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# REVISITING THE ECONOMIC VOTER HYPOTHESIS: ELECTORAL VOLATILITY AND ECONOMIC UNCERTAINTY IN LATIN AMERICA (1997-2018)

Charles Tibedo

# REVISITING THE ECONOMIC VOTER HYPOTHESIS: ELECTORAL VOLATILITY AND ECONOMIC UNCERTAINTY IN LATIN AMERICA (1997-2018)

by

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ABSTRACT

The large majority of studies concerning the "economic voter" have tended to follow specifications that assume retrospective, myopic, and sociotropic voter behavior. However, the magnitude of the economic effect and the conditions under which the effect is found have varied considerably across the entire body of research.

This study reframes the study of economic voting by focusing on variability in economic performance over the medium-term as a causal factor as opposed to specifying particular directions and levels of economic performance over the short-term as the necessary condition for retrospective and sociotropic voter behavior. Additionally, structural and institutional conditions associated with party structure are assessed for their conditional effects on the 'economic vote.' Most importantly, however, the outcome of interest is shifted from a focus on the incumbent or opposition only to a focus on overall levels of electoral volatility.

Results from fixed effects regression indicate preliminary support for the hypothesis that economic variability matters at least as much as the strength and duration of economic downturns. However, further research is needed to develop a solid theoretical foundation for explaining why the interaction between structural and institutional characteristics of the competitive electoral environment and economic variability produces the opposite effect of what would be expected if uncertainty in the party system functioned to reduce voters' ability to hold incumbents accountable and assess their alternatives. The high degree of distrust in political parties across Latin America may prove to be a fertile starting point for further theoretical and empirical exploration.

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I would like to acknowledge the support of my dissertation committee chair, Dr. Edward Sayre, for his guidance and support with developing this work. Specifically, Dr. Sayre's guidance with regard to empirical considerations has been invaluable. With this support, the task of attempting to contribute both theoretically and empirically relevant research has been made possible. I would also like to thank Dr. Joseph St. Marie, Dr. Robert Pauly, and Dr. Hadiseh Faridi Tavana for their guidance and support as part of my dissertation committee. Additionally, I would like to thank the core faculty in the International Development Program at the time I completed my coursework – Dr. Edward Sayre, Dr. St. Marie, Dr. Robert Pauly, Dr. Shadad Naghshpour, and Dr. David Butler – who dedicated their time and energy to ensuring I was prepared to complete my dissertation. Further, I would like to acknowledge the contributions to this research from the dataset on the electoral vote share of parties in Latin American presidential elections made public by Andy Baker and Kenneth Greene from the University of Colorado. And last, I would like to acknowledge the contributions of my peers in the International Development Program, whose endless support, encouragement, and critiques made me a better student and individual.

# DEDICATION

I would like to dedicate this work to the faculty within the International Development (IDV) doctoral program at the University of Southern Mississippi, especially the members of my dissertation committee. The IDV faculty – through countless ways - prepared me as a researcher to be able to identify areas where further research could contribute to the greater scholarship on party systems and electoral volatility and imparted in me a deep appreciation of the significance of being able to conduct research using both quantitative and qualitative methods. Furthermore, by emphasizing a cross-disciplinary approach to topics of interest within International Development, the IDV faculty inspired my desire to better understand the mechanisms connecting issues related to economic development with issues related to political development. I owe my current disciplinary and methodological knowledge to the continuous efforts of the IDV faculty to instill in me a deep awareness and appreciation of the research process and the integrated nature of political, economic, and social development.

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| | |
|---|---|
| *RGDP* | Real Gross Domestic Product |
| *DSO* | Data Set Observations |
| *CPO* | Causal Process Observations |
| *IVCPO* | Independent Variable Causal Process Observations |
| *FGV* | Funacao Getulio Vargas |

# CHAPTER I – INTRODUCTION

## Background

### *Revisiting the Economic Voter Hypothesis*

The economic voter hypothesis is far from a single hypothesis; rather, it is a general set of theories in the field of political economy, which, at their core, maintain that the *state of the economy* matters for political outcomes. With hundreds of books and thousands of scholarly articles devoted to the subject since the 1920s (Beck and Stegmaier, 2019), one might suppose that most, if not all, of the major testable hypotheses about what mechanisms link economic and political outcomes with regard to voting have been explored. To some degree, this statement could be considered true, but variations in the way in which the three main bodies of research within the larger topic have been conceptualized by researchers have left open important considerations, which may eventually fuel the development of additional topics of interest within the general theory.

From the 1930s to the 1960s, the majority of scholarship focused generally on validating the basic hypothesis that the state of the economy affected political outcomes – such as elections - in the United States. Following this period, from the 1970s to the 1990s, two specific research approaches developed (Lewis-Beck and Stegmaier, 2019). The first was concerned with vote popularity functions, which formally model the relationship between the popularity of the government and various economic or political indicators (see Nannestad and Paldam, 1994, Lewis-Beck and Paldam, 2000, and Bellucci and Lewis-Beck, 2011 for overviews of the state of this research topic in the late

1990s and early 2010s). The second was concerned with predicting voter behavior based on micro-analyses of national election survey data. There were several key points of general consensus that came out of this research. Economic voting behavior, when observed, was a) generally myopic more than it was hyperopic, b) sociotropic more than ego-tropic, and c) and retrospective more than prospective. Furthermore, there was a general consensus that institutional factors - such as how the dynamics of partisan control over policy-making affected voters' ability to ascribe responsibility to the incumbent party – played a role in determining the presence, timing, and magnitude of economic voting. Also, there was general agreement that micro-analyses at the individual level largely supported the same predictions as cross-national data (Lewis-Beck and Stegmaier, 2019).

However, more insightful than a general survey of where the literature evolved, is a deep dive into the research on popularity functions. Here, the general consensus among researchers on the links between the economy and political outcomes (Lewis-Beck and Paldam, 2000, p. 114) was that the popularity functions were *unstable*. Thus, no general function (and hence, theory) linking economic conditions and voting intent or behavior was developed that could 'hold up' when applied across diverse contexts, both geographically and temporally. In short, the instability problem left researchers with the same reduced-form 'Responsibility Hypothesis' they had at the outset of this research agenda. Thus, the theory that voters held the government responsible for economic conditions – the 'Responsibility Hypothesis' – had not been formally modeled in a way

that could be robustly supported when subjected to variation in political, economic, geographic, and temporal conditions.

Scholars working on popularity functions put their efforts into explaining why the instability in various functions might be 'apparent' versus 'inherent,' in an effort to identify possible conditions that might lead to the phenomenon predicted by the Responsibility Hypothesis. For example, Powell and Whitten (1993) and Royed, Leyden, and Borelli (2000) sought to account for the inconsistency in the popularity function by incorporating a formal specification for 'clarity of responsibility' in their econometric model. The outcome of this line of research was that there was mixed support for the hypothesis that institutional influence over policymaking by opposition parties was a necessary condition for retrospective voting. High levels of influence by opposition parties 'muddied' the waters wherein voters determined how to assign responsibility for economic performance. But the theory didn't hold when there were low levels of opposition influence. On the other hand, Royed, Leyden, and Borelli (ibid) did find support for their hypothesis that other institutional factors (i.e., single-party versus coalition governments) affect rational decision-making about assigning accountability for economic performance.

It is within the context of failing to provide a general theory that researchers increasingly began to focus on making changes to the way the *predicted effect* of the Responsibility Hypothesis was measured (as opposed to the traditional incumbent vote share) and the way the *hypothesized causal mechanisms* (i.e., independent variables) were

constructed. Furthermore, researchers introduced new causal variables to help account for variability in political and economic context.

## Significance of the Research

As a whole, while the body of work devoted to the economic voter hypothesis has tended to support a model of a sociotropic, myopically retrospective voter, it has by-and-large failed to produce a more general model that systematically explains how institutional, structural, and agency factors affect the predicted outcome. Thus, a gap exists in the research on this topic, and a rather large one at that. While researchers are currently focusing on questions such as how patrimonial and positional dimensions of voters and how economic crises may affect economic voting functions (Lewis-Beck and Stegmier, 2019; Okolikj and Quinlan, 2020), their questions should not be limited to identifying the institutional, structural, and agency level characteristics of 'political and economic contexts' that affect how rational voters behave.

Identifying 'what' matters is definitely useful, as it will lead to new theories and help to explain unpredicted outcomes. But great care should be taken not to assume that it is no longer feasible to form a more general theory that applies across all contexts, particularly given that there has been an emphasis on conceptualizing this research topic as naturally limited to studying the effect of various causal predictors on incumbent performance (or some variation thereof) in an election. In other words, there has been significant interest in finding support for theoretical and practical measures for estimating the *political and economic contexts* that have deterministic rather than relational effects. That is, there seems to be a bias toward situating research on the premise that *levels* of

economic performance accurately capture how voters conceptualize the state of the economy, and thus an emphasis on how dynamic interactions between levels of economic performance and various individual, institutional, and structural contexts determine the presence and magnitude of the economic voting phenomenon.

## Research Problem

This research provides a new approach to modeling what matters to voters; it is proposed that variation rather than levels is the characteristic of economic performance that voters are most sensitive to and therefore, that determines salience. Furthermore, this research reconceptualizes the question of what is necessary to cause voters to turn against an incumbent party to how does the degree of instability in the party system in the presence of salient economic conditions affect how voters shift the party system as a whole? Rather than simply focusing on trying to explain how specific variations in political or economic contexts affects how voters shift their support for the incumbent party, the focus here is on how variability itself in the economy and in the party system affect the way voters behave. Thus, the most significant contribution of the current study to the literature on economic voting is that it is entirely devoted to focusing on a relational outcome, the Pedersen Index. In this way, this study is wholly devoted to evaluating whether using measures of uncertainty (i.e., variation) for explanatory purposes could help illuminate the specific cognitive and perceptual aspects of rational voting behavior that must exist in order to form a better performing general model of economic voting than measures of absolute characteristics of economic and political phenomenon can produce.

## Research Questions

The primary research question is whether variation in economic performance, regardless of whether this variation occurred during overwhelmingly negative or positive periods of growth, predicts the degree of total electoral volatility or vote share change (i.e., the Pedersen Index). A secondary research question is whether variation in party structure co-determines the impact of variation in economic performance on total electoral volatility. It is hypothesized that variation in economic performance will have a strong and consistent effect on total vote share change across Latin America. It is also hypothesized that the degree to which variation in economic performance has an effect on total vote share change is dependent on the degree of uncertainty (and hence, ability to ascribe responsibility) present in the electoral system.

## Research Limitations

It is important to note there are significant methodological concerns with regard to the process that must be used to convert raw data available on party systems during each election into measures of electoral volatility (e.g., political uncertainty) across Latin America. This concern arose because measuring the degree of party system change depends on being able to assess whether a party in the current election was present in the previous election (in the same form). Oftentimes, there are significant changes in Latin American party systems, due to the preponderance of mergers, exits, and splits. Such events can lead to conditions where according to the name of a party, it can seem like they weren't competing in the previous election, which can make it difficult to assess with a high level of confidence the proposed measure of volatility within the party

system. However, these concerns were somewhat offset by the discovery of a dataset created by Baker and Greene (2016) because they have already gone through the painstaking effort of determining if parties from previous elections were truly unchanged in the current election, even if there had been some small revision to that party's name.

Additionally, there are good reasons, perhaps, why measures of variability haven't been used to assess the salience of economic volatility. That is, measures of variability are by nature positive. Thus, they are insensitive to the overall direction of variation in the economy, and therefore, can't detect any independent effect that *levels* of economic performance *may have* on whether and how voters perceive economic fluctuations. That said, the research aims in this research were chosen to specifically *ignore* any independent effect changes in the absolute levels of economic performance, due to the hypothesis that variability mattered to voters.

## Outline of the Dissertation

Chapter 2 begins with a literature review of scholarship addressing three primary areas of interest to this topic: 1) general trends Latin American economic development and theoretical approaches to explaining variation in those trends, 2) general trends in Latin American political development and theoretical approaches to explaining variation in those trends, 3) methodological approaches to defining and measuring political instability as a theoretical construct, and 4) theoretical foundations for exploring the political economy of voting behavior across Latin America, with an emphasis on how the presence of economic and political uncertainty may affect the causal mechanisms at play in within a rational-choice voting framework.

Chapter 3 will establish the empirical methodology to be used and outline the specified model. Particular emphasis will be given to establishing the theoretical relevance of using relativistic measures (e.g., Pedersen Index as the dependent variable, standard deviation of real growth rate during incumbent tenure as the primary economic independent variable, and the consistency of party structure from one election cycle to the next). Finally, I will conduct a rigorous analysis of regression results in light of the hypothesized directions and relative magnitudes of each explanatory variable.

Chapter 4 will utilize process-tracing as a case study method to both test theoretical mechanisms supported by regression results and develop theoretical mechanisms for results not supported within the regression analysis.

Finally, Chapter 5 will present an analysis of the major theoretical and methodological considerations not fully explored in this study and outline what the author feels is most important to carry this research forward.

# CHAPTER II - EXPLAINING LATIN AMERICA'S ELECTORAL VOLATILITY

## Introduction

This dissertation addresses the multifaceted relationship between economic fluctuations affecting labor markets in the liberalization and post-liberalization era and electoral (i.e., political) instability in Latin America. More specifically, this research aims to create a fuller picture of the dynamics between macroeconomic changes and the labor market observed since the shift toward liberalization witnessed across Latin American countries after the 'Lost Decade' of the 1980s - specifically fluctuations in levels of unemployment, per capita income, and income inequality - and political instability defined as the degree of electoral instability witnessed from one election cycle to another. This section will analyze the insights and gaps in previous research on the impact of economic factors on electoral instability across Latin America from the 1990s to 2000s, as well as research aimed at understanding the theoretical causes of electoral instability, both in general application and specifically in reference to Latin America.

### *Latin American Economic Development in the Post-Liberalization Era*

Latin America has long been recognized as one of the most highly-protectionist regions of the world. It opened to trade and capital flows only after the inefficiencies of ISI policies pursued from the 1950s to 1970s were compounded by external shocks during the 1970s, including a global shift from fixed to floating exchange rates and two oil shocks, which ultimately led to a regional debt crisis and bouts of hyperinflation. Thus, Latin America, historically defined by its proclivity to protectionism, entered the 1980s, or what is known as the 'Lost Decade' – a decade of high inflation and unemployment during a period of no to slow growth – searching for a new set of

macroeconomic, industrial, and trade policies that could stimulate growth while simultaneously reducing inflation and unemployment (Reyes and Sawyer, 2020). State-led development models were abandoned by Latin American governments, and they began to rapidly adopt various policies generally grouped under the term "The Washington Consensus" (Williamson, 1990).

This 'consensus' included a wide range of macroeconomic, industrial, and trade policies that are generally market-driven or viewed as essential for establishing free-markets. However, the period in which Latin American countries were shifting from ISI to market-based policies was marked not only by the lingering effects of the failures of the former, but also by the short- and medium-term economic dislocations caused by the latter (Reyes and Sawyer, 2020).

Despite the fact Latin American countries began to adopt neoliberal economic policies and achieved various levels of success in reducing inflation, reducing regulatory burdens on businesses, and opening to trade and capital flows, the people continued to suffer during the 1990s as growth remained sluggish, wages were relatively stagnant, and inequality was on the rise (Magaloni and Romero, 2006; Roberts, 2014). This suffering was exacerbated by the Asian financial crisis in the late 1990s. The continued levels of economic suffering and uncertainty resulted in large-scale popular protests against governments that were perceived as 'pro-market,' leading to increased support for political parties (and their candidates) who promoted populist policies (Roberts, 2014). Indeed, by the early 2010s, 11 Latin American countries were under some form of leftist national government (Weyland, Madrid, and Hunter, 2010). But not all Latin American

countries have experienced such a shift. Thus, a major question for scholars to answer centers around explaining why the stability of electoral competition and party systems varied so much across Latin American countries that had experienced similar economic conditions prior to and during the market-led reforms of the 1980s and 1990s. Another major question is why economic policy changes following instability in electoral competition and party systems generally fail to align well with either the ISI or Neoliberal models (Reyes and Sawyer, 2020).

## Literature Review

### *Variations in Economic Trajectories in Latin America in the Post-Liberalization Era*

The initial shift from import-substitution to market-oriented policies in Latin America was born more out of necessity than preference. According to Remmer (2003, p. 37), "…the switch from statist to market-oriented policies in Latin America was initiated less in response to domestic political changes than to external pressures and resulting constraints on policy choice." The literature attempting to explain the reasons why market-oriented policies were adopted is known as 'transitions' literature because the process of adopting such policies occurred during a period of wide-spread democratization across Latin America, (O'Donnell and Schmitter, 1986).

But to conceptualize Latin American political and economic trajectories as singular is incorrect; countries within the region have experienced widely varying outcomes regarding economic performance as well as the quality of democratic governance. Indeed, many scholars that have questioned the degree to which democratization has occurred, in part due to gaps in political representation and aspects

of authoritarianism that remained entrenched across the region, as well as the limited successes of market reforms (Wise, 2013).

The variable outcomes across the region stemming from the interaction of the processes of liberalization and democratization have taken three basic forms: a) market reforms led to greater political competitiveness, which in turn spurs more effective reforms, b) market reforms initiated a slow, gradual transition from authoritarianism, and c) market reforms led to the collapse of traditional political systems, but the new democratic systems are fragile (Wise, 2013). Part of the cause of such variation in political and economic outcomes originates in the approaches different Latin American countries took in response to external economic and political pressures, beginning in the 1970s (Remmer, 2013, p. 37.)

The major types of reforms – privatization, trade liberalization, opening of capital markets, and monetary and fiscal reform – and the limitations these market-oriented reforms placed on the policy choices available to Latin American governments were adopted wholesale across the region by the onset of the 1990s. However, the specific combinations of economic policies used to achieve reform of exchange rates, social policy, and economic stabilization varied considerably, even though policies regarding trade liberalization were fairly consistent across the region (Remmer, 2013, p. 37.). By 1999, exchange rate policies varied from dollarization and currency boards to managed and freely floating rates. Social policy differences saw large variations in per capital spending and spending as a percentage of GDP. And the policy frameworks (e.g., combinations of fiscal, monetary, trade, and distributive policies) used to achieve

economic stabilization were far from consistent as well (ibid). Thus, the region may have had some common precipitators for the switch from import-substitution-industrialization policies to market-oriented policies and from authoritarianism to political competition, but the way in which each Latin American country pursued these economic and political processes and the effects of them varied considerably (CEPAL, 2000; Hoffman, 2000; Roberts, 2014).

*Theoretical Approaches to Explaining Variations in Economic Trajectories*

No single theoretical approach has convincingly been used to explain the relatively poor economic performance across Latin America in the 1990s and 2000s. (Caldentey and Vernengo, 2017). Neo-classical economic theory – with its reliance on the 'prerequisites' for growth including saving levels, free trade, free flow of investment, and macroeconomic stabilization policies – has provided insight, but failed to convincingly explain both the low levels of economic performance across Latin America in the 1990s and 2000s and the variations in economic performance across countries (Bonilla and Gattica, 2005; Aguiar de Medeiros, 2017).

Standing in stark contrast to the neo-classical approach is the structuralist approach to understanding Latin American underdevelopment (Ficker, 2005). This approach, inspired by the works of Raul Prebisch, initially emphasized structural consistencies that were external in nature among underdeveloped nations and focused on their role in limiting the success of neo-classical-based policy recommendations. For structuralists, there were important structural limitations affecting Latin American economic development – including, but not limited to its colonial history, imbalances in

the state of world trade, and sensitivities to the free movement of capital – that called for Latin American governments to take an 'inward-looking' (i.e., protective) approach to development (ibid). Hence, many Latin American governments pursued industrialization policies during the post-World-War-Two era until the late 1970s, when external political and economic pressures forced them to reconsider these strategies.

At its core, structuralist approaches emphasized that Latin America had to first develop a means of increasing productivity levels – a key driver of growth in neo-classical growth theory – before it could effectively gain by pursuing more liberal policies. In short, this approach stressed that Latin American countries had to create their own self-generating growth factor (i.e., productivity) or they would be permanently reduced to the status of underdeveloped, periphery countries dependent on the core advanced industrial ones (Street and James, 1982). However, this characterization of structuralist approaches only addresses those theorists such as Prebisch who believed that through structural reforms, sustained economic development was, in fact, possible. Dependency theory, an outgrowth of structuralism, represents the other side of the structuralist approach, and advocates that underdevelopment of Latin American economies wasn't due to an internal lack of something necessary for neo-classical growth to occur, but rather due to a condition of the global economy; capital investment that captured key elements of growth and extracted them in the form of wealth (Schmidt, 2019). Researchers in this structuralist camp felt that the only way to rise out of the exploitive, wealth-extracting relationship with the larger global economy was to promote socialism (ibid). But structuralist approaches came under growing scrutiny during the

debt crises of the 1980s, as debt incurred to fund the growth of domestic industries under the ISI framework proved to be a critical constraint on policy options to deal with the debt crisis, including the ability to restructure debts in ways that would allow Latin American countries to avoid default while rekindling growth (Sims and Romero, 2013; Clement and Maes, 2013).

Institutionalist theorists departed from neo-classical theorists in that they emphasized that it was the quality and stability of both formal and informal institutions, or norms and rules (North, 1990) that were the determining factor in overall economic development. They departed from structuralists in their focus on internal rather than external factors as the key determinant of overall economic development. Acemoglu, Johnson, and Robinson (2003) further developed institutional theory to highlight the role that colonial settlement patterns (and hence, the existence of developed, stable institutions) played in Latin American development.

The definition of institutions as formal or informal sets of norms and rules that constrain behavior allows researchers to focus on a wide variety of institutional manifestations, such as the services an economy is dependent on (e.g., tax structures and the quality and efficiency of bureaucratic structures; see Portes and Smith, 2010), and the rule of law and property rights as evidenced by impartial and stable judicial systems that underlie investment decisions (Cameron, 2004), among many other possible emphases. These types of research emphases have come to be known as the New Institutional Economics or New Institutional Theory, in part because the paradigm incorporates key elements of neo-classical and structural approaches to development but seeks to identify

the behavior-based factors that condition the particular development path observed (Ficker, 2005). Thus, the primary constraint on any single one of these theoretical approaches to analyzing economic underdevelopment in Latin America is that none of them, in and of themselves, represent a complete picture of all of the relevant factors that contribute to economic development (Ficker, 2005). In addition, many of the early institutionalist studies used indices as proxies for institutions, rendering variation within nations difficult, if not impossible, to discern, and therefore, include in one's analysis. The risk of using political indices as instruments for institutions is that tautological conclusions may be reached (Portes and Smith, 2010).

*Variations in Political Trajectories in Latin America in the Post-Liberalization Era*

*Theories of Political Change* Modernization theory espoused by Rostow (1961) held that countries develop along a continuum, and that economic, social, and political modernization are mutually reinforcing; that is, they positively impact one another even though advancement in one tends to break down existing institutions in another. Rostow's stagism led scholars and American diplomats to stress the need to reduce the gaps within Latin American societies – both in terms of political and economic power – by pursuing more equitable development policies and promoting reforms of the judicial system (Ish-Shalom, 2006). The more social groups who previously held little political or economic power mobilized, the greater the overall effect of the development policy on the nation's political stability and economic performance.

