Neither Gone Not Forgotten:
The Development and Struggle of Political Business Cycle Theory

Não se foi, nem foi esquecida:
O desenvolvimento e as disputas da teoria dos ciclos político-econômicos

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Abstract: Research in political business cycles (PBCs) are part of a larger program related to the economic analysis of politics with a macroeconomic focus called New Political Macroeconomics. This article explores the historical evolution of the literature in political business cycles, starting with its first writers. The article emphasizes William Nordhaus's contribution. Nordhaus transformed a problem that was seen as a microeconomic issue into a macroeconomic one. The model has come under criticism because of its hypotheses on voters, lack of empirical verification and lack of conforming with rational expectations theory, which made interest in PBCs diminish. The formalization of conditional PBCs "solved" the problem of empirical verification. These models predicted that PBCs need specific conditions to happen. The article concludes that PBCs have the capacity of reinventing themselves and analyze, with macroeconomic tools, issues of collective decision-making, a domain previously thought to be only microeconomic.

Keywords: Political business cycle. Political economy. Public choice. New political macroeconomics. William Nordhaus.

Resumo: A pesquisa em ciclos político-econômicos (CPEs) é parte de um programa maior relacionado à análise econômica da política com um foco macroeconômico, chamado Nova Macroeconomia Política. Este artigo explora a evolução histórica da literatura em ciclos político-econômicos, começando pelos seus primeiros escritores. O artigo enfatiza a contribuição de William Nordhaus. Nordhaus transformou um problema que era visto como um tópico microeconômico em um tópico macroeconômico. O modelo sofreu críticas por causa de suas hipóteses sobre os eleitores, falta de verificação empírica definitiva, e falta de conformidade com as doutrinas das expectativas racionais, assim fazendo com que o interesse em CPEs diminuísse. A formalização dos ciclos político-econômicos condicionais "resolveu" o problema da verificação empírica. Estes modelos previam que os CPEs precisam de condições específicas para acontecerem. O artigo conclui que os modelos de CPEs

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[1] PhD. in Economics, Federal University of Minas Gerais. Paper presented at 6th Latin American Conference of the History of Economic Thought and I Economics Workshop, Federal University of São Carlos, in Sorocaba. I would like to thank Carlos Eduardo Suprinyak, Alexandre Cunha, Pedro Garcia Duarte, Lilian Furquim, Luiz Bruzzi, Eduardo Angeli and two anonymous reviewers for the comments, and William Nordhaus for the replies to my questions. This article is part of my PhD. dissertation "Dreaming of Unity: Essays on Political Economy", with institutional support from the CNPq.

têm a capacidade de se reinventarem e analisarem, com ferramentas macroeconômicas, assuntos de tomada de decisão coletiva, anteriormente um domínio unicamente microeconômico.

Palavras-chave: Ciclo político-econômico. Economia política. Escolha pública. Nova macroeconomia política. William Nordhaus.

JEL Classification: B21; B22; B41; D7; E69.

> *"In the course of my career, both as a student and as a public official, I have found it necessary to revise my ideas about the proper role of government in specific economic matters. Experience is a demanding teacher, and my respect for it has led me at times to favor governmental actions that I abhorred in my youth. My confidence in the basic advantages of free enterprise remains, however, unshaken."* Arthur F. Burns[2]

1 INTRODUCTION

The political business cycle is a model pioneer in synthetizing political economy with macroeconomics. In its simplest definition, a political business cycle (PBC) occurs when, in an electoral year, the incumbent government will try to manipulate the economy, through a looser fiscal and/or monetary policy, in order to boost its popularity and increase the chances of continuing in power. Independently of being elected or not, the consequences of such looser policies are felt later, with ensuing inflation. To deal with these consequences, austerity policies must be enacted until the next election approaches, when the cycle repeats again.

The study of political business cycles follows an intuitive and common-sensical observation of political behavior, on how politicians' seking victory in short-run elections lead to economic problems in the medium-run (PALDAM, 1981). Its empirical verification, however, has been indecisive (DRAZEN, 2000a; FRANZESE, 2002; DUBOIS, 2016). Ever since Nordhaus's 1975 model, the

[2] Arthur Burns was the chairman of the Federal Reserve during Nixon's administration, and during the development of the model. See Burns (1973).

literature on political business cycles has grown steadily, resisting even severe criticism from the rational expectations framework.

The purpose of this paper is to recount the development of this approach from its first propositions to its current iterations. Studying the history of the PBCs, how they were criticized and how they are still being considered as a topic of research helps to understand questions of interdisciplinarity between economists and political scientists, macro and microeconomists, introduce institutions to macroeconomic research, and to provide an illustration of the resilience of economic models – how the model survived the rational expectations criticism and lack of empirical verification. Therefore, this article expands the literature on the history of political business cycles by showing their evolution through the aforementioned issues.

