National Elections and Policy Induced Business Cycles: A Historical Perspective on the Literature

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The development of the literature on the effect of national elections on economic policy formulations and on the resulting business cycles is analyzed and evaluated. Six distinctly different periods of the development of the literature are characterized. A few important models of policy induced business cycles arising out of the reelection-seeking behavior of policymakers are discussed in more detail. Some thoughts and insights for further research in this area are presented (*JEL* Classifications: B20, E32, E66).

Cycles are not like tonsils, separable things that might be treated by themselves, but are, like the beat of the heart of the essences of the organism that displays them.
Joseph Alois Schumpeter (1939, p.v)

I. Influence of Elections on Economic Policy Formulation

In shaping economic policy, political considerations play important roles, especially in a democratic society where the political figures, who influence and determine economic policies, are at the mercy of the voters for holding on to the political power. As early as the 1930s and 40s political scientists, sociologists, and economists observed that economic conditions have an important influence on election outcomes of incumbent officials. Some argued that the incumbent government would try to manipulate the economy in order to have at least a minor

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boom near an election.

Various factors affect voters' voting decisions for a political candidate. Not only the personality and ideology of the candidate, but also his actual achievements and future potentials are important factors that influence the voting decisions. In so far as an elective office, whether it is the Presidency or a senatorship, is considered to have powerful influence on formulating economic policies, the economic conditions in election years are likely to be an important factor in the evaluation of an incumbent candidate.

The President, in his capacity as the chief executive, is expected to exercise a powerful influence on formulating and implementing economic policies. Thus, a President is more likely to be blamed or praised than a senator or a congressman for the state in which the nation's economy finds itself. Recognizing the effect of economic conditions on national elections, the incumbent president seeking reelection may try to manipulate economic policies to achieve a desired state of the economy.

According to Lindbeck (1976, p. 12), three sets of relations of political behavior have to be specified in politically motivated economic policy models. Firstly, a "popularity function" or "voting function" should be specified. Secondly, a "target-preference function" of the government should be specified. Thirdly, "how the government can influence the economy through the maximization of the target-preference function should be described, and the economic constraint within which such influence takes effect" should be specified.

For each numbered box in Figure 1, there are three inputs and one output. In box (1), economic conditions manifested in the policy-induced business cycle are an input for voters, popularity or voting function. In addition, there are the indirect (denoted by the broken arrow) effect of election related institutional constraints and voters' own subjective factors. Popularity indices are the output or signal to the government. Institutional constraints may include the political system, the period of election, the party system, the terms of eligibility, the power of incumbency, and the like. It is assumed that these institutional constraints influence the government directly, but the voters and the economy only indirectly. The subjective factors for an individual voter can be party loyalty, certain preference structure based upon his ideological inclinations, his perception of the personality of the incumbent, and so forth. The subjective factors that influence an elected government official in box (2) may be, among other things, his subjective