The stageist approach to development was diametrically opposed by Huntington (1968), who argued that if political institutions were not able to accommodate increased

demands for participation, then a 'gap' would arise that would produce a condition of political decay. Because increased demands for participation arose from social and economic modernization, or growth, the gap represents the difference between the expectations formed by people (as a result of socio-economic growth) and their demand for political vehicles to help accomplish those expectations. As a result of Huntington's work, development theorists began to question if pushing reforms too quickly might actually produce a result that was the opposite of what was intended. Indeed, political decay theory strongly suggested that modernizing nations pursue a state-led modernization strategy, whereby there was a managed transition from authoritarianism to democracy (Fukuyama, 2014).

Thus, it shouldn't come as a surprise that in focusing on the causes of political instability, most studies tend to emphasize the role of economic growth and increasing economic inequality as key causal factors. Brandt and Ulfedler (2011) find that despite the absence of strong links between GDP growth and various measures of political instability, the *rate* of GDP growth does have a strong relationship with political instability. However, their finding that the rate of GDP growth has a much stronger impact on political stability during periods of *fast*, not slow, growth goes against the 'poverty and crisis' thesis and lends support to Huntington's (1968) political decay theory. In a similar vein, Gurgul and Lach (2013) find no causality running from poor economic performance to political instability,

There is also ample research suggesting a causal link between political instability and economic performance (Barro, 1991; Alesina and Perotti, 1996; Campos and Nugent,

2002; Sturm and de Haan, 2005), Aisen and Veiga, 2011). These studies generally contend that political instability primarily affects economic growth by lowering productivity and secondarily through lowering the rate of physical and human capital accumulation - which suggests that both phenomena may be endogenously determined. Carmignani (2003) contends that political instability causes uncertainty that affects the incentives of individuals, businesses, and politicians by making future institutions and economic policies unclear. The lack of confidence that a regime will have stable institutions and economic policies then, in turn, reduces investment (Roe and Siegel, 2011). Sokoloff and Engerman (2000) and Acemoglu, Johnson, and Robinson (2001) both find that economic inequality is positively linked to political instability, which in turn produces sub-optimal policy choices that worsen inequality. Thus, they find causal evidence for a persistent cycle of inequality and instability.

The findings that periods of fast, not slow, economic growth and the resulting economic inequality contribute to political instability should not be surprising. Olson (1963) and Huntington (1968) both claimed that it is not absolute levels of poverty which lead to political instability; rather, it is the experience of social, political, and economic modernization that leads to it. In Huntington's (1968, p. 41) words,

> "It is not the absence of modernity but the effort to achieve it which produces political disorder. If poor countries appear to be unstable it is not because they are poor, but because they are trying to become rich. A purely traditional society would be ignorant, poor, and stable."

In essence, both Olson (1963) and Huntington (1968) suggest that the relationship of economic development and political instability is higher for low-middle to middle

income countries that are currently undergoing the process of socioeconomic modernization. Beyond a certain level of income, this relationship reverses, and political instability begins to decrease with further economic development.

Thus, based on theories of modernization's impact on political development, one would expect that periods of relatively rapid economic growth – prompting changes from low to middle income status - for modernizing countries such as those across Latin America to have a strong impact on political instability because they highlight the *contrast* between where one expects or aspires to be (economically speaking) and the economic realities they actually face. As a result, traditional party systems and forms of electoral competition may not be viewed as adequately channeling the needs of social groups. Political instability for Latin American countries should therefore be viewed as partially the result of achieving a level of economic development beyond that of a middle-income country and partially the result of slow or ineffective institutional change in the political sphere.

Given these assertions, a question arises concerning whether these relationships between growth and political decay were observed the period from 1997-2018. From 1990 to 2010, the Latin American region as a whole – with the exception of Venezuela and Colombia – saw a drastic reduction in the percentage of populations living in poverty. Also during this time period, life expectancy rates have increased by nearly 10% and the percentage of children enrolled in primary and secondary schools has nearly doubled (Skiles, 2014). From 1971 to 1990, people living in Latin America has experienced declines in the rate of GDP growth in 12 of those 20 years, with the sharpest

declines (from nearly 6% to just below -2.5%) from 1979-1982, as the debt crisis unfolded. Then, from 1990 to 2015, growth rates remained sluggish but mostly positive, with the only negative rate coming in the wake of the 2008 global financial crisis (World Bank Development Indicators). But overall sluggishness persisted; only 8 of the 26 years saw region-wide growth rates above 4% and 10 of those years saw rates at 1.5% or lower (ibid). This data hardly suggests that economic conditions were ripe for Huntington's process for political decay to be supported, at least at the aggregate regional level. Yet, from 1995 to 2014 there was considerable volatility in party composition and structure across Latin America.

Di John (2005) contends that economic liberalization tends to produce 'polarizing politics' in the sense that one observes frequent policy switches. Indeed, the processes by which anti-market sentiment was channeled during the post-adjustment period (i.e., late 1990s and early 2000s) has led to the development of new left-of-center parties or the re-alignment of traditional right-of-center parties that largely embraced the market reforms instituted during the transition to neoliberalism but also sought to prevent any further deepening of market liberalization, bring about policies that reduce economic inequality, and provide some securities against the uncertainties of the market (Roberts, 2014).

One effect of political mobilization in Latin America during the 1990s and 2000s was a general political environment where "policy-oriented voters … purposefully moved their governments' ideological locus of gravity … to the center" (Baker and Greene, 2011, p. 44). Indeed, Baker and Greene (ibid) note that a peculiar outcome of the 'shift to the left' in Latin American politics is not based out of a strong anti-market desire

to implement socialism and that after election, most left-of-center leaders have left most of the pro-market policies in place. On the other hand, Hwang and Down (2014) posit that the effect of liberal trade policies on party systems is conditioned on the degree of factor mobility. When factor mobility is low, increased trade will lead to a general diversification of interest groups and policy preferences (likely to put structural pressure on party systems); alternatively, when factor mobility is high, they posit that trade promotes class-based grievances that are unlikely to affect the structure of party systems. Morgan (2018) notes that in an effort to strengthen democratization, a general policy of decentralization was pursued across the region. Based on Rostow's modernization theory, this sounded like a good idea. But in terms of the impact of decentralization on political parties, the effect has been negative, and high levels of electoral volatility have been observed as a result. Her findings, along with varied empirical results from studies on the impact of economic factors on political instability, suggest that political development may in some ways develop independently from any economic development trajectory. However, Morgan (ibid) does acknowledge that the effect of decentralization on political parties was largely dependent on the economic context in which decentralization occurred, with periods marked by poorer economic performance and limited policy differences among parties exacerbating the negative effect on the electoral landscape; party composition and structure during these periods was more susceptible to breakdown or change than it was during time of higher levels of economic performance and more differentiated policy programs among parties.

*Defining and Measuring Political Instability* In the literature addressing economic causes of political instability, one typically finds that political stability is defined as one or another form of political violence such as coups, riots, and assassinations. Barro (1991) constructs an indicator of political instability based on the occurrence of political revolutions and coups d'etats as well as political assassinations. Other scholars have followed suit and constructed (or used pre-existing) similar indices focusing on various forms of violence and political mobilization as defining characteristics of political instability (see for example, Alesina and Perotti, 1996; Roe and Siegel, 2011).

Scholars have also taken two other general approaches towards defining political stability. Morrison and Stevenson (1971) approach political stability as the propensity for government change. They define political stability as a condition observed within political systems where institutionalized patterns of authority are challenged and as a result, breakdown. However, they also contend that the result of this breakdown is an increase in political violence. Alternatively, Sanders (1981) defines political stability as the degree to which institutional changes – or the lack thereof - represent a deviation from a 'normal' institutional pattern. Thus, the literature uses the term 'political instability' largely to refer to either violent political events or institutional weakening which may lay the groundwork for future political violence. However, another approach to defining political instability is taken by Roberts (2014), who defines political stability as the degree of change or continuity in party systems and electoral composition from election to election. Roberts' (ibid) work analyzes electoral instability as a complex process of party realignment and party dealignment that was conditioned by the 'critical

juncture' of the transition from state-led development to neoliberalism. However, he doesn't provide a measure of electoral instability outside of summary data on electoral outcomes. In short, there is no index or summary statistic that allows one to quantitatively estimate or predict variability in electoral outcomes, nor quantitatively assess the impact of causal factors such as economic or political fluctuations on such variability.

In sum, while the majority of the research on political stability approaches it as the presence of one or more forms of political violence or violence-inducing institutional change (Jong-A-Pin, 2009), there is also a strong focus in the literature on defining political instability as the variability of institutional change, whether the institutions in question refer to government structure, laws and regulations, or party composition, among other factors.

To estimate electoral instability, most scholars use the Pedersen index (Pedersen, 1979), which produces an index value from 0 to 100 based upon the absolute change in party representation from one election to another. However, as Wilensky (2002, p. 411) notes, an index constructed in this way is unable to assess what individual voters are doing or whether party dealignment or realignment has occurred. Vowles (1994) method of comparing outcomes of successive elections through logit regression was observed to strongly correlate with individual survey data, but this measure still doesn't provide researchers a straight-forward and easy to interpret way of understanding how the processes of party de-alignment and re-alignment affected the overall level of electoral volatility.

However, Marinova (2015) claims that use of the Pedersen index to measure electoral volatility excludes an essential component of party systems – instability within parties themselves. She holds that use of the Pedersen index is limited to measuring shifts in party system stability due to changes in voter preferences and that this measure is unable to capture dynamics occurring within parties themselves; namely, shifts in party ideology, structure, and strategies. In this sense, she maintains that the Pedersen index is insufficient to capture the instability *within parties* between elections. However, Marinova's index measuring the degree of party instability between elections - which limits "the conflation of different sources of instability in party systems (e.g., electoral shifts between stable parties and instability within parties, such as mergers, splinters or new parties)" has its own limitations (2015, p. 265). Because it fails to account for changes in electoral outcomes (i.e., vote share), it only provides a limited snapshot of the overall level of electoral instability (or relative stability/continuity) observed in any election.

Beyond variation in the way scholars have measured electoral instability, there is the question of what impact electoral instability in one period has on future levels of electoral instability. Indeed, there is a sizeable literature that focuses on the relative impact of electoral instability on the durability of new and emerging democracies. Mainwaring and Scully (1995) posited that the degree of party system institutionalization (PSI) – and specifically, electoral volatility, which they deemed the most important of four dimensions of PSI – is linked to the degree to which political actors feel represented. The existence of low levels of electoral volatility allow political actors to develop stable,

clear expectations about political parties and thus, how well they represent them. Mainwaring and Torcal (2006) added that higher levels of electoral instability are a part of a typical process that occurs in new and emerging democracies.

Thus, the research suggests that low levels of electoral volatility produce political climates where actors can be assumed to have sufficient information to orient themselves accurately to political representatives. However, high levels of electoral volatility produce the opposite – a political climate where actors can be assumed to have a lack of information necessary to orient themselves accurately to political representatives. In the event of high levels of electoral volatility, then, when new parties arise and others merge or fragment, it is likely that actors wouldn't have enough information to form clear motivations to act (i.e., vote) based on expected outcomes or policies. If one assumes that electoral volatility is to some degree necessary to establish political accountability and also typical of new and emerging democracies, then it seems plausible to suggest that voters in such polities will be limited in their ability to formulate clear expectations for parties in elections, and instead, may vote based on retrospective economic conditions. As a result, in the absence of electoral volatility, voters behave in ways that reflect their belief that the parties they vote for and the ideological underpinnings of their policy-frameworks will be sustained well into the future and, at the least, have a modest chance of being successfully implemented. However, when there are relatively high levels of electoral instability, voters become less inclined to behave based on the premise that these organizations and practices will be sustained. In the latter context, a heightened level of uncertainty begins to influence their rational decision-making process or voting

behavior; in effect, voters must use concrete information they possess on recent economic experiences to form expectations about the likely effects of the ideological underpinnings of competing parties' policy-frameworks and the likelihood each would be in power long enough to successfully implement those policies.

*Economic Factors Affecting Political Behavior* While there is abundant literature on the political economy of Latin America, a large majority of studies on the subject focus on explaining the historical, social, and institutional reasons for overall poor economic growth. Still, some studies focus specifically on explaining the relationship between economic fluctuations and electoral instability (e.g., Blanco and Grier, 2009; Cohen and Kobilanski, 2018), but find either a non-linear or temporally limited relationship between them. In this sense, the literature is underdeveloped regarding systematic, non-temporal causal relationships between macroeconomic fluctuations and electoral instability. This study seeks to determine whether such systematic relationships can be observed in Latin American politics since the general shift to financial and market openness observed across Latin America since the 1980s, and furthermore, whether labor market dynamics in this 'post-liberalized' economic and political context acts as a predictor of electoral stability.

In the Heckscher-Ohlin model of international trade, differences in labor productivity – which are believed to be the cause of variations in international costs that give rise to foreign trade – arise from variations in factor endowments. As a result of a country having more abundant resources in certain factors relative to others, they will seek to export goods that rely on those factors for production and import those goods that

rely on factors the country is relatively scarce in. Furthermore, the Stolper-Samuelson theorem holds that factor prices will tend to equalize across countries that trade. The theorem states that as the relative prices of output increase the relative return to the abundant factors used in the production of that output will also increase, while the relative return to the factors not used in the production of that output will decrease. Thus, at a country level, if trade liberalization leads to the exporting of goods produced by an abundant factor such as unskilled labor as predicted by the Heckscher-Ohlin model, then the relative price of unskilled labor should rise compared to the price of skilled labor and wage-inequality should decrease. Unskilled workers would therefore benefit from free trade policies and wage inequality should decrease if the composition of trade follows the path predicted by the Heckscher-Ohlin model.

Thus, the Stolper-Samuelson theorem predicts that countries with an abundance of high-skilled/low-skilled individuals will be more pro-trade than a country with an abundance of low-skilled/high-skilled workers because trade openness will tend to shift production towards goods and services that utilize the abundant factor (Jakel and Smolka, 2012). However, Beaulieu et al. (2005) found that even in the lowest-skilled countries in Latin America, in no case were low-skilled workers statistically more likely to support free trade than high-skilled workers. They also found that while skilled workers are more likely than unskilled workers to support free trade policies, this difference is statistically significant in less than half of the 17 Latin American countries they examined. Their results suggest that unskilled workers don't perceive themselves as benefiting as much as higher-skilled workers from trade liberalization. Lopez-Calva and Lustig (2010) find in

four Latin American economies (Argentina, Brazil, Mexico, and Peru), a decline in the relatively high levels of economic inequality that persisted the period of liberalization began around 2000; in part, this is explained by the large increase in government transfers.

The implications of Beaulieu et. al. (2005) and Lopez-Calva and Lustig's (2010) research, taken together, suggest that economic liberalization across Latin America – which resulted in an adjustment period that saw rising wage inequality and trade patterns that favored skilled-labor over unskilled-labor – resulted in increased political mobilization of low-skilled workers that, in turn, led to the adoption of policies that provided safeguards for uncertainties experienced in a market-based economy while not abandoning the core reforms that were made to open up their economies. Baker and Greene (2011) find support for this claim. They argue that the regional shift towards populism across Latin America since the early 2000s is not a simple backlash against market liberalization. Rather, they suggest that parts of the neoliberal model have been embraced by voters across the political spectrum. In a similar vein, Remmer and Wibbels (2000) suggests the turn toward populist-based policies and parties that supported them was not a simple response to the economic hardships endured during the 1980s and 1990s, given that the shift continued even when economic conditions began to improve. Thus, the shift to the 'left' in the wake of the market-oriented reforms adopted during the 1980s and 1990s didn't entirely abandon neoliberal policies. Indeed, the new governments only modified – not rejected – the reforms they had inherited (Roberts, 2014). What followed in the "post-adjustment political era" was a halt to technocratic

efforts to deepen market liberalization and an embrace of new policy initiatives that promised to reduce the inequalities and insecurities experienced in a market-oriented environment.

It is notable that Baker and Greene (2011) contend that the shift to the left in Latin American politics doesn't reflect voters' dissatisfaction with free trade as much as it represents their dissatisfaction with privatization. Saul and Pelletier (2018) give a comprehensive overview of how the academic and political debate about the impact of privatization and its effects on developing countries has evolved over the past few decades. While it has generally been expected that privatization would lead to broad increases in efficiency and firm competitiveness, numerous studies on privatization in developing economies have produced inconsistent results; as it turns out, firm characteristics, the timing and sequence of the selection of firms, the regulatory environment, and a variety of other factors affect whether the impact of privatization on efficiency and competitiveness is positive or negative.

Saul and Pelletier (2018) note that Latin America experienced the largest amount of privatization (as measured by the value of privatization transactions as a % of GDP) of any region in the world between 1988 and 2008. However, privatization had a negative effect on labor efficiency and competitiveness in the telecommunications sector. Furthermore, while privatization led to an increase in efficiency and quality in the electricity sector, it didn't lead to an increase in people's access to electricity; thus, the gain from privatization of this industry had no real impact on most households. On the

other hand – and this was found to be the case for most regions of the world – privatization did increase the efficiency and competitiveness of the banking sector.

In sum, Saul and Pelletier (2018) note how privatization itself is insufficient in spurring improvements in efficiency and competitiveness. Instead, the impact of variability in contract design, enforcement of policies, ownership structure, and aggregate demand - among other factors - on efficiency and competitiveness proved to be more important in explaining the general relationship between privatization and economic outcomes at national, sectoral, and household levels. As a result, the debate over privatization shifted from an early focus on achieving the goals of increasing firm efficiency and reducing subsidies to state-owned-enterprises (SOEs) to determining the regulatory and institutional frameworks that must be in place *prior to* privatization in order for the latter to have a positive impact on the overall economy. Such frameworks include protections for consumers and workers.

Chong and Lopez-de-Silanes (2005) findings are similar to Saul and Pelletier (2018). The former found that while privatization has been perceived by the Latin American public as having a negative effect on their economic opportunities, the data suggest the opposite is generally true. Namely, privatization has had overall positive impacts on productivity, output, state fiscal operations, firm restructuring, and quality of goods and services. Like Saul and Pelletier (2018), they note that where privatization has had negative economic effects, it has been due to poor contract design, lack of complimentary deregulation policies, or an overinvolvement of the state in an opaque privatization process.

Furthermore, while most studies on privatization find a positive impact on efficiency and competition, these types of increases can "come at the expense of customers, workers, and other social groups as a result of increased prices, lower levels of employment, longer work hours, worsening service conditions, and neglect of environmental effects (McKenzie and Mookherjie, 2003, p. 162)." With regard to price level changes, they were found to be inconsistent across the four Latin American countries following privatization; in most cases, any increases in prices were offset by increases in accessibility and sometimes quality. However, with regard to employment, the short-run impact of privatization on employment was mostly negative, while in the medium-run the shock to employment levels rescinded. Additionally, privatization was found to have a negative impact on wage levels and wage inequality; but it is suspected that such impacts were minimal when considering the percentage of the total labor force reallocated from the public to the private sector and also the larger market pressures that accompanied other aspects of liberalization (ibid). In this light, Chong and Lopez-de-Silanes (2002) found that 78% of 84 countries they examined experienced a post-privatization decline in overall employment, and Birdsall and Nellis (2003) found that privatization tends to increase income inequality. In fact, for the greater part of the 1980s and 1990s – following liberalization – wage inequality increased across Latin America (Lopez-Calva and Lustig, 2010). In 12 of the 17 Latin American countries for which data was available, they found that wage inequality trends only began to reverse toward the end of the 1990s and early 2000s. Lopez-Calva and Lustig (ibid) claim that part of the

reduction in inequality observed since the early 2000s in some Latin American countries is not due to decreases in relative wages, but rather increases in government transfers.

Thus, despite the gains in productivity and competition, any negative impact – or expected negative impact - of privatization on employment and prices in the short-run could've spurred popular dissatisfaction with privatization and mobilized voters to support new, more left-leaning policy regimes that seek *not* to reverse liberalization, but rather supplement it with state-directed policies that help to minimize the economic consequences faced by both workers and consumers.

*Economic Causes of Electoral Volatility* While the literature on the relationship between economic fluctuations throughout the process of liberalization and labor market changes, and also on the relationship between economic growth and political instability, is relatively abundant for Latin America, the former research aim tends to analyze the economic – and not political – impact of liberal macroeconomic policies (e.g., privatization, debt management, inflation targeting, etc.) and the latter aim tends to focus on political instability defined as changes in regime structure or the occurrence of various types of political violence or demonstrations. However, there is still ample research focused on the causal relationships between economic indicators and electoral instability. Dash and Ferris (2018), in their research on economic indicators of electoral instability in Indian states found that higher income growth rates reduced electoral volatility at both the assembly and constituency level. However, they found that the growth rate in the year immediately preceding an election had a greater impact on electoral volatility than that average growth rate between election cycles. They also found that income growth

changes tend to cause more shifting of votes among established parties than between them and newly formed parties. Dassonnovelle and Hooghe (2017), in their study on economic indicators of electoral instability in Western Europe found that there is a positive association between economic indicators and levels of electoral volatility between 1950 and 2013 that grew stronger over time. They theorize this increasing effect over time is due to the process of party dealignment – voters who leave a party but don't realign to a new party.

Brady (2016) finds a similar correlation between economic performance and electoral volatility and suggest that countries experiencing below-average economic performance are most susceptible to electoral volatility. Furthermore, Brady (ibid) finds that the general increase in electoral instability in advanced countries is associated with a decline in the share of manufacturing employment. He contends that even though the services industries in advanced economies grew and became increasingly tradable, that the employment gains in those industries were not enough to offset the losses in manufacturing. Thus, while the benefits of globalization have reduced the costs of goods, the share of income going to labor at the national level has gradually decreased and income inequality has risen as middle-income jobs have declined. Brady (ibid) also claims that as inequality has increased, a fragmentation has occurred in the electorate, producing electoral instability accompanied by unpredictable fluctuations in political party policy frameworks and orientations.

These studies bring to light the potential value voters place on 'concrete information' such as recent downturns in economic growth as well as historical trends of

low levels of economic growth, rising income inequality, and decreases in per capita income as well as labor's share of national income observed in the wake of liberalization on electoral instability. Given the relatively recent liberalization across Latin America and the persistent levels of low-economic growth that burdened the region in the 1980s and early 1990s, as well as after the 2008 financial crisis, it is more than plausible to suspect such economic indicators play a key role in producing the relatively-high levels of party realignment and dealignment witnessed across the region over the past several decades and the electoral instability that is produced by these processes. However, Marinova (2015) claims that voters do not simply regress – or simplify their voting calculus – by reverting to retrospective economic considerations in the presence of electoral volatility, despite the lack of familiarity voters have with parties' policy stances in such conditions. Instead, she suggests that voters are less able to determine future governing capability based on past economic performance in the presence of party instability due to changes in the organization and orientation of incumbent parties.

