined as any correlation above .8, no correlations surpass .6 and few are larger than .5. Scatterplots indicate that relationships between the dependent variables (the money supply and aggregate credit) and independent variables are generally linear.

Tests of Propositions

In the following discussion, the tests of the hypotheses presented in Chapter III are discussed. Regression results of each monetary measure and each nation result in twenty-four regression equations. Table I presents expected relationships between the independent variables and monetary policy.

The Political Party in Power

Hypothesis 1: Parties of the left tend to expand monetary aggregates to a greater extent than parties of the right.

1 The use of representative variables when multicollinearity is present is discussed in Johnston, *Econometric Methods*, pp. 159-168.
TABLE I

EXPECTED PARAMETER SIGNS OF REGRESSION RESULTS
EXPLAINING MONETARY POLICY

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition</td>
<td>negative (-)</td>
</tr>
<tr>
<td>Deficit</td>
<td>negative (-)</td>
</tr>
<tr>
<td>Election</td>
<td>positive (+)</td>
</tr>
<tr>
<td>GNP</td>
<td>positive (+)</td>
</tr>
<tr>
<td>Inflation</td>
<td>pos./neg. (+/-)</td>
</tr>
<tr>
<td>Party</td>
<td>negative (-)</td>
</tr>
<tr>
<td>Stability</td>
<td>positive (+)</td>
</tr>
<tr>
<td>Trade</td>
<td>positive (+)</td>
</tr>
</tbody>
</table>

The relationship between political party in power and the absolute money supply is significant in two of three nations (Italy's Christian Democrats have been in power throughout this whole time period so the party measure is not represented in the regression equations for Italy). In France, a negative b-value with a high level of significance indicates that monetary policy was expanded more by leftist parties before 1958 (Table II). Table III illustrates that in the United Kingdom there is a similar relationship between party and the money supply. A significant, negative slope indicates that the incumbency of the Labour Party and monetary expansion are related. On the other hand, Table IV depicts a negative slope in West Germany indicative of the expected relationship, but this relationship is statistically
### TABLE II
THE RELATIONSHIP BETWEEN THE MONEY SUPPLY AND SIX INDEPENDENT VARIABLES--FRANCE

<table>
<thead>
<tr>
<th></th>
<th>b-value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-427</td>
<td>17.1</td>
<td>-24.9</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>-2.23</td>
<td>.742</td>
<td>-3.01</td>
<td>.003</td>
</tr>
<tr>
<td>Election</td>
<td>-5.46</td>
<td>2.51</td>
<td>-2.17</td>
<td>.032</td>
</tr>
<tr>
<td>Inflation</td>
<td>2.94</td>
<td>.055</td>
<td>53.0</td>
<td>.000</td>
</tr>
<tr>
<td>Party</td>
<td>-29.9</td>
<td>5.45</td>
<td>-5.49</td>
<td>.000</td>
</tr>
<tr>
<td>Stability</td>
<td>-2.25</td>
<td>1.81</td>
<td>-1.24</td>
<td>.217</td>
</tr>
<tr>
<td>Trade</td>
<td>-1.22</td>
<td>.599</td>
<td>-2.03</td>
<td>.045</td>
</tr>
</tbody>
</table>

R² = .987  F-Ratio = 1329  Approximate Probability = .000

### TABLE III
THE RELATIONSHIP BETWEEN THE MONEY SUPPLY AND SIX INDEPENDENT VARIABLES--THE UNITED KINGDOM

<table>
<thead>
<tr>
<th></th>
<th>b-value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-10303</td>
<td>2171</td>
<td>-4.74</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>330.8</td>
<td>108.2</td>
<td>3.06</td>
<td>.003</td>
</tr>
<tr>
<td>Election</td>
<td>314.4</td>
<td>287.6</td>
<td>1.09</td>
<td>.277</td>
</tr>
<tr>
<td>Inflation</td>
<td>100.4</td>
<td>6.554</td>
<td>15.3</td>
<td>.000</td>
</tr>
<tr>
<td>Stability</td>
<td>262.6</td>
<td>285.7</td>
<td>.919</td>
<td>.360</td>
</tr>
<tr>
<td>Trade</td>
<td>.715</td>
<td>.484</td>
<td>1.48</td>
<td>.143</td>
</tr>
</tbody>
</table>

R² = .789  F-Ratio = 45.8  Approximate Probability = .000
insignificant. The R-squared levels of these equations (.987, .789, and .911 in France, Britain, and West Germany respectively) indicate powerful, well-fitted models.

TABLE IV
THE RELATIONSHIP BETWEEN THE MONEY SUPPLY AND SIX INDEPENDENT VARIABLES--WEST GERMANY

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-157</td>
<td>11.6</td>
<td>-13.5</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>.299</td>
<td>.216</td>
<td>1.39</td>
<td>.169</td>
</tr>
<tr>
<td>Election</td>
<td>1.10</td>
<td>.965</td>
<td>1.14</td>
<td>.257</td>
</tr>
<tr>
<td>Inflation</td>
<td>1.65</td>
<td>.074</td>
<td>22.4</td>
<td>.000</td>
</tr>
<tr>
<td>Party</td>
<td>-2.32</td>
<td>3.73</td>
<td>- .622</td>
<td>.536</td>
</tr>
<tr>
<td>Stability</td>
<td>.522</td>
<td>.837</td>
<td>.623</td>
<td>.534</td>
</tr>
<tr>
<td>Trade</td>
<td>- .072</td>
<td>.301</td>
<td>- .241</td>
<td>.810</td>
</tr>
</tbody>
</table>

R² = .911 F-Ratio = 171 Approximate Probability = .000

When absolute aggregate credit is used as a measure of monetary policy direction, a relationship between party and monetary policy in France is evidenced once again. Table V shows a negative b-value with a high level of significance in France. In the United Kingdom, on the other hand, the previous relationship between party and the money supply reverses itself when aggregate credit is employed as the dependent measure. This finding suggests that the Labour
### TABLE V

THE RELATIONSHIP BETWEEN AGGREGATE CREDIT AND SIX INDEPENDENT VARIABLES—FRANCE

<table>
<thead>
<tr>
<th>Variable</th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-1002</td>
<td>59.1</td>
<td>-16.9</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>- 7.19</td>
<td>2.59</td>
<td>-2.77</td>
<td>.007</td>
</tr>
<tr>
<td>Election</td>
<td>- 18.8</td>
<td>8.47</td>
<td>-2.22</td>
<td>.029</td>
</tr>
<tr>
<td>Inflation</td>
<td>6.17</td>
<td>.204</td>
<td>30.3</td>
<td>.000</td>
</tr>
<tr>
<td>Party</td>
<td>- 145</td>
<td>20.2</td>
<td>-7.18</td>
<td>.000</td>
</tr>
<tr>
<td>Stability</td>
<td>- 1.27</td>
<td>5.68</td>
<td>-.224</td>
<td>.823</td>
</tr>
<tr>
<td>Trade</td>
<td>- 2.19</td>
<td>1.84</td>
<td>-1.19</td>
<td>.238</td>
</tr>
</tbody>
</table>

R² = .946  F-Ratio = 291.6  Approximate Probability = .000

Party has held the money supply at higher levels while the Conservative Party has expanded absolute aggregate credit. This could be due to the different constituency basis for these parties. The pro-business Conservative Party may have expanded credit to aid its constituency while the Labour Party may have expanded the money supply in an attempt to circumvent unemployment.² Table VI illustrates the relationship in Britain with a very significant slope. The relationship between monetary policy and party in power is

