How bad are Irregular Democratic Transitions? The case of Impeachments*

Pedro A. Cabra-Acela†
University of California, Los Angeles

Bruno Jiménez‡
New York University & CEDLAS

December 5, 2025

Abstract

We study how irregular presidential transitions affect tax morale, focusing on Peru's 2022 ousting of President Castillo. Using a difference-in-differences design that exploits geographic variation in support for Castillo, we find that tax revenues in pro-Castillo regions fell by up to 16% in the short run. This effect is driven by a persistent fall in presidential approval, temporary drops in trust in law enforcement, and increased racial discrimination tied to the repression of protests. No comparable effects arise from routine transitions, highlighting the unique tax morale consequences of democratic breakdowns.

Keywords: Impeachments, Public Finance, Racial Wage Gaps.
JEL Codes: H26 , J15, P49.

*We thank Thomas Fujiwara, Natalia Guerrero, Almudena Valle, Jill Conte, Daniel Vaquero, Ignacio Lunghi, Sebastian Sardón, Pablo Zárate, Nicolás Urdaneta, German Orbegozo, Arielle Bernhardt, Ellora Derenoncourt, Gianmarco León-Ciliotta, Alberto Bisin, Raquel Fernandez, Ricardo Perez-Truglia, Leopoldo Fergusson, Juliana Londoño-Vélez, Giuliana Silva, and seminar participants at Princeton University and New York University for their valuable comments and suggestions. Brayan Condori provided outstanding research assistance. All opinions, errors, and omissions are our own. This research was supported by the Institute for Humane Studies (grant no. IHS019014) and the Graduate School of Arts and Sciences at New York University.

†Contact: pacabra@g.ucla.edu
‡Contact: btj228@nyu.edu

1 Introduction

Democratic backsliding, defined as the incremental weakening of institutions and norms that sustain representative government, has intensified worldwide since the early 2000s (V-Dem Institute, 2025; Repucci, 2020; Hellmeier et al., 2021). While outright military coups have become less common, disruptions now more often occur through constitutionally sanctioned channels: amendments to electoral rules, constraints on the media, and presidential impeachments carried out within formal procedures (Bermeo, 2016). Although these events differ from violent seizures of power, they are still "irregular" in the sense that they break the expected electoral cycle and generate uncertainty about the continuity of democratic mandates. Given the well-documented link between stable democratic institutions and favorable economic outcomes—higher growth, better public health, and stronger fiscal capacity (Acemoglu et al., 2019; Fujiwara, 2015; Acemoglu et al., 2015)—understanding the consequences of such legally grounded yet disruptive transitions, particularly impeachments, remains an important and underexplored research agenda.

In this paper, we ask whether irregular presidential transitions shape citizens' willingness to pay taxes. Motivated by the recent wave of legally sanctioned yet democracy-eroding power grabs, we focus on the ouster of Peruvian President Pedro Castillo and the subsequent ascension of his constitutional successor, President Dina Boluarte. We treat this episode as a natural experiment to study how impeachments affect citizens' tax contributions.

Pedro Castillo's 2021 presidential campaign mobilized rural, Indigenous, and working-class voters through a grassroots, left-wing platform. Racial and ethnic tensions were present from the outset and remained a defining feature of his presidency. Castillo's rise was seen by many elites as a threat to Peru's longstanding racial and class hierarchies. As a political outsider, he was often mocked in the media with classist and racist undertones. Despite this, he won a narrow but surprising victory, prompting the opposition to immediately challenge the result with baseless fraud claims. After those claims were dismissed, Congress initiated several impeachment attempts, invoking allegations of misconduct under the charge of "moral incapacity."[1] Hours before a third impeachment vote, Castillo attempted to dissolve Congress in what many saw as a self-coup.[2] Congress rejected the move and swiftly impeached and detained him.[3]

Vice President Dina Boluarte assumed office and quickly distanced her government from Castillo's platform. She replaced key officials and clashed with left-leaning governments abroad.[4] Many supporters viewed this as a betrayal, while others regarded it as the natural course of action given the circumstances. Protests followed, and were met with violent repression that left around 70 dead—mostly from Indigenous communities—and hundreds injured (Amnesty International, 2023).

We embed the impeachment episode within a difference-in-differences framework, treating it as a shock that deprived one group (supporters of the ousted president) of their elected representative, while leaving others relatively less affected. Our strategy is to compare local-level tax contribution trends before and after the event between Castillo's supporters and non-supporters, using administrative records of local tax collection.

