THE POLITICAL PITFALLS OF AN ECONOMIC WINDFALL: COMMODITY CYCLES AND POLITICAL POLARIZATION IN LATIN AMERICA

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By

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ABSTRACT

Commodity booms can provide a significant economic boost for a country, but also can create unsustainable expectations among both the elite and the general population. As this paper’s model shows, commodity cycles in Latin America are strongly correlated with political polarization: as commodity prices rise, polarization decreases; and as commodity prices fall, polarization increases. This paper argues that in Latin America perceptions of resource rents, economic redistribution, and inequality provide a critical link between political polarization and commodity prices. Commodity booms may temporarily reduce polarization through economic growth and expansionary spending, as the population begins to feel better off and various interest groups are satisfied with a share of the resource rents. As long as structural inequalities remain in place, however, the windfall is only papering over the factors contributing to polarization—once the boom ends, political polarization will reemerge.
This thesis would not have been possible without the gracious support of many. To my husband Julio, thank you for your patience and unfailing encouragement at every step along the way. Particular thanks also go to my advisor, Dr. Andreas Kern, whose constant guidance and insight made this thesis possible.
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I. INTRODUCTION

Global events over the last year have highlighted the high degree of political polarization present in many western democracies, as ideologies shift away from the middle and toward the extremes. In the United States, this polarization was obvious in the bitterly fought 2016 presidential election, but it is also evident in the dearth of moderates in the U.S. Congress and the anecdotal but plentiful reports of voters who believe a victory by the other side would be an existential defeat for “their” America. Europe is facing its own divisive political battles—including last summer’s Brexit vote—over identity and immigration, as support surges for nationalistic, right-wing parties. And across Latin America, citizens are taking to the streets to protest elected governments that they view as corrupt and illegitimate.

This wave of polarization in Latin America in recent years seems in many respects unexpected, coming on the heels of a decade that witnessed political stability, significant economic gains, and diminishing inequality across the region. Between 2002 and 2012, over ten million Latin Americans joined the middle class every year and the region averaged 4 percent annual GDP growth (Calvo-Gonzalez, 2016). Much of this economic success can be credited to the commodity boom of the 2000s, which provided significant benefits to commodity-dependent Latin American economies. After more than two decades of persistently low commodity prices, growing demand in China and other emerging Asian markets in the early 2000s began pushing prices upwards. The commodity boom (roughly 2004-2012) was of unusually long duration, surviving even the 2009 global financial crisis, which led many in Latin America and beyond to claim
that the upward trend would continue as a “new normal” (Fishlow and Bacha, 2010). The fact that the commodity boom helped cushion much of the impact on Latin America of the 2009 crisis created a perception that the region had broken free of its historic cycles of boom and bust, and—as the case of Brazil clearly shows—led some policymakers to assume they no longer needed to worry over strict fiscal discipline. Flush with commodity rents, average primary spending across the region increased in the second half of the 2000s, often outpacing GDP growth.

By 2011, however, as it became clear that the Chinese economy was cooling and that the European markets were likely to remain weak for some time, observers began warning that the region’s reliance on commodity exports left it vulnerable to a slowdown in the commodity market. As prices fell in 2012 and 2013, government revenues decreased and economies contracted across Latin America. Many have noted that over the same period, dissatisfaction with the government and political polarization increased. The simple assumption is that the economic pain felt in the wake of the commodity price bust was responsible for the contemporary rise in popular frustration.

As this paper will show, there is in fact a significant and robust relationship between commodity prices and polarization. As commodity prices rise, on average, polarization declines; and as commodity prices fall, polarization intensifies. Yet this relationship holds true even controlling for GDP growth and inflation, suggesting that a more complicated mechanism is at play than the simple relationship between commodity prices and GDP.
This paper will argue that the true relationship between commodity prices and polarization in Latin America cannot be explained through economic ups and downs alone. In fact, this paper will argue that the current wave of polarization in Latin America has its roots in the commodity boom of the 2000s, rather than the bust of 2010. During periods of rapid growth, the government can use commodity rents for redistribution (to a variety of interest groups) to build goodwill and economic optimism without actually fixing underlying structural issues, including structural causes of inequality. Yet in doing so, the government sets unsustainable expectations. When commodity prices inevitably fall and governments can no longer satisfy all their constituencies, these underlying fissures are exposed. Dissatisfaction and fighting over resources become more intense, as aspirations go unmet, and polarization grows.
In particular, this paper argues that in Latin America perceptions of economic redistribution and inequality are a critical link between polarization and commodity prices. As the case of Chile demonstrates, voters strongly believe that economic windfalls should be used to raise incomes and expand government social services. A government that fails to adequately redistribute a windfall will face protests and challenges at the ballot box. Yet the cases of Brazil and Colombia show that although the redistribution of commodity rents can reduce polarization temporarily, polarization will come roaring back if people subsequently begin to feel like they are losing economic ground.

The following pages will first discuss the literature on government redistribution and polarization, then present a theoretical model and quantitative evidence for the hypothesis, and finally discuss three case studies from Latin America (Brazil, Colombia, and Chile) that each offer insight into the mechanisms that link polarization to commodity prices.
II. THEORY

There are a number of different theories explaining why governments redistribute rents, but they all seem to be grounded in the idea governments distribute rents in order to maintain or strengthen their position with the electorate and relative to other political factions. The higher the degree of polarization and political instability, the more the government will redistribute in an effort to maintain control.

A classic model argues that the median voter in most societies is more likely to be poor than to be wealthy, prompting governments to redistribute to the lower classes in order to secure a majority of votes (Lupo and Pontusson, 2011). However, this model assumes that there is a median preference for redistribution that will satisfy a sizeable portion of the electorate. It also does not explain why a government would redistribute to the elite in the form of tax breaks or business subsidies. A related theory argues that redistribution is linked to leftist governments, as leftist parties tend to have strong support from the workers and the poor—groups that benefit significantly as poverty declines and that tend to believe in redistributive justice and social reform (Huber and Stephens, 2012). However, this theory does not adequately explain why some leftist government resist redistribution (e.g., the Frei and first Bachelet governments in Chile) while some conservative governments embrace it (e.g., Colombia under Uribe). A more flexible and persuasive model holds that the government uses redistribution to target specific constituencies to gain an advantage in competitive electoral environments, to satisfy the business sector, and to address social movements and protests, tailoring policies to meet the specific preferences of each group (Fairfield and Garay, 2017).
Building on this model, a number of authors have argued that governments worried about maintaining control use economic windfalls to buy support rather than invest in sustainable economic growth. Political squabbling over who gets a share of the rents can lead a government to overextend itself fiscally in an attempt to placate all influential factions. Tornell and Lane (1998) argue that windfalls only provide economic benefits where there is “unitary fiscal control.” When multiple factions can lay claim to the rents, government spending tends to increase more than the actual amount of the windfall, leading to a deterioration of fiscal accounts. Annett (2000) provides evidence that the more a government worries about being overthrown, either voted out at the ballot box or through a more forceful mechanism—as measured by social fractionalization—the higher government spending tends to be. Annett found that a one standard deviation increase in fractionalization was correlated with an increase in government consumption by 1.29 percentage points. Arezki and Burckner (2010) similarly found that commodity windfalls tend to increase fiscal imbalances in countries with high polarization, and have no overall effect on GDP per capita growth.

In this sense, windfalls from commodity booms are likely to generate a similar economic effect to the “windfalls” accrued during credit booms. A growing branch of political economy literature has found that credit booms are not correlated with common indicators of a country’s potential for long-term growth and in fact seem to offer only short-term—and arguably artificial—positive gains (e.g., rising asset prices due to more money in the market) (Mendoza and Terrones, 2008). Moreover, credit bubbles seem to
exacerbate the economic crisis that follows the bust (Moreno, Saavedra, and Ulloa; 2014).

There is persuasive evidence that commodity-booms, like credit booms, offer illusory short-term economic gains while masking underlying structural issues. Alberola et al. (2016) argue that commodity booms tend to generate GDP growth in the short run because they increase the value of key exports and drive demand for the goods and services needed to produce those exports, which attracts additional investment. This inflow of cash and corresponding strengthening of the currency tends to increase domestic consumption, further boosting the economy. This can create an entrenched “sense of optimism” that high growth will continue unabated for a number of years (Alberola et al., 2016, p. 5), which serves as justification for additional investments. Brazil, as will be discussed later, offers a textbook example of this cycle.

Prior research has also shown that Latin American fiscal policy is highly responsive to commodity price fluctuations, although the magnitude of the relationship varies significantly among countries. For example, Medina (2010) argues that political and economic institutions can mitigate the volatility caused by commodity price shifts. Chile, for example, has stronger institutions and a more stable fiscal situation than Venezuela (despite both states’ significant natural resource revenues), one possible reason that it has proven to be an exception to the observed tendency toward expansionary spending in Latin America during economic upswings (Fishlow and Bacha, 2010, pp. 6-7).
There is also a substantial body of literature examining the so-called “resource curse” in developing countries. Many authors have argued that countries rich in natural resources tend to experience worse economic and political outcomes than natural resource-poor states (Sachs and Warner, 1995). There is also strong consensus in the political economy literature that political instability has a negative effect on economic outcomes, both in terms of institution-building and economic growth. There is less agreement, however, on the reasons for these correlations (Annett, 2000). One theory holds that natural resources serve as an economic rent, capable of providing significant revenue to the governing class. This creates a potential source of conflict, as different factions (parties, government departments, etc) compete for control over this revenue stream (Gray and Kaufmann, 1998; Ross, 1999). This tends to both result from and drive polarization, and undermine efficient governance.