This paper has five sections besides this introduction. Section 2 details the antecedents of the political business cycle research in Kaleckian and Institutionalist literature. Section 3 presents the original Nordhaus's model, which allowed macroeconomists to analyze a problem that was previously thought to be exclusively microeconomic. Section 4 details other similar models and immediate reactions to Nordhaus's model, plus alternate models such as the partisan theory. Section 5 details the challenges and criticism the model faced from the breakdown of the Phillips curve and from the rational expectations revolution, who claimed that it was inconsistent with theory and empirical evidence. The model eventually was adapted to include rational expectations, reinventing itself. Lastly, the paper concludes reviewing how the model did not "die" with the criticism and how it established of a *macroeconomic* approach to problems of political economy and public choice that can be called "new political macroeconomics"[3].

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[3] See Snowdon and Vane (2005, chap. 10) and Gärtner (2000), for a synthesis of this tradition of macro political economy. See Almeida (2021) for a history of this tradition and its place in the wider field of analysis of collective decision-making.

2 EARLIER POLITICAL BUSINESS CYCLES: KALECKI AND ÅKERMAN

Though passing references to this phenomenon had occurred in earlier literature[4], according to Velupillai (1987), the earliest intuition on "political business cycles" came from the writings of the Swedish political scientist Herbert Tingsten. Tingsten (1937, p. 150) wrote that "the political importance of economic factors must be admitted" through studies of the relationship between class and party and the strength of the electorate and its role in economic fluctuations.

Practitioners of new political macroeconomics trace the origins of the PBC literature to Michał Kalecki's 1943 article "Political Aspects of the Full Employment" (KALECKI, 1943; SNOWDON; VANE, 2005). He wrote it during his stay at the Institute of Statistics, at Oxford University, and it is one of his most quoted papers (LÓPEZ; ASSOUS, 2010, p. 9-10). He followed a unique "Kaleckian" methodological approach, which placed him in conflict with Marxian economists, in spite of sharing with Marx a critical stance towards capitalism and the Say's law, and Keynesians, in spite of having discussed his ideas in Keynes's Cambridge circle (LÓPEZ; ASSOUS, 2010; DIXON; TOPOROWSKI, 2013; MARCUZZO, 2020). According to him, most economists admitted that full employment was possible and that the governments should take action to guide the economy towards it. However, there were *political* obstacles to it. When the economy is in full employment, the bargain power of the capitalist class diminishes because there is a high demand of labor, and workers will not submit to whatever conditions capitalists impose on them (in terms of wages and work conditions).

In order to keep its power, the capitalist class will oppose full employment policies, even at the cost of their own profits, and pressure the government "to return to the orthodox policy of cutting down the budget deficit. A slump would follow in which Government spending policy would come again into its own" (KALECKI, 1943, p. 330). This is what Kalecki called a "political business cycle".

[4] Nordhaus (1989, p. 1) opened with a citation from 19th century Tocqueville's *Democracy in America*: "It is impossible to consider the ordinary course of affairs in the United States without perceiving that the desire to be re-elected is the chief aim of the President; … and that especially as [the election] approaches, his personal interest takes the place of his interest in the public good."

He claimed to have verified this for the United States in 1937-1938, which explained a reduction of the budget deficit, followed by a slump. The only way to ensure full employment was execute structural reforms, though Kalecki remained skeptical of this possibility (LÓPEZ; ASSOUS, 2010, p. 199).

Independently from Kalecki and using a different, but still relatively heterodox methodology, Johan Henrik Åkerman also proposed an early notion of "political economic cycles" (ÅKERMAN, 1947). Building on his research into economic fluctuations and earlier writings in Swedish[5], Åkerman argued there was a direct correlation between "cycles of prosperity and depression on the one hand and the duration of the different cabinets on the other" (ÅKERMAN, 1947, p. 107).

Åkerman spent years studying in the United States, where he was deeply influenced by the original Institutionalist movement, especially Veblen and Mitchell (CARLSSON, 1999). Inspired by the National Bureau of Economic Research and Tingsten (VELLUPILAI, 1987), Åkerman executed an empirical analysis using time series from England (1855-1945), the United States (1865-1945), Germany (1871-1945) and Sweden (1866-1945). In all the time series, Åkerman found a correlation, strong in many occasions, between political and economic crises.

Although Kalecki and Åkerman proposed political business cycles as a research topic, they remained relatively obscure. Kalecki used a model that incorporated class struggle as a primary component, alienating himself from the economic mainstream (VILLAMARÍN, 2008). His objective with the model was to show how absurd capitalism was, unable "to secure the rational use of resources because of the blocking political, social and financial power of the capitalist class" (TOPOROWSKI, 2014, p. 7). Later, Kalecki would argue that the capitalist class was one of the most reactionary groups in the world and responsible for the maintenance of fascism in society just to consolidate their *political* power (KALECKI, 2020).

[5] His book *Ekonomiskt Skeende och Politiska Förändringar* proposed a "political economic cycles", to explain the depreciation of the franc and loss of reserves are related to the constant changes in the French government (ÅKERMAN, 1962, p. 102-103).