Thus, party instability leads to disruptions in voters' ability to use past performance as a predictor of future performance. However, despite any increase in uncertainty that decouples past performance and expectations of future performance, her argument can't be used to throw out the rational economic actor theory entirely. In other words, while electoral volatility might lead to uncertainty regarding the incumbent party future capability of governance, voters also seek to understand the likelihood that any party would be in power long enough to successfully implement their policies. Put another way, while voters are more likely to use retrospective economic performance to

evaluate whether to support incumbents following elections marked by high levels of electoral volatility, they are also more likely to respond to recent high levels of electoral volatility by using retrospective economic conditions to evaluate the potential for any non-incumbent party to succeed in the near-term. The mechanism through which voters would use retrospective economic conditions to evaluate the potential effects of non-incumbent parties' policy-frameworks as well as the likelihood of those parties staying in office long enough to see their policies implemented successfully is most likely to occur through a comparison of incumbent and non-incumbent parties' policy-frameworks. There is little likelihood that at the individual level this comparison would lead to evaluations that were systematically predictable. Rather, if retrospective economic conditions are utilized by voters in contexts defined by persistent levels of electoral instability, what is most likely is that voters would develop their own criterion for comparing incumbent and non-incumbent policy-frameworks and then choose to support a party whose proposed policy-framework was most likely to benefit their personal level of income, whether it comes from a specific employment sector or through government assistance.

Another potential causal link between economic performance and political instability can explored through the critical-juncture framework. Roberts (2014) uses the 'critical juncture' framework – first used by Lipset and Rokkan (1967) to explain variation in party systems and later by Collier and Collier (1991) to explain variation in political regimes – to analyze how the variation in how Latin American party systems have developed from the late 1970s and 1980s to the post-liberalization adjustment era.

Specifically, he contends that the most recent critical juncture – the shift from the ISI model to market-oriented development models - *conditioned* political outcomes in the post-adjustment era; however, such outcomes are not structurally determined. Instead, this shift – like all critical junctures – created enormous pressures for abrupt and sharply diverging policies and institutions, resulting in a dramatic expansion of the strategic choices political actors were able to make compared to periods of relative stability.

> "Critical junctures, then, have been periods when states significantly augment or scale back their developmental and social welfare responsibilities, the range of societal outcomes determined by market exchanges sharply contracts or expands, and the social landscape is transformed by new patterns of collective action or the demise of old ones. These realignments of multiple social fields alter the ways in which party systems mediate between citizens and states, producing fundamental changes in the social bases and programmatic structuring of partisan competition. (ibid, p. 70)

The variation in political outcomes – namely the organizational composition of Latin American party systems, level of electoral competition, and the level of policy and ideological competition between parties – during and after the shift away from ISI toward market-oriented development models was conditioned during three sequential, but distinct, stages. These stages include antecedent conditions, which work to shape the dynamics of political power relations; the critical juncture, which 'shocks' existing institutional frameworks and forces actors to implement sharply divergent policy and institutional changes; and the post-adjustment period itself, when policy and institutional outcomes of the critical juncture period are challenged in ways that result in institutional entrenchment or reform and party consolidation, party decomposition, or programmatic de- or re-alignment.

Specifically, Roberts (2014) claims that whether party consolidation, party decomposition, or programmatic de- or re-alignment was observed was due to several factors including the character of the national party systems during the statist era, the duration of the economic crises experienced during the transition to pro-market policies, and the contrasts between the political orientation of pro-market reformers and their opponents during the transitional period. He concludes that party systems that were dominated by labor groups during the statist era were more prone to the destabilizing effects of implementing pro-market reforms than were countries that demonstrated elitist patterns of party competition in the statist era. He further claims that party systems where political alignments existed between conservatives and pro-business leaders and parties – especially when there was a strong, organized opposition – realigned programmatically and essentially were able to channel anti-market sentiment among social groups toward moderate-left parties. This process helped to stabilize electoral competition in the post-adjustment era. On the other hand, party systems where political alignments had formed between labor-based and other center-left parties tended to 'de-align' the programmatic tenets of the system. This process resulted in a situation where anti-market sentiment – even if short lived or simply masking the desire for state-policies that hedged against the vulnerabilities experienced by workers and consumers during liberalization - among voters couldn't find an established party to represent it. Consequentially, the party system broke down and new populist or leftist movements arose during the post-adjustment era.

## Summary

### *Revisiting the Economic Voter Hypothesis*

The purpose of the current research is to explore electoral instability as a non-violent form of political instability, where the degree of party consolidation or breakdown observable at the conclusion of each electoral cycle is dependent on how the voters formulate their rationales for voting based on economic conditions leading up to the election. The topic is relevant to international development and political economy researchers because identifying mechanisms through which economic fluctuations influence how voters behave and as a result, how they influence volatility in electoral cycles, is an ongoing effort for scholars focusing on Latin America. In short, analyzing the causal relationships between economic fluctuations and electoral/party system instability will better enable scholars to understand how economic factors play into the rational decision-making process of political agents (i.e., voters).

Rational-choice theory posits that voters act according to self-interest; thus, if the opportunity cost of voting is greater than the expected benefit, voting, in-and-of-itself, could not be considered rational. Scholars have attempted to explain this 'paradox of voting' by positing reasons other than expected *personal* benefit as the motivation for rational action. Some scholars hold that it is rational to vote if the goal is to change the outcome of an election. Other scholars hold that it is rational to vote if the goal is to express themselves and their loyalty to a certain ideology or group; in short, voters can be rational despite the expected minimal influence they will have on an election if they simply wish to be a causal agent in a process that lies beyond any reasonable self-interest

as they fully comprehend the outcome is not dependent on them nor is it likely to directly benefit them. Combining both approaches, while voting to change the outcome of an election or to influence the likelihood of specific policies that will benefit the individual voter could be considered irrational in the sense that there is little likelihood of either outcome being dependent on a single vote, voting for the purpose of being 'expressive' and contributing to a social process where certain ideologies come to dominate others could be considered rational. Gelman and Kaplan (2008) summarize this view in suggesting that voting is irrational at the individual level when the purpose for voting is to achieve outcomes that will directly affect the individual. What they contend is that rational voters shouldn't be expected to vote based on weighing costs and benefits and expected impact on outcomes, but rather whether they want to contribute to a broad goal of bettering their country as a whole (i.e., benefitting not only themselves, but others).

Thus, the topic of how voters rationalize their voting behavior is not only relevant to scholars, but also policy makers, as it will shed light on how economic factors affect the agency of voters, and, in turn, how voter's rational behavior affects the relative stability of political institutions. Add in the potential for fluctuations in the political institutions to affect patterns of economic growth and investment across Latin America, and the relevance of this topic to investors becomes apparent as well.

# CHAPTER III - ANALYZING VARIATION IN TOTAL ELECTORAL VOLATILITY

## Introduction

While the first chapter reviewed the dynamic nature of electoral volatility in the post-liberalization era across Latin America and the theoretical role in that dynamic played by fluctuations in macroeconomic indicators and labor market outcomes the second chapter will focus on explaining variation in electoral volatility. This study aims to estimate the causal linkages between economic fluctuations, rational theories of voting, and changes in party systems on electoral volatility (i.e., voter preferences) more precisely than is possible using other commonly used electoral volatility measures such as incumbent vote share. In this chapter, I will first analyze the successes and failures of various theoretical approaches used in estimating the impact of economic fluctuations on electoral volatility across Latin America. Next, I will outline the core tenets and variables of the model proposed in this study and explain how it differs from other methodological approaches to studying the topic. Last, I will present the results from empirical testing of the model.

## Theoretical Approach to Model Development

### *Critical Juncture Theory & Economic Determinants of Electoral Volatility*

Roberts' (2014) use of critical juncture theory to explain variation in political outcomes across Latin America in the post-adjustment period provides valuable insights into how both distant-and-near-term past conditions affect future political outcomes. In essence, he argues that the post-adjustment political outcomes – the organizational composition of parties, level of electoral competition as well as the level of policy and

ideological divergence between them – are conditioned by the political characteristics of three distinct, yet sequential stages. In this sense, Roberts (ibid) creates a dynamic theoretical structure that incorporates a large number of economic and political factors that played a key role in shaping political outcomes in the post-adjustment period, making his model sophisticated, but not simple and difficult to create an empirical model from.

The challenge present in this study is to simplify the dynamic relationships among key variables over time in a way that makes it possible to estimate their individual and collective impact on two of the political outcomes Roberts (2014) focuses on – the organizational composition of party systems and the level of electoral competition. In order to accomplish this, it is necessary to reconceptualize the dynamic interplay among the key characteristics of each of Roberts' (ibid) three stages.

Roberts (2014) contends that antecedent conditions during the statist period (stage one) shape how institutional and policy frameworks shift during the period of transition from statist to pro-market policies (stage two – the 'critical juncture' period). The sharp divergences of the critical juncture period from the statist era then become the new 'target' of political competition during the post-adjustment period, when parties – who themselves are changing due to consolidation, decomposition, and programmatic de-and re-alignment – challenge the new institutional and policy frameworks.

The primary antecedent condition of the statist period that shapes the critical juncture period is the character of national party systems, and this condition represents one of Roberts' (2014) three key determinants of political outcomes during the post-

adjustment period. Statist period party systems are characterized as either *elitist* or *labor* oriented. Thus, Roberts (ibid) is framing long-run political outcomes as at least partially dependent on historical institutions. While this is not problematic from a theoretical point of view, it is challenging from an empirical point of view in terms of explaining how the characteristic (i.e., elitist or labor-oriented party systems) *dynamically* impacts the second of his three key determinants of party change, namely, the duration of economic crises experienced during the transition to pro-market policies. Roberts (ibid,) explains this dynamic impact by noting that the *adjustment burdens* experienced during the critical juncture transition to neoliberalism by polities dominated by labor-oriented party systems were greater than those experienced by elite-oriented party systems. Specifically, the

> "more extensive lower-class organization and more ambitious state-led development typically being associated with the LM cases … created a formidable and highly destabilizing set of adjustment burdens … in particular, the political costs of severe and often prolonged economic crises, the social dislocations attendant to market restructuring, the discrediting of statist policies and interventionist practices that historically provided parties with programmatic linkages to labor and popular constituencies, and the demise of mass-based organizational models in both civil and political society (ibid, p. 32-33)."

Thus, for countries with labor-oriented statist party systems the economic crises of the transitional period were experienced by political actors operating in a more highly fragmented party system than those actors in countries with elitist-oriented statis party systems. This fragmentation, he argues, then provides conditions greater levels of electoral volatility and programmatic realignment during the transitional period.

At this point in Roberts' theoretical framework, the character of national party systems during the statist era conditions the types of institutional and policy frameworks adopted in the critical juncture period, which then have a direct impact on the duration of economic crises experienced during that same period. In short, Roberts (2014) argues that for labor-mobilizing countries who were more entrenched in statist institutional frameworks, it was more difficult than it was for elitist countries to make adjustments from the ISI period to liberalized policies due to the relative differences in economic and political costs associated with reforms. Labor-mobilizing countries often tried to avoid orthodox stabilization policies and instead adopt reforms that were more amenable to the more well-organized labor unions and the parties they had formed linkages with. These policies ultimately led to hyperinflation and the need to pursue 'shock' treatments. However, elitist countries – which had diverged from liberal policies less severely than labor-mobilizing countries – were able to pursue more gradual and moderate reforms and didn't face strong opposition from labor unions as they were relatively weak in those countries. Thus, it is not surprising that labor-mobilizing countries experienced longer and deeper episodes of inflation, recession, and wage cuts. The intensity of the economic crises, in turn, led to greater levels of electoral volatility among labor-mobilizing countries than in elitist countries from 1970 to 2000.

Roberts provides descriptive data to support his claim that labor-mobilizing countries experienced greater levels of electoral volatility as a result of longer and deeper economic crises, reproduced in Table 1 and Table 2 below. While the data in Tables 1 and 2 appears to corroborate Roberts' claim that labor-mobilizing countries were more

susceptible to electoral volatility stemming from voters wishing to punish the incumbent party for poor economic performance, the use of peak inflation, worst economic contraction, and number of years where inflation was greater than 100% are misleading.

Table 1

*Party Systems and Economic Crises in Latin America*

| Type of Party System | Peak Annual Inflation Rate (1970–2000) | Years with Inflation >100 (1970–2000) | Worst Economic Contraction, 1980–2000 (+=multi-year) | 1997 Index of Real Minimum Wage (1980 = 100) |
|---|---|---|---|---|
| Elitist | | | | |
| - Colombia | 30.4 | 0 | -4.1 | 103.8 |
| - Costa Rica | 90.1 | 0 | -9.6+ | 135.0 |
| - Dominican Republic | 59.4 | 0 | -5.7 | 78.0 |
| - Ecuador | 96.1 | 0 | -6.3 | 50.5 |
| - Honduras | 34.0 | 0 | -2.2+ | 78.3 |
| - Panama | 16.8 | 0 | -15.0+ | 110.0 |
| - Paraguay | 38.2 | 0 | -4.0+ | 107.0 |
| - Uruguay | 112.5 | 2 | -16.0+ | 40.8 |
| **Mean** | **59.7** | **.25** | **-7.9** | **87.9** |
| Labor-Mobilizing | | | | |
| - Argentina | 3079.8 | 16 | -11.2+ | 78.0 |

Table 1 (continued).

| | | | | |
|---|---|---|---|---|
| - Bolivia | 11748.3 | 5 | -10.9+ | 32.2 |
| - Brazil | 2937.8 | 13 | -4.4 | 73.2 |
| - Chile | 508 | 5 | -14.7+ | 102.3 |
| - Mexico | 131.8 | 3 | -6.2 | 30.1 |
| - Nicaragua | 14295.3 | 7 | -19.8+ | N/A |
| - Peru | 7481.5 | 7 | -23.4+ | 26.7 |
| - Venezuela | 99.9 | 0 | -7.8 | 39.9 |
| **Mean** | **5035.3** | **7.0** | **-12.3** | **54.6** |

Source: Roberts (2014, p. 130-132)

Table 2

*Average Electoral Volatility in Elitist and Labor-Mobilizing Party Systems, 1978-2000*

*(Pedersen Index of Volatility)*

| Type of Party System | Volatility in Presidential Elections | Volatility in Legislative Elections | Combined Average Volatility |
|---|---|---|---|
| Elitist | | | |
| - Colombia | 13.2 | 10.8 | 12.0 |
| - Costa Rica | 8.7 | 11.9 | 10.3 |
| - Dominican Republic | 18.5 | 18.1 | 18.3 |
| - Ecuador | 37.7 | 29.2 | 33.5 |
| - Honduras | 6.2 | 7.9 | 7.1 |

Table 2 (continued).

| | | | |
|---|---|---|---|
| - Panama | 26.7 | 46.4 | 36.7 |
| - Paraguay | 24.7 | 16.1 | 20.4 |
| - Uruguay | 11.5 | 11.2 | 11.4 |
| **Mean** | **18.4** | **19.0** | **18.7** |
| Labor-Mobilizing | | | |
| - Argentina | 23.0 | 14.1 | 18.6 |
| - Bolivia | 27.3 | 27.6 | 27.5 |
| - Brazil | 38.4 | 23.0 | 30.7 |
| - Chile | 21.8 | 10.0 | 15.9 |
| - Mexico | 20.0 | 15.7 | 17.9 |
| - Nicaragua | 51.3 | 47.7 | 49.5 |
| - Peru | 39.9 | 49.6 | 44.8 |
| - Venezuela | 37.8 | 28.9 | 33.4 |
| **Mean** | **32.4** | **27.1** | **29.8** |

Source: Roberts (2014, p. 146)

First, looking at the Pearson Correlation Coefficient between Average Volatility in Presidential Elections and Number of Years Where Inflation Was Greater than 100%, we find a positive correlation (PCC = 0.375), but a relatively weak one that is insignificant (p=0.152, 99% CI, 2 tail). Second, the correlation between the Worst Economic Contraction and volatility is negative (PCC = -0.413) when one would expect it to be

positive, and it is insignificant (p=0.111, 99% CI, 2 tail). The implication here is that Roberts' (2014) use of descriptive statistics such as averages and frequency counts fail to present a full picture of the dynamics between economic fluctuations and electoral volatility.

Table 3

*Pearson Correlation Coefficient Between Inflation and Average Volatility*

| ***Pearson Correlation Coefficient*** | | | |
|---|---|---|---|
| | *Average Volatility (Presidential Elections)* | *Inflation > 100* | *Worst GDP* |
| Average Volatility (Presidential Elections) | 1 | | |
| Inflation > 100 | 0.37532 | 1 | |
| Worst GDP | -0.41329 | -0.2853457 | 1 |

The conclusion that Roberts' reliance on descriptive data was faulty is further supported when analyzing the results of a simple regression of the Worst GDP measure on Average Volatility in Presidential Elections.

Again, we find that while the relationship is significant (p=0.111), it is negative (β=-0.852), the opposite of what one would expect. This can be interpreted as implying that sharper declines in GDP are correlated with decreases in average electoral volatility. This logic clearly doesn't align with Roberts' (2014) contention that Labor-Mobilizing countries were more susceptible than Elitist countries to electoral volatility because their reluctance to implement structural reforms led to greater 'shocks' on the economy.

Table 4

*Regression of Worst GDP on Average Volatility in Presidential Elections*

| **Variables** | **Coefficients** |
|---|---|
| Worst GDP | -0.852<br>(0.111) |
| Intercept | 16.829***<br>(0.012) |
| Adjusted R Square | 0.111 |
| Observations | 16 |

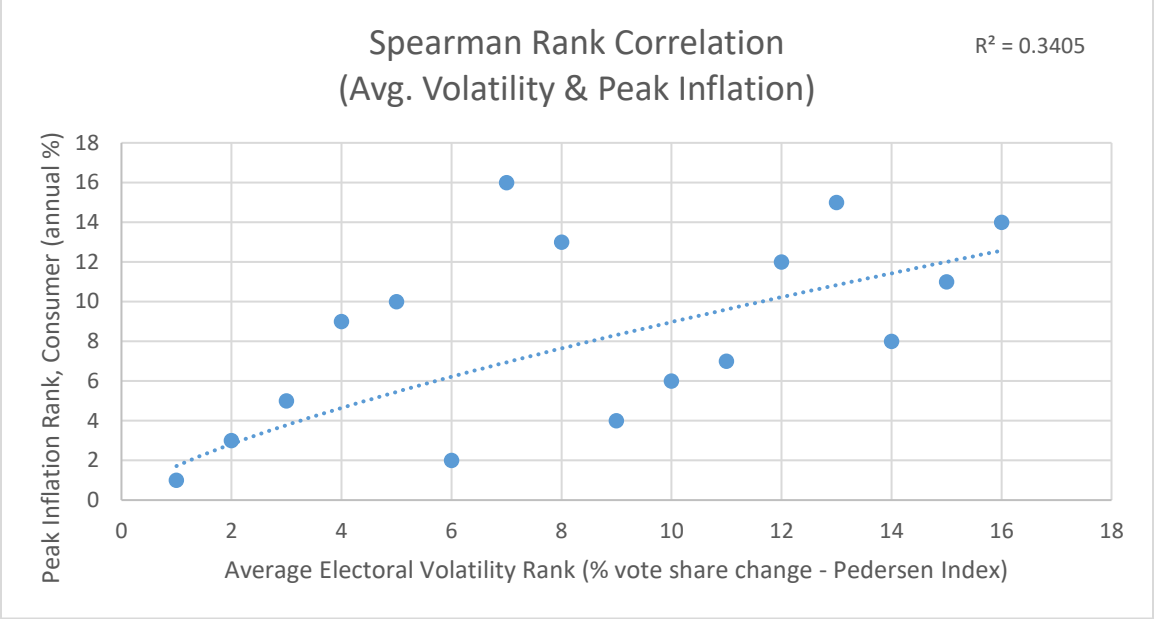
Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Third, regarding the Peak Inflation explanatory variable, Roberts selects only one inflation measure in a 30-year period. It is irrational to assume that a voter operating under the tenets of the traditional economic voter hypothesis would punish an incumbent due to an inflationary experience that occurred far in the past. Roberts attempts to use average electoral volatility to escape this conundrum, but this approach is flawed.

The analysis of the Spearman Rank Correlation between average electoral volatility and peak inflation reveals that there is, indeed, a positive (rho = 0.567) and significant correlation between the two variables (p=.015, 99% CI, 2 tail). This result can be interpreted to suggest that higher levels of electoral volatility are associated with higher levels of peak inflation. Despite this result, when evaluating the relationship as depicted in the trendline below, we notice that the deviations from the trend line do not follow a linear pattern. Thus, it is likely that Roberts' (2014) reliance on averages and singular measures to describe 30 years of relationships between economic fluctuations and electoral volatility has underspecified and misestimated the magnitude and functional nature of the relationship between economic fluctuations and voter behavior.

*Figure 1. Spearman Rank Correlation: Average Volatility & Peak Inflation*




Data Source: Roberts (2014, p. 146)

In Figure 1, a power trend line is used as it has a significantly better fit than other lines. When power trend lines are the best fit to a data plot, it suggests that causal relationship between two variable changes at a specific rate. In this case, the line suggests that higher ranks (e.g., closer to 1) of inflation are more tightly correlated with the corresponding rank of volatility. Indeed, you see this in chart above, the size of the residuals (i.e., degree of dispersion around the line) decreases the higher the rankings for both variables; in short, the line starts to 'increase' its rate of change as it moves to the lower-left side of the chart.

What's truly revealing about the shortcomings of Roberts' reliance upon descriptive statistics and outliers such a 'peak measures' is what the data show when you divide the data sets into Elitist and Labor-Mobilizing groups.