There is also support for the idea that reducing rent redistribution could prompt popular backlash. The theory of loss aversion holds that people become attached to what they have, and highly resistant to losing it. In essence, “losses loom larger than gains” (Kahneman and Tversky, 1979, p. 279). In policymaking, for example, the potential loss of a government benefit would seem extremely painful to a beneficiary, to the point where they have no interest in risking a short-term loss even if by doing so they stand to gain considerably in the future (Eckles and Schaffner, 2010; Weyland, 1998; Vis and van Kersbergen, 2007; Vis, 2008). This can lead to a preference for the status quo as the least risky proposition—at least until the status quo so untenable that there is more to lose by maintaining the status quo than there is by risking reform. In essence, the massive student
protests in Chile served as this type of shock to the system—in which the status quo favored the political elite—forcing the government to enact education reform in order to restore social stability.

Taken together, the existing literature provides theoretical support for the hypothesis that governments often use the rents from commodity windfalls buy short-term political support, but also that the subsequent withdrawal or reduction of such rent redistribution could cause significant political backlash.
III. MODEL AND STATISTICAL ANALYSIS

3.1 Introduction to the Model

This paper argues that commodity booms followed by evitable busts contribute to increased political polarization, as expansionary spending followed by austerity measures drives dissatisfaction. Section IV will examine evidence for this mechanism through a qualitative discussion of three case studies.

The following pages will empirically test the first part of the claim by showing that commodity booms are inversely correlated with political polarization using the following general model:

\[
(Polarization)_{i,t} = \alpha_j + \gamma_t + \beta_1(Commodity\ Prices)_{i,t} + \beta_2(GDP)_{i,t} + \beta_3(\text{Inflation})_{i,t} + \varepsilon_{i,t}
\]

Where \( i \) denotes the countries, \( t \) denotes the years, \( \alpha \) represents the country-fixed effects, \( \gamma \) represents the time-fixed effects. To capture the relationship of commodity prices to polarization relative to each country’s revenues, this analysis uses natural resource rents as a percentage of GDP as the independent variable.

The model makes use of time and entity fixed effects (FE), using country-year panel data, in order to control for the variation that arises due to fixed differences between countries and over time. For example, the FE model controls for the fact that Venezuela and Chile have vastly different geographies and histories, and any other factors that remain constant.
for each country over time. The FE model also controls for all factors that vary with time but are constant for all countries, such as global economic growth. As a result, FE eliminates a significant source of potential endogeneity, and allows for greater confidence that the results discussed below are indicative of the true relationship between polarization and commodity prices.

3.2 Defining Polarization

There are a number of methods for measuring political polarization, each of which captures a slightly different aspect of the phenomena. Political polarization is traditionally defined as a measure of the extent to which two opinions or ideologies are diametrically opposed. Fiorina and Abrams (2008, 566) define polarization as a “bimodal distribution of observations” where the two modes “lie at the extremes, not near the center,” as you can see in Figure 2 (next page). In practice, however, it can be difficult to say with certainty that a given distribution shows polarization. However, it is certainly possible to determine trends (i.e., to find out whether a society is becoming more or less polarized).

Fractionalization is conventionally defined as the probability that any two individuals randomly selected from the population will not belong to the same group. Legislative fractionalization, therefore, is the probability that any two legislators randomly selected will not belong to the same party. The greater the probability, the more factionalized the population.
It is important to stress that fractionalization and polarization measure different qualities. Two populations could have the same fractionalization level while having very different levels of polarization. Looking again at Figure 2, we can see that in both graphs the distribution is evenly split between the Liberals and the Conservatives: each side has 50 percent. So the level of fractionalization is the same for both groups. The first distribution, however, is highly polarized while the second distribution is not. However, polarization only measures the prevalence of extreme views, not the number of different viewpoints. Thus it may not accurately measure the fragmentation of a political system (such as the number of political parties in a legislature), failing to capture the diversity of the interest groups that need to be satisfied.

Within the literature there is also a distinction between elite polarization and popular polarization (Fiorina and Abrams, 2008; Hetherington, 2009; Krasa and Polborn, 2012).
Elite polarization occurs when there are ideologically cohesive political parties with little to no overlap. In Brazil, this can be clearly seen in the leftists Workers’ Party and the center-right Brazilian Social Democratic Party (PSDB)—both large, ideologically cohesive parties—which currently stand in opposition to one another when it comes to economic policy in Brazil. The larger the gap between the parties and the more loyal party members are, the higher the degree of polarization. Elite polarization is typically measured by examining voting patterns in legislative bodies. In contrast, popular polarization measures the partisan divide among the electorate, often based on data from opinion polls and election results. Colombia, for example, is considered to have a relatively cohesive political elite, but a highly polarized electorate: a quarter of all Colombians in 2015 identified with either the extreme left or extreme right, according to the annual Latinobarometro survey—despite the fact that its government and policies have stayed remarkably stable relative to the rest of Latin America for decades.

This paper uses measures of polarization and fractionalization within the government as dependent variables. During commodity booms, we would expect that the government would use the extra revenue to redistribute to the elites, its key constituents, in the form of corporate tax breaks, pork barrel spending, or even outright vote buying and other forms of corruption. We would also expect the government to redistribute to the people, through conditional cash transfer programs, looser credit regulations, and higher wages in order to maintain popular support. Thus we would expect a fall in commodity prices to correspond to an increase in both elite and popular polarization.

---

1 Government fractionalization measures the amount of cohesion within a governing coalition in the legislature. The more factions and parties within the coalition, the higher the level of fractionalization.
3.3 Data Description

The panel data (country-year) spans from 1995-2015. As most Latin American countries underwent profound political shifts in the 1970s and 1980s (single-party dictatorships transitioning to democracy), and profound economic shifts in the 1980s and early 1990s, this paper focuses on data from the year 1995 onwards. Most countries in Latin America from 2000s onwards have had market-based economies and democratic political systems, although of varying degrees.

3.4 Empirical Results

The results of a simple OLS regression analysis are reported in Tables 1 and 2 (below), and show support for the hypothesis that commodity booms are negatively correlated with polarization: as commodity prices fall, polarization levels rise. All the models produce estimated coefficients on natural resource rents that are statistically significant and negative, which is exactly what the theory predicts. Furthermore, controlling for inflation and GDP does not significantly alter the coefficient on natural resource rents, suggesting that the relationship between commodity prices and polarization does not depend on economic growth.

---

2 The dataset does not include Belize, Suriname or Guyana—which are all outliers in Latin America as former British and Dutch colonies. The dataset also does include the Caribbean islands. I dropped all observations for Haiti and Cuba, which are significant outliers in Latin America in terms of both economy and political system, and were also the only Caribbean islands originally included as part of “Latin America” by the original dataset.
The regression results for both elite polarization and fractionalization provide evidence in favor of the hypothesis that commodity booms influence polarization. As commodity prices rise and governments gain access to more resources to distribute, political polarization in society declines. The fact that are fewer parties in the legislature when commodity prices are high indicates that both the political elite and the electorate are less fragmented, suggesting a less polarized and less frustrated society. The finding that polarization increases as commodity prices fall also supports the hypothesis. As commodity prices decline, government revenues will also decline. This gives the government a smaller pool to redistribute from, leading to ever more vicious fights over the crumbs and a hardening of positions.

Table 1. Regression Results: Government Fractionalization

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Resource Rents (% GDP)</td>
<td>-0.01445**</td>
<td>-0.0137*</td>
<td>-0.0133*</td>
<td>-0.0123*</td>
</tr>
<tr>
<td></td>
<td>(0.0059)</td>
<td>(0.0066)</td>
<td>(0.0065)</td>
<td>(0.0061)</td>
</tr>
<tr>
<td>Log(GDP)</td>
<td></td>
<td>0.1595</td>
<td>0.1429</td>
<td>0.0951</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.1195)</td>
<td>(0.1322)</td>
<td>(0.1008)</td>
</tr>
<tr>
<td>Inflation</td>
<td></td>
<td>-0.0014</td>
<td>-0.0029</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.0016)</td>
<td>(0.0017)</td>
<td></td>
</tr>
<tr>
<td>Government expenditure as proportion of government revenue</td>
<td></td>
<td></td>
<td></td>
<td>0.1476</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.1429)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.3588***</td>
<td>-3.4940</td>
<td>-3.0670</td>
<td>-0.0577</td>
</tr>
<tr>
<td></td>
<td>(0.07287)</td>
<td>(0.9215)</td>
<td>(3.2355)</td>
<td>(0.1846)</td>
</tr>
<tr>
<td>R²</td>
<td>0.0077</td>
<td>0.0000</td>
<td>0.0002</td>
<td>0.0000</td>
</tr>
<tr>
<td>F-test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations (N)</td>
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<td>321</td>
<td>321</td>
<td>279</td>
</tr>
<tr>
<td>No. of Countries</td>
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<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Country Fixed Effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year Fixed Effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* *p < 0.10, **p < 0.05, ***p < 0.01
Table 2. Regression Results: Elite Polarization