Åkerman, on the other hand, followed an Institutionalist methodology, at a time when data collection was too rough to produce robust empirical evidence. Dubois (2016) does not consider Kalecki (1943) to be the predecessor to current political business cycle research, claiming that, although Kalecki created the term, he did not use it in the same context as Nordhaus, being incompatible with rational choice theory. Instead, he situated Åkerman's work as the antecessor to Nordhaus's model. These factors contributed to the lack of interest in political business cycles at the time. Aside from a few articles (FREY; LAU, 1968; LAU; FREY, 1971), it would take almost 30 years until the research on political business cycles returned to the economists' agenda.

3 NORDHAUS AND HIS 1975 MODEL

Alesina (1988), Snowdon (1997), Drazen (2000b), Olters (2004), Țigănaș and Peptine (2012) and Dubois (2016) all stress the importance of William Nordhaus for political business cycle research in establishing a tradition that combined political economy and macroeconomics. Dubois (2016) listed five reasons, political and economic, why the 1970s context gave momentum to Nordhaus's model:

a) Through the Cowles Foundation, Ray Fair[6] and Gerald Kramer[7] had published important papers on how economic conditions affected the political climate (KRAMER, 1971; FAIR, 1975) and wrote on similar topics as Nordhaus. Nordhaus's working paper was published in 1972 by the Cowles Foundation itself (NORDHAUS, 1972);

b) The works of Kalecki had received a reprint in the early 1970s, sparking renewed interest in his writings, including the PBC model. In Nordhaus's own words: "I visited University of Cambridge in 1970-71 and was told about

[6] Fair was also influenced by Downs (1957), Kramer (1971), and Stigler (1973), and by Orley Ashenfelter's prediction that Nixon would win, with Kramer's model (FAIR, 1996, p. 89). This led him to developed the Fair Model, which would become one of the most important economic models in forecasting election results.

[7] Rosenthal (2006) mentioned that Kramer studied under William Riker at Rochester, before going to the Cowles Commission, thus it is safe to say that he was influenced by the Rochester tradition of public choice. For a discussion on Riker and the Rochester tradition, see Amadae and Bueno de Mesquita (1999).

it by a colleague. Kalecki was an icon there, although I did not appreciate his work that much" (personal communication, 5/14/2020);

c) Nordhaus managed to "complete" other political economy models, with the inclusion of the Phillips curve, thus adding a macroeconomic dimension to the problem;

d) The macroeconomic situation was unstable and Nordhaus's model proposed a reason for that: electoral manipulations;

e) The United States had been caught by the Watergate scandal, and the cynical atmosphere, considering politicians as manipulators, was captured by Nordhaus's model. Abrams and Butkiewicz (2012) show, through analysis of declassified official tapes, how Nixon manipulated the then FED chairman Arthur F. Burns to follow a looser fiscal policy in order to be elected[8].

Unlike Kalecki and Åkerman's models, Nordhaus's model followed the rational choice theory as portrayed by Downs (1957), in which politicians are self-interested and only care about being elected. Nordhaus adapted this framework for both politicians and voters: individuals prefer stable prices and low unemployment rates; while they are rational in their preferences, they are ignorant of the macroeconomic tradeoff between inflation and unemployment. They have adaptive expectations, which means they use references from past elections to form their expectations.

In addition, voters are myopic, in the sense that they only care about economic results and do not know how the economy works. Thus, parties will try to maximize "political profit", i.e. the majority in the next elections. In the model, political ideology does not matter – at best, it is a means to an end. Voters will vote based on economic performance: if the incumbent produces good economic results, the voters will reelect him, if not they will vote for the opposition.

[8] Rogoff (1988, p. 53) called Nixon "the all-time hero of political business cycles." Drazen (2000a, p. 231) thus summarizes Nixon's manipulation of the economy: "The full-employment budget deficit, in balance in 1970, rose to $10 billion in 1971 and $12 billion in 1972. In 1971, Social Security benefits and personal tax exemptions were increased, while the investment tax credit was restored. Manipulation in 1972 appears even more striking: two weeks prior to the election, there was a 20% increase in Social Security benefits, announced in a letter from President Nixon to 24,760,000 Social Security recipients."