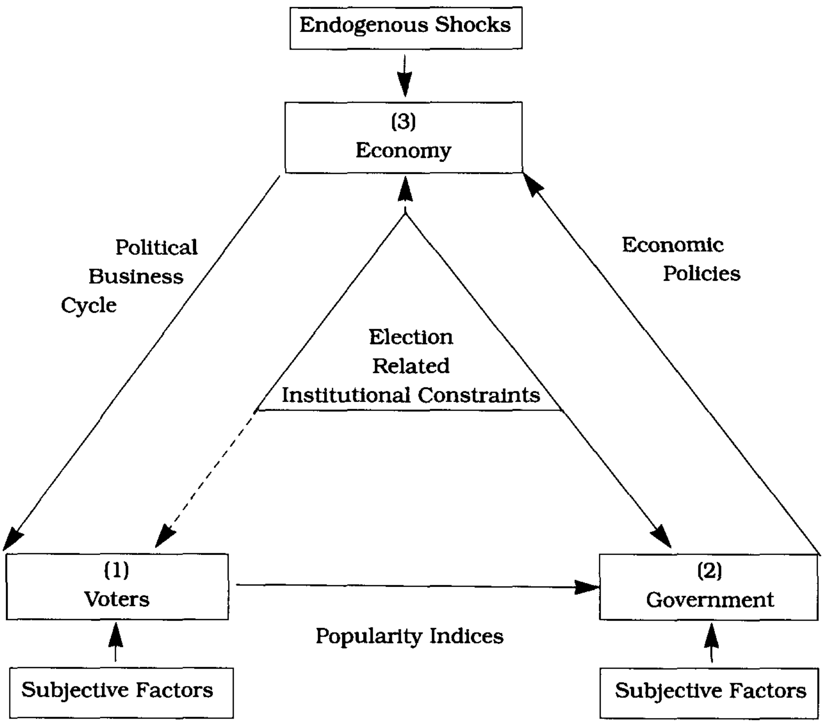

FIGURE 1
CIRCULAR FLOW IN THE POLITICO-ECONOMIC SYSTEM

perception and evaluation of the popularity index signal, his ideological goal, his desire to get reelected, his confidence in himself, and so forth.

The reelection-minded government in box (2) receives three sets of inputs for its target-preference function or reaction function. They are the popularity index signal from voters in box (1), the election related institutional constraints, and its own subjective factors. From these sets of inputs, its decision regarding economic policy implementation is formulated. The economy in box (3) is affected by the economic policies implemented by the reelection-minded government and by some exogenous shocks.

The structural and behavioral specifications of the economic state and policy variables are assumed to be similar to those in any standard macroeconomic policy analyses. What is new and interesting in this kind of "politico-economic" models is that the government policy is itself a function of the popularity function which is, in turn, influenced by the economy. This amounts to a built-in feedback mechanism of the government policy instruments. In the standard theories of macroeconomic policy since Tinbergen (1952), the economic policy is usually assumed to be exogenously determined. There have been some models of endogenized economic policy as in the dynamic stabilization policy models since Phillips (1954, 1957), and in the optimal control policy models since Theil (1958, 1964). However, in those models, economic policy is endogenized or policymaker's utility is maximized with neither any political motives nor any political implications. In politico-economic models, the economic policy is determined by the built-in feedback from voters' voting decisions through the changes in the economic conditions.[1] That is, economic policies are endogenized as a function of the economic conditions. It is possible that the economy thus run by endogenous economic policy implementations may display a unique pattern of economic fluctuations.

If the government can maintain good economic conditions throughout its entire electoral term, needless to say, it would be the best. If it cannot do so due to some inherent economic constraints and exogenous shocks, it has to become "strategic."[2] When the government must be strategic, the information about voting decision process becomes valuable to the government. That is because, with this information, it can plan its strategy of when to use the contractionary policies and when to use the expansionary policies in accordance with the voters' preferences.[3] The economic fluctuations due to this strategic manipulation of the economic policies by the reelection-seeking government are the "political business cycles (PBCs)."

[1]For an overview and discussions of the economic policies in a politico-economic system, see Frey (1983).

[2]The very notion of the political business cycle implies that the government will "strategically" manipulate its economic policies in the short run so that it will be reelected in the next election. If its goal is to get reelected continuously, its strategy will have to be different as Frey and Lau (1968) suggested. It may well turn out that the more ambitious long run goal of continuous reelection may not be compatible with the short run maximization of the probability of getting reelected in the next election in which case a rational government would concentrate on the short run or myopic strategy even if it is not optimal for the long run.

[3]For cited evidence of the influence of political considerations on the formulation of economic policies in the United States, see Chapter 2 in Tufte (1978).

II. Distinct Stages of Development in the Literature

There have been several surveys of the literature on the interdependence between the economic conditions and political events. Brief surveys of earlier studies can be found in Kramer (1971), Frey and Schneider (1975), and D. Mueller (1976). Frey (1978a) is a survey of mostly empirical studies of politico-economic interactions. Paldam (1981b, sec.6) briefly surveys the empirical findings of the patterns of the PBCs and Paldam (1981a) covers a more broad range of literature on popularity and voting functions including most of the studies which appeared in European journals. Surveys of the literature on voting theories in political science can be found in Page (1977), Monroe (1984), and Kiewiet (1983, Chapter 2). Locksley (1980) surveys the theoretical development.

Since there are already quite a number of survey papers, the present paper is not intended to be an exhaustive survey of the literature but a concise presentation of a rather broad and general historical perspective on the development of the literature on PBCs which are induced by politically motivated policies, and somewhat closer examination of a few important studies. The development of the literature on the effect of national elections on the economic conditions and vice versa can be divided into six periods of distinctly different characteristics.