TABLE VI
THE RELATIONSHIP BETWEEN AGGREGATE CREDIT AND SIX INDEPENDENT VARIABLES--THE UNITED KINGDOM

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-19175</td>
<td>1471</td>
<td>-13.0</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>-242.9</td>
<td>73.0</td>
<td>-3.33</td>
<td>.001</td>
</tr>
<tr>
<td>Election</td>
<td>474.8</td>
<td>203.1</td>
<td>2.34</td>
<td>.021</td>
</tr>
<tr>
<td>Inflation</td>
<td>174.3</td>
<td>4.34</td>
<td>40.1</td>
<td>.000</td>
</tr>
<tr>
<td>Party</td>
<td>1509</td>
<td>297</td>
<td>3.80</td>
<td>.000</td>
</tr>
<tr>
<td>Stability</td>
<td>-14.4</td>
<td>161</td>
<td>-0.90</td>
<td>.930</td>
</tr>
<tr>
<td>Trade</td>
<td>-1.15</td>
<td>.326</td>
<td>-3.54</td>
<td>.001</td>
</tr>
</tbody>
</table>

$R^2=.980$  \[ F-Ratio = 697 \text{  Approximate Probability} = .000 \]

not significant at the .05 level in West Germany (Table VII), but the negative b-value indicates a relationship in the hypothesized direction. Furthermore, its probability level of .126 is not excessively above the generally accepted .05 level. Hence, a relationship between absolute credit and political party in power is weakly evident. The amount of explained variance in these models is high and illustrates well specified equations ($R$-squareds equal .946 for France, .98 for Britain, and .947 for West Germany.

When the real money supply is utilized as the dependent variable, a few changes occur in the findings. The relationship between party and the money supply virtually disappears
TABLE VII

THE RELATIONSHIP BETWEEN AGGREGATE CREDIT AND SIX INDEPENDENT VARIABLES--WEST GERMANY

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-828</td>
<td>46.9</td>
<td>-17.6</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>.763</td>
<td>.898</td>
<td>.849</td>
<td>.397</td>
</tr>
<tr>
<td>Election</td>
<td>.457</td>
<td>4.30</td>
<td>.106</td>
<td>.916</td>
</tr>
<tr>
<td>Inflation</td>
<td>7.99</td>
<td>.295</td>
<td>27.1</td>
<td>.000</td>
</tr>
<tr>
<td>Party</td>
<td>-24.1</td>
<td>15.6</td>
<td>-1.54</td>
<td>.126</td>
</tr>
<tr>
<td>Stability</td>
<td>1.41</td>
<td>3.39</td>
<td>.417</td>
<td>.678</td>
</tr>
<tr>
<td>Trade</td>
<td>.886</td>
<td>1.19</td>
<td>.742</td>
<td>.460</td>
</tr>
</tbody>
</table>

R²=.947  F-Ratio = 298  Approximately Probability = .000

in France (Table VIII depicts a positive b-value at a less than significant .246). This indicates that leftist parties, while raising the absolute money supply more than rightist parties, have not differed significantly in their control of the real money supply. In West Germany, as well, the party in power does not show a significant relationship with monetary policy even when the real money supply is introduced as the dependent variable (Table IX). On the other hand, in the United Kingdom a very significant positive b-value occurs for party suggesting that the Conservative Party in Britain has expanded real money supply (Table X).
### TABLE VIII

THE RELATIONSHIP BETWEEN THE REAL MONEY SUPPLY AND SIX INDEPENDENT VARIABLES--FRANCE

<table>
<thead>
<tr>
<th>Variable</th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-.889</td>
<td>.095</td>
<td>-9.36</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>-.001</td>
<td>.002</td>
<td>-.423</td>
<td>.673</td>
</tr>
<tr>
<td>Election</td>
<td>.003</td>
<td>.007</td>
<td>.402</td>
<td>.688</td>
</tr>
<tr>
<td>Inflation</td>
<td>.007</td>
<td>.0003</td>
<td>23.07</td>
<td>.000</td>
</tr>
<tr>
<td>Party</td>
<td>.026</td>
<td>.023</td>
<td>1.17</td>
<td>.246</td>
</tr>
<tr>
<td>Stability</td>
<td>-.009</td>
<td>.006</td>
<td>-1.57</td>
<td>.119</td>
</tr>
<tr>
<td>Real Trade</td>
<td>-.461</td>
<td>.510</td>
<td>-.904</td>
<td>.368</td>
</tr>
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</table>

R² = .92    F-Ratio = 191    Approximate Probability = .000

### TABLE IX

THE RELATIONSHIP BETWEEN THE REAL MONEY SUPPLY AND SIX INDEPENDENT VARIABLES--WEST GERMANY

<table>
<thead>
<tr>
<th>Variable</th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-.529</td>
<td>.048</td>
<td>-11.0</td>
<td>.000</td>
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<tr>
<td>Competition</td>
<td>.003</td>
<td>.001</td>
<td>2.88</td>
<td>.005</td>
</tr>
<tr>
<td>Election</td>
<td>.005</td>
<td>.005</td>
<td>1.02</td>
<td>.311</td>
</tr>
<tr>
<td>Inflation</td>
<td>.007</td>
<td>.0003</td>
<td>23.3</td>
<td>.000</td>
</tr>
<tr>
<td>Party</td>
<td>.008</td>
<td>.017</td>
<td>.481</td>
<td>.631</td>
</tr>
<tr>
<td>Stability</td>
<td>.006</td>
<td>.004</td>
<td>1.42</td>
<td>.160</td>
</tr>
<tr>
<td>Real Trade</td>
<td>-.338</td>
<td>.246</td>
<td>-1.37</td>
<td>.173</td>
</tr>
</tbody>
</table>

R² = .950    F-Ratio = 317    Approximate Probability = .000
### Table X

**The Relationship Between the Real Money Supply and Six Independent Variables—The United Kingdom**

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>25.4</td>
<td>15.4</td>
<td>1.65</td>
<td>.102</td>
</tr>
<tr>
<td>Competition</td>
<td>1.39</td>
<td>.534</td>
<td>2.6</td>
<td>.011</td>
</tr>
<tr>
<td>Election</td>
<td>1.27</td>
<td>1.36</td>
<td>.930</td>
<td>.355</td>
</tr>
<tr>
<td>Inflation</td>
<td>.137</td>
<td>.047</td>
<td>2.91</td>
<td>.004</td>
</tr>
<tr>
<td>Party</td>
<td>-10.0</td>
<td>3.17</td>
<td>-3.15</td>
<td>.002</td>
</tr>
<tr>
<td>Stability</td>
<td>.796</td>
<td>1.42</td>
<td>.558</td>
<td>.578</td>
</tr>
<tr>
<td>Real Trade</td>
<td>.042</td>
<td>.603</td>
<td>.071</td>
<td>.944</td>
</tr>
</tbody>
</table>

R\(^2\) = .304  
F-Ratio = 5.36  
Approximate Probability = .000

While R-squareds for West Germany and France are .95 and .92 respectively, in the United Kingdom equation the explained variance is only .304. The lack of explained variance in the British model may be due to the limited explanatory value of inflation when real money variables are used as the dependent variables.