In the long run, the model gives the following result:

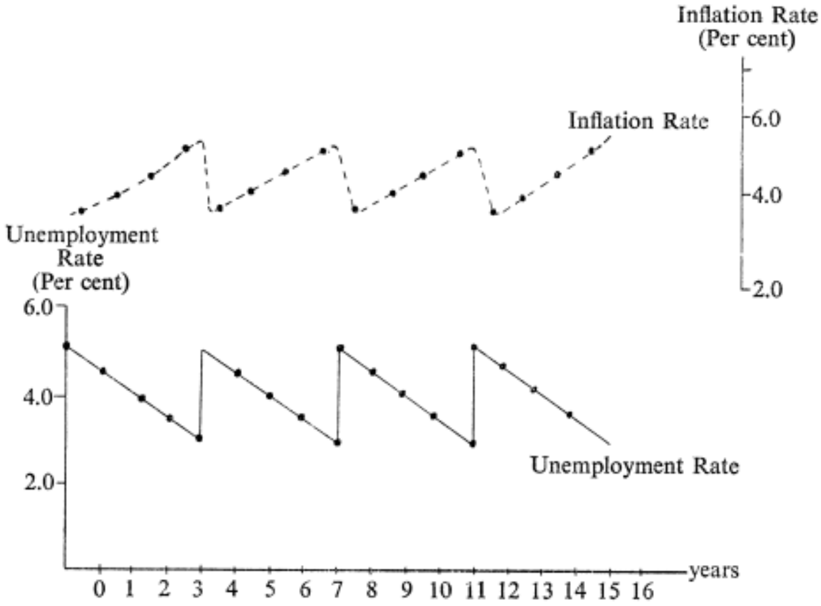
> Under conditions where voting is an appropriate mechanism for social choice, democratic systems will choose a policy on the long-run trade-off that has lower unemployment and higher inflation than is optimal. (NORDHAUS, 1975, p. 178).

Thus, decisions in the long run might be biased against future generations. Its sources, however, lie in the short run, where political business cycles happen.

In sum, the cycle proceeds as follows: after the election, the victor will raise unemployment to a relatively higher level to combat inflation. Then, when elections approach, he will adopt policies that increase the employment level at the cost of increasing inflation, supposing that the economy can "wing it". There is thus a cycle of austerity and expansion, derived from the idea that there is a menu of choices that politicians can manipulate.

The simplified model has two important predictions: i) that the politically-determined policy choice will produce lower unemployment and higher inflation than optimal, and ii) that the optimal partisan policy will lead to a political business cycle, with unemployment and deflation in the early years followed by an inflationary boom as elections approach. Nordhaus focused on testing prediction (ii) for nine OECD countries, finding promising evidence of a political business cycle for Germany, New Zealand and the US. Figure 1 shows the relation for US data, where we can see the political business cycle in the saw-tooth graph.

Figure 1 – The political business cycle



Source: Nordhaus (1975, p. 185).

Thus, Nordhaus elaborated a simple and yet elegant formal model of the political business cycle, that appeared in an appropriate moment of the American economy. Nordhaus provided a framework in which criticism of State intervention could be done from both a macroeconomic and a decision-making point of view, thus connecting groups that rarely talked to each other before. Public choice and political economy were seen as exclusively microeconomic fields, and Nordhaus was the first to formalize a macroeconomic approach to a public choice issue[9], in a language open to macroeconomists. In his words, when I asked about the distinction between his work and what public choice theorists were doing: “This seems an empty distinction. Economics started as "political economy," and the two subjects overlap. Many of the great discoveries in one field have been made by those in the other (Lindblom, Arrow, Dahl, Simon, Schumpeter), so it never occurred to me to engage the question” (personal communication, 5/14/2020).

[9] Public choice theorists argue that the political business cycle still has the same problems of mainstream macroeconomics, of not giving the due attention to economic variables and treat the economy as a balloon that can be inflated and deflated at will (WAGNER, 1977). Both groups rarely speak to each other (PADOVANO, 2004; ALMEIDA, 2021).

4 Debates Surrounding the Earlier Literature

Along with Nordhaus's model, there were two other earlier articles on political business cycles: one written by Assar Lindbeck, the other by C. Duncan MacRae. Paldam (1981) referenced the model as the "Nordhaus-MacRae model" and Alesina, Roubini and Cohen (1997) as the "Nordhaus-Lindbeck model", although recent literature only mentions the "Nordhaus model" (DUBOIS, 2016).

Lindbeck (1973) argued that new theories of economic policy must assume that politicians are "endogenous" to the system, that their behavior depends on a series of variables. Since not all politicians are the same, a theory of the economic effects of politicians on the political body is incomplete without a theory of how a policymaker influences others, and how they establish relations at different levels of policy (e.g. between politicians working at the municipal, state, and federal levels).

Like Nordhaus, Lindbeck (1973; 1976) treated the political business cycle as political manipulation. The incumbent politician's main objective is to accommodate the timing of the elections with a cycle when the rate of inflation is relatively small and unemployment is falling (LINDBECK, 1973). It is a different conclusion from Nordhaus's model, whose working paper is referenced in the article:

> The two main reasons for the difference in conclusion are perhaps that Nordhaus assumes rather small resentments among voters about inflation, relative to unemployment, and that he does not seem to include the rate of change in unemployment among the important considerations of the general public. (LINDBECK, 1973, p. 26-27).

