## Abstract

While economic factors beyond incumbents’ control, like oil prices and international interest rates, often dictate presidential success in Latin America, the case of Mexico presents a puzzle. Research by @CampelloZucco\_2016 shows how Low Savings Commodity Exporting (LSCE) Latin American countries tie presidents' fate to external economic swings, but in Mexico, the link appears weaker. This suggests other factors influence Mexican presidential success, potentially including the impact of the US economy. I propose that Mexico's unique characteristics, shaped by long-term migration and economic ties to the US, make it less sensitive to traditional exogenous shocks, but more susceptible to those specific to the conditions of the US economy. I focus on this relationship and the mechanism of misattribution of responsibility, which occurs when citizens mistakenly assign economic outcomes to presidential performance, regardless of its true cause. I contend that citizen perceptions towards positive economic conditions that are largely determined by specific fluctuations of the US economy, such as remittance flows and strong employment in the construction sector, significantly impact Mexican presidential approval, which potentially advances misattribution. This research aims to better characterize the factors beyond commodity prices and interest rates that influence Mexican presidential success.

## Introduction

Mexico is both part of Latin American countries due to its Spanish heritage and of North America because of its geography. The presence of Mexican culture is widely present in Central and South America however, its economic dynamics very much differ from that of its Latin American peers. Decades of integration with its two northern Anglo American neighbors, mainly through migration and economic agreements, have come to shape the country characteristics that distinguish Mexico within both regions.

The issue of misattribution of responsibility occurs when voters attribute economic conditions to incumbents even when those conditions are determined by factors beyond governmental control [@CampelloZucco\_CommodityPrices2022]. @camzuvol\_2020 claim that exposure to exogenous shocks, strongly associated with dependence on commodities and variations in trade, is a fundamental structural difference between developed and developing economies. They argue that countries highly exposed to volatile exogenous conditions face more challenges in identifying the competence of governments based on the economy.

For a large subset of Latin American countries, presidential popularity and reelection prospects strongly depend on factors exogenous to presidents’ policy choices such as commodity prices and international interest rates. As @CampelloZucco\_2016 show, Low Savings Commodity Exporting (LSCE) countries particularly dependent on oil prices and international interest rates evaluate presidents based on the positive or negative state of the economy, regardless of their direct responsibility. Authors study presidential success and popularity with the introduction of their Good Economic Times (GET) index^[The GET index, devised to gauge the economic environment faced by Latin American countries, combines monthly values of US 10 Year Treasury Constant Maturity Rate and UNCTAD’s "Free Market Commodity Prices" Index. Through principal components decomposition, it condenses these variables into a one-dimensional indicator on a unitless normalized scale. Higher GET values signify favorable economic conditions, while lower values indicate challenging times for the region. The authors justify this simplified approach for its ability to capture variations in international conditions, considering both commodity prices and US interest rates. The index is employed in the study to examine its impact on domestic economic indicators and presidential popularity, particularly distinguishing within 18 Latin American countries, 10 in the LSCE sample and 8 in the comparison group.] that display robust significant effects on presidential reelection probabilities in LSCE countries, particularly during favorable international economic conditions.

However, the magnitude of exogenous factors varies significantly among countries and regions. When @CampelloZucco\_2016 evaluate the predictive power of the GET index results show a strong covariance between GET and presidential popularity in Brazil (R² = 0.63) but a weak one in Mexico (R² = 0.12). Moreover, when comparing a model with only the GET index to a model with several domestic economic variables, the GET model performs almost as well in predicting popularity in Brazil but a null effect for Mexico. Despite this, authors acknowledge the challenges in predicting presidential elections, emphasizing that most empirical work on economic voting is better at predicting popularity than actual voting behavior.

This observation is particularly compelling, it signals that other factors beyond international interest rates and commodity prices influence presidential popularity in Mexico. I contend that country characteristics resulting from long-term migration and economic evolution make Mexico less vulnerable to interest rate shocks and commodity prices but also to other factors that result from exogenous shocks rooted in the conditions of the US economy, specifically remittance flows [@germano\_2013; @bravo\_2012] and strong employment in the construction sector [@df\_canas\_2023].