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Resource Rents</td>
<td>-0.0375**</td>
<td>-0.0381**</td>
<td>-0.0391**</td>
<td>-0.0359***</td>
</tr>
<tr>
<td>( % GDP)</td>
<td>(0.0140)</td>
<td>(0.0170)</td>
<td>(0.0167)</td>
<td>(0.0115)</td>
</tr>
<tr>
<td>Log(GDP)</td>
<td>0.5592</td>
<td>0.6065</td>
<td>-0.0685</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.4623)</td>
<td>(0.4683)</td>
<td>(0.3910)</td>
<td></td>
</tr>
<tr>
<td>Inflation</td>
<td>0.0053</td>
<td>-0.0082</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0080)</td>
<td>(0.0123)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government expenditure as proportion of government revenue</td>
<td></td>
<td></td>
<td>0.7931</td>
<td>(0.7133)</td>
</tr>
<tr>
<td>Constant</td>
<td>1.1787***</td>
<td>-12.3662</td>
<td>-13.6140</td>
<td>2.0301</td>
</tr>
<tr>
<td></td>
<td>(0.2082)</td>
<td>(11.089)</td>
<td>(11.3141)</td>
<td>(9.6451)</td>
</tr>
<tr>
<td>R²</td>
<td>0.1028</td>
<td>0.0377</td>
<td>0.0325</td>
<td>0.0943</td>
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<tr>
<td>F-test</td>
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<tr>
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<td>297</td>
<td>297</td>
<td>253</td>
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<tr>
<td>Country Fixed Effects</td>
<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year Fixed Effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* p < 0.10, **p < 0.05, ***p < 0.01

One potential concern arises from the possibility that the estimates are biased, due to the omission of relevant independent variables. Given the complexity of political polarization, it is important to consider that outside factors—unrelated to resource rents—could drive the regression results. The use of a country-year fixed effects model mitigates these concerns, through controlling for all characteristics that are 1.) constant for each country over time, such as national borders or colonial legacy, or 2.) constant for all countries in a given year, such as global economic trends. The model used in this paper also controls for several important factors that do vary over time and among countries, including GDP and GDP growth, and inflation. Critically, controlling for these possible
sources of bias does not significantly alter the regression results suggesting that the underlying relationship between commodity prices and polarization is strong.

A second limitation is that although the results above offer clear evidence of a relationship between polarization and commodity prices, they do not explain why this relationship exists or what the broader implications are. As described earlier in this paper, I argue that drops in commodity prices lead to polarization because previously established expectations go unfulfilled (the government no longer has the cash it needs to satisfy the demands of various interest groups). The results above offer empirical evidence supporting this connection. Several studies have linked commodity price volatility to inequality and a recent analysis found that commodity busts are strongly correlated with increases in inequality (IMF Survey, 2011; Delgado, 2017; Bhattacharyya, 2013). Conversely, commodity booms are associated with decreasing inequality. It makes sense that a rise in inequality, particularly if this rise represents a reversal of previously realized gains (i.e., something being taken away) would create fertile ground for rising polarization. To more precisely identify the mechanisms at play, the following section will provide qualitative evidence buttressing the empirical results through an examination of three case studies: Brazil, Chile, and Colombia.
IV. CASE STUDIES

The rise of the left in Latin America in the 2000s and normalization of peaceful transfers of power were widely hailed as a demonstration that the severe political polarization which characterized many of the region’s countries throughout the twentieth century—accompanied by military coups, repressive regimes, and popular uprisings—had settled down into a more acceptable level of political contention within the framework of democratic institutions (Aramayo and Pereira, 2011). Barely half a decade ago, few would have predicted the current severity of Venezuela’s collapse or the depth of Brazil’s intertwined political and economic crises. But there are other, less extreme cases: Colombians’ unexpected rejection in 2016 of the peace deal with the FARC; the unpopularity of a host of leaders across the hemisphere, including Mexico’s President Enrique Pena Nieto (who in January 2017 had just a 12 percent approval rating) and Chile’s President Michele Bachelet; a 20-point drop in trust in the government among Argentines between 2008 and 2014; and the rising incidence of protest votes or spoiled ballots as citizens feel none of the candidates represent their interests (Cohen, 2016).

The model described in Section 2 of this paper offers evidence that a relationship indeed exists between the polarization vividly on display in Latin America today and the rise and fall of commodity prices over the past fifteen years. Yet it does not explain the mechanism behind this linkage. To explore this connection, the following pages will examine three distinct case studies from Latin America: Brazil, Colombia, and Chile. All three countries, despite their different social, economic, and political institutions, exhibit
the same connection between commodity cycles and polarization. Both Brazil and Colombia increased government redistribution across the socioeconomic spectrum as commodity prices soared, through conditional cash transfers, subsidies, and other measures to help the poor; and through tax breaks, subsidized business loans, and even illicit payoffs for the political and business elites (Faguet and Torres, 2013; Lozano and Julio, 2015; Ferrari Filho, 2011; de Almeida and Zagaris, 2015). For example, lending as a share of GDP peaked at 4.3 percent at state-owed Brazilian National Development Bank (BNDES) in 2010 near the height of the commodity boom, as the Brazilian government sought to subsidize domestic industry (Central Bank of Brazil, 2017). At the same time, both countries have faced rising polarization as commodity prices declined and government resources contracted. Chile initially resisted the pressures to redistribute as copper prices spiked, but ultimately bowed to political necessity after massive student demonstrations demanded higher education spending and progressive taxation, exposing a fissure that threatened to destabilize Chilean society. In all three countries a growing gap between “income and aspirations” following the end of the commodity boom has left citizens feeling cheated by their governments.

4.1 Brazil

The relationship between polarization and commodity prices is perhaps easiest to see in Brazil, which was one of the largest beneficiaries in Latin American from the commodity boom of the 2000s. Its total exports grew from $72 billion in 2003 to $197 billion in 2008 (Fishlow and Bacha, 2010, p. 17). Between 2002 and 2009, the percentage of the
population living in poverty fell from 26.7 percent to just 15.3 percent, inequality decreased, and access to governments services—sewage, water, electricity—increased across the country (Economist, 2010). Foreign investment was also flowing into Brazil during this period, attracted to the country’s high growth and even higher interest rates. Together, these trends kept the Brazilian real strong even as the Central Bank amassed large foreign reserves. To many, it seemed that Brazil had finally outgrown the old adage that Brazil was “the country of the future and always would be” (Roett, 2011; Davidson, 2012; and Rohter, 2012). In 2010, the Economist—in a now infamous cover—declared that for Brazil, the future had arrived. And the world seemed to agree.

Just three years later, the Economist retracted its premature prediction with a cover of Brazil crashing and burning. Although the country achieved impressive socio-economic gains, with some 20 million Brazilians leaving poverty between 2003 and 2010, the weakening of commodity prices in 2011 and 2012 and the country’s subsequent economic troubles have proven just how fragile many of those gains actually were. The Brazilian government’s focus on short-term economic gratification came at the expense of policies that could have laid the foundation for long-term sustainable growth. Instead, the country faces rising popular outrage and polarization as it attempts to cut spending on entitlements and other redistribution programs in the midst of the worst recession in Brazil’s history.
**Political and Economic Background**

Following years of political and economic instability, Brazil seemed to turn a corner in the 1990s. After more than two decades of military rule, the country had successfully managed a fraught transition to democracy. The Constitution of 1988 restored civilian rule but a quick succession of governments—one president died on the eve of his inauguration and a few years later another was impeached for corruption—had created an early sense of political uncertainty. Concurrently, the fledgling democracy was plagued by economic woes inherited from the dictatorship: stagnation, hyperinflation, high public debt, and low productivity.

The election of sociologist Fernando Henrique Cardoso as president in late 1994 marked a turning point for the country. As Finance Minister, Cardoso had successfully
implemented the Plano Real in 1994 which introduced a new currency (initially pegged to the dollar for stability) and brought inflation down from 2500 percent in 1993 to just 22 percent in 1995, and 5 percent by 1997. His government successfully implemented large-scale fiscal reforms, selling off inefficient state-owned companies and focusing on attracting investment and opening up to trade. Yet Cardoso also sought to reduce structural inequalities, introducing several social welfare programs that were later bundled together under the name Bolsa Família and launching an affirmative action program for public universities. By 1999, the country had exceeded expectations by reducing its external debt to 48 percent of GDP.

The 2002 election of the leftist union organizer Luiz Inácio Lula da Silva—after he promised, during the campaign, to maintain Cardoso’s orthodox economic policies in an open “letter to the Brazilian people”—was taken by many as a sign that Brazilian democracy and its economy were finally stabilizing. It seemed at the time that the old political extremes had given way to a modern left and right that agreed on two key fundamentals: democracy and market-based economics. Over the next decade, as commodity prices climbed, Brazil experienced impressive economic growth and socioeconomic gains under the leadership of the supremely popular and charismatic Lula.

The Boom Years in Brazil: 2002-2012

President Lula’s two terms offer a fascinating window into the politics of resource windfalls under a leftist president. A founding member of the Workers’ Party (PT) and its most influential public voice, Lula gained prominence during the dictatorship by...
organizing mass demonstrations and workers strikes. He ran for president three times unsuccessfully before finally winning in 2002, after his campaign adopted a more moderate economic tone and promised to root out corruption. Nonetheless, Lula remained committed to social justice and poverty alleviation, and to the idea that the power of the state should be leveraged to bring about greater socioeconomic equality.

During Lula’s first term in office (2003-2006)—the first few years of the commodity boom—Brazil managed to both strengthen its fiscal stance and increase social expenditures and redistribution. Regardless of his inclinations, Lula had little choice but to maintain the orthodox policies of his predecessor upon entering office on January 1, 2013. Concerns that Lula’s election would represent a return to economic nationalism and state-led development had led to a sudden drop in foreign investment in 2002, causing the value of the Brazilian real to weaken and interest rates and debt-to-GDP to spike. Lula’s economic team, led by Finance Minister António Palocci, Treasury Minister Joaquim Levy, and Central Bank President Henrique Meirelles, addressed those concerns immediately upon assuming office—the precarious situation left little choice. Together, they focused on controlling inflation (through increasing interest rates) and reducing the country’s foreign currency debt. Between 2003 and 2006, Brazil maintained an annual primary surplus and by 2006 the country had achieved a 12 percent reduction in its debt to GDP ratio, aided by favorable international trends (low global interest rates, a strong Brazilian real, and rising commodity prices) (Barbosa-Filho, 2008, p. 194). The government was able to pay off its IMF loan in 2005. Concurrently, however, the government managed to increase social expenditures, especially income transfers to the
very poor. In 2003, the government consolidated several cash transfer programs into Bolsa Família, which at the time covered around 27.5 million Brazilians. By 2006 the program covered 46 million Brazilians (a quarter of the population) and was, according to the World Bank, responsible for roughly one-third of the decrease in poverty observed over that period (Lindert, Linder, Hobbs and de la Briere, 2007, p. 6).