The earliest study (known to the author) about the influence of economic conditions on the outcome of elections is Tibbitts (1931). In the 1930s and 40s, there were several studies in this vein. The first economist to use the term "political business cycle" was Kalecki (1943). According to Kalecki, big business leaders and the rentier class in a capitalist economy would form a powerful bloc to oppose a continued government deficit undermining a long lasting boom and full employment lest the workers should "get out of hand." When the slump follows, the government would increase the deficit and the economy would again reach a boom. But then, the big business would again make sure that the boom would not last, and so on. Thus, the first theory of a PBC was born.

The concept of a PBC in relation to national elections as is used nowadays, can be found a few years later in Akerman (1947, p.107). He looked at the political events as "primarily a function of the economic pattern." He examined the share of the percentage of the Republican votes in U.S. Presidential elections in relation to some economic indicators. He found some evidence of the "political economic cycle." He wrote, "in the United States the Presidential elections as a rule involve a change in party control when the votes are cast during a depression and maintenance of the party in office when the votes are cast during periods of prosperity. Sixteen out of twenty elections between 1865 and 1945 follow this routine." To be sure, Akerman was not the first one to examine the influence of macroeconomic variables on voting behavior. In the 1930s and 40s, a few studies by political scientists and sociologists painted a mixed picture of the importance of economic conditions on election outcomes.[4] This incipient period was characterized by new insights regarding the interaction between economic conditions and national elections.

The appearance of Tibbitts (1931) marked the beginning of the first period and the publication of Downs (1957) signified a new period of a more settled accommodations of earlier insights of politico-economic interactions in the analyses of economic and political decision making processes. There were three influential studies which attempted to apply economic theories to the analyses of political behavior. They were Downs' (1957) analysis of the government as a self-interested rational decision making unit, Buchanan and Tullock's (1962) theory of collective choice, and Olson's (1965) theory of interest groups. These periods of insights and accommodations, from the 1930s through the 1960s, served as the building block for the research in the 1970s.

Although economists are rapidly catching up with them, traditionally, political scientists have always been more active in the research of politico-economic interactions, especially in relation to voting behaviors and political systems of governments. The third period of rekindled interests opened with studies mostly by political scientists. Goodhart and Bhansali (1970) and J. Mueller (1970) tested the relationship between popularity of government and economic variables. Kramer (1971) and Arcelus and Meltzer (1975) examined the effect of economic variables on the outcome of Congressional elections with more statistical rigor. Often quoted comments by Bloom and Price (1975) and Goodman and Kramer (1975) followed.[5]

[4]Kramer (1971) offers an excellent survey and summary of these earlier studies. He points out that these early empirical studies were based on "rather simple statistical methods such as tabulations or simple correlations, and in almost every case no indication given of the stability or statistical significance of the results obtained." (p.133).

Kramer's (1971) study, which used modern statistical techniques, indicated the importance of real personal income, but not the changes in the rates of unemployment and inflation, in the outcomes of the U.S. Congressional elections from 1896 to 1964. His results were contested by a subsequent study by Stigler (1973). Stigler, who corrected some of Kramer's data and modified his statistical methods, claimed that economic conditions were not an important factor in the outcomes of national elections. This controversy drew serious attentions of economists to this provocative field of politico-economic interaction.

Kramer and Stigler may have improved on the methodology, but the basic concept and theory were not much different from the earlier studies. Their analyses were incomplete and static in the sense that only the relationship between voting behavior and the state of the economy was investigated rather than the whole circular flow of the interrelationships among voters, government, and the economy. That is, the dynamics of the complete circular flow, which runs from the influence of the state of the economy on voting decisions to the government's reaction in implementing economic policies, and finally to the consequent policy induced business cycles, was not analyzed.

Although Frey and Lau's (1968) analysis was a theoretical development in such a dynamic direction, it was Nordhaus' (1975) seminal work on the "PBC" that triggered rather active research by economists in politico-economic interaction models in the late 1970s and early 1980s. Nordhaus' (1975) social welfare function was based on the unemployment-inflation tradeoff relationship. Voters were assumed to have a quasi-concave utility function based on their well-behaved ordinal preference orderings over economic variables. It was also assumed that they have the same subjective standard for a tolerable level of economic conditions. This subjective standard sets the acceptable level of performance of the incumbent. Individual voter votes for the incumbent or against the incumbent depending on whether the ratio of his utility derived from the current economic conditions to his utility from his subjective standard of economic conditions is greater than or less than 1 respectively. If the ratio equals to 1, no vote is added to either candidate. By assuming that the expected level of economic performance remains the same, Nordhaus justifies the use of a quasi concave voting function.