The human trend of migration has had considerable effects in Mexico. Migration originates from multiple sources of needs, yet they all ultimately converge with the desire for better living conditions. Mexican migrant workers have been historically employed in the US, during the 2000’s they worked mainly in the Commerce (23.6%) and Manufacturing (22.5%) sectors, while more recently they are concentrated in the Construction (19.5%) and Hospitality and Leisure (13.8%) sectors [@df\_canas\_2023; @bbva\_serrano\_2022]. As of 2022, Mexico became the second-highest receiver of remittances in the world, only behind India ($55.9 and $98.2 US billions, respectively) but, this amount represents 4.5% of the Mexican GDP while 2.9% in the case of India [@bbva\_serrano\_2022].

With respect to trade, as of 2023, Mexico became the US top trading partner surpassing Canada, while in 2022 it became its first manufacturing partner surpassing China [@df\_torres\_2023]. Although this shift accelerated due to post-pandemic nearshoring dynamics in the US, such increased demand is only natural due to and technological advances allowing for the expansion and evolution of the traditional Mexican “Maquila” into a multifaceted trade hub. Moreover, this is also a result of sound economic reforms and 13 free trade agreements with 50 countries, particularly those under the scope of the USMCA, which was reformed in 2020 from the originally signed NAFTA in 1991 [@buendia\_1996; @cameronwise\_2004]. The rule of law conditions that emanated from the trust relationship between Canada, US, and Mexico have enhanced its appeal for larger flows of FDI that tend to establish operations for longer time periods as opposed to shorter term investments that are most prone to capital-flight dynamics.

Despite trade liberalization efforts and enhanced competitiveness, strong labor demand in the US continues to attract migrants, in 2021 a total of 11.9 million Mexican migrants lived in the US [@bbva\_serrano\_2022]. Endogeneity concerns should be considered since migration could be a consequence of poor long-term policymaking, forcing Mexicans to seek job opportunities elsewhere. However, underlying conditions in the US would determine demand for labor and trade, resulting in exogenous shocks. Beyond the benefits and consequences of trade, remittances, a historically increasing financial flow are sent by migrant workers to support Mexican households [@doyle\_2015; @doyleg\_2019]. Counterintuitively, remittances are commonly attributed as a presidential accomplishment regardless of the fact that these transfers originate from conditions in the US and migrant workers.

This matters because the positive perception of the increasing flow of remittances might result in misattribution of responsibility for an accomplishment beyond presidential policymaking. Hence, in order to amplify the fitting power of the model introduced by @CampelloZucco\_2016 and drawing inspiration from Bravo (2012), @doyles\_2018, and @doyleg\_2019, I hypothesize that exogenous shocks resulting from i) remittances flows and ii) strong labor demand in the US construction sector, could help better characterize the GET conditions and whether or not they have an effect on presidential popularity for the case of Mexico.

It is tempting to study presidential approval with variables like perceptions of security and crime, scholars like @romeromag\_2016 and @doyleg\_2019 have argued that these predictors have a weight in presidential success in Mexico, even more so than economic performance. However, the foundations of these variables are more endogenously-related given the state’s responsibility for order and governance. While one could make a case that insecurity could arise from increased competition between Drug Trafficking Organizations (DTOs) on a feud to protect or increase their share of the narcotics demand in the US market, it could be more challenging to say that crime would be exogenously-driven by factors in the US. It is precisely the exogenous and countercyclical characteristics of remittances that allows for the exploration of misattribution of responsibility.

The remainder of the article is structured as follows: Section (3) introduces notions of assignment of responsibility, economic voting, and presidential success. Alongside, we explain the relationship between remittances, employment in the construction sector, and presidential approval. Section (4) describes the experimental design and data, followed by the hypotheses, and expected results in Section (5). Finally, we portray the implications and limitations of the proposed study in Section (6).

## Literature Review

The relationship between remittances and economic growth has been a topic of debate, with scholars such as @yang\_2007 suggesting that remittances act as a vital international risk-sharing mechanism, of being largely outside the control of governments in migrant home countries [@germano\_2013; @bravo\_2012], and considered a political manifestation of economic dependency [@wibbels\_2006]. @doyles\_2018 contribute to the literature by examining the underexplored relationship between fluctuations in remitted income and incumbent approval in Central Eastern Europe, the Caucasus, and Central Asia. Their study reinforces assumptions about voters' ability to disentangle competence from exogenous shocks, particularly in low-information, developing country contexts (@CampelloZucco\_2016; Stokes 2001).