One significant difference which occurs when real aggregate credit is dependent is that party becomes significant with a negative slope in West Germany (Table XI). In France, Table XII illustrates that party continues to be important in predicting monetary policy as evidenced by a negative slope with a high level of significance. In
TABLE XI

THE RELATIONSHIP BETWEEN REAL AGGREGATE CREDIT AND SIX INDEPENDENT VARIABLES--WEST GERMANY

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-3.22</td>
<td>.171</td>
<td>-18.9</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>.008</td>
<td>.004</td>
<td>2.13</td>
<td>.036</td>
</tr>
<tr>
<td>Election</td>
<td>.012</td>
<td>.018</td>
<td>.666</td>
<td>.506</td>
</tr>
<tr>
<td>Inflation</td>
<td>.035</td>
<td>.001</td>
<td>33.2</td>
<td>.000</td>
</tr>
<tr>
<td>Party</td>
<td>-.169</td>
<td>.060</td>
<td>-2.80</td>
<td>.006</td>
</tr>
<tr>
<td>Stability</td>
<td>.018</td>
<td>.014</td>
<td>1.23</td>
<td>.221</td>
</tr>
<tr>
<td>Real Trade</td>
<td>1.12</td>
<td>.858</td>
<td>1.31</td>
<td>.193</td>
</tr>
</tbody>
</table>

R² = .972  F-Ratio = 573.6  Approximate Probability = .000

TABLE XII

THE RELATIONSHIP BETWEEN REAL AGGREGATE CREDIT AND SIX INDEPENDENT VARIABLES--FRANCE

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-3.25</td>
<td>.218</td>
<td>-14.9</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>-.002</td>
<td>.006</td>
<td>-.308</td>
<td>.759</td>
</tr>
<tr>
<td>Election</td>
<td>-.045</td>
<td>.022</td>
<td>-2.08</td>
<td>.040</td>
</tr>
<tr>
<td>Inflation</td>
<td>.019</td>
<td>.0006</td>
<td>29.3</td>
<td>.000</td>
</tr>
<tr>
<td>Party</td>
<td>-.418</td>
<td>.045</td>
<td>9.32</td>
<td>.000</td>
</tr>
<tr>
<td>Stability</td>
<td>-.014</td>
<td>.014</td>
<td>-.992</td>
<td>.324</td>
</tr>
<tr>
<td>Real Trade</td>
<td>1.62</td>
<td>1.39</td>
<td>1.16</td>
<td>.247</td>
</tr>
</tbody>
</table>

R² = .972  F-Ratio = 586  Approximate Probability = .000
Britain, however, the relationship between party and aggregate credit disappears when real aggregate credit is utilized (Table XIII). All three models explain a large percentage of the variance of the dependent variable with R-squareds of .972 in West Germany, .972 in France, and .882 in Britain.

<table>
<thead>
<tr>
<th>TABLE XIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE RELATIONSHIP BETWEEN REAL AGGREGATE CREDIT AND SIX INDEPENDENT VARIABLES--THE UNITED KINGDOM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>16.47</td>
<td>11.9</td>
<td>1.38</td>
<td>.172</td>
</tr>
<tr>
<td>Competition</td>
<td>-.756</td>
<td>.435</td>
<td>-1.74</td>
<td>.086</td>
</tr>
<tr>
<td>Election</td>
<td>2.24</td>
<td>1.14</td>
<td>1.97</td>
<td>.052</td>
</tr>
<tr>
<td>Inflation</td>
<td>.314</td>
<td>.035</td>
<td>8.96</td>
<td>.000</td>
</tr>
<tr>
<td>Party</td>
<td>2.59</td>
<td>2.43</td>
<td>1.07</td>
<td>.289</td>
</tr>
<tr>
<td>Stability</td>
<td>.222</td>
<td>1.04</td>
<td>.213</td>
<td>.832</td>
</tr>
<tr>
<td>Real Trade</td>
<td>-2.63</td>
<td>.500</td>
<td>-5.25</td>
<td>.000</td>
</tr>
</tbody>
</table>

$R^2 = .882$  
F-Ratio = .105  
Approximate Probability = .000

When the change in the money supply is employed as the dependent variable, past relationships between party and monetary policy do not always hold up. In France and Britain, no relationship between the party in power and money supply change is indicated after the model is changed (Tables XIV and XV). In West Germany, on the other hand,
### TABLE XIV

THE RELATIONSHIP BETWEEN CHANGE IN THE MONEY SUPPLY AND CHANGE IN EIGHT INDEPENDENT VARIABLES--FRANCE

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2.77</td>
<td>1.20</td>
<td>2.29</td>
<td>.024</td>
</tr>
<tr>
<td>Competition</td>
<td>-.114</td>
<td>.162</td>
<td>-.702</td>
<td>.484</td>
</tr>
<tr>
<td>Deficit</td>
<td>-.378</td>
<td>.081</td>
<td>-4.62</td>
<td>.000</td>
</tr>
<tr>
<td>Election</td>
<td>-.313</td>
<td>1.18</td>
<td>-.265</td>
<td>.792</td>
</tr>
<tr>
<td>GNP</td>
<td>.167</td>
<td>.021</td>
<td>8.02</td>
<td>.000</td>
</tr>
<tr>
<td>Inflation</td>
<td>-.007</td>
<td>.282</td>
<td>-.023</td>
<td>.981</td>
</tr>
<tr>
<td>Party</td>
<td>.309</td>
<td>1.04</td>
<td>.298</td>
<td>.766</td>
</tr>
<tr>
<td>Stability</td>
<td>-3.61</td>
<td>1.42</td>
<td>-2.55</td>
<td>.012</td>
</tr>
<tr>
<td>Trade</td>
<td>-.273</td>
<td>.365</td>
<td>-.750</td>
<td>.455</td>
</tr>
</tbody>
</table>

$R^2 = .650$ \quad F-Ratio = 22.1 \quad$ Approximate Probability $= .000$

the parameter becomes significant when the change in the money supply is employed. As shown in Table XVI, the negative b-value is very significant. The $R$-squared in the West German equation is .367 while the explained variance in France and the United Kingdom are .65 and .795 respectively.
TABLE XV

THE RELATIONSHIP BETWEEN CHANGE IN THE MONEY SUPPLY AND CHANGE IN EIGHT INDEPENDENT VARIABLES--THE UNITED KINGDOM

<table>
<thead>
<tr>
<th>Variable</th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>874.4</td>
<td>175.5</td>
<td>4.98</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>-66.8</td>
<td>19.5</td>
<td>-3.39</td>
<td>.001</td>
</tr>
<tr>
<td>Deficit</td>
<td>-34.3</td>
<td>42.2</td>
<td>- .814</td>
<td>.418</td>
</tr>
<tr>
<td>Election</td>
<td>-100.5</td>
<td>100.4</td>
<td>-1.00</td>
<td>.319</td>
</tr>
<tr>
<td>GNP</td>
<td>.030</td>
<td>.039</td>
<td>.783</td>
<td>.435</td>
</tr>
<tr>
<td>Inflation</td>
<td>-13.1</td>
<td>21.6</td>
<td>-.609</td>
<td>.544</td>
</tr>
<tr>
<td>Party</td>
<td>79.5</td>
<td>123.4</td>
<td>.645</td>
<td>.521</td>
</tr>
<tr>
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<td>-14.6</td>
<td>148.2</td>
<td>-.099</td>
<td>.922</td>
</tr>
<tr>
<td>Trade</td>
<td>.431</td>
<td>.213</td>
<td>2.02</td>
<td>.046</td>
</tr>
</tbody>
</table>

\[ R^2 = .795 \quad F\text{-Ratio} = 36.1 \quad \text{Approximate Probability} = .000 \]

These R-squareds all are relatively high for equations which have been differenced.