Our main finding is that, in the aftermath of the impeachment, tax revenues in the treatment group fell by 16%. This reduction is entirely driven by property taxes and is concentrated in the first quarter after the impeachment, precisely when protests demanding Castillo's reinstatement were met with violent repression. We replicate our quasi-experiment with the most recent regular transition from a left- to a right-wing government and find no effect. This result is particularly important, as it directly complements Cullen et al. (2021), showing that irregular presidential transitions have

[1] Moral incapacity (incapacidad moral) is a constitutional ground in Peru permitting Congress to remove a sitting president deemed morally unfit for office. While originally intended for cases of mental incompetence, it has evolved ambiguously, allowing Congress substantial discretion to impeach presidents over broad ethical or political allegations.

[2] A *self-coup* occurs when a sitting executive seeks to remain in power by unlawfully dissolving or bypassing constitutional checks such as the legislature, the courts, or the constitution itself.

[3] Castillo remains under investigation in pre-trial detention, and the legal interpretation of this episode is contested.

[4] Tensions escalated, resulting in Mexico imposing visa requirements on Peruvian travelers and vetoing Boluarte's assumption of the temporary presidency of the Alianza del Pacífico.

much larger tax effects than routine ones. Next, we return to our main case study and exclude areas with higher protest activity (any killings or larger crowds). We still find effects of the same order of magnitude. Thus, the fact that protest activity alone does not account for these results,[5] and that routine presidential transitions produce no comparable effect, suggests that whether an administration arises through regular or non-regular means is central to shaping the link between attitudes toward government and tax contributions.

We then investigate the mechanisms underlying this result. We conceptualize the irregular transition as a rupture in citizens' relationship with the state, which in turn undermines compliance with tax obligations. Motivated by the fact that Castillo's support base, and those most affected by the protests, were disproportionately rural and Indigenous, we focus on trust in the armed forces and police (the primary agents of state repression) and on perceived racial discrimination as potential channels. We find empirical support for both mechanisms. Trust in the police and armed forces declines by 3.3 and 4.7 percentage points, respectively, representing 13.5% and 11.2% of the pre-impeachment control group mean. At the same time, reported experiences of racial discrimination increase by 88.5% compared to baseline levels. These changes are concentrated during the height of protest activity and are not observed in our comparison using a regular presidential transition.

Next, we turn to nationally representative household surveys on living standards and views about the government to further unpack the mechanisms behind this result. We document a sharp and sustained drop in government approval: the impeachment reduced presidential approval by 15.6 percentage points, equivalent to 51.3% of the pre-impeachment mean. The decline is specific to the presidency and does not extend to subnational levels of government. Once again, this finding does not replicate in the setting of a routine presidential transition. Moreover, we show that respondents in the treatment group do not shift their preferences away from democracy, ruling out the possibility that the impeachment was perceived as an undesirable return to democratic rule. Taken together, these results support a narrative in which citizens silently protest a government they perceive as unrepresentative of their interests by reducing their tax contributions.

We support these results with the following pieces of evidence. First, we show that trust in institutions unrelated to the impeachment (e.g., the Department of Education, the Catholic Church, among others), as well as discrimination based on non-politicized dimensions (e.g., gender, sexual orientation, age), remain unaffected, suggesting that our results are not driven by generalized or ulterior discontent. Second, we show that the effects of the impeachment on government approval are larger among residents of rural areas, agricultural workers, racial minorities, and those who report feeling closely tied to their indigenous community. Interestingly, government disapproval also increases among non-minorities and urban residents. This pattern is consistent with the idea that individuals update their beliefs not only based on their own interactions with the government, but also on how they see the government treat others.[6]

Moreover, we reject an explanation based on sexist bias towards Peru's first female President: presidential approval also falls in areas with low gender gaps in wages and employment, and in districts with low incidence of intimate partner violence. Which further bolsters an explanation rooted in the irregular nature of Castillo's downfall.

Lastly, we bolster our claims on the importance of the nature of the presidential change by ruling out two potential confounders. On the one hand, we show that satisfaction with government programs—both food and non-food assistance—remains unchanged, as does the reported incidence of corruption in interactions with government officials. On the other hand, we find no decreases in labor income or household expenditure in the treatment group relative to the control group. Therefore, alternative explanations based on reduced public service quality or depressed economic activity are inconsistent with the data.

All of our findings are robust to sensible changes in our identification strategy. For example,

[5]For instance, one might worry that property damage to tax collection offices or mobility restrictions caused by protests drive the effect.

[6]This type of social multiplier effect has been documented in several contexts (Fujiwara et al., 2016; Glaeser et al., 2003; Jiménez, 2023).

they retain their qualitative interpretation when we replace our treatment dummy with a continuous measure of first-round support for Pedro Castillo. The interpretation of our results also remains unchanged when we include district-months with zero tax collection, using a $\log(1+x)$ transformation for the outcome or when estimating the model with a Poisson quasi–maximum likelihood estimator, following Chen and Roth (2024).