@doyles\_2018 examine the impact of fluctuations in remitted income on support for incumbents in remittance-receiving countries. The authors contend that remittance recipients, by relying on their pocketbooks to assess government performance, may be attributing economic developments abroad to the actions of incumbents at home. They show that changes in remittances influence economic assessments and incumbent approval, with increased remittance inflows leading to higher economic evaluations and incumbent approval, while declines result in punishment for incumbents.

Findings by @doyles\_2018 challenge traditional notions of economic voting (Kramer 1971; Fiorina 1981) and competence misattribution in developed countries (Duch and Stevenson, 2008), while reinforcing those of developing countries (Campello and Zucco 2022; Healy, Kuo, and Malhotra, 2014). Economic voting can promote accountability, yet this does not happen as voters reward or punish incumbents for economic outcomes beyond their control, which is also known as misattribution of responsibility. The authors support claims by (Campello and Zucco, 2017) stating that economic outcomes and assessments, even if largely driven by exogenous factors, may be the only signal or source of information about incumbent competence that voters have, which can establish a chain of democratic accountability (Stokes 2001).

(CZ 2020 merit luck contrast with developed and developing) In developing democracies, support for incumbents is often influenced by economic and political developments abroad, such as commodity price shocks (Leigh 2009; Monteiro and Ferraz 2012). @CampelloZucco\_2016 demonstrate that voters in Latin America misattribute responsibility for economic outcomes to incumbents, using the GET index based on commodity prices and US interest rates. This misattribution, driven by exogenous shocks, has implications for the efficacy of the economic vote as a mechanism of accountability.

@CampelloZucco\_2016 demonstrate that the GET index, designed to gauge international economic conditions affecting LSCE countries like Brazil, do not impact Mexico in the same way. Brazil stands out as a commodity-exporting nation highly reliant on international capital flows, while Mexico distinguishes itself as one of the least commodity-dependent countries in Latin America. Mexico's unique position is attributed to its close ties with the U.S. consumer market, making it more receptive to financial capital during favorable economic conditions in the United States. This is particularly evident during periods of rising interest rates, indicative of a robust economy.

The distinction in commodity dependence becomes crucial when considering the economic vulnerabilities of countries in the region. Nations heavily reliant on commodity exports often find themselves as price takers in international trade markets, exposing them to the cyclicality of prices and leading to significant fluctuations in export earnings. During periods of high commodity prices, these countries experience economic prosperity and increased export revenues. Conversely, as prices decline, they face economic hardships. The classification of countries into the LSCE category, like most South American countries and Nicaragua, contrasts sharply with the stance of Central American countries, Mexico and Paraguay, which generally exhibit lower dependence on commodity exports. To quantify this dependence, data from the World Trade Organization (WTO) on trade was utilized, specifically computing the share of nonmanufacturing exports over total exports of goods and services in the year 2000, as outlined @CampelloZucco\_2016.

Mexico stands out as one of the world's largest crude oil exporters, boasting extensive reserves that rank 12th globally, enriched with abundant heavy crude deposits. Pemex, the state-owned oil company, has played a pivotal role in driving the country's oil export market, shipping millions of barrels daily, predominantly to the United States. These crude oil exports significantly contribute to Mexico's economic development, generating substantial revenue for the government. However, a contradiction emerges as Mexico, despite being an oil-producing nation, finds itself heavily reliant on the United States for refined petroleum products, particularly gasoline.

The paradox is elucidated by Mexico's insufficient domestic refining capacity, which lags behind its crude oil production. The country's refineries often grapple with outdated infrastructure, requiring substantial upgrades to efficiently process heavy crude into gasoline and other refined products. Consequently, Mexico turns to importing gasoline, with the United States emerging as a major supplier. The decision to import gasoline is not merely driven by necessity but also by cost considerations and expediency. Importing gasoline, particularly from the U.S., proves to be a more economical and swift solution than investing in extensive domestic refining upgrades.