With the change in aggregate credit employed as the dependent variable, findings similar to those for the change
### TABLE XVI

THE RELATIONSHIP BETWEEN CHANGE IN THE MONEY SUPPLY AND CHANGE IN EIGHT INDEPENDENT VARIABLES—WEST GERMANY

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
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<td>1.47</td>
<td>- .131</td>
<td>.896</td>
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<tr>
<td>Competition</td>
<td>.165</td>
<td>.092</td>
<td>1.79</td>
<td>.076</td>
</tr>
<tr>
<td>Deficit</td>
<td>- .200</td>
<td>.064</td>
<td>-3.13</td>
<td>.002</td>
</tr>
<tr>
<td>Election</td>
<td>.837</td>
<td>.453</td>
<td>1.85</td>
<td>.068</td>
</tr>
<tr>
<td>GNP</td>
<td>.050</td>
<td>.020</td>
<td>2.38</td>
<td>.019</td>
</tr>
<tr>
<td>Inflation</td>
<td>.065</td>
<td>.137</td>
<td>.475</td>
<td>.636</td>
</tr>
<tr>
<td>Party</td>
<td>-1.98</td>
<td>.529</td>
<td>-3.75</td>
<td>.000</td>
</tr>
<tr>
<td>Stability</td>
<td>- .088</td>
<td>.586</td>
<td>- .150</td>
<td>.881</td>
</tr>
<tr>
<td>Trade</td>
<td>.267</td>
<td>.182</td>
<td>1.47</td>
<td>.146</td>
</tr>
</tbody>
</table>

\( R^2 = .367 \)  \( \text{F-Ratio} = 6.89 \)  \( \text{Approximate Probability} = .000 \)

in the money supply are evident. In West Germany, party is significant with a negative slope (Table XVII). In France, Table XVIII depicts an insignificant, positive slope not indicating the direction hypothesized. Table XIX shows that
TABLE XVII

THE RELATIONSHIP BETWEEN CHANGE IN AGGREGATE CREDIT AND CHANGE IN EIGHT INDEPENDENT VARIABLES—WEST GERMANY

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.93</td>
<td>6.43</td>
<td>.922</td>
<td>.359</td>
</tr>
<tr>
<td>Competition</td>
<td>.509</td>
<td>.422</td>
<td>1.21</td>
<td>.231</td>
</tr>
<tr>
<td>Deficit</td>
<td>.139</td>
<td>.187</td>
<td>.742</td>
<td>.460</td>
</tr>
<tr>
<td>Election</td>
<td>.046</td>
<td>1.58</td>
<td>.029</td>
<td>.977</td>
</tr>
<tr>
<td>GNP</td>
<td>.121</td>
<td>.030</td>
<td>4.05</td>
<td>.000</td>
</tr>
<tr>
<td>Inflation</td>
<td>.642</td>
<td>.429</td>
<td>1.50</td>
<td>.137</td>
</tr>
<tr>
<td>Party</td>
<td>-10.5</td>
<td>2.17</td>
<td>-4.83</td>
<td>.000</td>
</tr>
<tr>
<td>Stability</td>
<td>1.90</td>
<td>1.82</td>
<td>1.04</td>
<td>.303</td>
</tr>
<tr>
<td>Trade</td>
<td>1.27</td>
<td>.447</td>
<td>2.85</td>
<td>.005</td>
</tr>
</tbody>
</table>

$R^2 = .427$  $F$-Ratio $= 8.85$  Approximate Probability $= .000$

A near significant relationship between change in aggregate credit and the party in power is present in Britain but the positive slope does not illustrate the expected, hypothesized sign. The positive relationship between party and aggregate credit that has been illustrated in Britain previously is indicated once again. The $R$-squared in the British equation is low at .21 while the German equation explains more variation ($R$-squared $= .427$). The French equation is fitted best with a .675 $R$-squared.
The above results demonstrate that there is frequently a relationship between the political party in power and monetary policy. While equations explaining the change in the monetary aggregates failed to indicate consistent relationships between the party in power and the money supply and aggregate credit, this may be due partially to the fact that the party in power is a long-term variable not best represented in differenced equations. For example, changes in the monetary aggregates may be related to short-term variables (such as election), while a party is in office for
TABLE XIX

THE RELATIONSHIP BETWEEN CHANGE IN AGGREGATE CREDIT AND CHANGE IN EIGHT INDEPENDENT VARIABLES—
THE UNITED KINGDOM

<table>
<thead>
<tr>
<th>Variable</th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1477.3</td>
<td>271.8</td>
<td>5.44</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>-138.5</td>
<td>33.4</td>
<td>-4.15</td>
<td>.000</td>
</tr>
<tr>
<td>Deficit</td>
<td>-31.4</td>
<td>46.3</td>
<td>-.677</td>
<td>.500</td>
</tr>
<tr>
<td>Election</td>
<td>30.7</td>
<td>119.5</td>
<td>.257</td>
<td>.798</td>
</tr>
<tr>
<td>GNP</td>
<td>-.015</td>
<td>.041</td>
<td>-.369</td>
<td>.713</td>
</tr>
<tr>
<td>Inflation</td>
<td>-60.5</td>
<td>28.6</td>
<td>-2.12</td>
<td>.037</td>
</tr>
<tr>
<td>Party</td>
<td>377.6</td>
<td>238.2</td>
<td>1.59</td>
<td>.116</td>
</tr>
<tr>
<td>Stability</td>
<td>68.8</td>
<td>153</td>
<td>.449</td>
<td>.654</td>
</tr>
<tr>
<td>Trade</td>
<td>-.388</td>
<td>.236</td>
<td>-1.64</td>
<td>.105</td>
</tr>
</tbody>
</table>

$R^2 = .210$  F-Ratio = 2.77  Approximate Probability = .006

generally three to five years. Therefore, the levels of the aggregates are more important than changes since levels are attained over the long-term. While changes will vary greatly over a five-year period, the code for party may never change, and this will cause party to explain very little of the variance in the dependent variable. Nevertheless, over these eighteen equations, a definite relationship between party and monetary policy is indicated with nine significant
relationships substantiating the hypothesis and only one significant relationship contradicting the expectation.

**Electoral Cycles**

Hypothesis 3: Monetary growth will be greater six months prior to elections than at other times.

No significant electoral monetary expansion is suggested in any of these countries when the absolute money supply is the dependent variable. In France, there is a significant, negative slope indicating that the money supply was lower prior to elections than at other times (Table II). In Italy, there is also a negative relationship, although it is insignificant (Table XX). While b-values in the United Kingdom and West Germany are positive, significance levels are higher than .05 (Tables III and II). While R-squared values in Tables II, III, and IV have been given, the regression equation presented in Table XX is well-fitted with 94 percent explained variance in the Italian equation.