Moreover, we document that both groups followed similar trajectories prior to the impeachment across a wide range of outcomes. In particular, treatment and control groups not only evolved similarly in terms of tax contributions, but also in their views toward the government, institutions, and experiences of discrimination. These patterns strengthen the credibility of our identification strategy. Furthermore, our results remain qualitatively unchanged when we incorporate province-specific time trends, which account for unobserved province-specific dynamics.

We argue that the Peruvian case offers a valuable setting for studying the broader consequences of irregular democratic transitions. It represents an instance of a successful impeachment of a popular leader. Similar episodes have occurred around the world. In Figure 1, we present a global map of successful and attempted presidential impeachments from World War II through 2024. Over this period, a total of 18 countries experienced at least one successful impeachment, while 22 countries witnessed at least one attempt. That is, impeachments are a widespread and globally relevant phenomenon.

Our episode also bears some features of a (self) coup, an even more widespread mechanism for democratic erosion. In fact, at least 31 countries have experienced a self-coup, or an attempt, since the end of World War II, and 134 have witnessed at least one coup or attempt. Taken together, these trends reveal that irregular presidential transitions[7] are extremely pervasive.

What is more, recent impeachment episodes around the world exhibit striking similarities with the Peruvian case beyond the impeachment label. In the United States, Brazil, and South Korea, presidential impeachments or serious attempts were characterized by intense political polarization, unresolved questions about presidential wrongdoing, and—critically—strong reactions from segments of the population. In the U.S., the impeachment proceedings against Donald Trump sparked widespread partisan division, with no clear consensus on criminal liability and major protests on both sides. Similarly, in Brazil, the impeachment of Dilma Rousseff and the prosecution of Jair Bolsonaro occurred in contexts of deep polarization and mass mobilization. In South Korea, the removal of Park Geun-hye triggered large-scale demonstrations both for and against her, despite clear legal rulings. Likewise, as in the U.S. and Israel, claims of electoral fraud intended to benefit a particular party form part of our story. These parallels suggest that our findings may extend beyond Peru and apply more broadly to democracies undergoing severe institutional crises.

Moreover, our case study provides a compelling source of identifying variation. Although the ideal data would capture individual voting behavior and allow us to trace outcome trajectories around the impeachment, such data are unavailable due to ballot secrecy. As the closest proxy, and following (Ajzenman et al., 2023), we use district-level presidential election results. Districts are the smallest administrative unit in Peru, with an average population of about 18,000 (35 million Peruvians divided by 1,874). They are also the most granular units for which official election results and tax collection data are available.

Throughout the paper, we argue that this is a reasonable proxy given the high degree of political polarization in Peru. In districts where Castillo won, he received an average of 36% of the vote, compared to only 12% in districts where he lost, an exceptionally sharp contrast.[8] This polarization allows us to construct a credible comparison between supporters and non-supporters before and after the impeachment, closely approximating an ideal quasi-experimental design.

Our findings bridge the literatures on tax morale and political disenfranchisement. The tax morale literature emphasizes that individuals' willingness to comply with taxes depends on reciprocity-based motivations toward the state (Luttmer and Singhal, 2014). Empirical evidence consistently supports

[7] Throughout the text, we use the terms irregular transition and impeachment interchangeably, given the focus of our case. However, we are careful to distinguish these from traditional military coups, which we treat as a separate category.

[8] These are remarkably high vote shares given that the presidential race featured 18 candidates.

this view: survey studies document that trust in government and legal institutions is positively associated with self-reported tax compliance (Scholz and Lubell, 1998; Torgler, 2003), while laboratory experiments find that individuals with negative perceptions of government are more likely to evade taxes (Webley, 1991). Further, Cabra-Acela (2023) integrates intrinsic and extrinsic incentives for tax compliance that highlights how the effectiveness of enforcement and reward policies depends on the interaction between these two dimensions. In particular, when the intrinsic cost of evasion is low—such as when citizens feel increasingly detached from the state—tax evasion is likely to rise even in the presence of pecuniary incentives.

In short, tax morale captures intrinsic, non-pecuniary motivations to comply with the state, a point well established in the literature. A large body of evidence shows that taxpayers' contributions depend on perceptions of fairness, representation, and political attitudes toward authorities (Feld and Frey, 2002; Giaccobasso et al., 2022; Cullen et al., 2021; Ajzenman et al., 2024). The study most closely related to ours is Cullen et al. (2021), who find that partisan alignment during routine political cycles in the United States reduces tax evasion. We complement this work by focusing on an irregular rather than a routine presidential transition. We show that this distinction is crucial: the effects of irregular transitions are orders of magnitude larger. In our setting, routine presidential transitions have no discernible impact on tax collection, whereas an impeachment induces a large and immediate decline in property tax revenues.