Compared to the oil giants of Latin America, asseverations by @CampelloZucco\_2016 appear logical, yet on closer inspection Mexico's position in the global oil market appears a two-fold dependence, exporting crude while concurrently relying on foreign sources for refined products. The latest Pemex Annual Report for 2022 reveals that Mexico imported 1.84 billion barrels of refined products, primarily gasoline and diesel, while domestic refining produced only 649 million barrels. This stark contrast highlights that over 70% of Mexico's gasoline consumption is met through imports, emphasizing the nation's significant dependence on external suppliers. Because of this I contend that the original GET can be enhanced by including remittances from the US, hopefully achieving a better characterization of the index for the Mexican case.

Remittances are considered an exogenous and countercyclical capital flow providing a unique test for attribution in economic voting. (Bravo 2012) and [@doyles\_2018] position remittances as exogenous capital flows, largely beyond the control of governments in migrant home countries. Cañas and Pranger (2023) underscore the critical role of U.S. labor market conditions, particularly in the construction sector, in driving the growth of remittances. They highlight the countercyclical nature of remittances, which increase during economic downturns and emphasize the intricate link between economic conditions in the host country and remittance flows. The direct impact of remittances on household income, coupled with their largely uncontrollable nature by incumbent governments, makes them an excellent identification strategy to examine how individuals attribute responsibility for exogenous economic shocks.

@doyles\_2018 acknowledge endogeneity concerns and potential biases in attributing changes in economic evaluations solely to remittances. To address this concern, they use the share of woman in each household as instrumental variable in a within-subject design. The study underscores the fragile equilibrium remittances can create, influencing accountability mechanisms and governance dynamics in remittance-dependent economies. Misattribution, whether rational or not, poses normative challenges for democratic accountability, urging a reconsideration of traditional economic voting models in the context of exogenous shocks and remittance dependency.

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Presidential approval and public security in the context of Mexico's War on Crime have been intricately examined by Romero, Magaloni, and Díaz-Cayeros (2016). Addressing a gap in existing literature that often links crime to local authorities, the authors investigate the impact of victimization on presidential approval using survey data from the AmericasBarometer and the Mexican Presidency. Their findings challenge conventional wisdom, revealing that being a victim of a crime significantly diminishes approval, with the effect of security performance surpassing that of economic indicators. Importantly, the study suggests an incentive structure where presidents prioritize symbolic actions over crime reduction to maintain popularity.

In a parallel exploration, Doyle and García (2019) shift the focus to the influence of remittances on public security perceptions, personal safety, and presidential approval. Contrary to the economic vote hypothesis, they propose that remittances in Mexico impact approval through enhanced security perceptions, given the nation's high crime rates. The study utilizes individual data from Mexico spanning 2006–2017, demonstrating that remittance recipients report higher perceived safety and better national security evaluations. Importantly, they employ causal mediation analysis, revealing that nearly a quarter of the effect of remittances on sociotropic security evaluations is mediated through improved perceptions of personal safety.

Comparing these studies, both converge on the significance of security in shaping presidential approval. However, they differ in their emphasis – Romero et al. underscore the importance of symbolic actions and a strong presidential stance on security, while Doyle and García highlight the role of remittances in shaping security perceptions. Moreover, the studies diverge in their treatment of economic considerations. Romero et al. challenge earlier findings, suggesting citizens prioritize security over economic concerns during security crises. In contrast, Doyle and García argue that remittances, by alleviating economic pressures associated with crime, contribute to improved security evaluations and, consequently, presidential approval.

In conclusion, these two studies collectively contribute to our nuanced understanding of the multifaceted dynamics between presidential approval, public security, and remittances in Mexico. They shed light on the complex interplay of factors influencing public opinion in the context of security challenges, offering valuable insights for scholars, policymakers, and practitioners.