This combination—what Barbosa-Filho (2008, p. 194) called an unusual “economic arrangement…that benefited most the extremely rich and the very poor”—was possible due largely to the favorable global environment. Increases in tax revenue, driven by rising incomes and exports as commodity prices heated up in 2005 and 2006 and the Brazilian economy stabilized, along with small cuts in government expenditures on public sector wages and infrastructure investment, provided the government with the fiscal space it needed to maintain a primary surplus while increasing social spending (Barbosa-Filho, 2008, p. 194).

![Figure 4. Brazil’s Current Account Balance (1990-2015). Source: World Bank Development Indicators.](image-url)
Yet Lula, despite his popularity, was unable to deliver on the major reforms he promised voters in his 2002 and 2006 campaigns. To his credit, Lula initially attempted to fulfil his promises. In 2003, for example, he tried to enact pension reform, viewing it as a necessary step to prevent expenditures from skyrocketing and to free up cash for more targeted social redistribution (McCane 2008, 39). Roughly 75 percent of pensions go to retired federal workers, disproportionately benefiting the middle and upper classes and accounting for the largest share of government social spending (OECD, 2014, p. 3). Nonetheless, nearly a third of his own party revolted, accusing Lula of betraying his party’s socialist and working class roots and a splinter group broke off to form a new political party, PSOL. Congress eventually passed a watered down and ineffective version of pension reform—and by 2010, Lula’s final year in office, Brazilian federal spending on pensions equaled 10 percent of GDP—compared to an OECD average of 8 percent—even though only 6 percent of Brazilians were old enough to receive one (OECD, 2014, p. 3).³ Other battles were waged over subsidies for electricity and gas, credit expansion, and support for industry.

Seven years after the pension reform attempt, a public fight over the allocation of oil royalties underscored once again the fractionalization of Brazilian politics. The federal government traditionally received roughly 40 percent of oil royalties, with the rest going to the oil-producing states. However, the discovery of large reserves off the coast of Brazil in 2008 led to a bitter fight between oil-producing Rio de Janeiro and the rest of

³ In contrast, in the United States 6 percent of GDP was spent on pensions for around 12 percent of the population in 2010. Brazil allowed workers to retire in their 50s and pensions are tied to the minimum wage.
the country, as congressional leaders attempted to claim some of the anticipated oil wealth for their own states. Even scientists joined the fray, with various organizations lobbying for a share on the grounds that their scientific discoveries had made the deep sea oil exploration possible (Gardner, 2011). This frenzy occurred despite the fact that the fields were years away from being productive, and the potential windfall was entirely theoretical at that point. Lula himself characterized the battle by saying, “they are fighting for the chips (pirão in Portuguese) before catching the fish” (Fishlow and Bacha, 2010, p. 7).

This perpetual competition for resources among interest groups and political factions had plagued Brazil for decades, and the competition that only became more intense as the commodity boom increased the government’s redistributive power. Many politicians in Brazil view elected office as a vehicle for personal gain and most of the country’s 30-plus political parties—apart from a few of the largest—tend to be catch-all parties with limited ideological cohesion or even interest in policymaking (McCann, 2008; and Montero, 2005). Weak party discipline compounds the problem, making it difficult for leaders to command loyalty or votes from party members. The Workers’ Party was an exception, rising from an activist left that inspired a clear ideology and loyal and dedicated followers. However, once in office, as Lula’s difficulties in passing reforms made clear, the Workers’ Party struggled to govern an unwieldy multiparty coalition full of self-interested legislators (McCann 2008; Montero 2005). The Mensalão scandal that broke in 2005, revealing that the government had resorted to paying members of Congress to vote
for the government’s agenda, was an early sign that the Lula administration was well aware of the potential for using redistribution to secure political support.

The exposure of the vote-buying scheme, ironically, only increased the incentives of the government to redistribute. It weakened popular support for Lula’s Workers’ Party, undermining its already limited ability to push for loyalty votes by coalition members. Although Lula himself was never implicated and won reelection in 2006 with 60 percent of the second-round vote, PT won only 93 out of the 594 seats in Congress—representing a loss of 4 percent of the seats. The scandal also accelerated a shift in the PT’s political base. Urban workers and especially the middle class were frustrated with the continuing poor quality of education and high levels of crime, and disillusioned by the revelation that the PT was just as corruptible as the establishment parties. Lula’s strongest support increasingly came from the poor, who depended on the government’s cash transfer programs. In short, Lula’s supporters were no longer groups pushing for reforms (i.e., education, labor, political) but rather groups pushing for redistributive government expenditures.

Given this context, it is unsurprising that Lula’s fiscal policy began to shift almost immediately after his second inauguration on January 1, 2007. The Central Bank continued to practice inflation targeting, but fiscal policy was revamped to support increases in government spending on social programs and economic development. Under an ambitious new Program for the Acceleration of Growth (Programa de Aceleração do Crescimento, or PAC), the government pledged to spend an additional R$503.9 billion

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4 83 of 513 deputies and 10 of 81 senators.
over four years (2007-2010) on infrastructure (Fishlow, 2013, p. 75). Government programs extended access to electricity to 12 million rural residents and provided the poor with housing subsidies. Meanwhile, wage increases, cash transfers, and subsidies put more money in the pockets of newly middle class families, driving a significant increase in domestic consumption as more families were able to afford refrigerators, televisions, cell phones, and other consumer goods. To secure elite support, party members and other allies were rewarded with cushy government jobs and lucrative contracts with government-owned companies—although the extent of this practice did not become apparent until 2014 following the revelation that a multi-billion dollar kickback scheme was being run by PT-appointed executives of state-owned energy giant Petrobras (Arruda de Almeida and Zagaris, 2015; Donatelli, Hoefel, Resstom, and Stul, 2016; Goes and Matherson, 2017).

In essence, due to the international economic environment—low interest rates worldwide reduced the cost of Brazil’s sovereign debt even as the commodity boom filled the Brazilian Central Bank’s reserves—the Lula government was able to achieve economic growth and poverty reduction without confronting the country’s lingering structural challenges.

However, the 2008/2009 global financial crisis would mark a turning point for the Brazilian economy, despite record-level economic growth in 2010. When the crisis first began, common opinion was that it would be limited to the developed countries only, given their greater integration into the global financial and credit markets. Brazilian
policymakers were confident in their country’s macroeconomic health. President Lula famously remarked that the “financial tsunami” would cause only a “little wave not big enough to surf on” in the Brazilian economy (Barrionuevo, 2009).” Although the international crisis caused more than a “wavelet” in Brazil—the country’s GDP contracted 0.13 percent in 2009—the immediate effects were short-lived. In 2009, the government implement counter-cyclical policies to reduce tax rates and increase public spending, financed in part through the roll out of a more flexible fiscal surplus target of 2.5 - 3.75 percent of GDP (Ferrari Filho, 2009). The Central Bank added liquidity to the markets through lower deposit requirements for banks, a gradual reduction in the base Selic interest rate (from 13.75 percent in December 2008 to 8.75 percent in September 2009), and a new international export finance credit line that drew on foreign reserve funds. Meanwhile, the large publicly-owned banks—Caixa Econômica Federal, Banco do Brasil, and national development bank BNDES—loosened business and consumer credit restrictions to spur investment and domestic consumption. By the end of 2009, the country was in full recovery. In 2010, fueled by expansionary government policies and the tail end of the commodity boom, GDP grew an impressive 7.5 percent (World Bank, 2017). Lula’s chosen successor, Dilma Rousseff, coasted to victory in the presidential elections that year on Lula’s coattails, but the economic success story proved to be remarkably fragile.

After the Bust: 2012-2016

The subsequent collapse of the commodity boom showed just how vulnerable the Brazilian economy remained to external shocks, despite its success at withstanding the
2009 global financial crisis. Brazil’s economy was still relatively closed, despite the reforms of the 1990s and early 2000s. Exports of goods and services accounted for only 11.7 percent in 2012 (World Bank, 2017). By contrast, exports accounted for 34.3 percent of Chile’s GDP in 2012 (down from a peak of 43.8 percent in 2007) and the average across Latin America that year was 22.2 percent. Moreover, the country had a large domestic market (over 200 million people) and a large industrial sector. As a result, Brazil was less dependent on commodity exports than many of its neighbors—but its sheer size means it is nonetheless the 21st largest export economy in the world, and its top exports are all commodities (Atlas MIT, 2017).

Brazil’s current economic woes are closely tied to its success in the 2000s. The real soared as investors flocked to the Brazilian market, making it harder for Brazilian companies to compete abroad and undercutting industrial growth. Expansionary government spending programs—from gasoline and electricity subsidies to conditional cash transfer programs like Bolsa Família—increased the standard of living and lifted millions out of poverty yet also made it impossible for the government to meet its primary surplus targets once growth has slowed.