When absolute aggregate credit is employed, the relationship between the election variable and monetary policy becomes evident in Britain. In France, this relationship continues to be significantly negative instead of positive as was hypothesized (Table V). In Italy, a negative relationship continues to be insignificant in explaining monetary policy, and in West Germany, a positive relationship is insignificant (Tables XXI and VII). In the United Kingdom, the relationship between absolute aggregate credit and the
TABLE XX

THE RELATIONSHIP BETWEEN THE MONEY SUPPLY AND FIVE INDEPENDENT VARIABLES--ITALY

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-74168</td>
<td>3829</td>
<td>-19.4</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>475.1</td>
<td>289.4</td>
<td>1.64</td>
<td>.104</td>
</tr>
<tr>
<td>Election</td>
<td>-1076.2</td>
<td>879.1</td>
<td>-1.22</td>
<td>.224</td>
</tr>
<tr>
<td>Inflation</td>
<td>590.4</td>
<td>15.83</td>
<td>37.3</td>
<td>.000</td>
</tr>
<tr>
<td>Stability</td>
<td>531.6</td>
<td>607.9</td>
<td>.874</td>
<td>.384</td>
</tr>
<tr>
<td>Trade</td>
<td>- .197</td>
<td>1.03</td>
<td>- .192</td>
<td>.848</td>
</tr>
</tbody>
</table>

R²=.940  F-Ratio = 317  Approximate Probability = .000

TABLE XXI

THE RELATIONSHIP BETWEEN AGGREGATE CREDIT AND FIVE INDEPENDENT VARIABLES--ITALY

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-80107</td>
<td>2977</td>
<td>-26.9</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>251.0</td>
<td>202.6</td>
<td>1.24</td>
<td>.218</td>
</tr>
<tr>
<td>Election</td>
<td>- 501.6</td>
<td>621.1</td>
<td>- .808</td>
<td>.421</td>
</tr>
<tr>
<td>Inflation</td>
<td>670.6</td>
<td>12.98</td>
<td>51.7</td>
<td>.000</td>
</tr>
<tr>
<td>Stability</td>
<td>188.4</td>
<td>422.8</td>
<td>.425</td>
<td>.671</td>
</tr>
<tr>
<td>Trade</td>
<td>- 1.62</td>
<td>.704</td>
<td>- 2.31</td>
<td>.023</td>
</tr>
</tbody>
</table>

R²=.967  F-Ratio = 594  Approximate Probability = .000
electoral cycle is present with a positive, significant slope as depicted in Table VI. The explained variance in Italy represents a strong model at 96.7 percent.

When real money supply is employed as the dependent measure, no significant relationship exists between election and the money supply. In Table VIII, this lack of relationship is represented by a very low significance level, even though the b-value is positive for France. Table IX shows a similar null relationship in West Germany. In Britain and Italy similar outcomes occur with an insignificant, positive slope in the United Kingdom and a negative b-value which is insignificant in Italy (Tables X and XXII). The R-squared in Table XXII illustrates that the Italian equation linking the real money supply and several independent variables is a strong model (R-squared = .899).

The relationship between real aggregate credit and the electoral cycle is, as in the other models linking monetary policy and elections, generally not substantiated. In Britain there is a positive relationship between these two variables with a significant b-value (Table XIII). Table XII shows that in France the exact opposite relationship is present with a significant, negative slope. In the Italian and German equations no relationship is illustrated with very significant parameters although the slope in the German equation is positive (Tables XXIII and XI). The explained
\begin{table}
\centering
\caption{The Relationship Between the Real Money Supply and Five Independent Variables--Italy}
\begin{tabular}{llll}
\hline
 & \textbf{b-Value} & \textbf{Standard Deviation} & \textbf{T-Ratio} & \textbf{Approximate Probability} \\
\hline
Intercept & -142.8 & 18.6 & -7.70 & .000 \\
Competition & -.442 & .821 & -.539 & .591 \\
Election & -2.15 & 2.20 & -.974 & .333 \\
Inflation & 1.68 & .074 & 22.8 & .000 \\
Stability & .409 & 1.63 & .251 & .803 \\
Trade & -1.49 & .671 & -2.22 & .029 \\
\hline
\end{tabular}

\textbf{R}^2=.899 \textbf{F-Ratio} - 179 \textbf{Approximate Probability} = .000
\end{table}

\begin{table}
\centering
\caption{The Relationship Between Real Aggregate Credit and Five Independent Variables--Italy}
\begin{tabular}{llll}
\hline
 & \textbf{b-Value} & \textbf{Standard Deviation} & \textbf{T-Ratio} & \textbf{Approximate Probability} \\
\hline
Intercept & -123.9 & 18.1 & -6.85 & .000 \\
Competition & -.781 & .784 & .997 & .321 \\
Election & -.140 & 2.30 & -.061 & .952 \\
Inflation & 1.76 & .071 & 24.9 & .000 \\
Stability & .073 & 1.70 & -.043 & .965 \\
Trade & -2.71 & .657 & -4.13 & .000 \\
\hline
\end{tabular}

\textbf{R}^2=.911 \textbf{F-Ratio} = 206 \textbf{Approximate Probability} = .000
\end{table}
variance in the Italian equation continues to be relatively high at 91.1 percent explained variance.

Analysis of change is the best method for testing the occurrence of electoral monetary expansion because the relationship between monetary policy and elections is short-term. In the equations relating election with the change in the money supply, prior negative results relating these variables are substantiated. Only in West Germany is the hypothesis partially substantiated with change in the money supply dependent. Table XVI presents this relationship. It shows a positive b-value and a significance level of .068. While this level of significance is outside the .05 level, it is very close, and the relationship probably warrants consideration as significant. In the case of Britain, France, and Italy, this relationship lacks statistical significance. Table XV contains an insignificant, negative b-value in Britain for the electoral variable while in France, the relationship is also negative and very insignificant as depicted in Table XIII. In Italy, the relationship between electoral cycles and the change in the money supply is positive but insignificant (Table XXIV). This equation in Italy explains 70.6 percent of the variation of the dependent variable, the change in the money supply.

When the change in aggregate credit is dependent in the regression equations for these nations, there is no significant relationship indicated between electoral cycles and
### TABLE XXIV

**THE RELATIONSHIP BETWEEN CHANGE IN THE MONEY SUPPLY AND CHANGE IN SEVEN INDEPENDENT VARIABLES--ITALY**

<table>
<thead>
<tr>
<th></th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>830.7</td>
<td>286.8</td>
<td>2.90</td>
<td>.005</td>
</tr>
<tr>
<td>Competition</td>
<td>-197.6</td>
<td>117.4</td>
<td>-1.68</td>
<td>.095</td>
</tr>
<tr>
<td>Deficit</td>
<td>- .033</td>
<td>.066</td>
<td>-.509</td>
<td>.612</td>
</tr>
<tr>
<td>Election</td>
<td>209.0</td>
<td>266.0</td>
<td>.786</td>
<td>.434</td>
</tr>
<tr>
<td>GNP</td>
<td>.348</td>
<td>.024</td>
<td>14.1</td>
<td>.000</td>
</tr>
<tr>
<td>Inflation</td>
<td>5.13</td>
<td>38.7</td>
<td>.133</td>
<td>.894</td>
</tr>
<tr>
<td>Stability</td>
<td>- 30.6</td>
<td>264.0</td>
<td>-.116</td>
<td>.908</td>
</tr>
<tr>
<td>Trade</td>
<td>.900</td>
<td>.387</td>
<td>2.32</td>
<td>.022</td>
</tr>
</tbody>
</table>

\[ R^2 = .706 \]

F-Ratio = 32.9  Approximate Probability = .000

Monetary expansion. Tables XVIII, XIX, and XXV depict insignificant positive relationships between the change in aggregate credit and election in West Germany, Britain, and Italy respectively. In France, a negative slope indicating an inverse relationship occurs as in other equations, but in this particular model the b-value is insignificant. The R-squared value in Italy continues to be substantial as in other models even though this is a differenced equation (R-squared = .527).
TABLE XXV