Presidential approval and public security intertwine in Mexico's War on Crime, as explored by Romero, Magaloni, and Díaz-Cayeros (2016). The study responds to the scarcity of works linking these variables, noting the conventional association of crime with local authorities. Drawing on surveys from the AmericasBarometer and the Mexican Presidency, the authors reveal a significant decrease in approval for those victimized by crime, challenging earlier findings that local authorities are the primary focus in criminal matters (Arnold and Carnes, 2012; Chevigny, 2003; Devroe, 2013). In contrast to economic considerations, the study accentuates the pronounced impact of security performance on approval, proposing an incentive structure where presidents prioritize symbolic actions over crime reduction (Romero, 2013).

In a shift of focus, Doyle and García (2019) investigate the influence of remittances on perceptions of public security, personal safety, and presidential approval. The authors cite literature linking remittances to increased approval through an economic vote (Ahmed, 2017; Bravo, 2012; @germano\_2013, 2018; Tertytchnaya et al., 2018) but propose that, in contexts where presidents are evaluated on security issues (Romero, Magaloni, and Díaz-Cayeros, 2016), remittances may impact approval through enhanced security perceptions. Utilizing Mexican data (2006–2017), the study reveals that remittance recipients report higher levels of perceived personal safety and better national security evaluations. In contrast to Romero et al. (2016), the study suggests that remittances, while positively associated with approval, do not have a statistically significant effect. Sociotropic evaluations of public security strongly and significantly influence approval levels.

Comparing the two studies, both converge on the significance of security in influencing presidential approval in Mexico. Romero et al. underscore the importance of symbolic actions and a strong presidential stance on security, whereas Doyle and García highlight the role of remittances in shaping security perceptions and influencing approval. Additionally, the studies differ in their treatment of economic considerations. Romero et al. challenge earlier findings, suggesting that citizens prioritize security over economic concerns during security crises. In contrast, Doyle and García argue that remittances contribute to improved security evaluations and, consequently, presidential approval by alleviating economic pressures associated with crime.

In conclusion, these two studies offer complementary insights into the complex dynamics of presidential approval, public security, and remittances in Mexico. By enriching our understanding of the multifaceted relationship between these key variables, they contribute to a more nuanced comprehension of the factors shaping public opinion in the context of crime and security challenges.

While the political consequences of immigration in receiving states have been extensively studied, the political effects of remittances on the countries or individuals receiving them remain relatively unexplored [@doyles\_2018]. The literature suggests that remittances can influence exchange rate policy, citizenship requirements, public accountability, and the strategies adopted by political parties, including clientelism [@doyles\_2018]. Remittances emerge as a vital economic component for Mexico, surpassing manufacturing exports and tourism as the main net foreign-exchange generator (Cañas and Pranger 2023). Constituting 4.5 percent of Mexico's GDP in 2022, remittances alleviate poverty, reduce regional economic disparities, and serve as a stable source of income. The economic implications are far-reaching, diminishing the government's reliance on overseas borrowing during crises. The literature suggests that remittances can have insurance and consumption effects, increasing economic optimism and support for incumbents, especially in contexts where economic performance is largely driven by exogenous shocks [@doyles\_2018]. Cañas and Pranger (2023) emphasize the oversight in neglecting the political dimensions of remittances. Their study builds on existing literature showing that remittances influence exchange rate policy, public accountability, and political party strategies (Singer 2010; Leblang 2017; Abdih et al. 2012; Tyburski 2012). It sheds light on how remittances, a significant source of income, can shape individuals' economic evaluations and, consequently, influence political attitudes.

Cañas and Pranger (2023) also highlight potential challenges and risks associated with remittances, including the risk of illicit funds from drug cartels. While regulations exist, there is a concern that a fraction of remittances could be linked to illegal activities, posing potential money laundering risks. From shaping political attitudes and influencing incumbent approval to serving as a vital economic lifeline for households and nations, remittances prove to be a complex and influential force in our interconnected global landscape. Understanding these dynamics is crucial for a comprehensive analysis of the impact of remittances on both sending and receiving economies, contributing to informed policymaking and academic discourse.

## Research Design and Data

I will replicate the sample by CZ16 in order to see the position of Mexico as well as its peers of Central America. This study will focus solely on Mexico but as discussed earlier, the central region might share more similitudes that could allow for an extension of the GET Index to this countries.

- ![ Debt Service Share and Commodity Dependence](com\_debt\_latam.png){ width=100% height=100% #fig:label .center}

- First, I will replicate the original GET index combines monthly values of US 10 Year Treasury Constant Maturity Rate and UNCTAD’s "Free Market Commodity Prices" Index.