Government measures to counteract the economic slowdown in 2012 and 2013 further exacerbated the problem. Rather than much needed infrastructure investment to modernize the country’s ports and roads and public utilities or assistance to increase industry competitiveness and productivity, the Rousseff government focused on expanding domestic consumption through easier access to credit—delaying the economic
reckoning to come. The result, several years of middling growth financed by increasing levels of household and government debt, only led to an overall weakening of Brazil’s fiscal condition. Concurrently, government involvement in a number of sectors, including energy, finance, and infrastructure—spurred by local content policies and subsidized loans for Brazilian businesses—reduced the interest of foreign investors (Saad-Filho and Boito, 2016; Ban, 2012). Adding to the problem, loose fiscal policy combined with strong domestic consumption caused inflation to spike, from around 4.2 percent in October 2009 to a peak of 10.7 percent in December 2016.

As the economy weakened and structural flaws became more apparent, Brazilians began to believe that the previous decade of commodity-fueled growth had produced few benefits for ordinary citizens. A proposed bus-fare hike in São Paulo in June 2013 sent thousands of Brazilians into the streets. Over the next few weeks, hundreds of thousands marched against the government in cities across Brazil, protesting corruption and governing spending on World Cup stadiums even as spending for education and health services languished and inequality remained high. The revelation in 2014 that state-owned energy company Petrobras was the center of a massive political kickback scheme—and subsequent testimonies implicating some of the most power figures in Brazil, including former President Lula and former billionaire Eike Batista—only reinforced the perception in Brazil that the commodity windfall had been stashed away in Swiss bank accounts and spent on private airplanes. By the time President Rousseff was impeached on charges of crimes of fiscal responsibility in 2016, street demonstrations had become a weekly occurrence.
Even as popular frustration mounted, the corruption investigations and economic pressures fractured the governing coalition. Rousseff’s efforts to implement much-needed fiscal and monetary reform were rebuffed by both the right and the left. After narrowing winning reelection in 2014, it soon became clear that she was incapable of governing her own party much less leading the governing coalition. Deeply unpopular and stripped by the financial crisis of her ability to leverage redistribution to win political support, Rousseff struggled for a year and a half to work with Congress to restore economic growth before finally being impeached. The new government of Michel Temer has been moderately more successful with Congress, but the public remains unconvinced. Proposed reforms to the pension system and labor laws, as well as the recently imposed cap on government expenditures are likely to cause economic pain in the years ahead and many Brazilians are loudly protesting the proposed cuts. Yet the collapse of commodity prices and subsequent recession have left the government with little choice except to cut government spending, including spending on popular social programs, leaving many in Brazil feeling betrayed.

Brazil over the last decade is a textbook example of the perils of a commodity windfall, and of a government that was unable to resist using its good fortune to buy political favor instead of meaningful reform. With the boom ending, the government has found itself spread too thin and unable to meet its many promises, even as a deepening corruption scandal has exposed the extent to which the last two administrations used national assets as political leverage. The fallout has already claimed one president, and may yet claim
two more, as well as a host of powerful politicians and business executives—and it offers a cautionary tale of how deeply polarized society can become when natural resource rents are used to purchase political cohesion and paper over structural challenges.

4.2 Colombia

Even as the left swept into power across Latin America in the early 2000s, Colombia endured as a bastion of the right both politically and economically. Colombia has often bucked regional trends in recent decades: it remained a democracy with conservative fiscal policies in the 1970s and 1980s as military dictatorships took hold across South America, and then pursued greater social spending in the 1990s as the rest of the region was implementing neoliberal reforms. Despite the political cohesion of its elites—united against the common threat posed by left-wing guerrilla groups—Colombian society is deeply divided.

The commodity boom of the 2000s raised Colombia’s GDP but did little to reduce inequalities between the rich and the poor or between urban and rural populations. However, the common enemy of the FARC, ELN, and other lefists groups combined with growing social spending in the mid to late 2000s served as a binding agent for the different factions in Colombian society during those years. Subsequent efforts to negotiate peace, which coincided with the end of the commodity supercycle, laid bare the polarization present in Colombian society. The global slowdown has meant Colombia
could not have—even if it had wanted to—used redistribution to bring cohesion in 2012-2016, as the peace talks divided both the political elite and the people.

![Figure 5. Polarization and Commodity Prices in Colombia (1996-2016). Sources: IMF Commodity Price Index, Latinobarometro Annual Survey.](image)

**Political and Economic Background**

Colombia’s recent economic and political history is distinct compared to that of many of its neighbors in South America. Democracy did not fall to military dictatorship in the 20th century, but a bloody civil war (1948-1957) followed by decades of conflict with drug cartels, leftist guerilla groups, and rightwing paramilitaries has discouraged investment and development in many parts of the country. Following the civil war, in which an estimated 250,000-300,000 Colombians died, the Conservative and Liberal factions formed a new National Front coalition to end the conflict and restore stability to the country. However, the deal excluded a number of other political groups from power,
particularlly on the left. Barely ten years later, a new source of violence had emerged in
the form of leftist guerilla groups, including the National Liberation Army (ELN), Maoist
People’s Liberation Army (EPL), and the Revolutionary Armed Forces of Colombia (the
FARC). Even as the security situation deteriorated, the drug trade was gaining steam. In
the 1970s, organized crime in Colombia began processing coca lead from Peru and
Bolivia into cocaine, which was then trafficked into the United States. In the 1980s,
Pablo Escobar’s Medellin Cartel and the Cali Cartel both emerged as major players in the
drug trade, using their newly acquired wealth to corrupt and intimidate.

Despite the security situation, the Colombian economy averaged 4.7 percent annual
growth with low volatility from 1950-1990—another contrast with its South American
neighbors. The government’s relatively conservative economic policies protected
Colombia from the worst of the Latin American debt crisis of the 1980s: it was the only
major economy in Latin America to not default on its debt, and throughout the period
growth remained modest but steady (Hudson, 2010, p. 146). Colombian officials
reportedly used to tell international investors, “Good country bad neighborhood”
(Economist, 1997).

Reforms in the early 1990s, however, significantly changed the public policy
environment. Following what has become known as a “dual-track” reform agenda,
Colombia adopted market liberalization measures even as it bolstered the state’s role in
guaranteeing social and economic rights for Colombians. It was a unique mixture in Latin
America in the 1990s, part neo-liberal and part socialist, and was entrenched through Colombia’s new 1991 Constitution.

The Constitution included social equity and development as core tenants of Colombian public policy, leading to a significant expansion in access to public sector services. Access to health social security, for example, increased from 24 percent in 1993 to 91 percent in 2012 and access to secondary education increased from 43 percent to 72 percent (Bagley and Rosen, 2015, p. xi). The reforms also significantly decentralized fiscal and social policy, expanding state responsibilities as well as giving them a greater share of national rents (Bagley and Rosen, 2015, p. xi). In 1996, for example, the fastest category of expenditures was federal transfers to the states (Economist, 1997). As a result, government spending increased significantly, leading to several tax reforms to raise revenue.

A second fiscal implication of the 1991 Constitution comes from its institutional reforms. Cardenas, Junguito and Pachon (2006) argued that the 1991 Constitution strengthened democratic checks and balances and increased representation, but also increased political transaction costs “making cooperation harder to achieve” (Cardenas, Junguito, and Pachon, 2006, p. 1). Greater political gridlock combined with the new social mandate caused a severe deterioration in Colombia’s fiscal balance in the 1990s. Public spending grew from 21.2 percent of GDP in 1990 to 33.7 percent in 2003, even as revenues only increased from 20.6 percent of GDP to 29.7 percent (Cardenas, Junguito, and Pachon, 2006, p. 5). An Economist article from 1997 accused President Ernesto Samper of
“spending more to stay in power” as he faced allegations of corruption and close ties to the drug cartels (Economist, 1997).

Yet at the same time, Colombian officials were working to reduce inefficiencies that were, according to the government and the World Bank, the result of state intervention in the economy and protectionism. Import restrictions were reduced (average import tariffs fell from 44 percent in 1989 to 12 percent in 1992) and export subsidies reduced to bring Colombian policy in line with the rules of the World Trade Organization (WTO) (Bagley and Rosen, 2015, p. 6). The liberalization of financial flows followed, increasing inbound FDI. The government privatized a number of state-owned enterprises and opened key sectors to private investment. The 1991 Constitution had also mandated the creation of an independent central bank, although its policies had to be done in “coordination with the general economic policy” (Bagley and Rosen, 2015, p. 7).

As Colombia took on greater debt to finance social spending in the 1990s and became more integrated into the global economy, it became more vulnerable to external shocks. The Asian economic crisis in 1997 and drop in international investment sent the Colombian economy into its first recession in over half a century. Average economic growth for the decade dropped to just 2.9 percent per year, and urban unemployment rose to 20 percent by 1999 (Cardenas, Junguito, and Pachon, 2006, p. 6). Faced with a difficult fiscal and monetary situation, in 1999 Colombia signed a three-year loan agreement with the International Monetary Fund. In exchange, the government agreed to restore fiscal discipline and inflation targeting as keystones of its economy policy, and
enacted modest pension reform and privatizations to reduce spending, as well as tax reforms to strengthen its revenue base. Yet the tensions between the 1991 Constitution’s emphasis on social rights and liberal market economics remained.

However, the economic difficulties of the 1990s were largely overshadowed by escalating violence. In 2002 Colombians voted for a presidential candidate who campaigned on the promise to crack down on leftist guerrilla forces and bring security to Colombia.