[5]Hibbs (1977) made a comprehensive international comparison of the dependency of economic policies (manifested in the rates of unemployment and inflation) on the ideology of the governing parties.

He makes two crucial assumptions. One is that the "decaying memory" of voters represented in the "backward-looking" discount rate. That is, voters are assumed to forget past events rather quickly. The other is "myopic" voter assumption encompassed in the integral over the length of only the current electoral period.

Fair (1978) and Frey and Schneider (1978a, 1978b) presented supporting evidence for the influence of economic conditions on election outcomes, and the influence of the government's political goal of reelection on its economic policy implementation. MacRae's (1977) empirical study verified the PBC hypothesis while McCallum's (1978) rational expectations model found no such evidence.

MacRae (1977) assumed the vote loss as a function of inflation and unemployment. The government's objective is to minimize the loss in votes (accumulated over the past years since the last election) subject to an economic constraint. The solution to this optimization problem yields an optimal decision rule for the government which is to choose the unemployment rate subject to an inflation-unemployment tradeoff relationship of a Phillips curve. The presence of "strategic" voters, who vote rationally and strategically in the short run so that the government may promote the long run optimum policies, modifies the vote loss function. By comparing the prediction errors of the unemployment rates predicted by the two hypotheses with the corresponding values of Theil's inequality coefficients, MacRae concluded that "the myopic hypothesis does a better job during the Kennedy-Johnson and Johnson administrations while a strategic hypothesis holds better in the second Eisenhower and Nixon administration" (p.262).

McCallum (1978) tested the rational expectations hypothesis against Nordhaus-MacRae type PBC model through an empirical examination of the unemployment rates of the U.S. quarterly data between 1949 and 1974. The unemployment rate was assumed to be generated by a covariance-stationary stochastic process that may be expressed in an autoregressive form. He set out to test if an additional explanatory variable such as the phase of the electoral cycle could provide additional explanatory power. To test their correlations with the residuals, first, ARMA models were estimated. Then, residuals from the chosen ARMA models were regressed on the various electoral variables. Both seasonally adjusted and unadjusted unemployment data were tried, and again, the results showed that the electoral variables were not significant. The hypothesis of the PBC did not seem to withstand the test of rational expectations. An unfavorable result was also obtained by Beck

(1982) who investigated if there were changes in the unemployment and inflation series near election day by using Box-Tiao intervention analysis.

In this fourth period of endeavor, the number of articles of politico-economic interaction models published in economic journals rose substantially. In fact, the number of monographs and articles in economic journals which were published between 1975 and 1983 was more than fifty.[6] This showed a remarkable increase from less than twenty monographs and articles in economic journals on the same subject in the preceding three decades. However, after a short period of a renewed enthusiasm, a period of set-back in this line of research followed immediately.

This fifth period of slow-down and modification of research in PBCs may be attributed to the following three factors. Firstly, the findings of empirical tests yielded less than definite evidence for PBCs. Secondly, the bulk of the literature in the preceding period used to be empirical studies with various specifications, methodologies, and sample periods for various countries. And soon, the feasible variety and ingenuity in empirical tests of PBCs became almost exhausted. Thirdly, on the theoretical front, the emerging predominance of rational expectations models in macroeconomics forced the politico-economic models, which were based on the usual assumptions of myopic voters with adaptive expectations, to be not only rather naive and uninteresting but also out of fashion.

The implications of the policy ineffectiveness and the advocation of rules over discretion in the rational expectations models (Sargent and Wallace 1975; Kydland and Prescott 1977; Barro and Gordon 1983) rendered seeming absurdity to the PBC hypothesis according to which the myopic voters with adaptive expectations are fooled by the conniving policymaker repeatedly. With such influence of the new classical macroeconomics, beginning with McCallum (1978), studies which incorporated rational expectations into PBC models sprouted here and there until they almost completely displaced the earlier Keynesian PBC models in the 1990s.