One reason why Lindbeck's name is not currently associated with the political business cycle literature was because this subject was only a secondary concern of his project of revising the theory of economic policy. He considered three main problems for stabilization policies: (I) the open economy problem, (II) the limitations of aggregate demand management, and (III) tensions of the political process (LINDBECK, 1976). While the first two problems had heavy technical writing, the last one offered a discussion of possible problems and future research, remaining a “literary” model. Also, unlike Nordhaus, Lindbeck proposed a synthesis of the idealistic politician of the theory of economic policy and its self-interested public choice alternative.

MacRae’s contribution starts with the tradeoff between inflation and unemployment but, instead of a nominal Phillips curve, MacRae uses a quadratic loss function and dynamic programming to calculate the political business cycle. He arrived at a similar conclusion, that politicians will spend more in periods close to elections. MacRae went beyond Nordhaus’s model, however, by introducing two different types of voters: myopic and strategic.

Myopic voters behave just as in Nordhaus’s model, ignorant of how the economy works. But strategic voters can notice the cycle and punish the government accordingly, by changing their vote. His empirical analysis focused only in the United States and found that the myopic-voter configuration predicted better the behavior of voters in the Kennedy-Johnson administration, while the strategic-voter configuration predicted better the behavior of the Eisenhower and Nixon’s administrations.

In many aspects, MacRae’s model is more robust than Nordhaus’s. In fact, MacRae cited Nordhaus (1975) twice to criticize it for not analyzing the stability of the cycle and for ignoring voters’ capacity of shifting their preferences (MACRAE, 1977). Even though his working paper is earlier than Nordhaus’s by a year, it was only published two years after the latter, thus making the later date of publication a reason why it did not enjoy the same exposure. Another hypothesis, however, relates to MacRae’s choice of a quadratic loss function of the Theil-Tinbergen type, instead of the more recent expectations-augmented Phillips curve used by Nordhaus.

According to Forder (2014a), in the 1970s the Phillips curve was being increasingly used for applied research and policy evaluation, especially income and regional policy. Nordhaus (1975)’s PBC model “hypothesized a Phillips curve which became steeper but not vertical during inflation, vote maximizing governments, and voters who were averse to both inflation and unemployment”, and Nordhaus’s role in introducing political economy concerns is emphasized by the fact that "the exposition is mainly theoretical and is certainly the *source* of many conventional ideas on that theme" (FORDER, 2014a, p. 12, emphasis added).

As mentioned above, the introduction of the Phillips curve bridged earlier semi-theoretical work on political business cycle into a theory that could be tested. Fiorina (1981) argued that the accumulation of literature was combining a demand side that analyzed the voters' reactions with a supply side that focused on the governments' actions (KRAMER, 1971; NORDHAUS, 1975). It was expected that both approaches would eventually converge into a general equilibrium model of the political business cycle (FAIR, 1975; FREY; SCHNEIDER, 1978). Tufte's analysis of the American economy being a major example of empirical literature (TUFTE, 1978).

As indicated before, Nordhaus's approach had its own problems. Drazen (2000a) summarized the main criticism in three points: 1) the model assumes that incumbents control monetary policy, violating central bank independence[10]; 2) it relies too much on irrational behavior by voters – while voters do get fooled, "a far better approach would be to ask whether political business cycles can be consistent with rational behavior" (TUFTE, 1978, p. 237); and 3) ambiguous empirical support. Besides, articles as early as Frey and Ramser (1976) argued that the fundamental long-run result of having purely myopic agents is not consistent with how actual governments behave.

The most restrictive hypothesis of the model seemed to be the one concerning the rationality of voters. Thinking of this flaw, Douglas Hibbs elaborated the "partisan theory". Hibbs showed how ideology was an important variable in the political business cycle, differently from Nordhaus's approach of ignoring the ideology of policymakers. Its main result was that "the macroeconomic policies pursued by left- and right-wing governments are broadly in accordance with the

[10] Alesina, Cohen and Roubini (1992, p. 254) commented on how puzzling it was that their panel data analysis did not reject Nordhaus's results for Germany and New Zealand, two of the countries that had the most independent central banks.

objective economic interests and subjective preferences of their class-defined core political constituencies" (HIBBS JUNIOR, 1977, p. 1468).

Hibbs argued for the existence of an ideological political business cycle, by making a distinction between policies pursued by the right (emphasis on austerity and fiscal responsibility) and the left (emphasis on full employment). In other words, leftist voters "tend to occupy unsheltered, lower status jobs" that are most sensible to changes in unemployment, while rightist voters "hold the lion's share of financial capital in the household sector, and they tend to occupy higher status, and more secure jobs" (HIBBS JUNIOR, 1992*,* p. 362-363). Hibbs knew that parties were not so black-and-white, but he sought to identify "empirically meaningful differences on the margin". He identified the Eisenhower and Nixon-Ford administrations with austerity cycles and restrictive fiscal policies, and the Kennedy-Johnson administration with full employment cycles and looser fiscal policies. Hibbs's model, however, can be criticized in the same way as Nordhaus's, due to reliance on "mistaken expectations of what policy will be in order to get real effects" (DRAZEN, 2000a, p. 249).