**The Boom Years in Colombia: 2000-2012**

In 2002, Alvaro Uribe, a rightwing hardliner who had broken ranks with the National Front coalition, was elected president. Three years of talks with the FARC had just broken down, and most Colombians were tired of waiting for peace (McDermott, 2010). Uribe wasted little time: after his inauguration was interrupted by a FARC attack in Bogota, killing 20, he declared a state of emergency and beefed up the national security forces, with significant assistance from the United States under Plan Colombia (Bagley and Rosen, 2015, p. xi; Shifter, 2012). Over the next eight years, Uribe oversaw a dramatic turnaround in Colombia’s security situation: murder rates and kidnappings plummeted, leftwing guerilla groups beaten back into the jungles, and rightwing paramilitary groups neutralized through a peace deal (Brodzinksy, 2010; Silva, 2015).

Uribe also promised as a candidate to keep the bureaucracy in check and streamline government spending, but in this he proved less successful. In 2003, Congress declined to
pass his original austerity reforms, which would have reduced the number of legislators, consolidated the bicameral body into a single chamber, imposed new rules to improve congressional transparency in voting and fiscal management, and introduced a list of reasons whereby a legislator could be removed from office. Instead, they approved a modified version of the constitutional amendments—and all the reforms but one subsequently failed a public referendum in 2003. Following the defeat of his austerity plan, Uribe proposed increasing income tax rates, raising the value-added-tax, and taxing assets and pensions in an attempt to fill the budget shortfall. He ultimately managed to get Congress to pass a so-called “wealth tax” and a financial transactions tax. Uribe also enacted a new fiscal rule, requiring the government to determine primary balance targets at both the national and subnational level each year. However, many of his attempted reforms—like the ill-fated austerity referendum—failed to gain political support. In 2005, the World Bank warned that tax increases alone would not be enough to fund high levels of social spending, given the context of modest growth, low investment, and high unemployment (World Bank, 2005).

As a result, rising commodity prices in the mid 2000s brought welcome relief to strained government finances. Uribe particularly encouraged the expansion of the oil and mining sector. The government implemented a new royalty model and created an independent regulatory agency to attract foreign investment, and gave state-owned oil company Ecopetrol greater autonomy act as a company rather than as a government agent (Tissot, 2013). The resulting increases in production, combined with higher global energy prices, had a significant positive impact on Colombian growth. The sector contributed roughly
0.3 percentage points to Colombia’s GDP growth in 2005; that contribution peaked at 1 percentage point in 2011, when oil and mining provided 14 percent of total fiscal revenues to the government (Hudson, 2010, p. 158). Approximately 35 percent of that revenue came from Ecopetrol’s dividend payments (Tissot, 2013).

Tellingly, as rising commodity prices increased the government’s redistributive power and the 2006 election drew near, Uribe seemed to become more comfortable with government spending. At the time, Uribe faced considerable criticism for his government’s perceived lack of interest in social programs. His initial plan to cut government expenditures and focus on the war against the leftist guerillas left little room for social spending. In an attempt to counter this criticism, Uribe campaigned on several social promises: wider health care coverage, university education, and micro-finance for the poor (Forbes, 2006). Yet he also sought to maintain support among the elite through proposals to lower income and corporate tax rates, and reduce the tax on financial transactions: reforms that chipped away at the revenue gains made from earlier tax reforms and made the tax structure less equitable overall (Bagley and Rosen, 2015, p. 9). Government spending spiked again in 2009 and 2010, coinciding not only with efforts to bolster the Colombian economy during the global financial crisis but also with Uribe’s efforts to build popular support for a Constitutional amendment that would have allowed him to run for a third term in office. However, strong economic growth supported these redistributive efforts and generated substantial increases in income in the second half of the 2000s. Poverty declined 17 percentage points between 2002 and 2012, and employment and job quality improved.
However, even as growth and investment climbed, the socioeconomic results were mixed. Strong domestic demand and high economic growth improved labor markets from 2003-2007, but unemployment—though lower—remained high and the informal labor market remained large. And while poverty similarly fell in the mid 2000s, the poverty gap between urban and rural residents, and income inequality more generally, remained substantial (Bagley and Rosen, 2015, p. 15). Government spending on social programs disproportionately benefited urban areas, particularly Bogota, leading to an exacerbation of the urban-rural divide. Whereas Latin America on average saw an improvement of 3.5 percentage points in the Gini coefficient, and between 2002 and 2010, Colombia saw just a 1 percentage point improvement (ECLAC). As a result, much of the population saw its standard of living increase due to general economic growth, but Colombia did not address structural sources of inequality. Government commitments to social spending had also reduced the flexibility of fiscal policy to respond to economic crises. Ocampo (2014) argues persuasively that this kept the Colombian government from fully adopting countercyclical economic policies to smooth out consumption and GDP cycles, creating conditions for more volatile growth rates (Bagley and Rosen, 2015, p. 13).

Nevertheless, Colombia recovered quickly from the 2008 financial crisis and its strong economic growth of the 2000s and—perhaps more importantly—Uribe’s success at reducing urban crime and at cultivating an image of a strong and capable leader made him immensely popular. In 2008, a poll of the four largest metropolitan areas found he had 82 percent support, despite significant evidence that his government had ties to right-wing paramilitary groups and sanctioned human rights abuses by Colombian security
forces (Canas Baena, 2016; Bronstein, 2008). And in 2011, Colombia finally reclaimed its coveted investment grade status.

![Figure 6. Colombia’s Current Account Balance (1990-2015). Source: World Bank Development Indicators.](image)

**After the Bust: 2012-2016**

The end of the commodity super-cycle in 2012 exposed previously covered structural challenges, particularly inequality and lagging productivity, and falling export revenues strained government finances in Colombia. Unlike in Brazil, however, where political turmoil impeded the government’s ability to react to falling commodity prices, the Colombian economy has proved one of the more resilient economies in Latin America. The country managed to achieve 4 percent GDP growth in 2012, and bottomed out at 1.6 percent in 2016, significantly better than most of its neighbors. From 2010-2015, the country even made progress reducing poverty by 11.2 percent and unemployment by 2.5 percent (World Bank, 2017).
Its economic success has not saved Colombia from experiencing rising polarization however, as Colombians demand greater socio-economic progress and protections from their government. Demonstrations and strikes in 2013 cost the country 0.8 percent of GDP, including a 4 percent drop in coal production due to strikes at the country’s two largest mining companies protesting government regulations (Asociacion Nacional de Instituciones Financieras). Farmers, students and labor unions marched against free trade agreements in August 2013 and then again in December to criticize the government for its “broken promises” (BBC, 2014). There is a sense, particularly among rural residents that the government has forgotten about them (Lansberg-Rodriguez, 2016; Alexander, 2014). There is also widespread dissatisfaction with the way Santos has handled social issues in general, including healthcare services, poverty reduction, unemployment, and the environment (Graham, 2016).

The peace talks started by Uribe’s successor, President Juan Manuel Santos were also highly controversial. A 2014 poll found that just 39 percent of Colombians thought that the dialogues would lead to peace; most preferred Uribe’s hard stance that the guerillas should either surrender or be defeated. The fight against the FACR and other guerilla groups was, for many years, one of the few unifying ambitions in a country deeply divided along socio-economic and rural/urban lines, Santo’s decision to open negotiations also opened a fissure between those who believe in a negotiated peace and those who thought military victory was the only acceptable outcome (Alexander, 2014). The decision also caused a significant falling out between Santos and Uribe, his former boss and mentor. Their political rift, which spilled into the 2014 presidential election and
the 2016 plebiscite on the peace deal, has only served to increase social tensions and polarization. Although the peace deal narrowly passed in its second iteration, it seems unlikely to guarantee an end to current political fight in Colombia as a broad swath of Colombians have come to believe that their country is not headed in the right direction (Casey, 2016).

The case of Colombia indicates that the accumulation of resource rents can drive government spending regardless of government ideology. Although Colombia’s government has remained reliably conservative for decades—except for a small blip in the 1990s—with a tradition of disciplined fiscal policy, Uribe nonetheless drove government spending higher during the years of the commodity supercycle. As Colombia’s fiscal accounts worsened following the fall in commodity prices, however, polarization has grown stronger. Interestingly, polarization has increased in Colombia despite the country’s relatively strong economic growth in recent years, supporting the idea that polarization cycles depend less on GDP and more on popular perceptions of well-being and inequality.

4.3 Chile

Widely considered to be the rare economic success story in Latin America, Chile has long prioritized stability and fiscal discipline. Although Chile’s economy has slowed following the drop in commodity prices, it still averaged 2 percent GDP growth over the last four years—a feat many of its neighbors would have been thrilled to match as they
faced zero or negative growth figures. And while political polarization in Chile has spiked since 2010, Chile has not endured the level of domestic turmoil felt by many of its neighbors. Nonetheless, Chile’s experience demonstrates the difficulties a government faces in satisfying various interest groups when there is an economic windfall, and the tensions that almost inevitably arise. It is perhaps unsurprising that President Bachelet’s record approval ratings corresponded with a significant increase in government spending, as her administration sought to soften the impact of the 2009 global financial crisis through a large stimulus package.

Figure 7. Polarization and Commodity Prices in Chile (1996-2016). Sources: IMF Commodity Price Index, Latinobarometro Annual Survey
Political and Economic Background

Throughout Chilean history there has been a strong emphasis on maintaining stability. The fierce polarization and economic instability of the 1960s and 1970s, which culminated in the 1973 military coup that brought a brutal dictatorship to power, left a profound and enduring legacy in Chile. Despite a deep divide between the left and right in that lingered well past the return to democracy in 1990, Chile institutionalized a political culture and electoral system that prioritized gradual change and consensus-building as a bulwark against returning to such a polarized era (Klein, von Knebel, Zilla, and Thunert, 2015; and Reid, 2009, p. 109). Similarly, the country maintained the orthodox, countercyclical economic policies introduced under General Pinochet and his “Chicago boys,” which are generally credited with producing what Milton Friedman termed the “Chile Miracle”: 5.2 percent growth between 1984 and 2010, with only two mild recessions in 1999 and 2009 (Caputo and Saravia, 2014).