This sixth and current period since the late 1980s may be called the

[6]This is based on a few monographs and the relevant articles listed under headings 011, 025 and 131 in the (old version) subject index of articles in current periodicals in the *Journal of Economic Literature*. The articles (mostly by political scientists) published in the journals of political science are not counted.

period of rational expectations critique. Some studies attempted to incorporate rational expectations with an information gap in the voting behavior and to set the interplay between the policymaker and the voters (Backus and Driffill 1985; Cukierman and Meltzer 1986; Rogoff and Sibert 1988) or between two political parties (Alesina 1988) in a game-theoretic framework. Most recent studies reject the PBC in economic state variables such as output and unemployment. Yet some concede that there are some indications that fiscal and/or monetary policies might have been manipulated in accordance with PBC hypothesis resulting in political "budget" cycles (Beck 1987; Grier 1987; Alesina 1989; Rogoff 1990; Alesina, Cohen and Roubini 1993).

III. Formulation of Policy and Resulting Business Cycles

A. Endogenization of Political Factors into Formulation of Policy

What is new and interesting in the politico-economic models is that the economic policy formulation is endogenized as a function of voting decisions which are, in turn, influenced by the economic conditions. According to these models, economic policy formulation amounts to a built-in feedback mechanism of the reelection-seeking government's reaction to voters' preferences. The government, as a unit of collective decision making, can be looked upon as a maximizer of its own utility instead of that of the entire society (i.e., social welfare). An elected government could be inclined to maximize its chances of getting reelected even at some cost of the welfare of its people if necessary. If that is the case, the utility of the government will depend more heavily on the prospect of reelection rather than on the general welfare of the people. If the government is indeed a utility maximizer and values its own reelection above anything else, then the economic policies implemented by such a government will have distinct features arising out of its effort to appease the voters. Maximizing the utility of the reelection-seeking government is equivalent to maximizing the number of votes through manipulating economic conditions.

The manipulation of the economic conditions, however, may be subject to some economic as well as political constraints. The government is essentially under two kinds of pressure according to Frey and Lau (1968). Internal pressure may arise from the government officials or party leaders who have specific interests of their own, but are, at the same time, united by a "common interest to stay in power." External pressures stem from the fact that the government must obtain the majority of votes in each upcoming election. The outcome of an election, thus, would depend on how much "goodwill" the government has been able to accumulate in the past. The internal pressure is encompassed in government's ideology function, and the external pressure is expressed in the approval function of the voters. The government's utility depends on these two functions.

To the extent that the government succumbs to such internal and external political pressures, economic policy formulation may depend "on the future electoral gains of accommodation weighed against the future electoral losses of resistance" (Gordon 1975, p.835). Lindbeck (1976, p.11) also notes the importance of the role of government policies in economic fluctuations:

> It is obvious that macroeconomic fluctuations today are so intimately connected with government policies that realistic explanations and forecasts of macroeconomic fluctuations require that government behavior be analyzed as an integral part of the fluctuations.

As a result of such politically calculated economic policy implementations, the economy may display a unique pattern of policy induced business cycles in close tune with the intervals of national elections. If so, by disregarding the possibility of politically calculated economic policy implementations, the traditional non-political macroeconomic models may be foregoing an opportunity for improving their predictive power.

When the political factors were endogenized in Frey and Schneider's (1979) model, its predictive power proved to improve over a traditional non-political econometric model. The influence of the reelection constraint, not only on fiscal policy but also on monetary policy, was investigated by Maloney and Smirlock (1981) and Laney and Willett (1983).

Frey and Schneider's (1979) work is essentially an extension of their two previous studies (1978a, 1978b). By incorporating political variables into an existing econometric model (Bonn Version V2 Model by W. Krelle) for the West Germany, they empirically investigate the hypothesis that if the economic policies are endogenized, the predictive power of the model must increase. The political variables in the economic policy instrument function are the squared popularity surplus term and an ideology term.

In the estimation of the popularity function, the dummy variables for right-wing, left-wing and a coalition government are included. The regression equation for the policy instrument included government tax receipts reflecting the influence of the budget constraint, and a dummy variable indicating how many years there are until the next election for the government to take action. The lagged policy variable is included in order to capture the bureaucratic and legal obligation of maintaining the policy action at least at the level of the preceding year. They claim that their politico-economic model yields in almost every year better forecasts than the pure economic model. The policy instruments used were government expenditures, government transfers to wage earners, the wage rate of government employees, and employment in the government sector.