Our focus on property taxes connects to a recent strand of the tax morale literature that emphasizes this type of contribution (Nathan et al., 2025; Del Carpio, 2013; Cabral and Hoxby, 2012). Property taxes are an appealing setting to study tax morale. In Peru, compliance is neither universal nor negligible, leaving scope for behavioral responses (Del Carpio, 2013). Liabilities are based on property size and cadastral values, making them largely invariant to business cycle conditions. They are also salient: unlike income taxes, they are not withheld automatically but paid consciously. Finally, although municipalities can perfectly observe compliance, they prosecute only a small share of delinquents (Del Carpio, 2013). The room for noncompliance with minimal risk of punishment, coupled with their saliency, makes property taxes particularly suitable in our context.

Our finding of decreased property tax contributions directly complements Nathan et al. (2025), Del Carpio (2013), and Cabral and Hoxby (2012). While Del Carpio (2013) stress the role of social norms—how contributions depend on peers' compliance—we focus instead on citizen–government relationships. We also complement Nathan et al. (2025), who emphasize extrinsic motives such as savings and filing frictions.[9] We show that intrinsic motivation also matters. Finally, Cabral and Hoxby (2012) demonstrate the role of salience, another extrinsic factor: people dislike handing over cash to the state for no immediate return. By contrast, our results highlight a non-pecuniary channel, where irregular political transitions undermine reciprocity-based intrinsic motivation to comply.

Recent studies on the erosion of citizens' trust in the state examine how individuals respond to abhorrent acts of targeted government violence. For example, Ang et al. (2021) document declining willingness to cooperate with the police in the aftermath of the murder of George Floyd. Even after an observed increase in gunshots, 911 calls declined across several cities in the US. In another example, León-Ciliotta et al. (2025) show that state-mandated forced sterilizations in Peru had persistent negative effects on the use of government-provided medical services. Notably, there are serious allegations—supported by survey evidence—that these sterilizations were racially targeted, disproportionately affecting Indigenous women (Rendon, 2020). Our work provides evidence of yet another channel of civilian resistance: reduced willingness to finance the state.

Thus, our findings link political disenfranchisement and public finance. An irregular presidential transition that some citizens perceive as the removal of a rightful representative disrupts their relationship with the state. This disruption weakens reciprocity-based intrinsic motives, erodes trust in the government, and heightens perceived discrimination. Together, these changes translate into lower tax compliance.

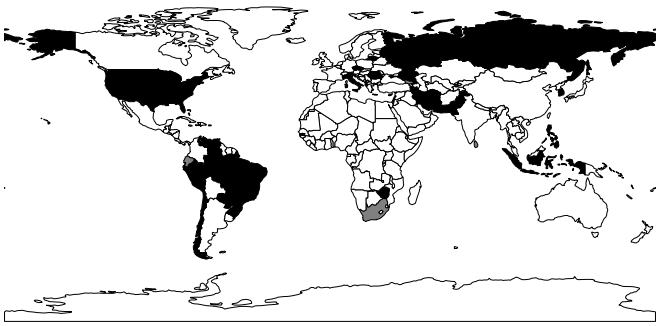
Finally, we broaden our understanding of the consequences of removing government officials from

[9]Strictly speaking, they show that these factors shape households' choice to protest or accept their tax bill.

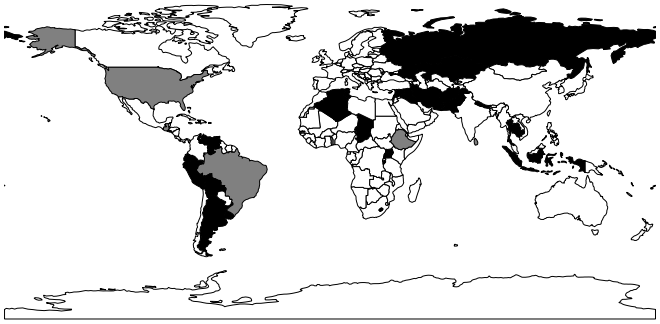
office. To our knowledge, Artiles et al. (2021) is the only existing study in the Economics literature that focuses on impeachments. Our work differs primarily in scope: while they examine how the removal of sub-national authorities affects the selection of politicians, we study how presidential impeachments shape individual attitudes toward the government and influence market interactions between individuals. Still, our results share substantial common ground. Artiles et al. (2021) show that sub-national impeachments reduce the representation of Indigenous groups among local authorities. Similarly, we find that the events we study carry significant racial undertones: individuals report feeling more racially discriminated against following the removal of their leader and the violent repression they face when protesting the impeachment.

The remainder of the manuscript is structured as follows. Section 2 provides background information. Sections 3 and 4 describe the data and our identification strategies. In Section 5, we present the main results. Sections 6 and 7 unpack the mechanisms behind our main results and test their robustness. Section 7 concludes.