Chile’s economic stability over the last decade and a half rests heavily on a structural fiscal balance rule introduced in 2000. The Asian financial crisis in 1997, which briefly weakened Chile’s fiscal accounts, and the election of a socialist president in 2000 raised fears that the country could relapse into the economic mismanagement of the 1960s and early 1970s—despite the fact that the new President Ricardo Lagos hailed from the same center-left coalition (the Concertación) as the previous president. In response, Lagos announced a new structural fiscal balance rule, designed to force the government to save surplus revenue during economic booms, with an annual target equal to 1 percent of
Chile’s GDP. The primary goal was to decrease Chile’s vulnerability to external crises, but the rule was also intended to prevent a government from succumbing to pressure to increase spending at an unsustainable rate during economic booms (Marcel, 2013). The rule became statute in 2006 with the passage of the Law of Fiscal Responsibility, further institutionalizing Chile’s commitment to countercyclical economic policy and fiscal discipline.

**The Boom Years in Chile: 2002-2012**

Chile is the largest producer of copper in the world, and its economy is heavily dependent on copper exports, which currently represent 49 percent of the country’s total exports. Chile’s mining industry, which includes copper but also lithium and other minerals, accounts for 14 percent of GDP. At its high point in 2012, the sector represented 20 percent of GDP. For comparison agriculture accounted for just 4 percent, as of 2016. Given its strong reliance on a single commodity, Chile is highly vulnerable to swings in the global copper market. As copper prices increased in the mid 2000s, due largely to rising demand in China, the government saw its revenue increase $2.1 billion per year from 2000-2005 and $11.5 billion per year from 2005-2011 even as actual output remained constant. (*Economist*, 2013; CIA World Factbook, 2017).

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5 In practice, the rule is relatively flexible. The Budget Directorate calculates the structural balance every year, based on a number of inputs including long-term copper price forecasts and GDP growth rate, but the actual target can be changed if economic conditions require it. In 2009, for example, the target was lowered to 0 to allow the government greater leeway with its stimulus package.
Chile, like much of Latin America, saw significant social gains and poverty reduction during this period. According to the World Bank, severe poverty in Chile declined from 7.7 percent in 2003 to just 2 percent in 2014, and moderate poverty declined from 20.6 percent to 6.8 percent during the same period. Moreover, the incomes of the poorest Chileans grew 4.9 percent on average from 2003-2014, compared to 3.3 percent for the entire population (World Bank, 2017).

Much of this improvement was a result of economic growth rather than increased government spending. Although between 1990 and 2005, government spending on health increased by a factor of ten and spending on education almost as much, spending increases flattened out in the early 2000s. Constrained by the structural fiscal balance rule, as well as the Chilean elites’ fear of populism and their pride in being an example
for the region, the leftist governments of Ricardo Lagos and his successor Michelle Bachelet kept federal social spending relatively constant as a percentage of GDP (around 10-11 percent), even as it increased in real terms due to Chile’s growing economy (Montecinos, 1998).

![Figure 9. Chile’s Current Account Balance (1990-2015). Source: World Bank Development Indicators.](image)

Chile’s structural balance rule is widely viewed domestically as a legitimate and useful tool, but even so the Bachelet government faced significant domestic criticism in 2006 and 2007 for its refusal to significantly expand social spending even as the annual surplus hit a record-setting 7.9 percent of GDP in 2006 (despite the relatively low GDP growth of 4.4 percent), followed by an even larger fiscal surplus of 8.7 percent of GDP in 2007 (Reuters, 2007; Reuters, 2008; Daban, 2011).  

6 The primary fund for Chile’s annual surpluses is the Economic and Social Stabilization Fund (FEES), although the government also manages a Reserve Pensions Fund and a Fund for Innovation and Competitiveness.
Although poverty had decreased, income inequality remained high, leading to widespread criticism of structural socioeconomic divides in Chile. Bachelet had campaigned on strengthening the social safety net and democratic participation. During her first 100 days in office, she increased state pensions by 10 percent, worked to improve health coverage for seniors, and introduced bills to improve education and vocational training (Siavelis, 2007, p. 73). Yet Bachelet almost immediately ran into trouble from a variety of interest groups.

The most visible protest started in April 2006, when thousands of high school students took to the streets across Chile to protest an increase in the cost of the college entrance exam and rumored plans to impose limitations on students’ free transportation pass (Economist, 2012). The protestors, dubbed the “Penguin Revolution” for their white and black school uniforms, contended that the poor quality of the public school system exacerbated structural inequalities, and demanded more money for education. By early June, millions were marching in the streets in solidarity with the students, who had rejected Bachelet’s first offer of $60 million in “emergency education spending” as far too little, too late. In the end, Bachelet promised a 2.8 percent increase in the annual education budget (roughly $200 million). The government made college entrance exams free, added subsidies for schools serving lower-income communities, improved teacher training, and provided additional scholarships—leading Bachelet’s critics to contend that she had capitulated to demands for higher spending, encouraging future “disorder and chaos” (Fabrega, 2009; Navia, 2009, p. 322). Powerful labor unions, including those representing the cooper workers who went on strike in 2006 as well as schoolteachers and
government employees also pressured the government for a share in the copper windfall. And the public broadly supported increasing government spending for health, education, welfare, and pensions. Despite her negotiations with the student groups, however, Bachelet continued to emphasize in her speeches and overall policy goals that, as political scientist Peter Siavelis (2007) put it, “real progressive social policy grows out of fiscal responsibility, which allows sustained social spending over time, rather than simply responding to short-term episodic demands” (p. 75).

Unwilling to increase spending drastically and break with the structural fiscal surplus rule, Bachelet turned instead to welfare reform efforts in order to deliver on social promises made during her first campaign and administration. Bachelet’s pension reform (from early in her administration) also helped, almost doubling the amount that senior citizens were entitled to. Her government also passed an expansion of national health insurance services to cover the middle class as well as the poor—building on the comprehensive health reform of her predecessor—as well as an extension of childcare and unemployment benefits with minimum guarantees for all Chileans. All this was done without significantly increasing government spending as a percentage of GDP.

Despite the difficulties of her first two years, Bachelet’s commitment to fiscal discipline allowed her administration to use fiscal expansion to smooth the impact of the 2009 global financial crisis and to help Chile recover from the 2010 earthquake (de Gregorio, 2009, p. 7). It is interesting, however, that Bachelet’s peak popularity in her first term coincided with the government’s 2009 economic stimulus, underscoring the political
gains that often seem to correspond with a redistribution of commodity rents. According to an October 2009 opinion poll, 69 percent of Chileans approved of her government’s management of the economy while Bachelet herself enjoyed a 78 percent approval rating—up from just 43 percent two years prior—despite the fact that the GDP contracted by 1 percent in 2009 (Stehnbruch, 2009).

After the Bust: 2011-2016

Although Bachelet enjoyed high approval ratings, the public had become increasingly disenchanted with the political establishment as a whole and with the center-left Concertación in particular. In 2010, conservative billionaire businessman Sebastian Piñera narrowly won the presidency largely due to voter fatigue: he was the first democratically elected right-wing president in Chile in 52 years. Yet the political elite in Chile are highly cohesive, even across the political divide, due to the shared belief in the importance of political and economic stability. Piñera and his leftist opponent Eduardo Frei campaigned on remarkably similar platforms, including calls to further socioeconomic progress and support economic growth.

Nonetheless, the Piñera presidency witnessed rising partisanship and tension between the country’s tradition of fiscal discipline and stability and a desire among many Chileans to see government resources spent on reducing structural inequalities (Luna and Altman 2011, 150). Although the Chilean elite remained focused on stability and economic growth, ordinary Chileans had become increasingly focused on building a more equal and equitable society—creating a genuine disconnect between the government and the people.
in terms of spending priorities. In 2011, a Center of Public Studies (CEP) poll found that over 75 percent of Chileans believed that the quality of public education had stagnated or deteriorated (BBC, 2011). There was a growing sense that the political establishment was not “responding to the demands of the population,” including on issues of increased wages, better quality education and health care, and reforms for the legal treatment of corruption and crime (Norambuena, 2010). After a decade of strong commodity-fueled growth, Chileans were no longer content with mere economic progress: they wanted to see social progress as well.

As a result of this disconnect, periods of high commodity prices without a corresponding increase in government spending (2006-2007 or 2010-2011) seemed to exacerbate tensions in Chile. In contrast with Brazil, where the commodity boom was accompanied by increased government spending aimed at reducing inequality—leading to record high popularity for President Lula at the height of the commodity boom—President Piñera’s popularity was at a record low even as copper prices peaked in 2011. A poll in August 2011 found that only 26 percent of Chileans approved of Piñera’s government, and a full 53 percent disapproved, which made him the most unpopular president to date since the return to democracy. The students marching in the streets to protest his government’s education policy at the time had a 72 percent popular approval rating. (Cabalin, 2011).

In 2012, Chilean students again took to the street to demand education and tax reform, as commodity prices were beginning to fall. The students framed educational problems as one part in a system that institutionalized inequality. They called out the nation’s elite for
arguing that education reform would be too costly and for refusing to pass the progressive tax reform that could pay for it (Fairfield, 2015, 268). Desperate to restore peace to the streets of Santiago, Piñera implemented Chile’s largest corporate tax increase since 1990 to fund expanded spending for education. He faced less congressional and private sector opposition than Bachelet had in 2006, as awareness was growing even among the status-quo-loving Chilean elite that popular demand for social spending would need to be addressed. Yet Piñera, as a billionaire businessman, was also particularly susceptible to perceptions that he favored the elite and business community—which may have pushed him to be more proactive in the opposite direction as the protests gained strength (Fairfield, 2015, pp. 260 and 265).