THE RELATIONSHIP BETWEEN CHANGE IN AGGREGATE CREDIT AND CHANGE IN SEVEN INDEPENDENT VARIABLES--ITALY

<table>
<thead>
<tr>
<th>Variable</th>
<th>b-Value</th>
<th>Standard Deviation</th>
<th>T-Ratio</th>
<th>Approximate Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>877.6</td>
<td>312.3</td>
<td>2.81</td>
<td>.000</td>
</tr>
<tr>
<td>Competition</td>
<td>-55.4</td>
<td>102</td>
<td>-.544</td>
<td>.588</td>
</tr>
<tr>
<td>Deficit</td>
<td>.051</td>
<td>.062</td>
<td>.825</td>
<td>.412</td>
</tr>
<tr>
<td>Election</td>
<td>334.1</td>
<td>272.9</td>
<td>1.22</td>
<td>.000</td>
</tr>
<tr>
<td>GNP</td>
<td>.171</td>
<td>.019</td>
<td>9.12</td>
<td>.000</td>
</tr>
<tr>
<td>Inflation</td>
<td>120.4</td>
<td>34.3</td>
<td>3.52</td>
<td>.000</td>
</tr>
<tr>
<td>Stability</td>
<td>-145.2</td>
<td>237.1</td>
<td>-.613</td>
<td>.541</td>
</tr>
<tr>
<td>Trade</td>
<td>.843</td>
<td>.319</td>
<td>2.64</td>
<td>.009</td>
</tr>
</tbody>
</table>

$R^2 = .527$  $F$-Ratio = 15.3  Approximate Probability = .000

These analyses of the relationship between electoral cycles and monetary growth indicate that no relationship exists, and the hypothesis is, therefore, not substantiated. In none of the models did election illustrate any cross-national consistency. Three positive parameters indicated electoral monetary expansion, but three significant negative b-values indicated electoral contraction, and eighteen other equations resulted in no significant relationship between election and monetary policy. Furthermore, the absence of significant election parameters in the differenced equations
measuring change further indicates that no relationship is present. While there is some evidence to suggest that parties in power follow their respective ideologies when making monetary policy, there is no evidence here that governments use expansionary monetary policies to enhance re-election.

**Electoral Competition**

Hypothesis 2: The higher the level of electoral competition, the greater the magnitude of monetary expansion.

Electoral competition is expected to expand monetary policy. With the absolute money supply as the dependent variable, the expected relationship occurs only in France. Table II shows that the relationship between electoral competition and the money supply is represented by a negative slope which is statistically significant. While this finding concurs with the hypothesis, an opposite finding in Table III represents an actual contraction in monetary policy at times of electoral competition in Britain. The b-value for this parameter is positive and significant. In West Germany and Italy, the positive signs of the slopes are opposite that hypothesized, but these are relatively insignificant (Tables IV and XX).

With absolute aggregate credit dependent, two of the four b-values are significant in the expected direction. In France, a significant, negative b-value is presented in
Table V substantiating the findings with the money supply as the dependent variable. In the United Kingdom, the relationship between absolute aggregate credit and electoral competition is negative although this relationship was positive when absolute money supply was dependent (Table VI). This finding is especially perplexing given that the political party in power hypothesis is substantiated when the money supply is utilized but contradicted with aggregate credit dependent. These two variables, in effect, reverse roles. In Italy and West Germany, the relationship between aggregate credit and electoral competition differs little from the finding with money supply dependent (Tables XXI and VII). Again, both of the b-values are positive and statistically insignificant.

When real money supply is utilized as the dependent variable in the equations, changes in the findings relating electoral competition to monetary policy occur. Table VIII illustrates that the significance of electoral competition in France disappears when the real money supply is used. Table IX shows that in Germany the relationship between competition and the real money supply is opposite that which is hypothesized with a positive and highly significant b-value suggesting that monetary policy contraction occurs during times of high competition. In Italy the relationship is negative but lacks statistical significance (Table XXII). The results in Britain are similar to those which are derived for the absolute money supply. A significant,
positive slope indicates that higher competition leads to lower levels of the money supply in the United Kingdom.

When real aggregate credit is considered, one parameter nears statistical significance and another refutes the hypothesis that electoral competition results in monetary expansion with a significant positive parameter. In Britain, a negative b-value with a significance level of .086 indicates a relationship parallel to that which occurs when absolute aggregate credit is employed as the dependent variable (Table XIII). On the other hand, Table XII depicts a negative but insignificant relationship between competition and real aggregate credit in France. Again, the French relationship disappears when a real monetary variable is employed. In Germany, a significant, positive b-value as depicted in Table XI indicates that electoral competition is related to contractionary aggregate credit rather than to expansionary credit. This finding again contradicts the hypothesis. Finally, in Italy, no relationship is evidenced between competition and real aggregate credit (Table XXIII).

When change in the money supply is analyzed, a significant relationship for competition appears in the British equation, and in Italy, the b-value approaches a .05 level of significance. Table XV depicts a negative slope and a high level of significance in Britain for electoral competition. In Italy, a negative b-value and a .095 significance level suggests that the relationship between money supply
change and competition is close to being statistically significant (Table XXIV). Table XVI illustrates a positive relationship in Germany between competition and change in the money supply which suggests that competition actually leads to lower changes in the money supply. Table XIV shows a negative b-value but an insignificant relationship in France.

When change in aggregate credit is employed as the dependent variable, a significant relationship becomes apparent in Britain with a negative b-value and a high significance level, suggesting a strong relationship by which high party competition leads to substantial changes in aggregate credit (Table XIX). This is especially significant in the British case since this is the first observance of concurring relationships in both money supply and aggregate credit. Before this finding, aggregate credit seemed to be inversely related to party competition; this finding, however, indicates that monetary policy changes are greater in times of high electoral competition in Britain. All of the other cases illustrate highly insignificant relationships when change in aggregate credit is dependent. Tables XVIII and XXV depict negative b-values which are extremely insignificant in both France and Italy. Table XVII illustrates an insignificant positive slope for West Germany.

The hypothesis linking electoral competition and monetary policy is left unproven after analysis. While
seven parameters indicate that a relationship exists, five b-values suggest a relationship opposite that which is hypothesized. For West Germany the data suggest that high competition may lead to monetary contraction, rendering the hypothesized relationship questionable at best. While this hypothesis is supported within certain countries (particularly France and the United Kingdom), it does not hold up as a cross-national expectation.

**Political Instability**

Hypothesis 4: Political instability produces greater monetary expansion than political stability.

The hypothesis linking political stability and monetary expansion is definitely not substantiated by the data. Out of the twenty-four regression equations, only two parameters approach significance and both of these exhibit negative relationships suggesting that political instability leads to monetary contraction. Table XVIII illustrates a negative b-value with a .062 level of significance in France which suggests this negative relationship when the change in aggregate credit is dependent. This relationship is reinforced when change in the money supply is dependent as indicated by a significant, negative b-value (Table XIV). Other than these two cases, no statistically significant relationships are present.

Because significance tests take into account the amount of variance explained by the independent variable in their
computation, it may be useful to analyze the absolute values of the slopes without regard to significance tests when an independent variable, such as stability, has only a dichotomized value. Because dichotomized variables usually have less chance of explaining variance in the dependent variable, an analysis of slope parameters will at least enable an analysis of consistency throughout the equations. Of the twenty-two insignificant parameters, twelve are positive and ten are negative. When these are added to the two significant negative slopes there is a perfect split among the twenty-four equations which suggests that no relationship exists between political stability as measured by finance ministry turnover and monetary policy.