Maloney and Smirlock (1981) look at both fiscal and monetary policies. The fiscal policy instrument is nondefense government expenditures. Its economic constraint is real net tax receipt, and its political constraint is "politically optimal unemployment rates" derived from a popularity function. Monetary policy instrument is the real value of free reserves in the system. Its economic constraint is the short term interest rate which represents the opportunity cost of holding excess reserve. The political constraint is the same as that of the fiscal policy. Their empirical results from the period 1957:1-1976:4 show that "politically optimal unemployment rate" is significant in both fiscal and monetary policies. They claim it as an indication that the stabilization policies are being used to achieve political goals.

Laney and Willett (1983) set out to test whether the election cycle has influenced the behavior of the money supply. They distinguish two channels of such influence. One is a direct linkage in which the Fed caters to the desire of the party. The other is an indirect effect of partisan politics which may affect the variables to which the Fed responds in a non-partisan manner. In particular, they hypothesize that "to the extent that fiscal deficits tend to be partially accommodated by monetary expansion—for example, in order to limit the associated rise in interest rates—then an election cycle in fiscal policy would induce an election cycle in monetary policy also, even if the Fed were entirely apolitical in partisan sense" (p.54).

The direct influence of electoral cycle was investigated through the use of dummy variables for election effects. They found no dummy variables to be significant, and conclude that there has been no such direct influence. In order to see the indirect influence of the PBC through the government deficit which was found to be a very significant variable in the regression of money supply, the cyclically adjusted government deficit was regressed on political variables. Besides the electoral cycle variables, Democratic power variable, changes in the ratio of total federal government consumption to nominal gross national product, and dummy variables for special years such as 1967 for Vietnam War spending were added.

From the regression result, the coefficient for the electoral cycle (significant at 5% level) was multiplied to the electoral cycle dummy variable to form an "election-induced component" of the federal deficit. The "election-adjusted component" of the deficit is defined simply as the government deficit minus the election-induced component. In place of the plain electoral cycle dummy variable and high employment deficit variable, these two components are entered into the original regression equation. The results show that coefficients are statistically significant. The coefficient of the election-induced component is about 1.5 times that of the other components. Their outcomes suggest that "the Fed may have created more money to accommodate the politically induced component than the remainder of the deficit" (p.66).

Grier (1987) detected an electoral monetary cycle in the U.S.A. which was confirmed also by Beck (1987). However, claiming that the monetary cycle disappears when one controls for fiscal policy, Beck conjectures that the Fed may be passively accommodating fiscal business cycles rather than actively pursuing such monetary policy. Pre-election deficits for signalling purposes occur in the equilibrium PBC model of Rogoff and Sibert (1988). They postulate that the incumbent reduces taxes and/or increases spending before elections to appear competent assuming voters prefer a competent government to a less competent one. Even though pre-election deficits are monetized, the effects of monetization on inflation and on the seignorage tax are perceived by the voters only with a lag after the election. Hence, pre-election deficits for signalling purposes can still take place even if the voters are rational and aware of the policymaker's political incentives in Rogoff and Sibert (1988). Budget cycles take the form of distortions in the allocation of public spending programs in Rogoff (1990).

Somewhat weak qualitative evidence of the existence of budget cycles in OECD countries is reported in Alesina (1989). Alesina, Cohen and Roubini (1993) empirically test autoregressive models of monetary base and fiscal deficit separately with election and country dummy variables and political cohesion variables. Since PBC hypothesis indicates that the base money growth is higher immediately before the election, the election dummy takes the value of 1 the last three or five quarters of the election. The political cohesion variable in the budget deficit model tests the effects of political instability of a coalition government on budget deficits. The degree of the political cohesion is measured by assigning the value of 0 to a one-party parliamentary government or a presidential government, the value of 1 to a two-party coalition government, and 2 to a parliamentary government with three or more coalition partners.