- Second, I will create a database with remittance flows from Latin American countries and the Top 10 remittance-receiving countries.

- I will take a look at the most recent data (2022) and the historical trend since the 1970’s.

- ![Remittance as % of GDP 2022](rem22\_lat\_top.png){ width=100% height=100% #fig:label .center}

- ![Remittance as % of GDP Historical](remhist\_lat\_top.png){ width=100% height=100% #fig:label .center}

- Then, I will compare the changes in Remittance Flows using windows of 1, 5, and 10 years in both groups.

- ![Remittance % Change Latam](remlat\_chg.png){ width=100% height=100% #fig:label .center}

- ![Remittance % Change Top Receving](remtop\_chg.png){ width=100% height=100% #fig:label .center}

- Third, I will create a database with monthly construction employment from the Bureau of Labor Statistics payroll survey and median hourly nominal construction sector 12-month wage growth from the Federal Reserve Bank of Atlanta’s wage growth tracker.

- ![Monthly Construction Employment](const\_emp.png){ width=40% height=40% #fig:label .center}

- ![Median Hourly Nominal Construction Wage](const\_wage.png){ width=40% height=40% #fig:label .center}

- Alternatively, I will the FHFA (Federal Housing Finance Agency) House Price Index measures month over month changes in average prices of single-family houses with mortgages guaranteed by Fannie Mae and Freddie Mac.

- ![ FHFA (Federal Housing Finance Agency) House Price Index](fhfa\_9123.png){ width=40% height=40% #fig:label .center}

- Or the DJUSRE index is designed to track the performance of real estate investment trusts (REIT) and other companies that invest directly or indirectly in real estate through development, management, or ownership, including property agencies.

- ![Dow Jones U.S. Real Estate Index](djusrei\_1423.png){ width=40% height=40% #fig:label .center}

- Fourth, I will create a database with the peso-dollar exchange rate using Banco de México’s real peso exchange rate index. A real exchange rate index controls for the inflation rate differential in the two countries.

- ![Real Peso Exchange Rate Index](repe\_mex.png){ width=40% height=40% #fig:label .center}

- Finally, I will attempt to create an uptadet version of the GET index that accounts for exogenous factors that attain the Mexican economy. By using the baseline model with commodities and interest rates, I will test the changes in popularity as I introduce remittance flows, construction statistics, and the real peso exchange index. Hopefully it can better characterize the variations in the economy that are relevant for presidential success, popularity, and eventually election prospects.

## Hypothesis and Expected Results

## Implications and Limitations

Accountability mechanisms however, which are often rudimentary in these contexts, could erode even further as a result; it constitutes a form of competence misattribution (see Campello and Zucco 2017). For electoral accountability to function properly, voters need to reward, or punish, incumbents for outcomes for which they are primarily responsible (Kayser and Peress 2012).

What is more, the increasing use of technology, such as mobile and internet transfers, is making it even more difficult for governments to exert control over remittance inflows (Vieira 2017).

The Mexican economy took an economic decision of depetrolize in the 1970s when president XX did XX. Although still dependent , gradually reducing its dependence on oil from 60% in 1960 down to 20% since 1960.

We most consider that reduced capacity in Mexican refineries increases the crude exports while increasing imports of oil and other petroleum derivates.

Since 1960 mexico passed from being the 4th trading partner of the US to 1st position in 2023.

<https://www.atlantafed.org/chcs/wage-growth-tracker>

<https://www.bls.gov/ces/>

<https://tradingeconomics.com/united-states/housing-index>

<https://www.spglobal.com/spdji/en/indices/equity/dow-jones-us-real-estate-index/#overview>

<https://www.fhfa.gov/AboutUs/Reports/ReportDocuments/FHFA-HPI-Monthly_12262023.pdf>

<https://www.fhfa.gov/Dashboards/UAD/Pages/uad_advanced_analytics.aspx>

<https://catalog.data.gov/dataset?q=fhfa>

<https://catalog.data.gov/dataset/fhfa-house-price-indexes-hpis-948c6>

<https://stats.wto.org/>