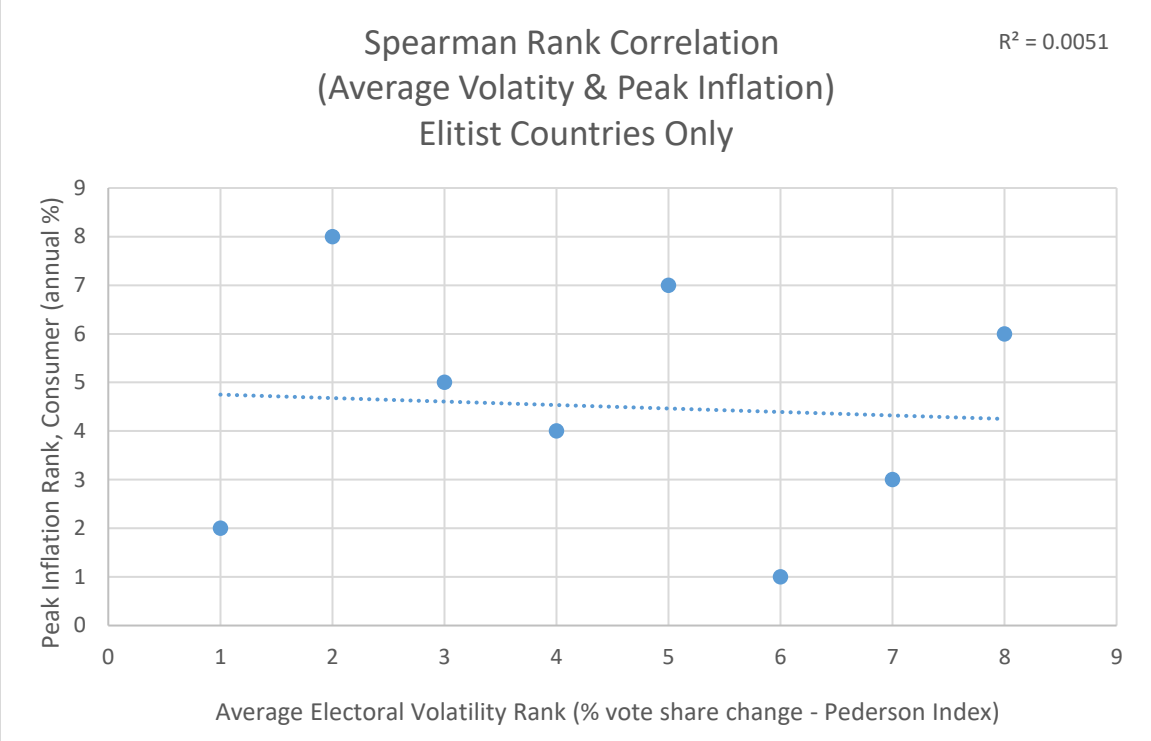
Analyzing the relationship between Average Electoral Volatility and Peak Inflation in Roberts' (2014) data set *for only Elitist* countries, the Spearman Rank Correlation Coefficient (-0.071, p=0.846, 99% CI, 2 tail) is not only significantly weaker – as compared to the coefficient for both elitist and labor-mobilizing countries – but the sign is also reversed, and the coefficient is highly insignificant. We must ask why it doesn't appear that voters are more likely to respond to increases in inflation by shifting party allegiance in elitist countries. As there is no clear correlation when one would expect one, it seems most likely that the relationship has been mis-specified, especially considering that the opposite finding is true for labor-mobilizing countries, and it is entirely unlikely that elitist countries possess some socio-political characteristic that prevents their elected leaders from being held responsible – and indeed, rewards them - for poor inflationary performance.

Looking at the same relationship *for only Labor-Mobilizing* countries, the Spearman Rank Correlation Coefficient (0.571, p=0.096, 99% CI, 2 tail) indicates a completely different relationship between peak inflation and electoral volatility than it does for the elitist only group. Here, the direction of the relationship is positive and the magnitude of it is about the same as compared to the coefficient for both elitist and labor-mobilizing countries (rho = 0.0567, p=0.0150).

Thus, not only is the direction of the relationship different for elitist and labor-mobilizing countries, but the effect is only significant for the latter group. The inability to establish a consistently functioning relationship for both the elitist and labor-mobilizing groups suggests that Roberts' errs in using these variables to evaluate the likelihood that

being dominated by elitist or labor-mobilizing groups in the statist era conditioned the relationship between economic performance and volatility.

*Figure 2. Spearman Rank Correlation: Average Volatility & Peak Inflation (Elitist Only)*

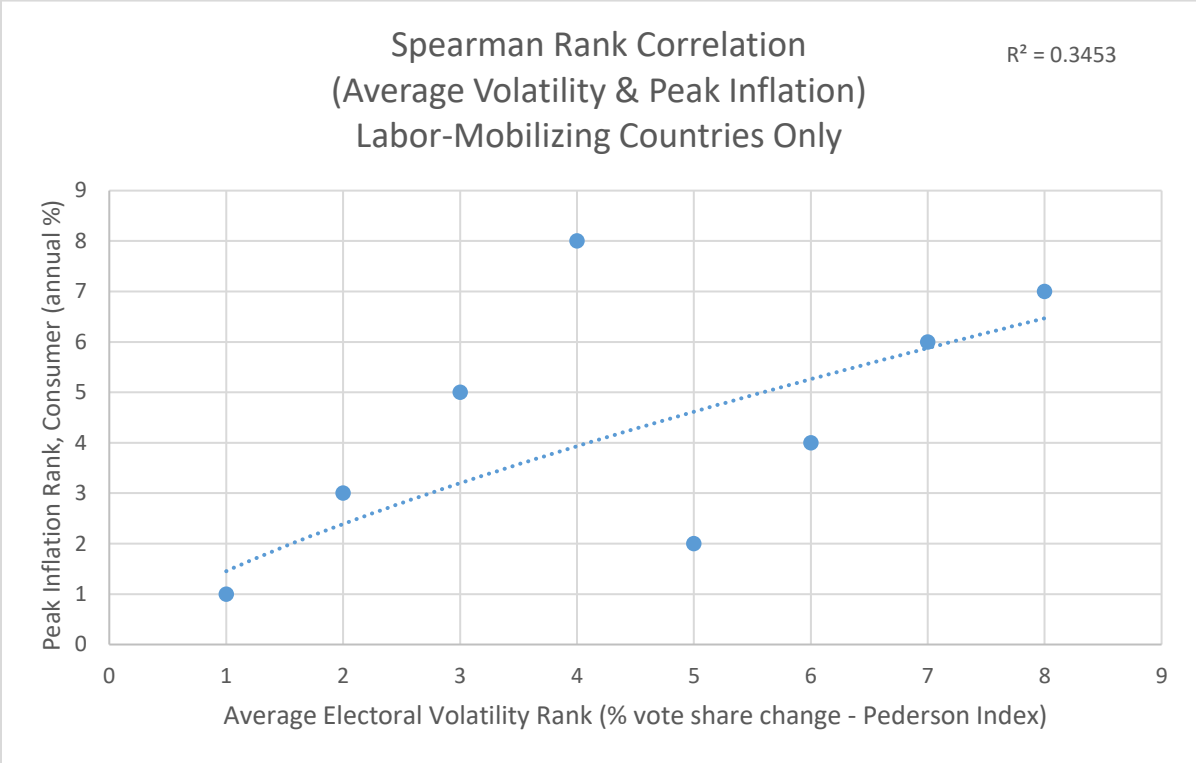



Source: Roberts (2014, pp. 130-132, 146)

These results for labor-mobilizing countries shown above in Figure 4 also suggest that beyond misspecification of the relationship between economic outcomes and electoral volatility – which risks not capturing the existence, direction, magnitude, and nature of the relationship – there is also the possibility that electoral volatility was conditioned more by fluctuations in the economic outcomes than it was by the character of national party systems during the statist era; in short, it lends credibility to the claim that while the character of national party systems may have set the stage for how the economic transition to liberalism unfolded in terms of economic outcomes due to the manner in which reforms were pursued, the connection between the antecedent condition

(e.g., elitist or labor-mobilizing character) and the subsequent levels of electoral volatility experienced during the transitionary period was not mediated by absolute levels of economic performance. Rather, it suggests that relative levels of economic performance may be a more important factor for voters when they are deciding how to respond to poor economic performance.

*Figure 3. Spearman Rank Correlation: Average Volatility & Peak Inflation (Labor-Mobilizing Only)*




Data Source: Roberts (2014, pp. 130-132, 146)

This alternative hypothesis may be supported by the analysis of the power trendline in the chart below, which again suggests that the strength of the relationship between peak inflation and average electoral volatility increases in as you reach higher levels of the former. This outcome raises the possibility of a non-linear relationship between inflation and voting behavior, as well as some kind of 'red-line' for voters where

the uncertainty created by inflation has risen to levels that change their voting calculus. Again, Roberts' (2014) data most likely misses the true relationship between antecedent conditions (i.e., elitist or labor-mobilizing statist national party system), economic performance during the transition to neo-liberal policies and institutions, and electoral volatility.

*Alternative Model Frameworks: Behavior of the Latin American "Economic Voter"*

We have seen the limitations of using aggregated averages and outlier data Roberts' (2014) study when trying to evaluate the impact of the statist era character of national party systems (i.e., elitist or labor-mobilizing) on subsequent economic performance during the transitional period to neoliberalism. Additionally, because the economic data provided by Roberts (ibid) is descriptive, and the logic espoused in his model linking of statist-era national party system character to transitional economic performance doesn't hold when subjecting that descriptive data to correlational analysis, confidence in linking economic performance to electoral volatility using his theoretical model and descriptive data is lacking. While this lack of confidence doesn't mean Roberts' (ibid) theoretical approach is incorrect, it does reinforce the idea the more accurate model specification needs to be done in order to rigorously test his theoretical propositions. The need to investigate other model specifications that link economic performance to electoral volatility begs the question as to what methods other researchers investigating this link have used, and whether or not those methods present limitations as well.

The majority of studies on the phenomenon of the economic voter in Latin America measure the impact of economic conditions on either the probability of voting for an incumbent or the incumbent's vote share (Remmer, 1991; Benton, 2005; Duch and Stevenson, 2008; Johnson and Ryu, 2010; Singer, 2013; Lewis-Beck and Ratto, 2013; Gelineau and Singer, 2015; Nadeau et. al, 2013; Carlin, Singer, and Zechmeister, 2015; and Lewis-Beck and Valdini, 2018). Most focus on the incumbent party's vote share, which is not unexpected as the basis of the economic voter hypothesis is that voters will use retrospective economic conditions to assess the performance of the incumbent party and will then reward or punish that party accordingly.

Each of the studies focused on Latin America does indeed find at least some support for the premise that economic conditions matter for voters. However, only one of these studies - Remmer (1991) - estimates the impact of inflation, GDP, and exchange rate on a measure of electoral volatility, using both current year measures and two-year averages of values prior to the election (i.e., current) year. Remmer (ibid) also incorporates a measure of party structure as an independent variable, but this measure doesn't align well with Roberts' (2014) idea of party structure, as she simply takes the vote share of the top two parties in the previous election. The measure of electoral volatility, the electoral discontinuity index, represents the total percentage change in votes received by all parties between elections. Thus, the index is used by Remmer (ibid, p. 781) to measure "an overall tendency toward electoral volatility as distinct from electoral shifts that merely penalize incumbents … [as] the incumbent party's share of the total vote tends to vary with party system structure (as does the potential for electoral

change as measured by the EDI." The way the index is calculated differs from Pedersen's (1979) *Total Electoral Volatility* index by omitting the step whereby the total percentage change in votes is divided by two. This has the effect of allowing the EDI index to rise as high as 200, whereas the Pedersen index is capped at 100.

Remmer's (1991) findings suggest that while short-term economic downturns translate to reduced support for the incumbent, in general, electoral volatility is more susceptible to broader and deeper crises (i.e., economic downturns lasting at least two years). Furthermore, overall levels of electoral volatility were found to depend on both inflation levels and party structure (the latter of which is a total vote share of the top two performing parties in the previous election). Thus, her findings imply that Latin American electoral politics in the 1980s was dominated by the performance of incumbents in keeping inflation under control and whether there were clear alternatives (if electoral competition is dominated by two parties, it is likely there are clearer ideological and policy differences among them than if there were heightened levels of electoral competition). The question then is whether the *conditions* of limited electoral competition and inflation performance for the presence of economic voting were true for later periods, and whether the effect varied or remained stable.

The focus on incumbent vote share or the probability of voting for the incumbent withstanding, the entire body of work on economic voting in Latin America has produced several well-supported generalizations about the mechanisms that condition the presence, strength, and direction of economic voting. These conditions are extremely relevant when considering why focusing on electoral volatility as the dependent variable – as this

study does - is theoretically sound. In addition, the generalizations about the conditions that shape the presence, strength, and direction of economic voting behaviors should be incorporated into any new model of the relationships between economic conditions and electoral volatility.

*The Consensus: Necessary Conditions for Observing the Economic Voter*

Carlin, Singer, and Zechmeister (2015) highlight that current research on the topic of economic voting has resulted in consensus that there are three primary conditions for observing its presence – a) economic issues must be salient, b) voters must be able to hold politicians accountable for outcomes, and c) there must exist clear alternatives to the incumbent party for the voter to cast support for a non-incumbent. The common theme running through each condition is that voters rely on information. For salience, voters rely on their perceptions as well as publicly available characteristics of the economy. Regarding accountability, voters must have a clear understanding of who they *should* hold accountable. For example, should the Latin American voter - following the extreme economic downturn that came as a result of fallout from Mexico's debt default in 1982, or the decline in growth rates following the onset of the East Asian financial crisis in 1997 – hold incumbents responsible? And last, when evaluating whether there are clear alternatives to the incumbent party, not only must the voter have some model for predicting non-incumbent performance or estimating the potential differences in their proposed policy frameworks, voters must also sometimes formulate such predictive models in the midst of persistently high levels of electoral volatility – with existing parties realigning, de-aligning, merging, or fading all-together and new ones arising.

Duch and Stevenson (2008) – in their extensive review of the literature on the economic vote – provide a framework for elevating the question of what conditions the economic vote and how it conditions it. Specifically, they point out that both the retrospective 'sanctioning' – which represents the theoretical foundation of the large majority of literature on the economic vote - and forward-looking 'selecting' models of economic voting are part of a broader class of rational voter theory based on utility-maximizing principles. The main difference between these two sub-classes of models is *how* the voter obtains their information. As evidenced in the literature, there are a wide variety of ways to conceptualize the 'retrospective' performance of the economy, but none of them have decidedly been shown to be more accurate or powerful measures of voters' cognitive processes; likewise, prospective models have to tackle the 'signal-extraction' problem, which centers around how to model voters' assessment of future competence, particularly when evaluating alternatives to the incumbent (party) (ibid).

Both sub-classes rely on the assumption that *signals matter*; in the retrospective case, signals created by the economic vote theoretically constrain policy-makers in the future. In the prospective case, recent economic performance, competing party platforms, and a variety of other economic and political factors are used by voters to form predictive 'models' that enable them to evaluate the potential future performance of candidates; indeed, they may even form 'rational-expectations' type of models, which suggest that only 'unexpected' factors will have the ability to change their decision-making model (Duch and Stevenson, 2008).

*Salience: The 'what' and 'when'* It has already been noted that Remmer (1991) found support for the claim that inflation performance of incumbents elicited economic voter behavior across Latin America in the 1980s. This is not surprising given the frequent double and even triple-digit inflation witnessed broadly across the region during the 'lost decade.' Benton (2005) analyzed 39 presidential elections from 1980-2003 across 13 different Latin American nations and found evidence supporting economic growth as being the primary concern of voters (i.e., having the largest effect on incumbent vote share). Indeed, Benton (ibid) found that a 1% decrease in per capita GDP led to a 1.7% decrease in the incumbent party's vote share. Thus, one could conclude from Benton's (ibid) study that for the last two decades of the twentieth century, economic growth performance was the most consistent predictor of voter's engaging in sociotropic behavior. Johnson and Ryu (2010) find support that both economic growth and inflation is important to Latin American voters, in their study of 78 elections across 18 Latin American countries (from 1982-2006). Importantly, they (ibid) find that inflation's effect on the incumbent's vote share (a 1% increase in inflation leads to .048 % reduction of incumbent's vote share) is five times the magnitude of growth's effect (a 1% increase in growth leads to a .01% reduction) on the same. In Singer's (2013) study of 79 presidential elections from 1982-2010, inflation was only a significant predictor of incumbent vote share from 1982-2000, while growth was only significant for 2000-2010.

Given these findings, it is not surprising that Lewis-Beck and Ratto (2013) – in their study of 13 Latin American nations from 1996-2004 – find there was a highly significant and powerful effect of sociotropic respective evaluations on incumbent vote

share. Using survey data across three election periods, they find that a change in voters' perceptions of the economic situation going from 'worse' to 'better' leads to a 21% increase in the probability of voting for the incumbent party. Nadeau et. al. (2013), in their study of 18 Latin American nations from 2008 to 2012, found there is a 13% increase in the likelihood of supporting an incumbent when a voter perceives the economy as performing 'better' than it was 12 months ago. Gelineau and Singer's (2015) findings are similar; they find a 35% increased likelihood of voting for the incumbent when voters perceive the economy as improving over the last 12 months versus a 29% increased likelihood of voting for an alternative when the economy is perceived as deteriorating over the same time period.

To test if economic downturns affect the presence and strength of the economic vote, Gelineau and Singer (2015) utilize the standard deviation of the growth rate in the ten years prior to the survey and include a dummy variable for surveys taken during economic contractions in their model. Interestingly, they find that while the economic effect increases during economic contractions, there was no evidence to support the idea that the "marginal effect of economic perceptions is larger when the economy is volatile.' But the lack of support for the notion that variability in economic growth impacts the magnitude of the sociotropic economic vote stands in stark contrast with Remmer (1991), Benton (2005), Johnson and Ryu (2010), and Nadeau et. al. (2013), who each find some support that short-term fluctuations matter to the economic voter. Beneath the surface of this contradiction are methodological concerns. First, the former measure the 'short-term' as a ten-year period and the latter measure it as periods of two-years or less. Second, by

using a ten-year period to assess economic volatility, they deviate substantially from theories of economic voting based on retrospective, sociotropic models; that is, a ten-year period for measuring volatility far *exceeds* the time-period in which retrospective, sociotropic models would plausibly apply to voter behavior, with the exception of cases where incumbents had been in office consecutively for two terms.

So, what are we to conclude? Is inflation or growth more of a concern for voters, or does the presence, size, and direction of the sociotropic economic vote primarily vary with the economic conditions of the short-run or long-run retrospective period in which elections are held? In short, when do economic conditions become salient to voters, which conditions become salient, and why? Singer (2013) provides a theoretical approach that may answer this question. He (ibid) finds support for the idea that voters are most likely to find salient only the recently poorly performing elements of the economy; that is, voters tend to place less 'weight' on relatively more productive areas of the economy, which have been relatively stable in the medium term. Such a view is detailed extensively in Nadeau et. al. (2013).

*Accountability and Responsibility: The 'Who'* Given the economic conditions considered salient, what information the voter is able to obtain about retrospective economic performance and how reliable that information is comprises only one side of the coin; the other side is determining to what degree the voter holds the incumbent (and their party by extension) responsible for macro-economic outcomes (Duch and Stevenson, 2008, Carlin, Singer, and Zechmeister, 2015, Lewis-Beck and Valdini, 2018). Indeed, "clarity about who is responsible varies based on the institutions and electoral

rules," and variations in the degree to which authority is concentrated in the executive, the degree to which the incumbent party also dominates the legislature, and the degree to which domestic and international actors (other than the domestic government) are held responsible for various outcomes can all affect how voters assign responsibility (Carlin et. al, ibid, p. 284). In short, it is difficult to pinpoint a systematically functioning model of how voters assign responsibility. Carlin et. al (ibid) propose that fragmentation of the electoral landscape likely weakens the traditional link between economic outcomes and government support because voters think about the broader economic context – including both domestic institutional frameworks and foreign actors - when determining whether the incumbent should be held responsible. Indeed, in addition to fragmentation among control of government, incumbents will likely be viewed as having little to no control over economic spillover effects arising from exposure to international trade global financial markets, and thus, not be held entirely responsible for economic fluctuations emanating from this exposure (Hellwig, 2007). Nevertheless, there is considerable support for the premise that across Latin America, presidents are held accountable (Nadeau et. al, 2013; Gelineau and Singer, 2015).

*Clear Alternatives: The 'Choice'* Theories of rational voting hinge on the basic assumption that voters are using logic to form a model for determining their voting behavior; but this assumption itself rests on an even more basic assumption – voters feel there is a choice. For, if the voter feels there is no clear alternative to the incumbent, the logic that conditions their models is likely to reflect more of a risk calculation (Echegaray, 2005). That is, in the absence of clear information about past states of the

economy, the inability to clearly assign responsibility for such states, and the relative inability to clearly assess prospective differences in future performance of candidates on the basis of policy differences (which is heightened in non-polarized polities or periods marked by electoral fragmentation), voters don't have the information necessary to formulate reliable retrospective or prospective economic voting models. In this case, where there has been instability in the national party system and thus, political party-based comparisons are difficult to make, suggest that 'cults of personality' will dominate (Nadeau et. al, 2013; Lewis-Beck and Valdini, 2018). The characteristics of the individual candidate then take on heightened importance. Lewis-Beck and Valdini (2018) emphasize that, "The Eurocentric nature of the usual clarity of responsibility conceptualization cannot fully capture its power in Latin America because it disregards the role and consequences of presidentialism and electoral volatility in economic voting" (ibid, p. 412). Even if party instability isn't the primary cause of voters' inability to differentiate between parties, a general lack of political knowledge about candidates and their policy proposals is even more common in Latin America than it is in advanced democracies (Echegaray, 2005).

Instead, the presence of incomplete information about platforms, parties, and performance – whether due to a generally low level of political information or to instability within the party system - creates a scenario where voters must use a different kind of calculus than the traditional utility maximization models that rely on absolute retrospective or prospective measures of economic performance (even if those measures are qualitative and ordinal as they are in region-wide surveys). The new calculus

suggested by Echegaray (2005) – who analyzed 41 presidential elections from 1982-1995 - is risk-based. In this voting model, voters are likely to disregard the possibility they could increase their utility by voting for an alternative to the incumbent because they become risk-averse in the domain of gains. That is, if they are relatively 'satisfied' with the status-quo, they won't vote for an alternative because in a state of imperfect information or limited capacity to assess alternatives, the voter is unable to predict with confidence how radically those alternatives may or may not alter the status quo. However, when the voter is dissatisfied with the status-quo, they are more likely to vote for an alternative to the incumbent - despite any limited information or capacity to predict – precisely because they become risk-averse to losses.

That is, uncertainty about alternatives can constrain the economic voter effect, even when poor economic conditions exist. Alternatively, even if economic conditions are generally improving, voters are likely *not* to reward the incumbent – even in the face of uncertainty about alternatives – if they are not satisfied with the status quo. Thus, the focus on satisfaction changes how researchers might conceptualize the rational basis of decision-making for the voter. Satisfaction is inherently subjective, and voters can be *both* dissatisfied and satisfied with economic downturns. Likewise, voters can be *both* dissatisfied and satisfied with economic upswings. The difference maker is their subjective threshold for whether the downturns or upswings are significant enough to motivate them to punish or reward the incumbent. This study predicts that this threshold can be modeled based on the idea that voters consider the medium-term past as the 'status quo' and compare the short-term past to the former to determine if they are satisfied or

not. In this way, voters 'normalize' economic trends, similar to how rational expectations theory conceptualizes people as basing expectations about future outcomes on the recent past.

Where Echegaray's (2005) risk-based theoretical framework significantly deviates from absolute utility-maximation models – often implicit in models of retrospective economic voting behavior – is its emphasis on the presence of a subjective process of determining what economic conditions satisfy them 'just enough' for them not to seek change. Thus, voters have subjectively determined thresholds or barometers for evaluating the status-quo; if the threshold is crossed, they shift from risk-averse to risk-seeking, or vice versa, regardless of the whether the short-term economic conditions are worse or better than medium-term economic conditions. Uncertainty about alternative options can bias voters toward risk-averse behavior, but if voters' subjective thresholds are crossed, uncertainty about alternatives will not constrain them from becoming ore risk-seeking.

This subjective nature of the decision-making process can also be inferred from the structure of studies that rely on survey responses across the region about voters' perceptions of recent economic performance; because those surveys typically utilize an ordinal 3-point scale organized from worse to same to better when asking how the economy currently is functioning relative to a point in the past, one can't infer that each voter's subjective distinction between the three states is even mildly comparable. The primary methodological questions that arise are how we model subjective criteria for making retrospective economic decisions in periods that are marked by instability in the

clarity of information about the alternatives (affecting party system instability) and instability in economic trajectories (affecting salience).