By proposing ideological differences to explain the origin of the business cycle, Hibbs inaugurated a new line of research called "partisan theory", to contrast with Nordhaus's opportunistic politician model, thus splitting political business cycle research in two main research lines.[11] There were early attempts of synthetizing both approaches to PBCs, such as Frey and Schneider (1978) and their "contingent partisanship" model (DRAZEN, 2000a, p. 250).

Up to that point, empirical evidence for political business cycles was both not as solid as its supporters would like, and not as damning as its critics would wish. As Paldam (1981, p. 291-293) mentioned, the idea of political business cycles is quite intuitive and it fits in the common sense of politics, even if "no one could read the [PBC] literature without being struck by the lack of supporting evidence" (ALT; CHRYSTAL, 1983, p. 125). And yet, there were defenses of the PBC models, claiming they existed and were important to understand political fluctuations in

[11] Most textbooks consider the term "political business cycles" referring to the opportunistic variant.

the economy (HAYNES; STONE, 1990). As Dubois (2016, p. 242) showed, different articles provided positive and negative evidence of political business cycles, but recent empirical work failed to find any *systematic* evidence of fiscal manipulation for reelection purposes (MANDON; CAZALS, 2019). Following the principle of rigor, ambiguous evidence may as well be as good as no evidence.

5 Rational Expectations as a Game Changer

The initially positive reception of political business cycle theory quickly reverted due to two critiques, in addition to ambiguous empirical verification: the use of an old version of the Phillips curve and rational expectations.

The breakdown of the Phillips curve relationship is considered a reason for the decline of PBC models (OLTERS, 2004). The PBC model was associated with the Phillips curve at the moment a "myth of the Phillips curve" started to take form. Forder (2014b) summarizes this "myth": first A. W. Phillips (1958) detailed an inverse relationship between unemployment and inflation; then Samuelson and Solow (1960) advocated that the Phillips curve should be an instrument of policy, that governments could accept slightly higher levels of inflation to boost unemployment; then Phelps (1967) and Friedman (1968) criticized the idea that governments have a "menu of policies" and, upon proposing the expectations-augmented curve, claimed that the idea of a menu gave leeway for inflationary policies that would eventually make the economy collapse; for this reason, money supply should be controlled.

This has been a narrative since the 1970s. As Forder (2014b) showed, however, it does not survive scrutiny. Phillips (1958) was criticized and eventually disowned by its author. Samuelson and Solow (1960) intended to study approaches on how to understand inflation and did not have any intention of providing policy recommendation. Phelps (1967) and Friedman (1968) admitted that the idea of how wages adjust to inflation was common knowledge in the economics profession at the time.

Due to degeneration of its original meaning, the expression "Phillips curve" could refer to different things loosely related to a tradeoff between inflation and unemployment. Different authors then started associating the term with the idea that this tradeoff *could* be exploited. Many researchers helped create and propagate the myth[12], but their intentions ranged from mere misunderstanding of the aforementioned articles to an actual agenda of associating Keynesianism to inflationary policies (BUCHANAN; WAGNER 2000). Research based on this version of the Phillips curve, such as Nordhaus's PBC model, thus suffered a loss of prestige.

In this shifting moment, the Phillips curve was a minor inconvenience compared to the new classical criticism. Alesina considered that the rational expectations revolution had a direct impact on the decline of political business cycle research (ALESINA, 1988, p. 15; SNOWDON; VANE, 2005, p. 571), because one of the model's most controversial hypotheses was the idea of myopic voters.

The idea that economic models of voter behavior are inconsistent with economic theory started with George Stigler's criticism of Kramer (1971). Stigler (1973, p. 166), defended "strong nihilistic conclusions" about the influence of economic conditions on voting behavior. The policy ineffectiveness proposition meant that rational agents could expect and prepare themselves to any change in policy if it was communicated (SARGENT; WALLACE, 1975). In one of the first empirical criticism of PBCs from a purely rational expectations perspective, McCallum (1978) argued there was no evidence of Nordhaus's political business cycle, while there was positive evidence for behavior predicted by new classical theory.

In one of the earliest surveys of the PBC literature, Martin Paldam concluded it is likely that "it is the politicians who react very myopically, but presume that the voters remember well" (PALDAM, 1981, p. 300). Paldam also observed that, because the vote function may easily turn into a target function for economic policymaking, what was observed was "a theory of popularity profiles of

[12] See sections 6.3 and 6.4 of Forder (2014b).

policies: i.e., we note that almost all policies may be said to lead to a set of popularity gains and losses distributed over time and population groups." (PALDAM, 1981, p. 289). In other words, the model could test the competence of the policymaker.