The collapse of copper prices in 2012 and 2013 only worsened this perception that ordinary Chileans were not seeing any quality of life improvements. Following the fall in the price of copper, which by 2016 was just 35 percent of its peak in 2011, GDP growth slowed to just 1.9 percent in 2014 and 2.1 percent in 2015 —significantly better numbers than the rest of the region, but representing genuine economic discomfort for Chile. President Bachelet, who won reelection by a record margin in late 2013, held just 24 percent approval by September 2015 (Quiroga, 2015).

Bachelet had promised an ambitious reform agenda during her reelection campaign in 2013, directly speaking to the discontent felt by many middle and lower class Chileans. Unlike the moderate reforms of her first term, Bachelet promised that in her second she would go to the heart of the matter, calling for constitutional reform to create a new, more
participatory and equitable basis for Chilean government and society (Benedikter, Siepmann, and Zlosilo, 2016). However, though her call for reform found significant support among ordinary Chileans, she has had difficulty convincing the political class to cooperate. Her administration was soon plagued by charges of corruption and economic mismanagement, eroding popular support and impeding her ability to push through economic and structural reforms in Congress. Support for the conservative coalition, however, has fallen even lower (just 15 percent approval).

Government countercyclical policies in response to the end of the commodity boom were successful in keeping the Chilean economy from contracting, but ultimately failed to convince Chileans that their government was on their side after years of limited increases in spending on social services. As during the global financial crisis, Chile’s commodity savings financed an increase in government spending: 6.1 percent in 2014 and 7.4 percent in 2015 to keep the economy stable as commodity rents decreased. However, unlike in 2009, this increase did not correspond to higher popular approval ratings. Deputy Finance Minister Alejandro Micco said in 2015, that “We are in a triangle of distrust…It is going to be hard to boost confidence in the business community and the government if society doesn’t believe a word that either of us says” (Quiroga, 2015). And unlike in 2009, the government could not rely on heavy cash inflows from copper exports to extend its efforts. The government is already reducing its stimulus (spending increased only 4.2 percent in 2016). Earlier this year, President Bachelet told the nation in a televised address that her goal was a “fiscally balanced and responsible budget…We will continue to carefully apply the fiscal rule, because our institutional credibility depends on it, and
the confidence needed for foreign and national private investment” (Millan Lombrana, 2016).

In essence, economic growth in the 2000s raised expectations that went unfulfilled due to the government’s policy of fiscal responsibility and fear of populism. Thus in Chile, polarization remained relatively steady throughout the boom (instead of decreasing)—as Chileans saw their government making money but did not see the improvement in their own lives—until the government stimulus of 2009, which corresponded with a sudden drop in polarization. However, polarization has rising quickly as commodity prices have fallen, showing the limits of government spending when commodity prices are low. The challenge for Chile now is to address its citizens’ aspirations despite the constrained fiscal environment.
V. CONCLUSION

Commodity booms can provide a significant economic boost for a country, but also can create unsustainable expectations among both the elite and the general population. As this paper’s model shows, commodity booms are strongly correlated with political polarization: as commodity prices rise, polarization decreases; and as commodity prices fall, polarization increases. This relationship exists independent of GDP, suggesting that economic growth is not responsible for the observed correlation.

The discussion of the three case studies—Brazil, Colombia, and Chile—offers further insight into the mechanism behind the relationship between polarization and commodity prices. Government redistribution, as all three case studies show, often reduces poverty without reducing the income gap. In essence, polarization occurs in response to the failure of government to use economic booms in a manner that fosters sustainable and equitable economic growth. That this is the case not only in Brazil and Colombia (which increased social spending significantly during the boom, and then were forced to cut back), but also in Chile (which keep spending relatively stable compared to GDP throughout the boom) suggests that this relationship is hard to escape in countries where inequality is high. Commodity windfalls raise high expectations among a vast array of interest groups in a society, and balancing these demands against government solvency is a difficult line to follow.

There are several lessons to be drawn from the case studies, however. First, governments should be wary of assuming that an economic windfall will last. They should also be
wary of conflating economic growth from commodity booms with genuine increases in economic productivity. In Brazil, the Lula government’s belief that Brazil had entered a new normal of higher growth and robust fiscal situation undoubtedly contributed to its decision to pursue expansionary spending policies during the boom years. Increasing government spending is easy during a commodity boom; but governments that increase spending too quickly will create unsustainable expectations, forcing the government to pull back on its “promises” once commodity prices fall.

Second, resisting pressure to increase spending during commodity booms is difficult and may hurt a politician’s popularity (as with Bachelet in 2007). Structural constraints can help reduce the impact of this pressure on public policy, but not all limits are created equal. Chile’s fiscal rule has proven flexible enough to accommodate a wide range of situations, and its legitimacy in the eyes of the population and the elite gives it strength. In contrast, Brazil recently introduced a different type of constraint: a constitutional cap on increases in government spending for the next 20 years. The rule has little flexibility, limiting the government’s ability to use stimulus spending to mitigate future economic downturns. It is also broadly unpopular, making it less likely that politicians will feel obligated to keep it in place.

Third, as the case of Chile shows, it is not enough to maintain sustainable social spending levels: the government needs to avoid a mismatch between income and popular aspirations. In short, using commodity windfalls to invest in capacity-building and economic reforms—increasing the long-term potential of an economy—would likely do
more to reduce inflation in the long run than increasing general spending (as Brazil and Colombia did) or stockpiling cash in a rainy-day fund (as Chile did). None of the three countries used the commodity boom windfalls to reform their education systems or improve the competitiveness of industry.

In sum, commodity booms may temporarily reduce polarization through economic growth and expansionary spending. As long as structural inequalities remain in place, however, the windfall is merely papering over the factors contributing to polarization—once the boom ends, political polarization will reemerge.
### Table 3. Variable Descriptions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Short form</th>
<th>Source</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polarization (Left-Right Placement on Political Spectrum)</td>
<td>Polarization</td>
<td>Latinobarómetro</td>
<td>Self-identified placement of survey respondents on a scale of 0 to 10, with 0 being extreme left and 10 being extreme right on the political spectrum.</td>
<td>Data from 1995-2016</td>
</tr>
<tr>
<td>Elite Polarization</td>
<td>Elite Polarization</td>
<td>Inter-American Development Bank - DPI</td>
<td>Measures the maximum difference between the chief executive's party value and the opposition.</td>
<td>Data from 1995-2015</td>
</tr>
<tr>
<td>Government Fractionalization</td>
<td>Fractionalization</td>
<td>Inter-American Development Bank - DPI</td>
<td>The probability that two deputies picked at random from the legislature will be of different parties.</td>
<td>Data from 1995-2015</td>
</tr>
<tr>
<td>Commodity Price Index</td>
<td>Commodity Price Index</td>
<td>IMF</td>
<td>Annual commodity prices index. 2005 = 100.</td>
<td>Data from 1992-2016</td>
</tr>
<tr>
<td>Exports as Percentage of GDP</td>
<td>Exports</td>
<td>World Bank</td>
<td>Annual exports (goods and services) as percentage of GDP</td>
<td>Data from 1992-2016</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>GDP per capita</td>
<td>World Bank</td>
<td>Annual GDP per capita</td>
<td>Data from 1992-2016</td>
</tr>
<tr>
<td>Factionalized Elites</td>
<td>Factionalized Elites</td>
<td>Fund for Peace Fragile States Index</td>
<td>Measures deadlock and brinksmanship among local and national leaders (power struggles, defectors, flawed elections, political competition). Scale of 0 to 10, with 0 being lowest intensity (least factionalized).</td>
<td>Data from 2005-2015</td>
</tr>
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</table>
Table 3. (cont.)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Short form</th>
<th>Source</th>
<th>Description</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Existence of Interest Groups</td>
<td>Interest Groups</td>
<td>Bertelsmann Transformation Index</td>
<td>Measures existence of cooperative associations/interest groups to mediate between society and the political system. Scale of 0 to 10, with 10 indicating a broad range of cooperative, competing groups (polarization is highest around 4)</td>
<td>Data from 2003-2012</td>
</tr>
<tr>
<td>Party System Stability</td>
<td>Party System</td>
<td>Bertelsmann Transformation Index</td>
<td>Measures the extent to which there is a stable and socially rooted party system able to articulate and aggregate societal interests. Scale of 0 to 10, with 10 indicating a stable and socially rooted party system and 0 indicating no real party system (polarization is highest around 4-5)</td>
<td>Data from 2006-2012</td>
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Table 4. Descriptive Statistics

<table>
<thead>
<tr>
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<th>Mean</th>
<th>Std. Dev.</th>
<th>Minimum</th>
<th>Maximum</th>
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<td>0.95</td>
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<td>Elite Polarization</td>
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<td>0.91</td>
<td>0.0</td>
<td>2.0</td>
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<td>Herfindahl Index - Government</td>
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<td>1.0</td>
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<td>Herfindahl Index - Opposition</td>
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<td>1.0</td>
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<td>Margin of Majority</td>
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<tr>
<td>Interest Groups</td>
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<td>1.93</td>
<td>2.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Commodity Price Index</td>
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<td>47.72</td>
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<td>Natural Resource Rents</td>
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<td>7.75</td>
<td>7.79</td>
<td>0.26</td>
<td>49.13</td>
</tr>
</tbody>
</table>

*Fewer observations are available due to the narrower time frame
REFERENCES