In the literature that addresses how voters determine whether and which economic issues are salient, it is often stated that broader economic conditions affect what outcome (i.e., inflation or growth) voters find salient (Nadeau et. al, 2013). A risk-based model that assumes voters form non-sophisticated and non-precise understandings of economic performance should suppose that voters generalize about the economy to subjectively determine the overall state of economic opportunities available to them, rather than perform more in-depth analyses of the personal implication for how different economic outcomes are trending.

However, the methodological question of how to model subjectivity in retrospective economic voting behavior also requires that the model allows for variability in how individuals *assess* economic performance information. In short, an accurate model of economic voting behavior must allow voters to think *both* in terms of relative performance (i.e., comparing medium-term to short-term periods) and overall performance (as opposed to separately evaluating trends in different economic outcomes for growth, inflation, and income).

Thus, we should assume that voters don't have perfect information and don't assess absolute levels of economic performance across different outcomes to determine whether their threshold for becoming risk-averse or risk-seeking has been crossed. Instead, they would use a relative measure, and evaluate the change in that outcome from one period to the next (i.e., from the medium-term to short-term period). To capture the potential for voters to evaluate the status-quo from a rational but relative point of view,

the model should assume voters' subjective thresholds for risk determination are sensitive to historical trends. The recent past has become the norm, and it is deviations from this recent past that are important, a point echoed by Echegaray (2005) and Singer (2013).

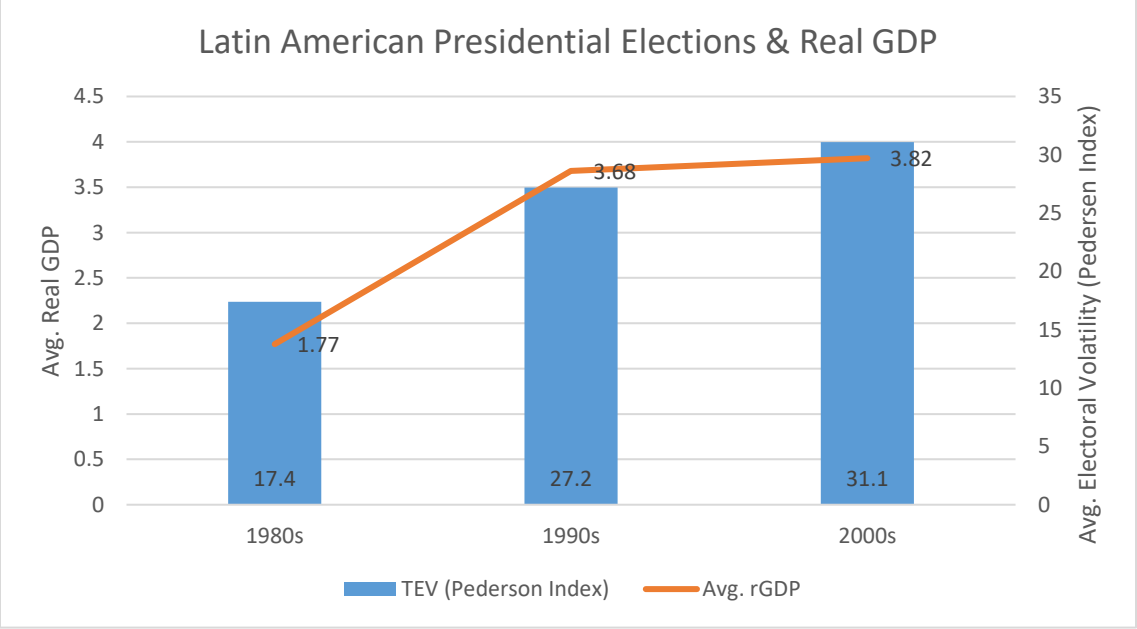
*Electoral Volatility as a Dependent Variable*

While it is not surprising the entirety of the literature on the economic voter effect in Latin America has substantiated its existence, it is noteworthy that these studies have generally completely avoided looking at electoral volatility as an *outcome* of changes in economic states. I suspect the lack of attention to electoral volatility as an important outcome lies in the fact the literature on economic voting has evolved to where the idea that there are conditions that affect the presence, magnitude, and root causes of economic voting behavior (typically measured as vote share or the likelihood of voting for the incumbent). Thus, electoral volatility has been treated in the literature – if treated at all as a primary point of analysis - as if it has a conditioning effect on voter preferences. On the other hand, it was not evident to this author in conducting a literature review that electoral volatility was viewed as an important outcome.

Therefore, it is logical to propose electoral volatility should be studied as a dependent variable because doing so allows models to predict economic voting behavior's effect on a larger set of voter behaviors, rather than limiting it to support or rejection of the incumbent. Specifically, it allows models to predict how economic conditions as well as uncertainty about alternatives affect the stability of the national party system itself, which has been proposed to have a significant effect on the presence and magnitude of the economic voter effect (Remmer, 1991; Roberts, 2014).

In sum, electoral volatility – measured by both changes in both voter preferences and the national party system – has largely been ignored in the literature regarding its potential to explain the conditional nature of the economic vote generally accepted as an axiom by researchers. This author's surprise is even more pronounced due to Roberts' (2014) finding that there has not only been persistently high average levels of electoral volatility across the region from 1980-2010, but also *continuously increasing* levels, all despite the region-wide increase in average real GDP (see Chart 1). Singer's (2013) and Carlin, Singer, and Zechmeister's (2015) theoretical approaches may assist in understanding these *continuously increasing* electoral volatility levels despite overall better levels of economic performance across the region.

*Figure 4. Rising Electoral Volatility & Real GDP in Latin America, 1980-2010*




Data Sources: Electoral volatility data sourced from Roberts (2014); Real GDP data sourced from IMF Databank. Countries include Argentina, Bolivia, Brazil, Colombia, Chile, Costa Rica, Dominican Republic, Ecuador Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

The tendency of voters to find salient only the recently poor performing elements of the economy and generally ignore relatively stable aspect of the economy should be exacerbated in conditions where electoral fragmentation has weakened – and continues to weaken – the link between economic outcomes and incumbent support *precisely because* of the increase in uncertainty in the voters' ability to rationally form models for assessing past and predicting future behavior. That is, the information they are able to obtain is likely to be substantially less reliable and clear in terms of the level of information needed to determine accountability and evaluate clear alternatives to the incumbent, so voters are most likely forming subjective evaluations that the observed average increases in real GDP over time is 'insufficient' and are therefore adopting risk-seeking behavior.

## Variables, Data, Model Specification, and Methodology

The intent of this study is to evaluate how economic fluctuations in macroeconomic variables impact overall levels of electoral volatility in Latin American party systems. The period for which data will be collected spans from 1997 to 2018 and includes data for both presidential elections in Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, and Venezuela. By spanning just over two decades, this study analyzes a sufficiently long enough period to allow for the proposed effects of economic changes on electoral outcomes to be measured across at least four successive election cycles in each country of interest.

### *Dependent Variable*

*Electoral Volatility in Voter Preferences: The Pedersen Index* Marinova (2015) provides an index that captures within-party volatility, while Pedersen (1979) provides an

index that measures between-party volatility. Marinova (ibid) claims that to ignore instability within parties themselves leaves researchers at a loss to explain the dynamics behind the observed changes in voter preferences.

However, both types of electoral volatility are not proposed to have the same function. In this study, between-party instability (i.e., shifts in voter preferences) is believed to be partially determined by within-party instability (i.e., changes to competitive nature of the party system itself due to newly emerging parties, mergers, splits, etc.). Thus, the dependent variable in this study is a simple measure of the Pedersen index for each presidential cycle. The goal is to predict variation in that index by modeling the dynamics of how economic outcomes interact with within-party change that occurs between election cycles. Party vote shares for each countries' presidential elections will be sourced from Baker and Greene (2011), who have since updated their data to include election data through 2018. The difference in party vote shares from the previous to current election periods is calculated, and then the sum of the absolute value of those differences is divided by 2 to produce the Pedersen Index value. A value of 0 represents no change to any party's vote share (i.e., all parties that received votes in the previous election received the exact same vote share in the current election) and a value of 100 represents a complete change to all party's vote share (i.e., all parties that received votes in the previous election received none in the current election).

*Independent Variables*

*Within-Party Structure Electoral Volatility Marinova's (2015)* limiting the data set to parties that received at least 5% of the vote in any election. Her method for coding events that she counts as instability are listed in Table 5.

However, upon close inspection there is an issue with this method. Specifically, the magnitude of each event can't be differentiated or evaluated. For example, should a split of a major party be weighted the same as a split of a minor party? Or should the disbandment of an existing major or moderately powerful party be weighted the same as the disbandment of a minor or relatively powerless party? The answer is clearly no. Thus, coding within-party volatility events in this way would not be able to provide insight into whether the events related to volatility in the party system were considered significant by voters, particularly in the sense that they would lead to increased uncertainty regarding voters' clarity about alternatives to the incumbent party. As creating a measure that did assign magnitude to each event would be biased by subjective cutoff points for categorizing, and it is unlikely that all voters in a polity would be systematically affected by the same event, this study must use a measure of Within-Party System Consistency that approximates the effect of within-party system changes on voters' ability to clearly formulate expectations about alternatives. For this reason, Within-Party System Consistency will be measured as the percentage of parties competing in the current election that were represented on the ballot in the previous election.

This measure focuses on stability in the party structure that voters engaged with in the previous election. It is believed that voters are most likely to be sensitive to changes in the existing party structure, so the measure is sensitive to any disbanded, split, merged, re-emerging, and newly emerged parties. An interesting characteristic evident across the Latin American countries included in this study is that party splits and mergers are common.

Table 5

*Marinova's (2015) Events-Based Model of Within-Party Volatility*

| **Type of Party Volatility** | **T (current election); T-1 (previous election)** |
|---|---|
| Merger of Two Existing Parties | 1 if party existing at *t-1* officially merged with 1 or more parties at *t* (with each party participating in a merger coded separately) |
| Disbandment of Existing Party | 1 if present at *t-1* but not at *t* (excluding parties that appear for re-election as mergers, splinters, or joint lists) |
| Emergence of New Party | 1 for new party (excluding parties that originated from mergers, splits or joint lists at *t-1*) |
| Split of Existing Party into Two Parties | 1 if new party formed from members splitting from party existing at *t* (excluding party members that de-align and hence, don't form a new party) |
| Exit of Party from Joint List | 1 for party at *t* that no longer appears on a joint list |
| Entry of Party from Joint List | 1 for party at *t-1* that appears on a ballot at *t* with at least one other party |

Data Source: Marinova (2016)

However, even though voters may be somewhat familiar with the component of a previous party that split or merged in the current election, it is logical to propose that the split or merger itself would most likely contribute to *increased*, not decreased, uncertainty with regard to what alternatives are available to voters in the current election. The alternative logic – those splits or mergers could clarify alternatives for voters – is less likely, although theoretically feasible. Party lists for each countries presidential elections will be sourced from Baker and Greene (2016), who have since updated their data to include election data through 2018.

*Generalized Economic Conditions & Holistic Economic Evaluations* A key proposition in this study is that voters make an overall holistic assessment as to the

overall performance of the economy that enables them to make a simple calculation regarding their economic opportunities. Thus, voters consider macroeconomic growth, but not independently of inflation or wage trends, and vice versa, when constructing this holistic measure. The best proxy for measuring voters' proposed generalized assessment is Real GDP per capita as it provides a rough estimate of whether voters' incomes are growing and whether that income growth is making them better off or not. The data for variables constructed from Real GDP per capita data was sourced from the IMF World Economic Outlook database.

It is important to clarify how voters likely assess Real GDP per capita in a generalized manner. This study proposes two ways that voters assess Real GDP per capita. The first way voters may assess Real GDP per capita as a measure of economic performance is by comparing mean Real GDP per capita across two periods – one that aligns with the period the incumbent would be held responsible for and another that aligns to the period their predecessor would've been held responsible for. It is proposed that voters evaluate the average level of the more recent Real GDP per capita under the incumbent party as satisfactory or unsatisfactory *relative* to the average level of the same variable under the incumbent's predecessor. Thus, voters are suspected of having long memories while at the same time categorizing those memories in generalized *and* relative terms (e.g., better or worse economic conditions). The second way voters may assess Real GDP per capita as a measure of economic performance is by evaluating the reliability of economic performance with regard to Real GDP per capita. By reliability, it is proposed that voters – while not technically calculating the standard deviation – do form a generalized understanding of the variability of the incumbent's economic

performance from year to year. Thus, voters are suspected of being particularly sensitive to economic performances that have a wide dispersion around the mean, precisely because those performances make it harder for the voter to feel stable economically, and thus, satisfied with the incumbent's performance. Also, higher variability in economic performance likely affects the risk-calculus of the voter, shifting them into states where they are relatively dissatisfied and willing to seek change. It is suspected that this sensitivity to higher variability characterizes rational voters in times of economic uncertainty, and it is proposed that this characteristic is constant whether the variability was based on mostly positive levels of Real GDP per capita or mostly negative levels. In short, this measure looks at how voters consider economic stability in their voting logic.

*Average Real GDP per Capita Difference* The short-term is described as the period starting at the beginning of the next year following the last election and stemming to the end of the year preceding the current election. Only *after* the incumbent has taken office are voters going to hold the incumbent responsible for the overall state of the economy. While voters may hold the incumbent at least partly responsible for economic performance in the year of the election – depending on whether the incumbent takes office in the election year – there are numerous reasons not to include election year economic performance, including: a) there would be minimal time for the incumbent to change the state of the economy in an election year, b) voters would reasonably expect a lag with regard to experiencing the effect of economic policy decisions, and c) the fact that the timing of elections within a year varies significantly across countries in this study means there is not a consistent amount of time for voters to form an assessment of

economic performance in election years. Also, using measures from the year prior to the election is a common occurrence in the literature (Lewis-Beck and Valdini, 2018).

Likewise, the medium-term period corresponds to a period of equal length to the short-term period that ends the year of the last election. Thus, the 'start' period of the medium-term is dependent upon the start period of the short-term as well as the length of the short-term period. The length of both the short- and medium-term periods is not a constant because the length of time between elections varies across countries in the study.

The reality of how this variable is constructed – the short-term average minus the medium-term average - means that it roughly equivalates to expecting voters to judge the incumbent's average performance with regard to real GDP per capita growth relative to their predecessor's average performance. In this way, this relative measure supposes that voters do, in fact, remember generalized experiences from administration to administration and form comparisons to help them evaluate the incumbent's economic performance. Thus, this variable is called *Average Real GDP per Capita Difference*.

Several data points deserve special attention due to deviations of calculation methodology for values of incumbent variance of economic performance. Ecuador had an election in 1996 and another one following in 1998. Thus, for the 1998 election in Ecuador, incumbent variance in economic performance was calculated from the 1997 *and* 1998 years. Although this is not the norm, this is done to avoid a variance of 0, and also because the incumbent party was in office to the half-point of the 1998 year. The same process was used to calculate incumbent variance of economic performance for the 2000 election in Venezuela, as Chavez was elected for a second consecutive term in at the end of 1998, but the adoption of a new constitution led to new elections in mid-2000.

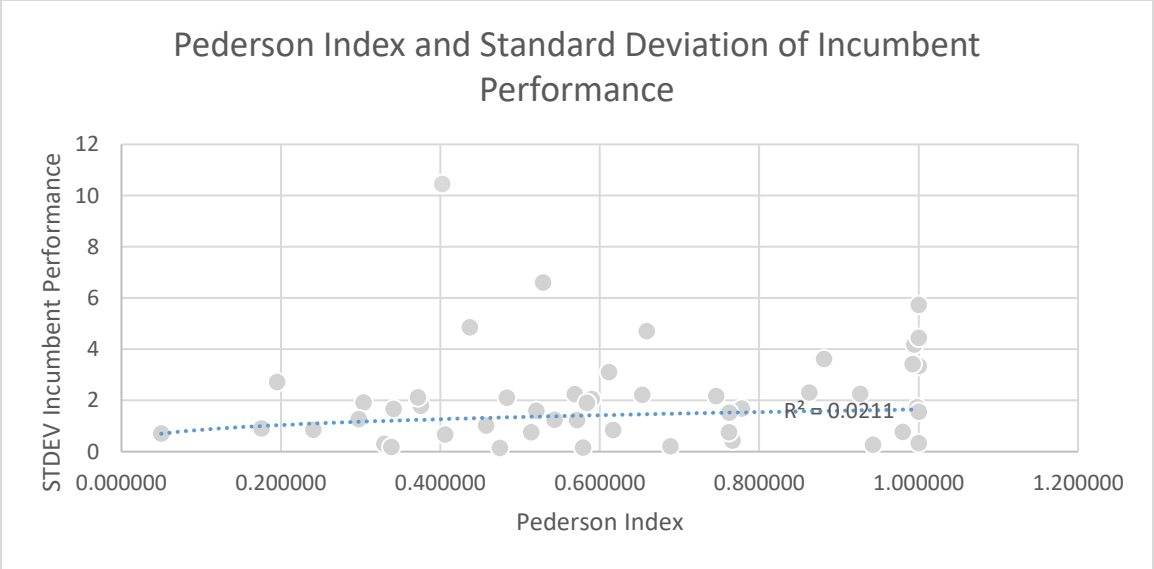
Additionally, Venezuela had back-to-back presidential elections in 2012 and 2013, due to the death of the incumbent, Hugo Chavez. In this instance, Nicolas Maduro – chosen by Chavez in 2011 to succeed him should he die and in 2012 as his Vice President, and the person who temporarily assumed the presidency after Chavez's death until the 2013 elections – was treated as the incumbent. However, since Maduro was only Vice President since 2012 and the 2013 election was held in April, the incumbent's economic performance for the 2013 election included data from 2011 (the year he was named as successor) and 2012. Thus, for the 2018 Venezuelan election, the previous incumbent's economic performance was assessed using data from 2011 and 2012 as well as 2013 (the year after Maduro's assumption of the presidency). In Peru, the 2000 elections were controversial, leading to President Fujimori to claim asylum and another presidential election in 2001. Thus, because the 2000 election saw Fujimori elected to a third consecutive term, variance in economic performance for the 2001 election was calculated based off of Fujimori's tenure starting the year after his second election (1996) and ending with the first year of his third term (2000).

*Standard Deviation of Real GDP Per Capita* This measure of variability was captured for only for the short-term period, which roughly corresponds to the incumbent's tenure. While the Average Real GDP per capita was measured as a relative difference in performance between the incumbent and their predecessor – and as such, measures relative changes in average performance levels of the present and previous incumbent – this measure of Real GDP per Capita is meant to capture voters' sense of being able to predict economic outcomes. A key part of the logic proposed in this study is that voters will also punish economic variability, not simply economies that are getting

'better' or 'worse' on an absolute level. It is suspected that the relationship between the standard deviation of Real GDP per Capita over the incumbent's most recent term and the Pedersen Index displays quadratic qualities (see Figure 5), so the square of it will also be included in the model.

It is also suspected that the effect of this variable will vary with the degree of Within-Party System Consistency measure as voters' willingness to shift to risk-seeking or risk-averse behavior based on economic evaluations will likely depend on whether they feel confident about their ability to interpret how the economy might change under any alternatives, so an interaction term will be included.

*Figure 5. Plot of Standard Deviation of Incumbent Performance against Observed Pedersen Index Values*




*Control Variables*

*1-yr Change in Real GDP* Each country's change in Real GDP from two years to one year prior to the election is included as a control variable as this is the most common retrospective period utilized in the economic voting research.

*Character of National Party Systems during the Statist Era* Each country's national party system character during the ISI period will be defined as either LM (Labor-Mobilizing) or Elitist, and data will be obtained from Roberts (2014). This variable is included due to the increased propensity for LM countries to experience higher degrees of political discontinuity (i.e., party decomposition) and Elitist countries to experience higher degrees of political continuity or party consolidation via programmatic re-alignments (Roberts, 2014, p. 108). Colombia, Ecuador, and Paraguay are thus classified as *Elitist* and Argentina, Bolivia, Brazil, Chile, and Peru are thus classified as *Labor-Mobilizing*.

*Trade Freedom* This variable is an index created by the Heritage Foundation Index of Economic Freedom. It is considered part of the group of variables that help to assess a country's "Market Openness." The Index ranges from 0-100, with 100 being the most-free. The trade freedom index assesses the degree to which government hinders the flow of trade through tariffs, export taxes, trade quotas, or regulatory barriers. The measure will be calculated as the change in the TFI value from one election year to the subsequent election year.

*Financial Freedom* This variable is an index created by the Heritage Foundation Index of Economic Freedom. It is considered part of the group of variables that help to assess a country's "Market Openness." The Index ranges from 0-100, with 100 being the most-free. The financial freedom index assesses the degree to which government introduces inefficiencies in banking and the flow of funds between investors, businesses and households through market interventions or other types cost-increasing regulations.

The measure will be calculated as the change in the FFI value from one election year to the subsequent election year.

## Econometric Specification

Electoral Volatility (Pedersen measure) = $\beta 1$(1-YR Change in rGDP $_{t1-t2}$) + $\beta 2$(Avg. Real GDP per Capita $_{t1-t2}$) + $\beta 3$STDEV of Real GDP Per Capita $_{t1}$ + $\beta 4$(STDEV of Real GDP Per Capita $_{t1}$)$^2$ + $\beta 5$Within-Party System Consistency + $\beta 6$Within-Party System Consistency*STDEV of Real GDP Per Capita $_{t1}$ + $\beta 7$Character of National Party Systems +$\beta 8$Trade Freedom + $\beta 9$Financial Freedom

## Hypotheses

*Core Hypotheses & Rationales of Methodological Approach*

- Voters are sensitive to long-term shifts in economic performance from one electoral period to the next.
    - $H_0$ = There is no effect of a change in the *Average Real GDP Per Capita Difference* on total electoral volatility.
    - $H_1$ = There is a negative relationship between the *Average Real GDP Per Capita Difference* and total electoral volatility.
- Voters likely form rational-expectations type models, where they use information about the economy to forecast what will occur under different scenarios (i.e., electoral alternatives). If the information is inconsistent or unreliable, voters' confidence in their ability to forecast outcomes without error will be diminished and they are more likely to go with the status-quo (i.e., be risk-averse in terms of

electoral choices), even if the status-quo was characterized by poor economic performance.

  - $H_0$ = There is no effect of a change in the *Standard Deviation of Real GDP Per Capita* on total electoral volatility.
  - $H_1$ = There is a positive relationship between the *Standard Deviation of Real GDP Per Capita* and total electoral volatility.
  - $H_0$ = The effect of a change in the *Standard Deviation of Real GDP Per Capita* on total electoral volatility is constant.
  - $H_1$ = The effect of a change in the *Standard Deviation of Real GDP Per Capita* on total electoral volatility is not constant.

- The presence of uncertainty about alternatives – or within-party system instability - dislodges the traditional theoretical link between economic outcomes and voter behavior and results in a rational decision-making process in voters where they are more likely to 'accept' poor economic performance.
  - $H_0$ = The effect of a change in the *Standard Deviation of Real GDP Per Capita* on total electoral volatility does not partially depend on Within-Party System Consistency.
  - $H_1$ = The effect of a change in the *Standard Deviation of Real GDP Per Capita* on total electoral volatility partially depends on Within-Party System Consistency.