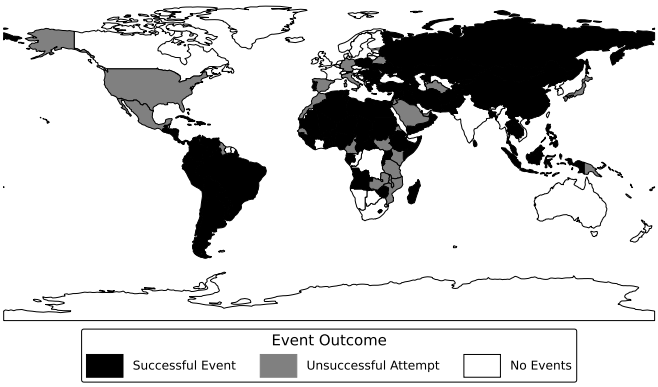
Figure 1: World Map of Irregular Presidential Transitions Since World War II



(a) Impeachments



(b) Self-Coups



(c) Coups

Note: The figure displays the global incidence of irregular presidential transitions since 1945. Panel (a) shows impeachments and impeachment attempts, based on data from Wikipedia's list of impeachments of heads of state. Panels (b) and (c) report the incidence of self-coups and coups, including attempts, extracted from Peyton et al. (2025). Countries shaded in black experienced at least one event of the corresponding type. Grey-shaded countries had at least one attempt that did not succeed. White indicates no attempts or no irregular transitions of that type.

2 Background

We study the impeachment of Peruvian President Pedro Castillo on December 7, 2022 as a case study to examine the consequences of irregular presidential transitions on tax collection.

2.1 Castillo's Presidency and Impeachment

Before turning to the empirical analysis, it is essential to outline the political events leading up to the impeachment and to explain how these may affect outcomes such as tax collection. While a full account of this complex sequence lies beyond the scope of the paper, we summarize the key elements most relevant for interpreting our identification strategy and results.

The 2021 Presidential Elections. Pedro Castillo emerged as a political outsider in the 2021 elections.[10] Mainstream news outlets largely ignored his candidacy, and most polling agencies predicted his vote share would remain below 5% just a few weeks before the ballot (Asensio, 2021). Some major media platforms did not even download his picture in preparation for the possibility of his election.[11] As a result, his campaign initially flew under the radar for many voters and analysts, particularly in urban areas that remained relatively isolated from the rest of the country due to the COVID-19 mobility restrictions that were still present in the first quarter of 2021.

Meanwhile, Castillo ran a successful campaign centered on smaller cities and rural areas, appealing primarily to rural and Indigenous communities. He adopted an identity-based strategy, emphasizing his background as a schoolteacher, his rural origins, experience as a union leader, and his ties to the *rondas campesinas*,[12] presenting himself as an honest leader with deep connections to ordinary Peruvians (González and Moscoso, 2021; Asensio, 2021). His political platform reflected this orientation. He proposed a constitutional reform, which he framed as addressing the roots of systemic inequality, alongside a restructuring of the pension system, the nationalization of key industries, land reform, and partial restrictions on foreign trade (Grompone and Jimenez, 2021). He also pledged to live frugally, refusing the presidential salary and continuing to receive his elementary school teacher's wage (Swissinfo.ch, 2021). Other observers have argued that his success also stemmed from highlighting stark disparities in living standards between Lima and rural Peru, which generated strong support in the latter regions (Pajuelo, 2021). In addition, he aligned himself with popular, though controversial, political figures such as Vladimir Cerrón and Antauro Humala.

Regardless of the reasons, Castillo's strategy proved successful enough to secure a spot in the second round of the presidential election. In the first round, held on April 11, 2021, his ticket, comprising himself, Vladimir Cerrón, and Dina Boluarte, received 18.92% of the vote, while the runner-up, Keiko Fujimori, received 13.41%.[13] As a result, the two advanced to the runoff election.

The results took several observers by surprise. For most, Pedro Castillo was not even considered a relevant player in the electoral landscape. Only a few weeks before the election did he begin to register non-negligible, albeit still very small, predicted vote shares in surveys of voting preferences (Asensio, 2021). So much so that, just weeks before the election, an interviewer mocked Castillo for having only 0.001% of the voting intention (O Salto, 2021).

Naturally, Castillo's rise to prominence as a viable presidential candidate attracted significant public attention. The opposition responded on several fronts. First, a smear campaign sought to associate him with foreign authoritarian leaders and domestic terrorist groups, claims largely unsubstantiated by neutral sources (Camacho and Sosa-Villagarcia, 2021). Second, critics highlighted Castillo's weak performance in interviews and debates, reflecting both limited media experience and modest formal

[10] These elections were routine; up to that point, all elections in the 21^{st} century had followed a regular schedule. They occur every five years, with the previous one held in 2016.