They conclude that the existence of monetary cycle cannot be ruled out even though the evidence is not very strong. No evidence of cycles on GDP and unemployment is found. However, some evidence of the electoral cycles on inflation and on monetary and fiscal policy instruments is found. Thus, even though Nordhaus formulation of the PBC is rejected, the rational political budget cycle is not rejected. They interpret these results as follows: "although the politicians may not have enough control over economic outcomes, they still try to avoid restrictive monetary and fiscal policies in election years, and occasionally are openly expansionary." (p.21)

In most of the models of politically formulated economic policies discussed above, some policy instrument variables are usually regressed on some economic state variables or autoregressive policy variables and on some election related political variables without much theoretical justifications. In these studies, the electoral cycle dummy variables are assumed to capture such reelection seeking government's prior knowledge about the voting function. They implicitly assume that the government has at least some knowledge of voters' utility function or popularity function even though the function itself may not be known to the researchers. In these studies, all that is necessary is that the government tries to maximize the chance of reelection by expansionary economic policies. This kind of assumption is most frequently employed in the empirical studies of the PBCs.

To the reelection seeking government, the voting function serves as a criterion for its policy formulation. In order to have an effective and realistic policy reaction function, the government must have the following three capabilities: (i) The government must have prior and exact knowledge of the voters' response in the form of a popularity or a voting function. (ii) It must have thorough knowledge of the workings of the economic system and the effect of policy variables on the economy. (iii) It must have absolute control over available policy instruments, if not in absolute terms, then at least to within a certain manageable range.

Even with all these three capabilities, the effect of the government's economic policies can still be uncertain if we consider politico-economic models with rational expectations. If voters had all the information available to them, they would not be fooled by the government's repeated manipulation of economic conditions to win elections. If the voters' expectations are rational, then the government's expectations of the effect of manipulating economic policies for popularity must also become rational. If the voters reward the honest government for maintaining economic stability, then the government has no other choice but to become honest and to stop manipulating economic policies for the political gain. In that case, the introduction of rational expectations would effectively eliminate the PBC as shown in the studies of Cukierman and Meltzer (1986), Rogoff and Sibert (1988), and Rogoff (1990).

B. Patterns of Resulting Political Business Cycles

If we detect no evidence of the PBC, then, does this mean that both the government and voters are rational? Or does it simply mean that only the hypothesis of the PBC is refuted? On the other hand, if we see any evidence of the PBC, does it mean that voters are not rational? Or could it be that, even though the voters are perfectly rational, an irrational government, in its desperate quest for reelection, just cannot feel safe until it tried everything within its power? If the implementation of such policies are affected by stochastic elements, we may still observe a PBC even within the rational expectations framework. Brittan (1978, p.169) notes that "it is only because manipulation is irregular and sparingly used, that the election cycle has lasted as long as it has." If the government has manipulated the economy by deviating from the announced policy rules in the past, then a credibility gap may be created. The public's skepticism could induce the policymaking into "the kind of circularity which is generally characteristic of games of strategy" as Fellner (1976, p.116) warns.

What most of the studies of the PBC try to do is to see if there exists a nontrivial relationship between the realized fluctuations of the important economic variables and the timings of national elections. They tend to become a description of how certain economic variables exhibit cyclical patterns in consort with the electoral cycles. While a few studies (MacRae 1977; McCallum 1978) try to test some theoretical models, many other studies (Paldam 1979; Dinkel 1981; Amacher and Boyes

1982; Beck 1982; Soh 1986) simply examine the changes in the most visible economic conditions for indications of the PBC without much theoretical development.

Finding no conclusive evidence for PBC, Hibbs (1977, 1987) presents a partisan theory of business cycles which argues that the Democratic party prefers higher inflation and less unemployment than the Republican. This suggests that if PBC exists at all, the partisan difference must be taken into consideration for the study of policy-induced business cycles. Chapell and Keech's (1986) study of the impact of unexpected monetary shocks on the changes in unemployment showed similar partisan differences even though it did not support PBC hypothesis. However, assuming this kind of systematic partisan difference in implementing monetary policies and using the post-World War Two data in the U.S.A., Alesina and Sachs (1988) found some evidence for PBC in the partisan aspect.

With the rational expectations models, the key factor for the existence of PBC is the asymmetry in information between the policymaker and the voters which makes the voters perceive the effects of the policy with a lag, i.e., after the election. However, the rationality of the voters and their awareness of the political motivation of the incumbent politician exert a subduing effect on the resulting PBCs which will be more short lived and less regular than the adaptive expectations PBC models.