## Methodology

The panel data set was unbalanced as each cluster (i.e., country) had elections in years that were non-sequential; thus, there were 'gaps' in the year time-unit, despite there being no missing data for all cross-sections. Estimates for the model were derived using fixed effects OLS regression, with robust standard errors. A Hausman test (p=0.0, Chi2=33.98) produced a large and significant statistic, therefore the null hypothesis that both fixed effects and random effects estimators are acceptable is rejected in favor of the alternative hypothesis that fixed effects estimators are more consistent.

## Results & Analysis

### *A Note on Interpreting Effects on the Dependent Variable*

Before analyzing the results, it is important to consider what the dependent variable – a Pedersen Index value – represents with respect to the topics of electoral volatility and the economic voter. First, the Pedersen Index provides a measure of the net percentage change in vote shares. It is not specific to the incumbent vote share, and thus, it has some limitations in terms of testing any economic voter hypothesis. There are many different pathways that can produce one of two outcomes – a higher or lower index value – as one moves from the previous election to the current election. These pathways are outlined in Figure 7 and 8 below. From analyzing Figures 6 and 7 below, it becomes evident that there are certain parameters related to the incumbent and their competitors that condition which pathway leads to the observed outcome in the dependent variable.

Low Pedersen Index values where the incumbent was competitive can be produced in two scenarios. Either the incumbent had a very large vote share (e.g., ~65%

or higher) in the previous election and stayed competitive, or the incumbent had a relatively small vote share (e.g., ~30% or lower) and stayed competitive.

*Figure 6. Pathways for High Values of the Pedersen Index*

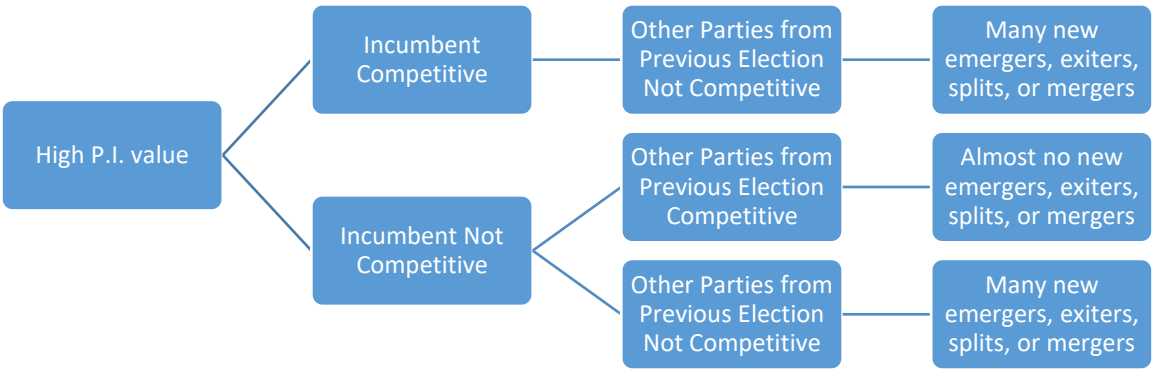
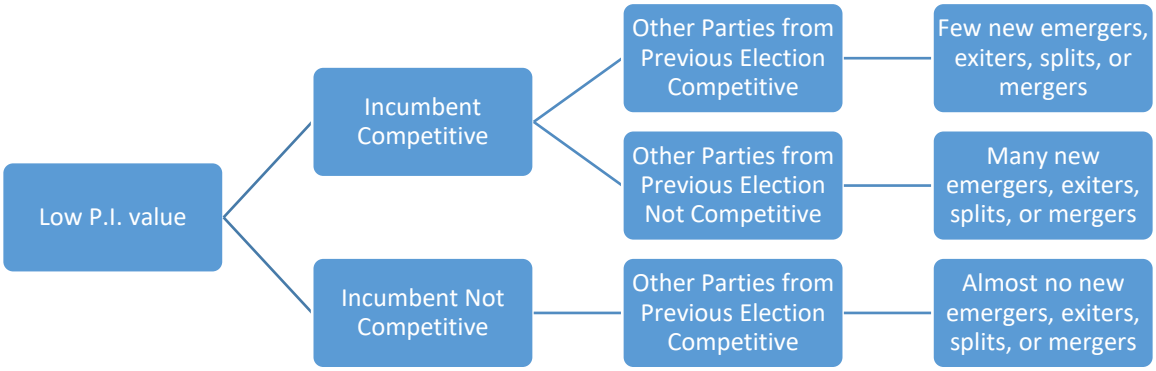



*Figure 7. Pathways for Low Values of the Pedersen Index*




In the small vote share scenario, it is feasible to have low Pedersen Index values only when there is consistency within the competitor party structure from the previous to the current election. In the large vote share scenario, it is feasible to have low Pedersen Index values even if there is complete turnover in the party structure outside of the

incumbent from the previous to current election. Alternatively, low Pedersen index values where the incumbent was not competitive are still feasible, but *only if* two conditions are met simultaneously. On the one hand the party structure outside of the incumbent's party must remain virtually unchanged, and on the other, the incumbent's vote share in the previous election must be on the lower end (e.g., ~30% or lower). Thus, there are two general parameters that define the pathway taken to low Pedersen Index values; the incumbent's vote share in the previous election and the consistency of the party structure outside of the incumbent's party.

High Pedersen Index values are produced through combinations of these two parameters as well. In the case where the incumbent was competitive, only one scenario is plausible. In this high Pedersen Index-competitive incumbent scenario, the incumbent's vote share was relatively small in the previous election and the party structure outside of the incumbent's party experienced high levels of change. The other pathways to producing high Pedersen Index values rest on the premise that the incumbent was not competitive in the current election, and two scenarios are possible. Either the incumbent had a very large vote share (e.g., ~65% or higher) in the previous election and lost a significant amount of vote share - or all of it (as in the case of a party exit, merger, or split) - or the incumbent had a relatively small vote share (e.g., ~30% or lower) in the previous election and received a similar vote share in the current election. In the non-competitive high vote share scenario, it is feasible that the party structure outside of the incumbent didn't change much or changed significantly. In this case, it is the reallocation of vote share *from* the incumbent party *to* the same or different competitor parties that

results in the high Pedersen Index value. In the non-competitive low vote share scenario, it is also feasible that the party structure outside of the incumbent didn't change much or changed significantly. In this case, it is the reallocation of vote share *among* the same or different competitor parties that results in the high Pedersen Index value.

Thus, the value of the dependent variable in this study – Pedersen Index – can vary based on two basic parameters – incumbent vote share in the previous election and party structure outside of the incumbent's party – but that variation isn't systematic. That is, the Pedersen Index doesn't depend systematically on incumbent vote share in the previous election, the change in incumbent vote share from the previous to the current election, or the party structure outside of the incumbent's party. However, due to the fact that significant change within the party structure outside of the incumbent will tend to lead to higher values of the Pedersen Index, isolating it within the model is an important step for being able to focus on other dynamics that condition the effect of party system change on Pedersen Index values.

Second, the Pedersen Index is calculated as a percentage that is represented in decimal form. This means that the coefficient on Within-Party System Consistency – a variable that measures the consistency of parties represented from the previous to the current election, and that is also measured as a percentage in decimal form – must be interpreted as a 'percentage point' effect. That is, a one-unit (i.e., percentage-point) change in $X$ has a $\beta$ percentage point effect on $Y$.

*Regression Results*

Fixed effects regressions were run on five different models. Each model had 49 observations across 9 groups or countries. Estimates for coefficients on variables included in the model are presented in Table 6 below.

It was necessary to drop the Statist Character variable due to multicollinearity and also because there isn't solid theoretical support for supposing a direct causal effect on the dependent variable, even though Roberts (2014) have provided ample evidence that this political characteristic describing the 'starting point' of institutional conditions prior to deepening economic ties through trade and investment with foreign countries is an important consideration when evaluating the long-term trajectories of economic performance across Latin America and how those trajectories have shaped an overall shift in support from centrist to leftist-populist based parties and candidates.

A baseline model was run to test how changes in more traditional measures of salience – which typically measure only short-term changes in growth or inflation rather than variability in these outcomes over the entirety of an incumbent's tenure – coupled with party consistency, proposed in this study to be a political factor that conditions voters' sensitivity to economic outcomes, effected overall electoral variability as measured by the Pedersen index. Not surprisingly, the coefficient on the traditional measure – the one-year delta between the growth rate of RGDP – was not significant and the magnitude of the effect was extremely small. This result is expected because the economic voter hypothesis is commonly expected to materialize *only in terms of the incumbent's vote share*. Changing the dependent variable to a measure of total electoral volatility diverges from traditional economic voting models; in short, recent changes in economic performance should have some impact on total electoral volatility because

there should be a correlation between variability in the Pedersen Index and true cases of the retrospective economic voter, but that correlation is not systematic due to the sensitivity of the dependent variable to structural changes in the party system. Not surprisingly, then, the coefficient on Within-Party Consistency was highly significant and the magnitude of a 1% change was large. However, the sign of the coefficient on within-party consistency was unexpected. A 1% change in this variable would result in a .64% *decrease* in overall electoral volatility.

The next model introduced the variables theoretically linked to the measure of total electoral volatility as outlined in this study, while retaining the traditional measure of economic salience. While the significance and magnitude of the traditional measure didn't change substantially, the newly introduced variables – the average difference in economic performance between incumbent and their predecessor, the standard deviation of economic performance for the incumbent's tenure, and the interaction between the standard deviation of economic performance and within-party consistency – were insignificant, with only one – the standard deviation – having any magnitude of import. It was suspected that the insignificance of the key variables proposed in the theoretical framework outlined in this study was due to a misspecification of the key measure of economic salience.

The relationship between standard deviation of economic performance and total electoral volatility as shown in Figure 5 was demonstrated to have quadratic qualities; this type of relationship means that there is a maximum effect of the measure of standard deviation on the dependent variable. In simple terms, voters were suspected to be less sensitive to increases in economic variability *at higher levels of variability*, and

eventually, insensitive to any further increases in it. From a rational expectations perspective, such a relationship makes sense; voters can more easily perceive differences in variability relative to an 'expected' starting point than they can perceive subsequent increases in that difference. For example, if variability of real gross domestic growth rates was measured as 1.0 in the period prior to the incumbent, and the experience under the incumbent was 2.0, voters would notice such variability, as a one-unit change in the standard deviation of RGDP is quite large. But further increases, beyond 2.0, would have less effect as the distance from the voters' expectation increases. This hypothesis makes sense if we translate it to how voters' might actually perceive economic variability. Significant initial departures from expected levels of variability (e.g., a one-unit increase in the standard deviation) are most definitely noticed as voters' perceive the economy from being relatively predictable to relatively unpredictable. However, once that mindset has been produced, higher levels of unpredictability are less easily perceived, and even more so, less easily translated into direct action against an incumbent or the party system that voters might hold accountable for the variability (e.g., unpredictability).

Thus, the third model tested introduced the quadratic term for the standard deviation, and the results change significantly on all hypothesized variables of interest except the interaction term. Two results stand out. First, the sign on the coefficient for standard deviation changes from negative to positive, as hypothesized. Second, the magnitude of the coefficient on within-party consistency decreases by about 30%, suggesting that the more appropriately specified relationship of economic variation to total electoral volatility 'explains' a significant portion of the observed effect of within-party consistency. This observation further suggests that a more detailed specification of

how increases in economic variability *causes* an increase in total electoral volatility could shed light on why the sign on within-party consistency was opposite of what was expected.

Average Real GDP Per Capita Difference was dropped as the sign on its effect was opposite of what was expected, although the coefficient was extremely small (0.003). Deeper analysis of the proposed rational decision-making process also made it clear that the effect of the difference between the incumbent's predecessor's performance with regard to Average Real GDP Per Capita and the incumbent's performance on the same had no strong theoretical link to the subjective evaluations of recent economic performance - that drive voter behavior as proposed earlier in this chapter. The Average Real GDP variable measures relative - but still objective - differences and considers the incumbent's predecessor when that is *likely too long of a time horizon for voters to be making subjective evaluations about.*

In the fourth model, control variables proposed to explain some of the variation in total electoral volatility were added – namely, measures of the trade freedom and investment freedom index. Earlier, measures of these indices were hypothesized to be positively related to total electoral volatility as voters are likely to blame some part of the economic variability they experience on politicians' attitudes and policies toward openness to the rest of the world. These relationships were hypothesized based on the substantial record in the literature of positive relationships between openness and the rise of populist regimes, which often are elected due to their promise to increase social safeguards against the expected results of openness – namely sensitivity to capital flight, displacement of workers in various sectors, and rising income inequality. However, while

investment freedom was found to be highly significant, but of small practical import, trade freedom was found to be highly insignificant. Again, no measurable changes in the most of independent variables of import – standard deviation of RGDP, its quadratic, and within-party consistency – were observed, outside of a small reduction in the magnitude of the effect of within-party consistency on total electoral volatility. It is interesting, though, to note this reduction, as it further suggests that better specification of institutional and structural political conditions and the causal process through which they effect total electoral volatility would more accurately illuminate the true relationship between within-party consistency and the same. However, one major change did arise. The addition of trade freedom and investment freedom measures resulted in the coefficient on the interaction term between economic variability and within-party consistency becoming highly significant ($p = .04$) from a previously insignificant status ($p = .17$). This change in the significant of the interaction term can be explained by concluding that a) parties' policy preferences do affect how voters assess the alternatives to the incumbent, and b) voters are sensitive to 'starting' levels of openness in that they must hold politicians accountable for the labor market conditions that have arisen as a result of such policies (or the absence of sufficient policies related to social safeguards).

In the final model, trade freedom was dropped, as it was suspected that the issues voters are sensitive to are already captured by the investment freedom measure, given that capital flows are theoretically more responsible for the shifts in employment and income opportunities that voters experience than are trade policies. The final, 'reduced' model predicted approximately 55% of the variation in the value of the Pedersen Index for each election.

Table 6

*Fixed Effects Regression Results*

| **Variables** | **Baseline Model** | **Innovations Model** | **Max Effect Model 1** | **Max Effect Model 2** | **Reduced Model** |
|---|---|---|---|---|---|
| 1-YR Change in rGDP | 0.002<br>(0.855) | 0.00<br>(0.928) | | | |
| AVG Difference | | -0.010<br>(0.210) | | | |
| STDEV | | -0.137<br>(0.605) | 0.121**<br>(0.032) | 0.118**<br>(0.038) | 0.116**<br>(0.046) |
| STDEV2 | | | 0.012***<br>(0.005) | 0.011***<br>(0.008) | -0.011***<br>(0.008) |
| Party Consistency | -0.624***<br>(0.004) | -0.623*<br>(0.061) | -0.433*<br>(0.108) | -0.404**<br>(0.024) | -0.424***<br>(0.015) |
| Interaction | | -0.001<br>(0.979) | -0.096<br>(0.173) | -0.126**<br>(0.049) | -0.117**<br>(0.037) |
| Trade Freedom | | | | 0.002<br>(0.604) | |
| Investment Freedom | | | | 0.004***<br>(0.002) | 0.004***<br>(0.001) |
| Constant | 0.819<br>(0.000) | 0.841<br>(0.000) | 0.661<br>(0.000) | 0.233<br>(0.552) | .41.805***<br>(0.001) |
| Observations | | | | | 49 |
| R-Squared<br>• Within<br>• Between<br>• Overall | <br>0.316<br>0.830<br>0.420 | <br>0.347<br>0.831<br>0.423 | <br>0.045<br>0.700<br>0.460 | <br>0.600<br>0.522<br>0.545 | <br>0.595<br>0.566<br>0.553 |

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Given the reduced model, normality of residuals was confirmed (Skewness = 0.1988, and Kurtosis = 0.9793). While no heteroskedasticity was noticeable in the fitted versus residuals plot, robust standard errors were used due to the belief that misspecification could exist in the model, yet the observations are independent of one another both within and across clusters (i.e., countries).

## Analysis of Hypotheses

The first hypothesis argued that there is a negative relationship between the *Average Real GDP Per Capita Difference* on total electoral volatility. This hypothesis is rejected and the null accepted as the coefficient on *Average Real GDP Per Capita Difference* was significant, but small (0.03), and the sign was reversed. This outcome most likely means that the theoretical basis put forth in this study that voters have long term memories and are sensitive to long-term shifts in economic performance from one electoral period to the next is not soundly modeled by this term, and perhaps, not a valid proposition. Voters may indeed have long term memories and long-term trends in economic performance may be important, but the dynamics of how the voter assesses the incumbent's performance may not be strongly dependent on any *relative* characteristics of that performance (i.e., how the incumbent's performance compares to their predecessor's performance). This lack of dependence is likely the case because predecessors and their parties are either no longer relevant as an alternative, or they are relevant alternatives and the voter only uses their knowledge of the predecessor's performance in this particular case of an election where a predecessor (and not just their party) is a relevant alternative.

The second hypothesis argued that there is a positive relationship between the *Standard Deviation of Real GDP Per Capita* (during the incumbent's most recent tenure) and total electoral volatility. The null hypothesis that there is no effect of this variable on the level of electoral volatility is soundly rejected in favor of the alternative hypothesis, given the coefficient was large (.1168684) and significant (p=0.035). For a one unit

increase in the *Standard Deviation of Real GDP Per Capita* the Pedersen Index *increased* by approximately 12% (higher values of the Pedersen Index represent more volatility). This finding is supported by basic microeconomic logic that supposes individuals must have reliable information about disposable income to make optimal decisions with regard to consumption and saving. In the event that voters feel uncertain about their ability to optimize consumption and saving decisions given the trajectory of the macroeconomy, they will rationally consider voting for an alternative to the incumbent's party, or even a newly formed or newly merged/split party.

Additionally, the third hypothesis argued that the effect of a change in the *Standard Deviation of Real GDP Per Capita* (during the incumbent's most recent tenure) on total electoral volatility is not constant. The null hypothesis that there is no effect of this variable on the level of electoral volatility is soundly rejected in favor of the alternative hypothesis, given the coefficient was large enough (-.0116432) and significant (p=0.008). This finding suggests that a one unit increase in the *Standard Deviation of Real GDP Per Capita* leads to a *decrease* in the Pedersen Index of approximately 10% (.1168684 + -.0116432). Thus, there is a diminishing characteristic to the relationship between *Standard Deviation of Real GDP Per Capita* and the Pedersen Index. This finding is supported by basic mathematical logic, as voters would likely be able to construct generalized understandings of variability in economic performance but would not substantially differentiate between one unit increases in *Standard Deviation of Real GDP Per Capita* and more than one-unit increases. Rather, voters might generalize in their assessments of economic performance and come to conclusions that economic

performance was ‘getting very unpredictable,’ but was ‘already generally unpredictable,’ precisely because one-unit increases in standard deviations represent a very significant change that would be readily perceptible to voters from year to year, *regardless of whether such changes represent positive or negative trends in the growth rate of RGDP*. In other words, at higher levels of variability in the growth rate of RGDP, voters become *less sensitive to the magnitude of variability*, while still being sensitive to the presence of the variability itself. This is one possible interpretation of this finding, but another key implication that ties the impact of economic variability on net vote share change to the presence and magnitude of party system change will be explored in Chapter 3.

The significance of the results for both *Standard Deviation of Real GDP Per Capita* and its square is that they strongly support the premise that inconsistent or unreliable economic performance matters to voters, perhaps just as much or more than absolute levels do. Thus, this finding supports the call for more large-N and small-N research into the economic voter phenomenon to incorporate measures of volatility in economic performance, and to specify the precise mechanisms through which economic uncertainty – predicted as an outcome of variability – impacts voter behavior across different electoral contexts.

However, the fourth hypothesis in this study was that effect of a change in the *Standard Deviation of Real GDP Per Capita* on total electoral volatility partially depends on Within-Party System Consistency. This hypothesis was formed based on the premise that volatility in economic performance decreases voters’ confidence in their ability to forecast economic outcomes without error, introducing a degree of uncertainty about

whether they should vote for the incumbent party or now. The null hypothesis that there is no interaction effect between *Standard Deviation of Real GDP Per Capita* and *Within-Party System Consistency* is soundly rejected in favor of the alternative hypothesis, given the coefficient was large (-.1172532) and significant (p=0.037).

Despite the model demonstrating robustness with regard to goodness of fit and misspecification tests, there was a theoretical mismatch with the sign on the interaction effect as well as the main effect of *Within-Party System Consistency* on the Pedersen Index. We see that the effect of a one unit increase in the *Standard Deviation of Real GDP Per Capita* depends on the value of *Within-Party System Consistency*. In the complete absence of party system consistency (i.e., 0%) where there is complete turnover in the party system, the effect of a one unit increase in economic volatility (*Standard Deviation of Real GDP Per Capita*) on electoral volatility (Pedersen Index) – .1168684*(1) + -.0116432*(0) – is positive and fairly significant, in the range of 11%. In this example, the effect of economic volatility on net vote share change was neither increased nor decreased in the face of an extreme party structure turnover. But, for extremely high levels of *Within-Party System Consistency* (e.g., 100%) where there is no turnover in the party system, the effect of a one unit increase in economic volatility (*Standard Deviation of Real GDP Per Capita*) on electoral volatility (Pedersen Index) - .1168684(*1) + -.0116432*(1) + -.1172532 – gets entirely negated, and in fact, becomes negative. Thus, an *increase* in party consistency (e.g., a lower level of confidence in voter's proscriptive ability with regard to assessing alternatives) is correlated with a *decrease* in the net vote share change, an unexpected outcome. In sum, the model may

have accurately detected correlation between party consistency and economic volatility, and net vote share change, but not causation.

Whether or not the hypothesized decreased confidence in alternatives matters to voters was suggested to depend on the electoral context in which that volatility occurs. For example, voters were hypothesized to be more likely to become risk-averse when there was uncertainty in electoral choices (e.g., a lack of consistency in party structure). Thus, voters – in the face of *both* economic volatility and volatility in party structure (i.e., uncertain alternatives) were hypothesized to be *more likely to tolerate* an incumbent party's poor economic performance (i.e., become less sensitive to unpredictability in the growth rate of RGDP). But the negative sign on the interaction term as well as the party consistency term were the opposite of what one would expect if the 'risk-averse' hypothesis were true. In other words, the 'risk-averse' hypothesis proposed that voters will tend to punish incumbent parties for economic performance that is inconsistent, but the likelihood that they do, and the degree to which they do so, will tend to decrease with lower levels of consistency in the party system. The results of the regression – specifically, the signs on the political consistency and interaction term – indicate this logic is not supported.

Typically, such a finding on a variable that is key to the theoretical premises of a study would be cause for suspecting spurious correlation - a relationship that statistically appears to be causal is in fact, not – and significantly reworking the theoretical foundations and model specification of the study. However, in the context of this particular study, it would appear that there is an unmodeled variable related to whether

voters hold incumbent parties responsible for economic volatility. Again, such a conclusion would have normally led to a re-specification of the model with an updated data set, along with a new theoretical proposition supporting the inclusion of those new variables into the model. However, after careful analysis, and in consideration of the goodness of fit and results of misspecification tests, it seems plausible that there is a set of theoretical conditions where there should, indeed, exist a negative relationship between party consistency and the interaction term and the dependent variable. These conditions are best explored via process-tracing of specific cases, which will be the focus of Chapter 3.