The preference for rational expectations in macroeconomics meant that models that did not fully comply with it, like political business cycle research, would remain in the periphery of the mainstream[13]. Reactions to rational expectations were mixed. Nordhaus (1989), defending his 14-year-old approach, criticized what he called the "ultrarrationality" assumption, viz. rational expectations. According to him, empirical testing rejects the ultrarrationality hypothesis and the presence of "post-election euphoria" is an indication against the voters' rational expectations[14]. However, others preferred to adapt the theory to fit within the mainstream approach, leading to the creation of rational political business cycle models (CUKIERMAN; MELTZER, 1986; ROGOFF; SIBERT, 1988).

The rational PBC models emphasized the asymmetry of information between voters and the government, changing how the policy effects can be interpreted (ALESINA; ROUBINI; COHEN, 1997, p. 16). The electorate would lack enough information to determine the incumbent's competence at first, while the politician knew privately the amount of public goods he could supply. The question would then concern the competence of a politician; as time passes, competent politicians would show off their capacities.

Although Cukierman and Meltzer (1986) were the first to extensively apply rational expectations to the relation between the economy and the polity, Rogoff and Sibert (1988) are credited with having introduced rational expectations to political business cycles research. Just as in earlier models, they focused on the

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13 Dubois's (2016) complete list shows PBC articles remained outside the main economics journals during the period 1980-1985, available mostly in political science journals and *Public Choice,* before they returned to economic journals.

14 Nordhaus himself was critical of new classical economics. In a discussion on the state of macroeconomics (NORDHAUS, 1984), he was skeptical of the Lucasian approach, preferring theories of contractual incompleteness and stickiness in non-clearing markets (incidentally, he did not mention political business cycles in his commentary).

availability of information about the workings of the government – in this case the competence of a government.

The model presumes that distortions happen due to temporary information asymmetries. The government has private information on the state of the economy that voters do not. Thus, the government can mask its actual competence by increasing expenditure in social transferences and other public services. While the policymaker is still opportunistic, voters are aware of how the economy works. The monitoring costs, however, are too high for them to check if the "competency shock" is real or just a fluke.

Their results indicate that a political business cycle can emerge when the government, in an attempt to look competent, increases the level of investment and social transfers in election years. Voters will only learn of its actual competence after the elections. It should be noted that the model implies there are specific conditions for the cycle to emerge, such as low popularity (if the government's popularity is high, the likelihood of a political business cycle decreases, because if its reelection chances are high enough, it does not need to recur to manipulation). Thus, they also tend to be short-lived.

Along with Alesina's rational partisan theory, which applied game theory to Hibbs's partisan theory (ALESINA, 1987), Rogoff and Sibert reignited the interest in political business cycles. Persson and Tabellini (1990) proposed an opportunistic rational expectations model, but having the unpleasant result that, loosely speaking, the more competent politicians are the ones who distort the economy, rather than the incompetent ones (ALESINA; ROUBINI; COHEN, 1997, p. 32). The reason is that competent politicians must distort the equilibrium, through increase of government spending, to signal how good they are.

Although researchers produced intuitive and robust theoretical models, the evidence for political business cycles remained elusive, with studies reporting cycles while others showed no evidence of them (FRANZESE JUNIOR, 2002). Susan Lohmann, writing for the *Oxford Handbook of Political Economy*, considered she wrote "a eulogy for a dead field" because of political business cycles' inability to produce meaningful research (LOHMANN, 2006, p. 525).

The issues raised by the rational political business cycles models were still prominent, namely, lack of empirical verification and inability of fitting properly into the prevailing macroeconomic paradigm. But reports of the model's death turned out to be greatly exaggerated. To adapt, the models abandoned the "one-size-fits-all" approach for a view of political business cycles as subject to specific conditions and economic variables. In the 1980s, Reiner Dinkel had already noticed that

> [...] for a political business cycle to occur, however, it is only necessary that the government *believes* that it could win votes from such a policy. Since no one can know in advance how people will vote, a government will use all possible policy instruments to ensure its re-election, even if economic conditions only have a weak impact on voting behavior. (DINKEL, 1981, p. 226, emphasis in the original).

Thus, the *context* in which the political business cycle emerged plays an important role. Shi and Svensson (2000; 2003) stressed the importance of the political business cycle as a moral hazard, due to the voters' lack of information about the politicians – this was named the *conditional political business cycle*.

The importance of the context might be the source of the gap between the common-sense wisdom concerning the political business cycle and the ambiguity of the empirical evidence. Franzese Junior and Jusko (2006) wrote that differences in context can explain the discrepancies observed ever since Nordhaus (1975). The three decades of ambiguous empirical results actually "hinted the importance of *context conditionality* for electoral cycles" since the beginning:

> Some of the inconsistencies in empirical evidence for electoral cycles likely emerged also from the implicit assumptions throughout these studies that all incumbents seek reelection equally in all elections and that all equally control policies equally effective toward that goal. Re-election incentives, control over policies, and political-economic policy efficacy are not constant, however; they vary considerable across *contexts*. (FRANZESE JUNIOR; JUSKO, 2006, p. 548-549, emphasis in the original).