[11] CNN, in fact, used a blank silhouette when announcing him as the winner (La República, 2021*a*).

[12] A grassroots civilian movement created to prevent petty crime in small communities, which also collaborated with state forces against terrorism in the 1980s and 1990s.

[13] The remaining votes were divided among 16 other candidates.

education. Third, Keiko Fujimori's campaign positioned itself as a fiscally responsible alternative to Castillo's more radical economic proposals, such as closing Peru to foreign trade. Fourth, several prominent opinion leaders, including Nobel Laureate Mario Vargas Llosa (Redacción La Mula, 2021) and former officials such as Carlos Bruce (El Popular, 2021), reinforced a narrative of the election as a contest between an educated, stable option in Fujimori and a less prepared, impulsive one in Castillo.[14] This discourse was laced with elitism and racial undertones, and at times included explicit calls for violence. For example, another presidential candidate, Rafael López Aliaga, who would later become mayor of Lima, closed a campaign rally with the words: "Death to communism! Death to Cerrón! Death to Castillo!"

Castillo's rival, Keiko Fujimori, is a controversial figure herself. She is not only the daughter of Peru's last dictator, Alberto Fujimori, but also a firm ideological supporter of his regime, which is widely criticized for rampant corruption and political violence. Nevertheless, the results of the election held on June 6, 2021, were extremely close, with Castillo winning by less than one percentage point. At the same time, Fujimori's party and its allies secured a notable majority in Congress.

The opposition viewed the election results as an alarming and unexpected outcome. In response, they swiftly shifted their strategy, focusing on annulling approximately 200,000 votes from rural and Indigenous areas where Castillo had strong support (BBC News Mundo, 2021). This effort reportedly cost the Fujimori campaign over 1 million PEN (around 300,000 USD) (La República, 2021*b*). Several Lima-based law firms offered their services to expedite the challenge and seek the cancellation of the election results (Ojo Público, 2021). Despite investigations, no credible evidence of systematic manipulation was found, and the review of these "suspicious" votes was broadcast repeatedly on over-the-air television for several days.

This process may have deepened political polarization, as politicians and non-state actors openly sought to annul rural votes in an effort to seize power through a seemingly legal strategy, despite the absence of any credible supporting evidence.

Rise to power and impeachment. After the opposition's challenges were resolved through legal channels, Castillo was officially declared President of Peru on July 19, 2021. Vladimir Cerrón and Dina Boluarte had initially been slated to serve as vice presidents alongside Castillo; however, legal proceedings, related to a corruption case, rendered Cerrón ineligible to hold public office. Hence, if Castillo were to leave office for any reason, Dina Boluarte would become the (first female) President of Peru.

Segments of the opposition maintained their efforts, shifting from contesting ballots to pursuing removal through institutional channels. Congress attempted to impeach Castillo three times. The first attempt, in November 2021, invoked the constitutional clause of "moral incapacity," citing corruption-related controversies (CNN Español, 2022). The motion did not secure the 52 votes required to advance the process and therefore failed. A second attempt followed in March 2022, again citing corruption allegations. In this case, the process advanced to a vote, but the motion garnered 55 votes in favor, 54 against, and 19 abstentions, falling short of the 87 votes needed to remove Castillo from office.

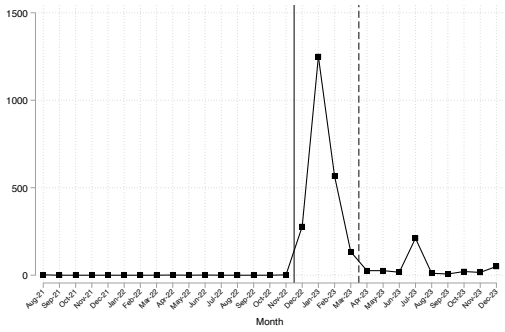
Congress initiated a third impeachment attempt against Castillo in December 2022. On December 7, facing corruption investigations and the prospect of removal, he declared the dissolution of Congress and announced the creation of an emergency government. He also imposed a curfew and called for both a constituent assembly and new presidential elections (Infobae, 2022). Authorities and most observers described these moves as an attempted self-coup, which triggered his immediate impeachment. Castillo was removed from office and now faces trial for rebellion, abuse of authority, and serious disturbance of the public peace, with potential sentences of up to 34 years.

[14] Some of the most striking remarks came from prominent figures such as Mario Vargas Llosa, who said of Castillo: "He seems profoundly unaware, consistent with his immense ignorance, that capital is necessary." He also questioned Castillo's fitness for office, stating: "That is something obvious to the vast majority of Peruvians, especially those in the cities, who are better informed than the rest." Carlos Bruce's comments were even more explicitly racialized. Referring to Castillo's health issues, he remarked: "It seems the abundant coastal oxygen has affected him." This comment alluded to Castillo's rural, highland origins and was widely interpreted as a classist and racist insult.