The findings above can be interpreted as non-supportive of, but not refuting the notion that the presence of uncertainty about alternatives – or within-party system instability - dislodges the traditionally proposed retrospective theoretical link between negative economic outcomes and incumbent electoral performance. Some of the reasons why such a notion can't be refuted is that the key economic measure of 'performance' is actually a measure of variability, and as such, is insensitive to whether or not economic trends were generally positive or negative (either on average across the entirety of the incumbent's recent tenure, or in chronological sequence from year-to-year in that same time frame). Another possibility that will be explored in Chapter 3 is the notion that uncertainty about alternatives was correctly hypothesized to play a role in the rational process utilized by voters to determine their voting behavior, but incorrectly hypothesized to play a 'necessary' role. In other words, it is feasible that 'necessary' conditions for retrospective economic voting behavior may only *necessarily* include economic salience

and voters' ability to proscribe accountability onto the incumbent's party, and that party system consistency only plays a role when certain conditions of salience and accountability hold true.

## Summary

The main findings support the idea that economic volatility – as compared to absolute levels – matters to voters. However, they don't offer support for the risk-adverse theoretical model proposed that intended to explain when voters would use this economic information in a typical reward-punishment economic context. More precisely, further theoretical research and model building is necessary to construct an economic voter model where 'risk-averse' behavior is determined by the degree of within-party system consistency. Specifically, theoretical linkages proposed between within-party system consistency and voters' ability to use forward-looking rational models to predict outcomes of the electoral field need to be refined in terms of better understand if, how, and when, within-party system consistency factors into voters' rational decision-making, especially considering the current study didn't incorporate a measure of accountability into the model or specify any theoretical mechanisms through which accountability would play a role in determining voting behavior.

That said, the focus in the economic voter hypothesis literature on incumbent vote share as the outcome of interest should expand so that studies give more credence to the dynamics of how voters' sensitivity to economic variability affects the type of voting model they deploy.

# CHAPTER IV – THE 2018 BRAZILIAN PRESIDENTIAL ELECTION: A CASE STUDY

## Introduction

In this chapter, I will conduct a case study on the 2018 Brazilian presidential election using process-tracing; this case represents a typical case predicted by the model with regard to economic volatility, yet this particular case represents an atypical case as predicted by the model with regard to party system volatility. The primary purpose of this case study is to conduct both theory testing and theory building using small-N qualitative research methods.

### *Methodological Considerations*

*Defining Research Expectations* Mixed-methods research strategies have been used for a long time in social science research, but they underwent a significant shift after the publication of King, Keohane, and Verba's Designing Social Inquiry: Scientific Inference in Qualitative Research in 1994. According to Mahoney (2010, 120), they

> "popularized many methodological terms and ideas … and [attempted] to codify each step in research design … [emphasizing] that "mainstream" quantitative research employs superior methods and that [it] could benefit from adopting these methods …"

But, as Lieberman (2005) points out, this push to apply techniques and principles of statistical analysis to qualitative research brought about a backlash by proponents of the value of methods of qualitative analysis as being unique; in short, they argued that qualitative analysis had the unique ability to flesh out causal processes associated with cross-national large-N studies in a way that statistical techniques simply couldn't do. Rather than simply perpetuate the methodological debate among scholars, some such as

Bennett (2022; originally presented in 2002) argued for integrating statistical and qualitative analytical methods in ways which increased the explanatory and exploratory power of both. The 'mixed-methods' literature saw scholars seeking ways to integrate regression analyses with case study methodology in a research design, as is evidenced by Lieberman's (ibid) contribution to the literature with his outline of how to conduct *nested analysis*. Others, such as Brady and Collier's *Rethinking Social Inquiry: Diverse Tools, Shared Standards* (2004) and Ragin's *Redesigning Social Inquiry: Fuzzy Sets and Beyond* (2008) elaborated on quantitative methods that relied on set-theory logic rather than statistical analysis; these scholars espoused the benefits of alternative quantitative methods for Large-N analysis such as Qualitative Comparative Analysis (QCA) and Fuzzy Set Qualitative Comparative Analysis (FSQSA).

Many scholars have held the view that Small-N research methods necessarily play a very important role in theory testing and building and are not simply methods for complimenting statistical analyses (Lieberman, 2005; Brady and Collier, 2004; Brady, Collier, and Seawright, 2008; Ragin, 2008). But as Lieberman (2005, p. 437) notes, in the early 2000s there was still a general lack of "direction about how to gather additional research in the SNA." Whether Small-N methods were combined with Large-N regressions or Large-N set-theoretical approaches based on analyzing sets of conditions sufficient and necessary for particular outcomes to occur, the lack of guidance, or more correctly, the lack consensus on established processes for linking Large-N and Small-N methodologies, resulted in significant variation in how researchers executed process-tracing. Naturally then, research began appearing on specific ways to integrate regression

analysis with process-tracing (Back and Dumont, 2007; Seawright and Gerring, 2008; and Rohlfing, 2008) as well as ways to integrate set-logic-based approaches with process-tracing (Rihoux and Lobe, 2009; Ragin and Schneider, 2011; Beach and Rohlfing, 2018).Out of this research, three primary points of consensus evolved around process-tracing; what epistemological goals are feasible to accomplish, how to select cases based on those goals, and what constitutes acceptable data within those orientations.

*Defining Process Tracing* As stated earlier, one of the major mixed-methods approaches to both explaining and exploring causal relationship was to integrate a case-study method known as process-tracing with Large-N regression analysis. The consensus in methodological research reached in the late 2000s about process tracing is that it is the identification of a "process whereby causal forces are transmitted through a series of interlocking parts of a mechanism to produce an outcome (Beach and Pedersen, 2013, p. 40)." The emphasis here is on the 'series of interlocking parts,' which together constitute the entire 'causal mechanism.'

Bennett and Checkel define process tracking as the "examination of intermediate steps in a process to make inferences about hypotheses on how that process took place and whether and how it generated the outcome of interest (2014, p. 6). The highlight the confusion that can be caused by the use of the term 'intermediate steps' because researchers are used to thinking of causal independent variables and caused dependent variables. To clarify, they stress that intervening variables are caused by independent variable but have the quality that they 'transmit' this causal force (originating with the independent variable) to "subsequent intervening variables and ultimately through them

to the dependent variable (ibid, p. 7).” Thus, for them, process tracing involves identifying these intervening variables that at once are independent of the dependent variable yet at the same time necessary for the independent variable to transmit its effect to the dependent variable. As such, they prefer to call the interceding variables that transmit the causal effect of the independent variable ‘diagnostic evidence.’ As an example, they note how data on how individuals explain their actions may provide evidence on their motives, but not independently affect the outcome of interest.

It can be challenging to think of ‘diagnostic evidence’ as truly independent of the dependent variable. In one sense, this is because all intervening processes are necessary for the transmission effect to occur, and for that reason it is easy to assign causality to them. For example, the last step in the causal chain between the independent variable and dependent variable *is* directly responsible for the ultimate *transmission* of the independent variable’s effect on the dependent variable. In short, researchers must carefully determine whether a proposed intervening step, or component of the overall causal process, is a necessary or simply sufficient condition for the causal process to culminate in the observed behavior of the dependent variable. The claim of the independence of intervening diagnostic evidence is akin to making the statement that voters’ feelings about the state of the economy between an election has no independent effect on the way they will vote in an upcoming election. While it may be logical to assume that it is not *the only* factor that would affect how they might vote, it is illogical to conclude that it has no contribution to the ultimate impact. Rather, in this example, suppose one theorized that the voter’s behavior was determined by a cumulative

assessment of every data point they retained in their memory about the state of the economy. If such a process of producing a cumulative assessment were hypothesized as an imprecise process of estimating a moving average based on what the memory can recall, one could make the claim that each data point on the voter's feelings about the state of the economy in the period between elections constitutes diagnostic evidence. The assessment was determinative, but in an indirect manner, as it only contributed to the causal process linking the state of the economy and voter behavior during the election; however, it didn't independently affect the voting outcome.

Due to the tendency of researchers to assume a degree of causality when using the term 'intervening variable,' Bennett and Checkel (2014, p. 7) refine their definition of process tracing to "the analysis of evidence on processes, sequences, and conjunctures of events within a case for the purposes of either developing or testing hypotheses about causal mechanisms …"

Alternatively, Beach and Rohlfing (2018, p. 7) define a causal mechanism as an explanation that "describes *how* a cause (or conjunction of causes) produces or contributes to an outcome." They (ibid) note that a useful way to conceptualize a mechanism is to think of it as an entity (or entities) engaging in an activity (or activities). In this line of reasoning, a mechanism consists of entities – be they individuals, organizations, demographic groups, states, etc. – engaging in specific actions which transmit the causal process in the overall set of interlocking parts. For example, if a voter's behavior at the ballot box is in part determined by whether they experienced economic volatility in the period before the election, a causal mechanism should identify

what action or series of actions the entity (voters) engaged in that were necessary, or sufficient, for them to incorporate economic information into their voting behavior, and how those actions are sequenced in time.

*Mechanism-Centered v. Condition-Centered Research Designs* Importantly, Beach and Rohlfing (2018) note that there are substantial disagreements in the methodological scholarship over what constitutes an actual 'causal mechanism.' To this end, the propose a bifurcated typology of research goals as they relate to the primary task of identifying and elaborating on causal mechanisms; research designs that are 'mechanism-centered' and those that are 'condition-centered.' In the former, researchers explicitly lay out the hypothesized causal mechanism linking the independent and dependent variables. In the latter, researchers look for pieces of evidence that provide clues about the mechanism at play, but don't offer an explicit theory for the mechanism. They admit the distinction is not a mutually exclusive one and that both types of designs are complimentary – and often, integrated within a single analysis.

*Positivist v. Interpretivist Research Designs in Process Tracing* Vennesson (2012) notes that while process tracing has been clearly identified as an "indispensable" element of case study methodology, the most systematic treatment of it up to the time of publication of his article – George and Bennett (2005) - primarily framed it as a within-case methodology best suited for positivist research aims and highlighted its shortcomings as a method for interpretivist research aims. However, Vennesson (ibid) claims that process tracing can be utilized in both types of research designs, allowing researchers to combine an emphasis on identifying 'what' causes exist and postulating 'how' those causes work to produce a specific outcome.

Positivist applications of process tracing emphasize the verification of theoretically hypothesized links between different causal factors by seeking evidence of what would be expected to be observed if the causal process of the theory is correct (Vennesson, 2012; Mahoney and Rueschemeyer, 2003; and George and Bennett, 2005). Alternatively, such efforts may aim at verifying the absence of such a link, and thus the need to reconceptualize the casual process from the basis of new or expanded theoretical foundations. In this sense, positivist process tracing aims to confirm the validity of the outcome and causes delineated in a regression or other form of logical, causal process model. One type of question a researcher might employ to this end is whether there is evidence that the rational framework with which agents are hypothesized to engage in – which is modeled as the relationship between one or more independent variables and an outcome variable in Large-N statistical research - is substantiated by survey or other data. In short, the positivist aspect of process tracing focuses researchers on discovering evidence of causal processes hypothesized to provide the links between independent variables and an outcome. When combined with Large-N statistical analysis, positivist process tracing is focused on substantiating the plausibility of theoretical links between causal factors and an outcome identified in a regression.

On the other hand, interpretivist applications of process tracing focus on finding evidence of the ways in which the proposed link between variables manifests as observable phenomena and the contexts within which those intervening links occur. In sum, when using process tracing as a mixed or nested method for Small-N research after conducting Large-N regression analysis, positivist process tracing seeks to validate the

hypothesized causal role of each variable included, while interpretivist process tracing seeks to provide a detailed explanation of how those causal processes are linked together in a consistent, logical chain that leads to the predicted outcome.

The description above of the aims of process tracing naturally leads to a definition of what constitutes appropriate and relevant 'data,' when seeking evidence to validate the choice of an independent variable and the causal mechanism through which that variable is hypothesized to have its impact. But to answer this question, it is first necessary to evaluate the characteristics of 'agency' assumed in the theory, on which any proposed casual mechanism must necessarily rest.

*Agency-Oriented v. Structurally-Oriented Mechanisms* The task of identifying causal mechanisms through process tracing should be guided by a close analysis of the type of theoretical argument being made – which will fall somewhere between individual level agency-oriented models and large-scale process level structurally-oriented models (Lieberman, 2005). In the former, the theory would predict the existence of evidence that deliberate action and calculations were made at the individual level. Such a theory would need survey, interview, or other historical narrative type of data in order to validate causal mechanisms. In the latter, the theory would predict that because actors were not very aware of the contexts that shaped their actions one would predict the existence of evidence largely at the macro level. Thus, the researcher must have a good understanding of the type of model they are employing in order to select evidence appropriately.

The challenge here is that it in agency-oriented models, hypothesized rational decision-making can be interpreted as requiring evidence of voters consciously factoring

in specific information into their voting behavior. As Bennett and Checkel (2014) note, many rational-choice theorists believe that process tracing is a method that should reveal whether their hypotheses are consistent with the actual cognitive processes used by individuals to make decisions, despite concerns voiced by some researchers that the origins of process tracing in cognitive psychology – where the focus was on errors and biases – made process tracing incompatible with rational-choice theory.

In juxtaposition to agency-oriented interpretations of what a causal mechanism is - and what is required by researchers to demonstrate it - is the structurally oriented framework. In this framework it is not necessary to specify or analyze a specific chain of interlocking entities and activities. In sum, there are many factors, including the limited availability of data, which may force a researcher to identify only a single event, occurrence, or process that links the causal influence with the predicated outcome. This type of analysis might best be described as 'condition-centered' designs, as "the systems' understanding makes clear that the collection of isolated pieces of evidence falls short of constituting a full *explanation* of the mechanism (Beach and Rohlfing, 2018, p. 9).

By clearly identifying the type of evidence that would be expected given the degree of agency v. structure in the explanatory model, researchers can better focus on the precise type of causal mechanism (and associated evidence or data) they will need to validate the theoretical assumptions of the model.

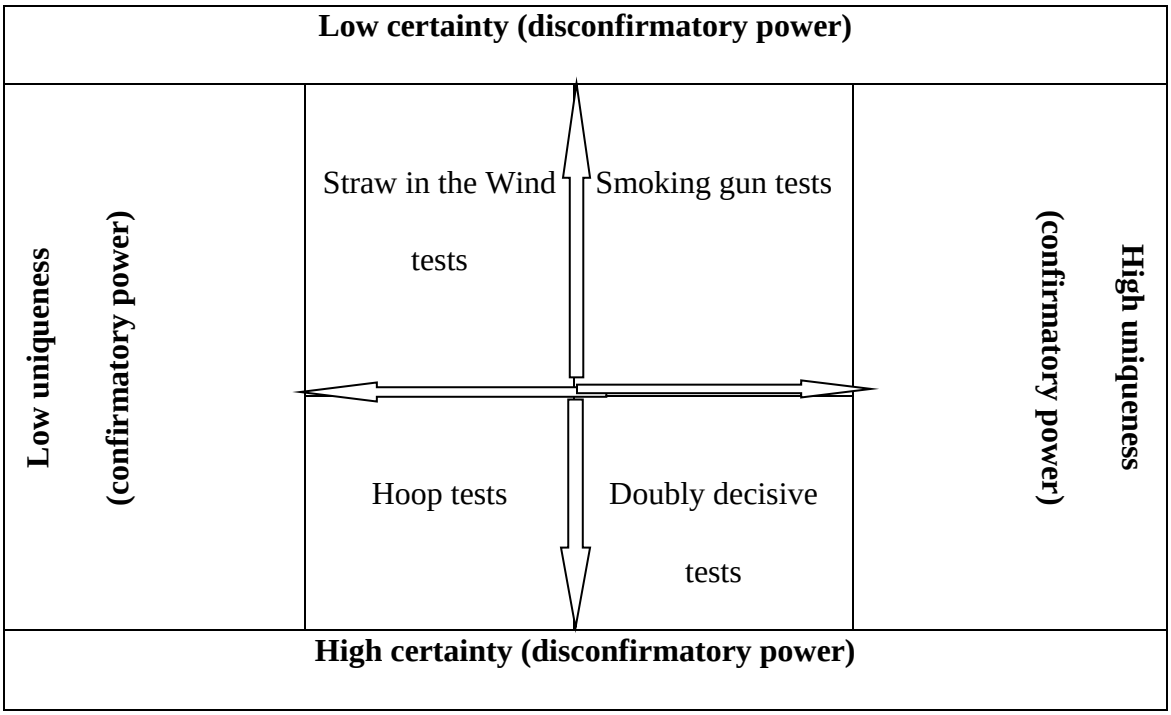
*Establishing an Empirical Basis for Process Tracing* Wauters and Beach (2018) note that causal mechanisms – to be considered robust – must have an empirical basis. That is, researchers need to outline empirical expectations and what they'd expect to be

able to observe if a proposed mechanism linking a cause to an outcome was reflective of reality. These empirical expectations are referred to as 'observable implications.' For each observable implication (i.e., step) in the theoretical mechanism, then, researchers must aim to identify the specific data to types of data that verify if that expectation is met. To this end, the authors offer two criteria, uniqueness and certainty. Uniqueness refers to the degree to which researchers are certain that an alternative theory couldn't offer a similar empirical prediction. That is, researchers are "looking for predictions that are unlikely to hold unless the theory [they] are investigating is operating (ibid, p. 292)." The more unique, the more 'confirmatory power' the proposed causal mechanism has. Certainty refers to the degree to which researchers are certain that finding the predicted evidence is necessary to sufficiently support the theoretical mechanism. These two criteria, when taken together, create a quadrant of tests researchers can conduct to evaluate if the evidence they proposed as a reliable way to assess the presence of a particular aspect of the causal mechanism is sufficient for validating the role that aspect of the causal mechanism is theorized to have. These tests are presented in the chart below.

Qualitative researchers employing process tracing can use Waters and Beach's (2018) constructs of uniqueness and certainty to ensure they systematically evaluate the central entities, activities, and transmission processes involved in any proposed causal mechanism. While the theoretical concerns that shape the types of entities, activities, and transmission processes envisioned by the researcher to play a causative role in the mechanism will determine what 'observable implications' (i.e., empirical expectations)

will be formed, the availability of data that satisfies both high uniqueness and certainty may be limited.

*Figure 8. Confirmatory Power of Tests When Process-Tracing*




Source: Wauters and Beach (2018, pp. 292)

It is important to note what these types of tests can and can't do. Generally speaking, they can't validate the causal mechanism, unless a smoking gun is found. This will be rare. More often, what they can do is help to identify if the failure to find the data hypothesized to reflect the causal mechanism is enough to disconfirm the theory or whether there are other sources of data that could be identified and sought. Thus, how researchers define the observable implications plays a pivotal role in the degree to which they can use process tracing to validate a theoretical set of causal mechanisms. In a practical sense, a researcher needs to establish a target with regard to the degree of

uniqueness they seek in the data and how confident they wish to be that the existence of the data constitutes a confirmation of the primary theoretical mechanisms at play.

However, the way in which various tests are employed depends on the relationship between the Large-N cross-case analysis and the Small-N within-case analysis. In this study, I began with a Large-N regression analysis, and the purpose of the Small-N process tracing is to both test a theory for a robust result that supported a hypothesis and reconceptualize or build another theory for a robust result that had the wrong sign, and thus, didn't support a hypothesis.

*Small-N Theory Testing v. Theory Building & Case Selection* Lieberman (2005) outlines a process for combining Large-N regression analyses with Small-N process tracing. If the results are robust to a satisfactory level, he suggests that the process tracing focus on model testing. In this instance, one would select a within-case example that was 'on-the-line,' meaning the dependent variable was well predicted by the model. Bennett and Checkel (2014) concur, noting that theory testing uses of process tracing ask the researcher to examine the empirical expectations of the causal mechanism that transmits the effect of independent variable to the outcome variable.

On the other hand, Lieberman (2005) notes that if the results of the regression analysis are not robust or satisfactory, the process tracing should focus on model building. In this instance, one would select one 'on-the-line' and one 'off-the-line' cases to assess whether there is a feasible, coherent alternative model. From there, the researcher must determine whether it is possible to test the new model with a regression analysis. If it is not, then the analysis must conclude. If it is, then the model must be

specified and a new regression analysis should be conducted. Again, Bennett and Checkel (2014) concur, noting that theory building uses of process testing ask the researcher to examine evidence within a case to develop hypotheses that may explain the case, which in turn may lead to a new set of testable phenomena.

*Typology of Mechanisms and Observations for Testing Theory in Process Tracing*

At the core of Brady et. al's (2008) analysis of mixed methods lies the distinction between observations derived from Large-N cross-national datasets, referred to as "data-set observations (DSOs)," and observations derived from Small-N case studies, referred to as "causal process observations (CPOs)." In process tracing, the focus is on CPOs. Mahoney (2010) outlines three distinct types of CPOs that should be considered when testing theory using process tracing: Independent Variable CPOs, Mechanism CPOs, and Auxiliary Outcome CPOs.

Independent Variable CPOs (IVCPOs) are used to indicate the presence of the variable in a causal process. They are valuable in the sense that they can confirm the existence of a cause; that is, there is some debate over whether the cause (independent variable) might even exist. He (ibid) gives an example of the hypothesis that dinosaurs went extinct when a meteorite crashed into the Earth. Obviously, the existence of such a meteorite can't be directly confirmed. Thus, the cause is open to debate as to whether it even existed. But the presence of iridium in the layers of the Earth's crust increases the plausibility of the theory. However, it is important to note that the iridium itself is not hypothesized to be part of the casual chain between meteorite impact and dinosaur extinction.

Mechanism CPOs are used to confirm the existence of one specific part of a causal chain, running from independent variable to outcome. For example, suppose the meteorite theory was based on the idea that impacts cause global warming by releasing certain particles or chemicals into the atmosphere and that this warming then led to the extinction of dinosaurs by altering their food and water sources. In this case, scientists might expect to find evidence of a higher concentration of particles or chemicals that originated in the crust in the atmosphere during the period immediately following impact. Then, they might expect ice core samples dated to this period to provide such evidence. The focus for the researcher is not on the number of pieces of evidence to support the specific causal mechanism, but rather on the likelihood that such a piece of evidence would be found if the causal process had not occurred as theorized (i.e., if alternative explanations were true).

Auxiliary Outcome CPOs are used to provide confirmatory power to causal mechanisms by establishing expectations about what should occur *as a result* of the causal mechanism taking place. If a theory is true, then the question is what might occur simultaneous to or as a result of the outcome of the mechanism. In this sense auxiliary outcomes are like ‘markers’ or ‘traces’ of an event. Going back to the meteorite theory of extinction, if the atmospheric conditions leading to destruction of the dinosaur population were true, one might also expect to see die-offs in other species inhabiting the Earth at that time. If evidence of such an occurrence is found, this can serve to help confirm the plausibility of the theory.