The area of political budget cycles provided the first empirical tests. Brender and Drazen (2005, p. 1292, emphasis in the original) proposed that "the question of *whether* such a cycle exists on the macroeconomic level across countries turns out to be a question of *where* it exists, that is, in which types of countries." According to them, governmental deficit, especially in election years, is related to the maturity of democracies. The less mature the democracy, the less used the electorate will be to these practices (and thus less fiscally conservative), thus the greater the probability of a political budget cycle. Alt and Lassen (2006a; 2006b) focused on transparency issues related to the political budget cycle in developed economies, showing they might follow the same logic.

Conditional political business cycles are considered the latest evolution of the PBCs literature (DE HAAN; KLOMP, 2013). Figure 2 summarizes the evolution of research in the field.

Figure 2 – Four general movements in the study of political cycles

	Expectations-Augmented Phillips Curve	**Partisan Cycles**	**Rational-PCs/Competency Models**	**Conditional Political Cycles**
Characterized by	Pre-election booms and post-election busts	Heterogeneous Partisan Preferences	Informational asymmetry between incumbent and public	Contexts make political cycles more or less likely
Examples	Nordhaus (1975)	Hibbs (1977)	Alesina (1987); Rogoff and Sibert (1988)	Alt and Lassen (2006*b*); Brender and Drazen (2005)
		Time ⟹		

Source: Philips (2017, p. 5).

With the emergence of conditional PBCs, the model showed once again its capacity to reinvent itself. Academic literature still uses PBCs to various topics involving economics and politics (MANDON; CAZALS, 2019; GARCÍA; HAYO, 2021; KERN; AMRI, 2021), occupying a research niche in academia, in the crossing of boundaries that is political economy itself. Thus, even with ambiguous empirical verification, the model was not forgotten or eliminated as an object of research from economics. On the contrary, it remains an option for researchers.

6 FINAL CONSIDERATIONS

Political business cycles remain as one of the most elusive phenomena in political economy. The original model contains one of the simplest, most intuitive theories of how political manipulation of the macroeconomy can happen, and yet it fails to muster *decisive* empirical evidence. Practitioners prefer to see Nordhaus's original model as a "thought experiment" (GÄRTNER, 1994, p. 86). Nevertheless, it sparked debates.

The questions the model created, however, helped to bridge the gap between groups that formerly had little interaction, such as macroeconomists and political scientists. Following Dubois's (2016) database of almost 530 works, political business cycles remain mostly an economic issue (90 economic journals had PBC-related articles, while in political science journals was 25). Many important articles were published in political science journals (KRAMER, 1971; HIBBS JUNIOR, 1977; FRANZESE JUNIOR, 2002; ALT; LASSEN, 2006a).

PBCs also managed to bridge the gap between micro and macroeconomists. Before Nordhaus (1975), the study of the economic determinants of voting behavior and other related issues were seen as a purely microeconomic topic. By showing that these issues could be studied from a macroeconomic point of view, Nordhaus invited authors to apply macroeconomic tools to a political problem. If the 1970s PBC research had not existed, would rational expectations theorists ever have been as interested in the economic analysis of politics as they were? PBC models nudged the literature to consider issues of political economy into macroeconomics.

Political business cycle models deal with problems related to institutions, and would benefit from research along the lines of other forms of political economy, such as new institutional economics. Galbács (2017, p. 7) argued that Nordhaus (1975) highlighted the institutional influence in the economy, pointing that the theory of political business cycles summarizes "both the shared interests of neoclassical orthodoxy and institutional economics on one hand and the institutionalist influences on mainstream economics on the other hand." The new focus of the conditional political business cycle models brought forward the importance of the institutional context in economic analysis.

Lastly, the rational expectations criticism should have made the model extinct. Both McCallum (1978) and Lohmann (2006) pronounced the model "dead" in different occasions. Given how economists still produce PBC literature, the question is: why didn't it die? Why didn't Alesina, Rogoff, Drazen, among others, simply just go study other topics, with stabler databases and more consolidated models, instead of writing on PBCs (even if they moved on to other topics later)? A simple answer is because it still points to an economic phenomenon that requires more attention. But it also exposes the difficulty of integrating rigorously the political and economic spheres and how certain topics depend on the economists' attention span.

The counterintuitive results of Kalecki (1943) and Persson and Tabellini (1990), for example, in which (supposedly) rational economic agents abandon profit to preserve their power or interfere in the economy to signal their level of competence, may show the limits of rational choice theory. The fact that its authors preferred to update the model instead of discarding it helped to create a tradition of political macroeconomics (SNOWDON; VANE, 2005, chap. 10), is a testament to its simplicity and intuitiveness, and how economists still desire to incorporate political elements into mainstream models. More investigations on what makes an economic model resilient are suggestion for future research.

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Recebido em: 26/01/2020
Aceito em: 23/07/2021