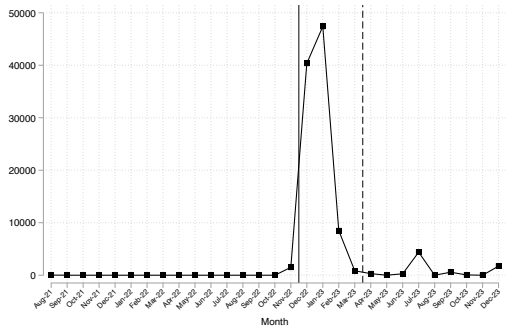
The Aftermath. After Castillo's removal, Vice President Dina Boluarte assumed the presidency. She immediately distanced herself from Castillo and initiated significant changes. Key officials were replaced, including the Prime Minister and the Minister of Economy and Finance. She also adopted a more confrontational foreign policy stance, particularly toward former allies such as Mexico, Argentina, and Colombia. Some observers suggest that Boluarte forged an informal alliance with Fujimorismo to remain in power until 2026,[15] a theory seemingly supported by the smooth approval of her first cabinet, which faced less opposition than any of Castillo's proposed cabinets.

The backlash was immediate and widespread. Boluarte's rapid policy shifts signaled a stark ideological break from the elected administration of Pedro Castillo. Large-scale protests occurred across the country from December 7, 2022, through March 2023, with demonstrators blocking roads and occupying airports in several regions. Figure 2 plots time in protest intensity, measured through riots and demonstrations related to Castillo's removal. The data are drawn from the Armed Conflict Location and Event Data Project (ACLED) (Raleigh et al., 2023).

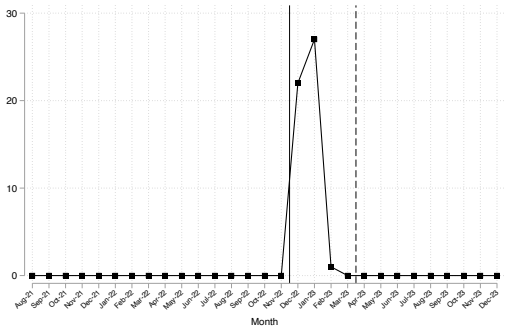
Figure 2: Time Trend in Event Counts, Crowd Size, and Casualties in Impeachment-Related Riots and Demonstrations



(a) Event Counts.



(b) Crowd Size.



(c) Number of Casualties.

Note: This figure displays the number of riots and demonstrations, crowd size, and number of casualties in impeachment-related events. We classify an event as impeachment-related if the event description includes the term "Dina Boluarte" or any of the following expressions: "removal of former president Castillo," "removal of Pedro Castillo," "pro-Castillo," "general elections," "new constitution," or "removal from office." The solid vertical line marks the timing of the impeachment, while the dashed line indicates the end of the associated protests. We elaborate on the treatment of these data in Appendix A. Source: Armed Conflict Location and Event Data (Raleigh et al., 2023).

Protest activity rose sharply following Castillo's removal. Both the number of events and the size of crowds increased markedly.[16] Security forces responded with violence: over 1,000 individuals were injured, and dozens of civilians and law enforcement officers were killed, including at least 10 minors. This pattern is visible in panel (c) of Figure 2. Indigenous communities accounted for roughly 80% of

[15] See discussions on the notion of "Fujicerronismo."

[16] In Appendix A we describe these data in greater detail and show that the spike was large even relative to all other recorded events.

recorded civilian deaths (Amnesty International, 2023).

Summarizing, Pedro Castillo's rise and removal unfolded amid deep political polarization. The presidential race divided the country between a predominantly rural, left-leaning, and lower-income electorate and a more urban and affluent segment that tended to support conservative or authoritarian-leaning platforms.[17] Following the election, political power was contested in a protracted struggle: Castillo's supporters argued that they faced persistent efforts to undermine their electoral mandate, while the opposition framed its actions as a defense of democratic institutions. The repression of subsequent protests further intensified this volatile environment. As we show, the resulting irregular transition altered the relationship between citizens and the state, with tax compliance emerging as one of the domains where its effects are most evident.

2.2 Tax Collection in Peru

Our paper is focused on understanding the tax morale effects of irregular presidential transitions. Hence, an understanding of the relevant legislation is of paramount importance.

We focus on local tax revenues. Contributions to the central government through income or sales taxes are largely outside individual control, as these are typically withheld by employers or collected at the point of sale. This makes them less suitable for our research question.[18] Our analysis therefore concentrates on taxes governed by local legislation.

District-level taxes are governed mainly by *Decreto Legislativo Nº 776*, or the Law of Municipal Taxation, enacted in 2004. Article 6 establishes that property taxes are the most important source of municipal revenue, alongside the real estate transfer tax, the vehicle ownership tax, the betting tax, the gaming tax, and the tax on non-sporting public shows.