Economic and Monetary Relationships

Inflation is best represented by a one quarter time lag. At other lags the b-values and significance levels are lowered. The lag for the trade balance is also best represented by one quarter. With GNP and deficit, a lag of three quarters is most appropriate because b-values and significance levels peak in all nations at this lag. In addition to being empirically evident, these lags also appear to be consistent with expectations. A one time period lag for inflation and trade balance seems justifiable since each of these variables may take little time to affect monetary policy decisions. With GNP and deficit, the three quarter time lags also seem
to be in agreement with expectations. Deficits will take a long period of time to affect monetary policy because of the amount of time it takes for a deficit to be monetized. Also, GNP may take three quarters to affect monetary policy because shifts in economic capacity and unemployment may not be reacted to instantly by monetary officials. Final equations for absolute and real money variables include only inflation lagged one time period because of the multicollinearity present in these models when GNP and deficit are included. GNP and deficit are included in the differenced equations because the collinearity disappears among economic variables in these equations.

The inflation rate is positively related to monetary policy in all equations which employ absolute and real monetary variables. Most of the b-values are extremely significant. In equations explaining absolute monetary policy, the T-Ratios indicate very strong relationships. This relationship should be expected since no correction is made for inflationary increases in the money supply and aggregate credit. But when real monetary variables are utilized, the relationship between the inflation level and the monetary aggregates remains strong indicating that inflation places an extra push on monetary policy above that produced by correction measures of monetary authorities.

Through the analysis of change in the money supply and aggregate credit, policy direction can be tested. A negative
relationship between change in inflation and change in the monetary aggregates should result if contractionary monetary policy is implemented to counteract inflation. If prescriptive monetary policy is not implemented, either a positive relationship should be indicated or no relationship at all should be present. The tables illustrating the relationship between change in inflation and change in the monetary aggregates show only one significant relationship. In the United Kingdom, the relationship between change in aggregate credit and change in the inflation rate is illustrated by a b-value of -60.5 and a significance level of .037 (Table XIX). This indicates that in Britain aggregate credit growth has dropped as inflation increases. Otherwise, it appears that prescriptive monetary policies are not always implemented in these nations.

The relationship between monetary aggregates and trade balance should illustrate the amount of constraint placed on monetary policy by the international economy. Analysis of the equations with absolute and real monetary variables illustrates that the international economy may not always be an external constraint. No significant positive relationships are illustrated while six statistically significant negative relationships are evidenced. These findings indicate that trade surpluses may actually lead to monetary contraction.
When changes in monetary aggregates are employed as dependent variables, the negative relationships between trade and monetary policy disappear, and five of eight relationships are positive. Analysis of change may be the most advantageous method for testing the relationship between trade balance and monetary aggregates since changes in trade should result in changes in the aggregates. Actual levels of monetary aggregates may be affected by a number of trend variables, and hence, the negative relationships in the other analyses may be spurious. Nevertheless, these five significant relationships indicate that monetary policies may at times be dependent on international economic activity.

The relationship between GNP and monetary aggregates is significant in six of eight equations. In the United Kingdom, no relationship between GNP and monetary aggregates exists, but in all three of the other nations, very strong relationships are present. This indicates that in Germany, France, and Italy, monetary policy tends to follow growth rates, while in Britain, monetary policy is somewhat independent of this domestic economic condition.

Budget deficit is not as reliable an indicator for monetary policy as has been suggested by many. In only two of the eight equations is deficit related negatively to monetary aggregates. In Germany, a negative b-value is present when change in the money supply is dependent (Table XVI), and in France, a strong negative relationship is also
related to change in the money supply. These findings indicate that deficits are not always related to monetary expansion, though monetary expansion is often suggested by laymen to be a cause of deficits.

All of these economic variables appear to have some effect on monetary policy. While inflation has the most definite relationship with monetary aggregates, trade balance and GNP have the most significant relationships when change in the monetary aggregates are analyzed. Budget deficit, on the other hand, is a less successful predictor and illustrates an expected negative relationship with the dependent variables in only two cases.

Cross-National Variation in Monetary Policy Determination

Several factors may influence cross-national variation in the political and economic determination of monetary policy. Political culture may affect policy by placing system-level constraints on political officials in determining which policies may or may not be implemented. The institutional structure of monetary authority is important because it may affect the amount of politicization involved in making monetary policy. Finally, poor economic conditions within a nation may render monetary policy unmanageable while good conditions may allow for responsive monetary policy.
In West Germany, the only political variables which appear helpful in explaining monetary policy are party and competition. In three of the six equations for the country, the relationship between party and monetary policy indicates that Social Democrats have expanded the money supply and aggregate credit more than Christian Democrats. On the other hand, electoral competition appears to be inversely related to monetary expansion. When competition has been most stringent in Germany, monetary growth has been lowest. This inverse relationship between competition and monetary policy could be due to the emphasis on controlling inflation in Germany. When high competition levels were present, political officials may have felt pressure to contract monetary policy instead of expand it in reaction to public pressure. Economic variables explaining monetary policy include inflation, GNP, and deficit. Inflation is a strong predictor of monetary policy, but according to the findings in the differenced equations, it places few constraints on policy-making. The trade balance does not appear to be strongly related to monetary policy with only one b-value of six significant. Deficit appears to affect the money supply while GNP is positively related to both money supply and aggregate credit.

Reasons for these findings in West Germany may be found in certain cultural, structural, and economic determinants.
The "market culture" in Germany may render generalizations about expansionary monetary policy unimportant because the population's fear of inflation could lead to other types of constraints not already defined in the political variables. For example, the electorate may vote for those who plan to counter inflation, and hence, electoral monetary expansion may not be the answer for those pursuing re-election. Second, since the Bundesbank is independent of political control, electoral maneuvering of monetary policy may be impossible. While party seems to have some effect on monetary policy, this party effect may be explained by the fact that the Bundesbank must follow policies conducive to the overall long-term economic policy of a government. Therefore, in the long-run, the party in power may affect monetary policy through its basic orientation to economic policy. Finally, the importance of economic variables in explaining monetary policy suggests policy-makers control economic policy according to economic conditions while considering politics of secondary importance.

France

Monetary policy in France appears to be affected by all of the political variables. Three significant parameters indicate leftist parties in France have expanded monetary policy more than rightist parties, while two equations suggest that electoral competition leads to monetary expansion in France. Conversely, election is negatively related
to monetary aggregates indicating lower monetary growth prior to elections. In two equations stability is actually negative; turnover in the Finance Ministry has been followed by lower monetary levels. Several economic variables appear to help in explaining monetary policy. While contractionary changes do not seem to occur when inflation develops, the inflation rate does seem successful in explaining growth in the overall level of monetary aggregates. GNP is positively related to both money supply and aggregate credit, and deficit is negatively related to money supply, suggesting that in France, deficits do lead to expansion in the money supply. The trade balance is positively related to monetary growth in one equation, that relating change in aggregate credit to the independent variables.

There appears to be some political control of monetary policy in France, and this control is possible through monetary institutions which allow much input from elected officials. The Bank of France and the Finance Ministry cooperate in forming economic policy. Also, there appears to be no underlying "market ideology" to explain why political variables are not stronger in the models. Finally, the French economy has been relatively stable since World War II, enhancing the ease of monetary policy management. Because of these characteristics of the French political and economic systems, more political influence might have been expected
over monetary policy. Nevertheless, political variables illustrate the greatest effect in the French case.