*Methodological and Epistemological Approach to the Current Study*

When considering the issues described above, in light of the regression results in Chapter 2, it is necessary to outline the methodological approach to the types of knowledge I feel can be explored through process tracing. This process is greatly clarified by isolating the one explanatory variable of primary interest – the measure for economic volatility – from the other explanatory variable of interest – the measure for within-party consistency and its interaction term with economic volatility.

The regression results suggested a strong direct relationship between economic volatility - measured as the standard deviation of real growth rates for the time period an individual voter could both reasonably assess and hold the incumbent responsible for - and the degree of net vote share change (i.e., the level of the Pedersen index). Translated into simpler terms, this means that the greater the economic volatility the greater the degree – in the current election - of vote switching away from parties competing in the former election. Again, this relationship is not systematic with regard to the institutional characteristics of the party system. Instead, there are several possible pathways to producing the same outcome. These possibilities were outlined in Figures 7 and 8 in Chapter 2.

In short, an increase in the Pedersen index is not specific with regard to explaining the dynamics of party competition that led to the higher value. Thus, when hypothesizing the causal link between economic volatility and an increase in the Pedersen index, I made a theoretical assumption that voters tend to retrospectively vote, and that this tendency would show up in the regression as an overall positive, or direct, relationship between the

index and economic volatility. What I didn't hypothesize was any direct causal relationship between economic volatility and party dynamics, which I will return to later as a possible oversight. In the model I specified, economic volatility and party consistency were viewed as causally interacting. However, I didn't model party dynamics in the sense of modeling the characteristics of parties (e.g., new, merger, etc.) or the degree of competitiveness between them based on historical outcomes of previous elections.

Following Lieberman (2005), the robust results on this explanatory variable should lead to the selection of a single case for theory testing. There are two options here. I could adopt a mechanism-centered research design whereby the focus would be on explaining the 'interlocking parts' of the causal mechanism connecting X (i.e., economic volatility) with Y (i.e., Pedersen Index). Or, I could adopt a condition-centered research design whereby the focus would be on finding some evidence of a possible mechanism that accords with the overall theory, but not trying to fully specify all steps in the causal mechanism from X to Y. The degree of agency I assumed in my theory also comes into play here.

While voters were hypothesized to be sensitive to economic variability, they were never imagined to have calculated the standard deviation of real growth rates over the electoral period just prior to the current election. Instead, they were thought to build an imprecise, but accurate, sense that over that time period, economic performance was variable, rather than constant. Variability was then hypothesized to produce uncertainty. Is such a causal process agency-oriented or structurally-oriented, given that the measure

itself (the independent variable in the Large-N cross-case regression) was constructed in a way that utilized only macro-level information, and given that it was proposed to affect the behavior of voters through an imprecise, non-calculating manner? In short, could it be argued that instead of the level of precision afforded by interviews, historical narratives, or surveys that specifically asked about the likely impact of economic variability (or uncertainty) on their voting behavior, survey data capturing sequential measures of consumer confidence could sufficiently meet the evidence expectation? And if so, is it possible that such data could be used to explain part of a rational, yet only semi-conscious, decision-making process? In this example, is this level of data limited to confirming a condition, or it is enough to support the claim that one is laying out a specific causal process within a mechanism? The answer to that question lies precisely in how much I have equated 'rational' with 'conscious.' To that end, while the voters are only semi-conscious of the *way in which variability is calculated* they are assumed to be fully conscious of the *effects of such variability* – namely, perceptible *swings* throughout the time period in question in economic performance. Note the emphasis on the plural form of swing. It is the perception of a 'back-and-forth' character to the economy that I am suggesting produces a conscious sense of economic uncertainty.

Based on the assumptions I made about the degree of awareness or deliberateness with which voters perceive and then act upon information related to economic volatility, the research design for this variable will be condition-centered and positivist. That is, I will seek to find evidence of a condition (or piece of evidence) that I would expect to see if the general theory were correct, for the purpose of validating the plausibility of the

general theory. In this regard, it is necessary to define what type of evidence suffices and how I plan to test the evidence for confirmatory power.

I mentioned above that I suspect that sequential measures of consumer confidence could sufficiently meet the evidence expectation of conscious actors being aware of the presence of economic volatility. I propose that measures produced via Brazil's FGV Consumer Confidence Survey (available through Trading Economics website) can provide insight (e.g., evidence) of consumers being consciously aware of swings. The survey data is collected monthly, and the index measures the degree to which consumers feel confident about the general state of the economy and their personal finances. Note that I am not fully specifying how monthly measures of consumer confidence transmit the cause (i.e., awareness of economic volatility) to the outcome (i.e., Pedersen Index). Instead, I am simply noting a condition that I would expect to be present if the theory I propose is correct. Identifying such conditions will then serve to help create a more detailed outline of the specific steps in the causal mechanism linking the cause to the outcome, but that is beyond the scope of the current study.

Thus, the usage of consumer confidence index scores to assess whether the presence of voters' being aware of economic volatility falls into the Independent Variable CPO type of data point that can be used to test a theory. Recall that IVCPOs are used to indicate the presence of the variable in a causal process that may be debatable. I contend that it is definitely debatable whether voters consider volatility, particularly since using the standard deviation of past real growth rates makes the measure insensitive to whether the real growth rates were generally positive, negative, or swinging between both ends of

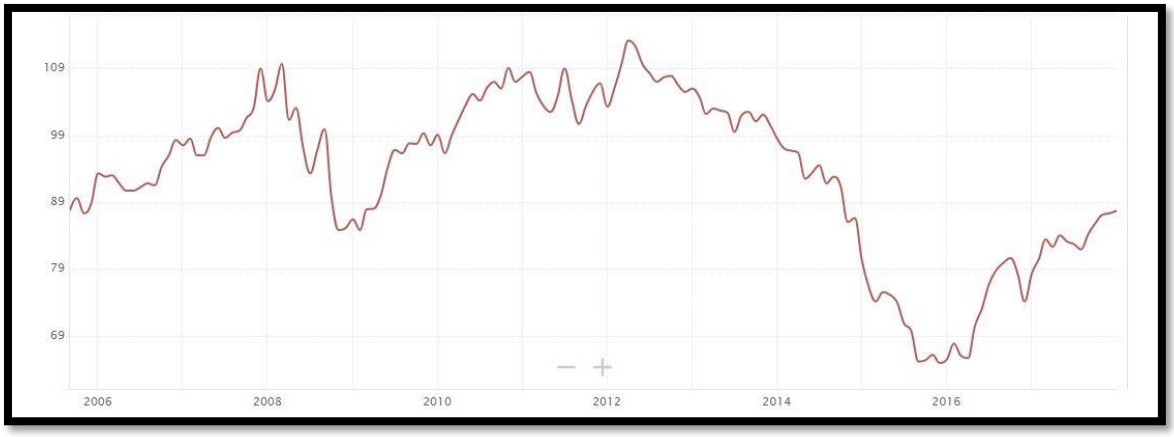
the spectrum. Therefore, the question is does 'economic volatility' even exist in voters' awareness, and the necessary follow-up question – again, for future research – is how such awareness transmits into specific behavior at the ballot box (i.e., the potential of switching votes away from the party one voted for in the previous election to a different part in the current election).

*Case Selection & Analysis*

*Economic Volatility* Now that I have outlined my approach to testing the plausibility of economic volatility as a causal factors that affects the level of net vote share change in an election, it is necessary to select a case. Going back to Lieberman (2005), when theory testing it is necessary to select an 'on-the-line' case. A good example of such a case is the 2018 presidential election in Brazil. In this election, economic volatility (or the standard deviation of RGDP) in the years between the 2015 election and 2017, was 2.21. This means that there was considerable volatility in the growth rates of RGDP in the time frame that accords with the period with which I proposed voters would be able to hold the incumbent party accountable for in the 2018 election. Another way to check if a 2.21 measure for economic volatility would be considered above normal for Brazilian voters is to compare it to historical averages of the same measure. As economic volatility for 2015-2017 was 0.857, it seems there is good support for concluding, objectively, that economic volatility did exist, and subjectively, that is was likely to have been perceived as such. But how can I confirm my expectations about the voters' perception of economic volatility as a 'problematic' development? Did they feel or experience sharp swings in terms of how confident they felt about the overall

state of the economy and their personal finances? The answer can be deduced from the information in the chart below.

*Figure 9. Brazil FVG Consumer Confidence Index, 2005-2020*




Source: Trading Economics (2022)

First, from 2015 to 2016, one can see that the confidence index dropped from the high-80s to the mid-60s, but then underwent a steep increase from the mid-60s in 2016 to the low 80s by late 2017. But then, another sharp decline occurs by the end of 2017 to the mid-70s. What this Independent Variable CPO suggests is that the condition of economic volatility being perceived by voters is plausible. The question of how they perceived it – as problematic – can also be answered using the same data. It was proposed in Chapters 1 and 2 that one of the major shortcomings of existing research on retrospective economic behavior was the fact that the majority of those studies only relied on variables measuring growth or inflation for the year prior to the election the effect was expected to be observed in.

But this presupposes voters have 'short-memories,' which I drew issue with. Instead, I proposed that voters have longer memories, capable of assessing (at a

minimum) the entirety of an incumbent party's performance, not just the tail end of their tenure. If this theory is true, one would expect a historical low series of values on the FGV Consumer Confidence Index to align with higher than usual measures of the outcome variable. Indeed, this is the case. The Pedersen Index for 2018 was .65, indicating that approximately 65% of the votes cast for parties in the 2014 election were switched to vote for other parties in the 2018 election.

Part of the high level of net vote share change observed in the 2018 election is certainly explainable by the fact that within-party consistency was only 30% in 2018, meaning that only 30% of the parties fielding candidates in 2018 were on the ballot in 2014. Specifically, there were only four parties fielding candidates in 2018 that also fielded candidates in 2014, while there were nine parties that were either new, or had split or merged from previously existing parties. However, given that two of the parties that fielded candidates in both 2014 and 2018 were parties that had dominated Brazilian politics for decades, a within-party consistency measure only means that four out of thirteen parties were repeating; it conveys nothing about whether those four parties held a large vote share in 2014. Examining vote share of the top two parties from 2014 to 2018 is quite revealing in this regard. Collectively, both of the top parties in 2014 received 75% of the vote, but only 34% of the vote in 2018. This indicates a massive public shifting away from them toward other parties. Again, examining the detailed variation in the outcome variable has provided some level of confirmation that the causal variable 'economic volatility' is plausible. The next step in terms of within-case analysis would be

to analyze available evidence to build more theory around the specific causal processes or sequence that transmits the causal effect of 'economic volatility' to net vote share change.

While the data here do suggest the theory presented in this research that volatility over the medium-term impacts how voters rationally decide how to cast their vote, it is important to note that they don't provide confirmatory power because the data is not very unique and has low confirmatory power. That is, data on consumer confidence scores only provides a straw-in-the-wind test, and as such, it only suggests the theory is plausible and should not be eliminated. But the discovery of trends in the data that adds plausibility to the 'economic volatility matters' hypothesis doesn't mean that alternative theories of economic voting that are myopic and focused on absolute changes in economic performance levels are weakened. In fact, because this kind of consumer confidence data could be expected based on a wide array of theoretical predications (both within the scope of research on economic voting and well outside of it), it has extremely low confirmatory power.

*Within-Party System Consistency* Based on the straw-in-the-wind level of support for the existence of a phenomenon labeled 'economic volatility' in voters' rational decision-making process, the question arises as to what types of data would lend plausible support for the theory that economic volatility matters when the condition of high levels of party system volatility exists. In my original theory, I proposed that voters might be reluctant to punish the incumbent party in the case where they felt uncertain about alternatives. In a traditional sense, parties serve the primary purpose of channeling individual preferences for the allocation of scarce resources into forms where collective

action can occur in an organized, and competitive manner. But what I observed in the regression results indicates that something about how Brazilian voters relate to political parties may not align well with the traditional understanding of the primary role of parties.

Table 7

*Model Predictions for Economic Volatility & Within-Party Consistency*

| Within-Party Consistency | Economic Salience | | |
|---|---|---|---|
| | None (STDEV = 0) | Low (STDEV = 1) | High (STDEV = 3) |
| Low (% repeat = 10) | **.376** | **.474** | **.671** |
| High (% repeat = 100) | **.074** | **.098** | **.131** |

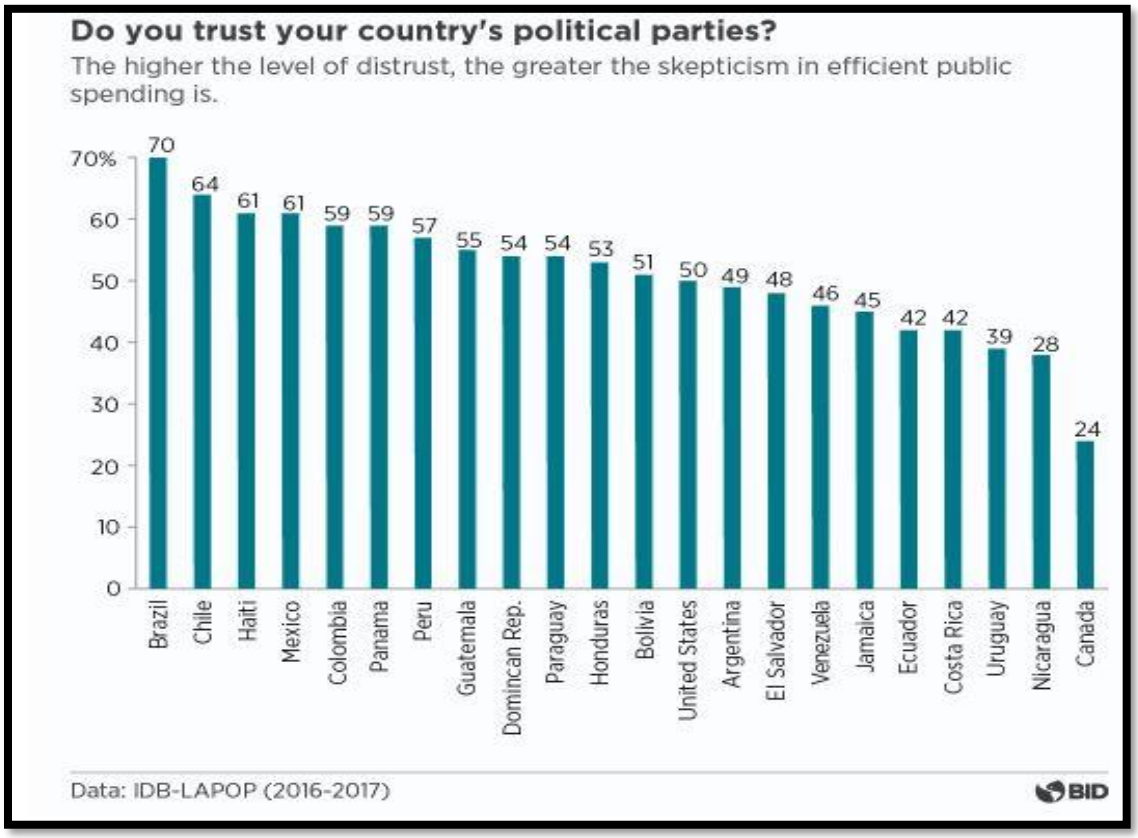
In Table 7, you can see two clear trends. First, lower (higher) levels of within-party consistency are correlated with higher (lower) levels of predicted net vote share change. In short, there is an inverse relationship between the percent of parties in the current election that also were represented in the previous election and the percent of votes that shifted from one party to another over the same period. That finding was clearly not in line with the original theory of how voters might curtail any retrospective voting tendencies when alternatives were less well known. The second finding clear in the table above is that a constant effect, regardless of the level of within-party consistency, is that net vote share change rises as economic volatility increases. What's

more interesting though is to ask why this relationship is also clearly differentiated by the level of within-party consistency.

If the traditional mechanism through which parties coordinate individuals into collective action has broken down, what would I expect to observe. In this scenario, I might expect to observe a high level of distrust in political parties. Theoretically, a high level of distrust in political parties might produce the opposite effect (in relation to the presence of economic volatility) that I originally theorized. In short, if voters are distrustful of established parties, then when within-party consistency is low, there is an array of parties (and candidates) that offer a new opportunity for establishing trust. As such, perhaps the presence of retrospective economic voting is emboldened by extreme party turnover in Brazil, precisely because voters feel they can't proscribe well with established parties but can at least make an effort to with newer parties. This is an oversimplified theory, but the aim here is simply to see if there is evidence that could support the development of a new theory. Such confirmatory evidence of the existence of trust in parties as a potential causal variable is present in the chart below. The question is specifically relating trust in political parties, and the data support the notion that there is low trust in political parties within Brazil.

The data below can also provide a quasi-hoop test for the alternative theory proposed above, whereby being able to jump through the hoop suggests that we haven't *disconfirmed* the proposed alternative theory, but we haven't established a high degree of confirmatory power either.

*Figure 10. Trust in Political Parties in Latin America, 2016-2017*




Source: Inter-American Development Bank, 2021

The lack of confirmatory power comes from the fact that this IVCPO has a low level of uniqueness; that is, the results showing a lack of trust in political parties are expected if the theory were true, but there are many different plausible alternative theories that would also expect to find low levels of trust in political parties. Furthermore, the lack of trust as evidenced in this data point has no explicit theoretical linkage to the outcome of net vote share change, and thus, the reversal of the sign on within-party consistency and its interaction term with economic volatility in the regression remains unexplained. However, if I were able to locate information – via survey, historical narrative, or interview – that supports the notion that low trust in political parties is

mostly true for established parties and less true for new arrivals to the political scene in Brazil, I might have the type of evidence necessary to establish a robust causal mechanism that could then be subjected to theory testing methods.

## Summary

Process tracing can be a useful method for both theory testing and theory building, but only when the researcher has a clear understanding of the type of causal processes (i.e., structural- or agency-oriented) that are reflected in the original regression model. Clearly identifying the type of causal processes theorized to be at work in the model helps the researcher to determine both the scope of the process-tracing - how robust of a causal mechanism they should seek to develop – and the types of data which should be expected and logical tests that can be carried out to add confirmatory power to the original theory or any alternative theories explored.

Close examination of the theoretical foundations of the regression model used in Chapter 2 suggested that structural factors affecting the economy were readily perceived by voters, but not directly. This led to the belief that there was a limit to the type of data that I could expect to find which would add confirmatory power to the original theory that economic volatility mattered to voters. In short, it led to a focus on locating an independent variable causal process mechanism rather than attempting to spell out an fully specified causal mechanism that linked all steps in-between the independent variable and the outcome. Initial evidence on consumer confidence trends reported monthly over the time period of interest lend some confirmatory power to the original

theory, but by no means provides a smoking gun or doubly-decisive finding that they theory would require to seriously challenge alternative hypothesis.

The same conclusion applies to the theory-building exercise related to party system volatility. The fact that the regression result on this variable and its interaction with economic volatility was robust, but produced an opposite sign as expected, signified that it is possible the model was correctly specified, but the theory explaining party system volatility's impact on net vote share change and on the effect of economic volatility on the same was incorrectly specified. The evidence related to voter trust in political parties only provides plausibility for this argument; it *does not*, however, provide any definitive confirmatory power for an alternative theory. In fact, it only provides a plausible direction for further research to be carried out for the purpose of building a more complete theoretical framework for predicting the negative relationship.

# CHAPTER V – CONCLUSION

In the Introduction to this dissertation, an idea was put forth that an effort to form a more general theory of economic voting behavior that applied across all variations of economic and political contexts had the potential to expand this field of research by illuminating ways in which variability (and any related uncertainty produced by it) might form a 'higher-order' of causality than directional and absolute level based measures of economic performance.

It was also proposed that not only did economic variability matter to voters, but that its effect on how voters behaved was conditioned by structural and institutional characteristics of the competitive electoral landscape – that is, the stability of the party structure from one election to the next. Furthermore, it was proposed that rather than focusing on how economic voting behavior affected incumbent (or opposition) performance, the dynamics of economic voting could be better understood – at a more general level – by studying how relative changes in the party system were produced by such economic and political variability.

In so doing, this research sought to open new doors for inquiry in this field by shifting the focus to relativistic causes and outcomes. While the statistical findings offered support for the hypothesis that economic variability could be conceptualized as a necessary causal condition for the economic voter behavior to be observed, and those same findings supported the hypothesis that this effect of economic variability was conditioned by the degree of party stability, the reversed sign on the latter indicated significant theoretical misspecification within the original model.

It is possible that the dataset relied upon for measuring political stability used an error-prone methodology for establishing whether parties running in a given election were represented in the previous election. This is not a trivial point. The sheer number of mergers and splits typical of Latin American party systems from election to election makes it extraordinarily difficult to assess with 100% confidence whether the measure of party stability had a high degree of external reliability. That said, even inconsistency with the way in which that measure was constructed using available data shouldn't have created enough variation in the dataset to completely throw the expected sign for that variable in the opposite direction to what was expected.

What is more likely is that the results from process tracing indicate a significant breakdown in the traditional linkage within the economic voting literature between parties and party systems and voter behavior. That is, if voters in Latin America don't trust political parties a-priori, then high levels of inconsistency within party structures wouldn't have the anticipated effect on the potential for retrospective, sociotropic economic voting, nor would they be theoretically consistent with the ability to prospectively assess the potential performance of opposition parties. Thus, two key features of the economic voting hypothesis break down: a) voters have no way of feeling confident about their ability to assess the potential economic performance of challengers to the incumbent, and b) voters' ability to hold incumbent parties responsible becomes diminished due to doubts voters can accurately ascribe economic outcomes to those parties. Indeed, voters may 'blame' parties and evaluate candidates in a more populistic

manner. But such a scenario would by default distort the predicted effect of volatility in party systems on the degree to which economic voting is observed in the data.

While process tracing helped to identify the lack of trust in political parties as a potential factor supporting an alternative theory that could explain the observed results, a causal mechanism for how party system volatility would transmit its effect on electoral volatility through distrust in political parties was not developed. It is feasible that perpetually high levels of distrust in parties create a condition whereby the newer the electoral landscape, the *less distrust* voters have in those parties, but this is far from being suggested simply by evaluating levels of trust. Rather, more research needs to be done to identify how distrust in political parties affects the 'conditional' nature of economic uncertainty's effect on electoral volatility.

Furthermore, while process tracing revealed support for the idea that economic variability matters, the existence of certain patterns within repeated samplings of consumer confidence is not sufficient for establishing with a high degree of certainty what the precise causal mechanism linking economic variation with electoral instability might be.

In sum, the findings of both statistical and qualitative tests clearly means both the primary and secondary research questions – a) whether variation in economic performance, regardless of whether this variation occurred during overwhelmingly negative or positive periods of growth, predicts the degree of total electoral volatility or vote share change, and b) whether variation in party structure co-determines the impact of variation in economic performance on total electoral volatility.  – can be answered with a

'yes.' But the theoretically specified causal mechanisms – and their temporal dynamics - required to formally model or even just statistically test how voters might rationally utilize information about uncertainty (and potentially distrust) to behave in retrospective ways is well beyond the scope of this particular research effort. Nevertheless, significant effort in these directions – as well as efforts to ensure the dataset has high degree of reliability - is required for the novel approaches in this work to determining salience, proscribing accountability, and assessing alternatives to become strong, testable alternatives to existing theories explaining retrospective economic voting.

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