In contrast to the somewhat ambiguous evidence concerning the influence of national elections on the fluctuations of economic conditions, most empirical studies of the effect of national elections on economic policy formulation show that the economic policy variables are indeed influenced by the electoral variables. Still, much more theoretical development is needed. For example, it has not been shown clearly how the fluctuations in popularity indices would be reflected in the government's policy reaction function. Although the findings of the studies of the popularity and voting functions are utilized in the formulation of the government's reaction function, there is virtually no research done on how the endogenous economic policies may generate the PBC, not to mention the research on the complete circular flow of the three sets of interrelationships among the voters, the government and the economy.

Even though one cannot readily detect a known pattern of the PBC by examining the raw economic data, the stronger evidence in the politically manipulated economic policy models supports the existence of the PBC at least in the policy formulation. It is not entirely implausible that the recent studies may have looked for the wrong signs or incorrectly hypothesized pattern of the PBC thereby obtaining seemingly weak evidence of its existence. For instance, in the case of the United States, it is not inconsistent with the hypothesis of the PBC if the data do not follow the anticipated pattern during the second term of a President who is prohibited by the 22nd Amendment to seek a third term in the office.

IV. Conclusions and Thoughts for Further Research

The study of the politico-economic models as a specialized area of economics is still at a developing stage. The shortcomings of the current research can be the starting point for the future research. In the literature, it is still not very clearly modeled how the information on the popularity or voting function influences government's policy formulation. More theoretical development on how the voters' preferences concerning economic conditions are fed back into the government's economic policy formulation may be desirable. In addition, more empirical tests of the predictability of the macroeconometric models in which the economic policies are endogenized, for example, as in Frey and Schneider (1982), may be stimulating. It may be interesting to incorporate the reelection constraint into a standard macroeconomic model as in Fassbender (1981) or Borooah and Ploeg (1983). It may be essential to construct multiperiod dynamic models of endogenous economic policies which generate PBCs.

Instead of the usual PBC corresponding to one electoral period, perhaps a cycle which corresponds to two consecutive electoral periods may be worthwhile to investigate. Since most of the existing empirical studies examine the traits of the PBC in isolation from the other two sets of relationships, namely voters' response and the government's reaction, the characteristics of the PBC are not theoretically well defined. Some theoretical characterization of the PBC generated by the reelection seeking government's economic policy implementations may be necessary before we can empirically pin down the precise pattern of the PBC.

The empirical findings do not appear to endorse the existence of the PBC unequivocally. Given this inconclusive evidence for the existence of the PBC, the "isolation" of the influence of the election cycle from other influences may still be one of the important tasks ahead. According to Frey (1978b, p.103), "the only way to isolate electoral cycles from other influences is to construct carefully formulated theoretical models which specify exactly in what way the government is envisaged to create political cycles."

The characteristics of the realized PBC would depend very much on institutional factors. For an extreme example, if any elected government official is prohibited to run for reelection, we may not be able to see any business cycle that is attributable to the reelection-seeking behavior of the government. Such reelection-free government may conscientiously choose to maximize the welfare of the public. One implication of the PBC hypothesis is, then, elections are costing the public economic stability and thereby reducing its economic welfare.[7] It means that there can be a certain dead-weight welfare loss associated with the PBC. The welfare cost of the PBC to the economy in terms of lost economic stability has rarely been investigated.

In the similar vein, we could examine whether the election is a public good or a public bad. We could also derive some implications for institutional changes such as the optimal length of the electoral period as in Keech and Simon (1983) and the undesirability of the incumbent's candidacy with the implication of some constitutional change as in Wagner (1977). The study of the interaction between the government and the electorate in a game theoretic framework could be challenging. The incorporation of uncertainty and stochastic elements into the politico-economic models could be rewarding.

Overall, further research is needed for the illumination of the linking mechanisms for the three sets of relationships among voters, government, and the economy. The construction of an integrated dynamic model which can account for the whole circular flow in the politico-economic system could be crucial. One always has to keep in mind that the PBC is neither the sole nor the most powerful explanation of the economic fluctuations. Although one should be wary of attributing too much to the political aspect of the business cycle when there are more essential and inherently economic causes, the inclusion of political factors in the analysis of the macroeconomic policymaking and the resulting dynamic changes in the economy will undoubtedly prove fruitful in

[7]This may open up a host of questions ranging from the most optimal length of the term of an elected office to the philosophical, ethical and legal justification of the democracy and the search for the best form of government. Although these are very important questions, they are beyond the scope of this paper.

the end. (*Manuscript received September, 1993; final revision received February, 1994*)

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