**United Kingdom**

Three of four political variables had some effect on monetary policy in Britain. Electoral competition is related significantly in all six equations, but in equations linking real and absolute money supply the signs are positive indicating that high competition leads to lower monetary growth, but in the other four cases, a negative relationship is present. The presence of negative relationships in the differenced equations suggest higher competition leads to greater changes in the monetary aggregates than would otherwise occur. A negative relationship occurs between party and supply, but a positive relationship exists with aggregate credit dependent. Higher levels of aggregate credit are related to electoral cycles, but this relationship disappears in differenced equations suggesting that changes are not necessarily greater in the six months prior to elections. Political stability is not related to monetary policy in any of the six equations. An interesting finding concerning the relationship between inflation and the change in aggregate credit is a negative relationship indicating that credit is curtailed as inflation rate changes are greater, and therefore, that monetary authorities actually respond to inflation as prescriptive economic theory would suggest they would.
While trade illustrates one positive slope with the change in aggregate credit, GNP and deficit do not illustrate significant effects on monetary policy in these equations.

Findings in Britain largely parallel those in France; political effects are present but not consistently related to monetary policy in all of the equations. Monetary structures are also very similar to those in France, and there may be even more emphasis on creating employment in the United Kingdom than in France. It seems that the absence of economic effects in Britain allows some control by political officials. While a slow-growth economy has plagued the United Kingdom, its stability and predictability may have allowed more monetary control in Britain than in a nation with a less predictable economy.

**Italy**

Only one political relationship out of a possible eighteen is significant in Italy. Change in the money supply is negatively related to competition indicating that greater changes accompany high electoral competition. Otherwise, no relationships exist between competition and monetary policy just as no relationships are evident between election and stability and monetary aggregates. There are three important economic effects on monetary policy. Inflation is a strong predictor of money supply and aggregate credit (even when aggregate credit is differenced) suggesting that
inflation pushes the money supply and aggregate credit beyond the strict control of monetary authorities. This finding at least indicates that Italian officials have been insensitive to inflation and have allowed the aggregates to grow as inflation increased instead of using contractionary policies when inflation has been high. Because unemployment has been consistently high in Italy, decision-makers may have been reluctant to implement contractionary monetary policy during periods of "stagflation" since public demand was likely to have been oriented more towards the reduction of unemployment than toward curtailing inflation. While trade is negatively related to monetary aggregates in the real and absolute equations, the relationship becomes positive when change in money supply and aggregate credit are employed as dependent variables, thus indicating that monetary expansion may follow decreases in the trade deficit or increases in the trade surplus. GNP is also strongly related to the change in aggregate credit and money supply illustrating that monetary expansion and contraction follows shifts in employment and economic capacity. Budget deficit is not related to monetary policy in these equations which indicates that officials have not always expanded the money supply when deficits are present.

The null relationship between the political variables and monetary policy indicators in Italy may be due to the influence of the domestic and international economies on
monetary policy. The lack of stability of the Italian economy and export market during the 1960s and 1970s may have resulted in less successful control over monetary policy. Monetary authorities may have had to react to shifts in the international economy since Italy relies so heavily on exports for its economic health. By failing to react to the balance of trade, monetary authorities would cut off exports by forcing exchange rate changes which could result in more expensive Italian exports, and hence, fewer sales of these abroad. Because monetary policy is generally controlled by political officials in Italy, an absence of this institutional control by political officials does not seem to explain the absence of relationships between political variables and monetary policy. Furthermore, there is no evidence that a strong "market ideology," such as exists in Germany, is present in Italy. Hence, the lack of political relationships with monetary policy indicators may be due to economic conditions rather than to cultural or structural factors.

Summary and Conclusion

The analysis of this chapter resulted in the rejection of the hypothesis linking political instability and monetary policy. The hypothesis relating electoral cycles and monetary expansion was also virtually rejected although some significant relationships were found between monetary policy and electoral cycles. Party competition showed stronger
effects on monetary policy than did election, while political party showed the greatest effect on monetary policy. All economic variables were found to be related to monetary policy in some models, but these relationships did not always appear in all of the nations indicating that the importance of economic variables in determining monetary policies differs cros-nationally.

The absence of strong relationships between political variables and monetary policy may indicate several problems similar to those found in research on the political business cycle. First, while parties may often follow ideology in making economic policy, they may not always do this in a deterministic manner. Rightist parties may sometimes need to expand an economy while leftist governments may often implement economic stabilization policies. While Thatcher's monetary policies in Britain have followed slow growth patterns, this tight monetary policy may not continue in the future if public pressure on the Conservative Party continues. Second, governments may sometimes expand an economy prior to elections, but this may not always be done. A government may pursue expansionary monetary policies only in times when economics is most salient as a voter issue. Because economic policy is only one of many policies which political officials may implement, other policy-making may take priority. If this is true, then multivariate statistics, such as time series regression analysis, may not be totally
appropriate for testing relationships concerning political business cycles because periods when the hypothesized relationships do not occur may result in a null finding for a total time series. For example, if a nation with five elections over a twenty-year span contracted policy once, expanded it twice, and left it alone in all other cases, statistical relationships will either appear weak or may not even be significant. Nevertheless, in this hypothetical case there was some suggestion that governments may expand economies prior to elections but may not always do this. Since these political relationships may not be deterministic, but are instead tendencies, political scientists may be underestimating the question of whether a government uses economic policy for its own benefit.

The question of whether economic conditions actually affect electoral results is of great concern to political business cycle analyses because as economic conditions become more important in determining election results, political officials will more likely manipulate economic policies for electoral gain. Research exploring both economic conditions and the political business cycle are the next step in comparative economic policy research. This research would enable a comparison of countries' political business cycles when one nation's economic conditions are important to election outcomes and other country's election outcomes are not correlated with economic conditions.
For future analyses of monetary policy determination, both theoretical and methodological improvements may be needed. First, better measurement of certain variables, such as interest group activity, which may affect monetary policy should enable more explanation of monetary policy. Because economic variables are much more easily measured (and available) than political variables, policy studies tend to indicate relationships between economics and policy more often than relationships are found between politics and policy. This has probably been due to the lack of measurement and inclusion of relevant political variables and not to the fact that politics does not matter. Dependent variable indicators for monetary policy may also need more thorough development. If the political business cycle aspect of monetary policy is to be considered thoroughly, then a systematic study of policy instruments may be helpful. This can provide information on the intent of policy moves, therefore actually measuring political motives. There are many cross-national problems with this approach, however, because of differing effects of similar monetary instruments in various nations. Many equivalency problems exist in this type of analysis.

Methodologically, a more appropriate time series technique which could be employed is pooled time series analysis. This enables different time series to be combined into one
series with the data aggregation being similar to cross-sectional analysis in that all nations are combined in the analysis. This technique would result in more general findings while allowing more nations to be analyzed in one equation. Furthermore, while normal time series must employ a certain number of cases, pooled time series would allow for series to be broken up in smaller time spans in order to test for temporal stability through comparison of different time periods. Because of these characteristics, pooled time series will enable more thorough cross-national policy analysis in the future.

Should these suggestions be incorporated in future studies, more can be learned about the relationship between politics and monetary policy. By analyzing the effects of certain political variables, this study serves as a starting point for a new examination of monetary policy.
BIBLIOGRAPHY

Books


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Data Sources