Article 8 of *Decreto Legislativo Nº 776* establishes that the property tax is levied on the value of both urban and rural properties. This provision makes this tax broad in scope, covering essentially all real estate holdings regardless of location.[19] Each real state unit has to pay taxes to the district where it is located. Article 10 clarifies that the amount due each year is determined as of January 1, according to the legal ownership of the property on that date.[20]

The same tax rates and schedules apply throughout the country, and, importantly, they did not change during our study period. Article 15 establishes the payment schedule. Taxpayers may either pay the full annual amount in a single installment, due by the last working day of February, or in up to four quarterly installments. In the latter case, the first quarter is due by the end of February and corresponds to one-fourth of the total tax liability, while the remaining installments are due by the last working day of May, August, and November. These are deadlines, however, as payments are made continuously throughout the year at dates chosen by taxpayers, so long as they occur before the corresponding deadline for each installment.

Under Decreto Legislativo Nº 776, the taxable base of the property tax is established by the taxpayer's sworn self-report, submitted each February (Art. 14). The applicable rates are progressive and fixed by law in Article 13: 0.2% on the portion of the value up to 15 tax units (UIT), 0.6% on the portion exceeding 15 UIT and up to 60 UIT, and 1.0% on the portion exceeding 60 UIT, brackets

[17] The opposing candidate was the daughter of the former dictator who led the 1990s authoritarian regime. Her campaign invoked a promise to govern under a "demodura"—a Spanish wordplay combining *democracia* (democracy) and *mano dura* (iron fist) (BBC News, 2021). The term also echoes another expression blending *democracia* and *dictadura* (dictatorship).

[18] Although we expect no effect on these dimensions, we include them as a robustness check. The results and discussion are presented in Section 6.

[19] The law exempts, among others, government properties (except private concessions), properties of foreign governments and international organizations, and non-income-producing properties for purposes such as charities, hospitals, cultural heritage, religious entities, the Volunteer Fire Department, and some peasant or native communities.

[20] This means that the individual registered as the owner at the start of the year is liable for the entire year's property tax, regardless of whether the property is sold later in the year. In the case of a transfer, the new owner only assumes the status of taxpayer beginning on January 1 of the following year.

which municipalities are not authorized to modify. Importantly, municipalities typically maintain cadastral records of property area and value, which are updated through taxpayer self-reports and verified through municipal audits.[21]

Del Carpio (2013) provides a detailed account of how tax collection is operationalized. In the weeks preceding each deadline, municipalities post reminders and announcements on billboards and websites, and warn non-compliers of potential legal proceedings. By law, non-payment may result in the freezing of personal accounts or the repossession and auction of the debtor's property, depending on the outstanding balance. In practice, however, prosecutions are exceedingly rare: in Lima, Peru's largest city, with a population of roughly 11 million, only about 30 properties were auctioned following repossession in 2024 (Servicio de Administración Tributaria de Lima, 2024). More broadly, data on enforcement is scarce, but Del Carpio (2013) reports that even in high-capacity districts of Lima, only between 68 and 80 percent of debtors are ever prosecuted.

When a taxpayer falls behind on property tax payments and a formal collection process is initiated, the outstanding balance is typically increased by an additional charge—about 10% on average, though the exact rate varies across municipalities—to cover collection expenses. Some districts also grant tax amnesties that reduce accrued penalties to encourage taxpayers to settle overdue obligations. These amnesties may be introduced at any point in the fiscal year, which means that property tax payments can occur in virtually any month.

Notably, the Peruvian system for local taxation is particularly lax. While there are no official measure of the true extent of tax amnesties, they seem to be widespread and examples abound. For instance, in 2024 the wealthy district of La Molina introduced Ordenanza Nº 446/MDLM, granting up to 100% discounts on unsettled amounts of municipal taxes and penalties under its "beneficios de fiscalización tributaria" campaign. Similarly, in 2025 the rural district of Andabamba in Huancavelica launched its "Gran Campaña Amnistía Tributaria 2025", offering full condonation of interests and penalties to delinquent taxpayers. What is more, municipalities also resort to extensive debt rescheduling schemes. For example, Los Olivos has had an official system since 1997 that allows taxpayers to divide overdue municipal taxes into installments, setting the number of quotas and their amounts.

In sum, property taxes in Peru are only lightly enforced: a sizable share of debtors face no action at all, and even when fines are imposed, they are frequently pardoned or deferred through long-standing local amnesty policies.

2.3 Supporting Information.

Appendix B includes an overview of the presidential transition from Ollanta Humala to Pedro Pablo Kuczynski, which we use to benchmark the effects of *regular* presidential transitions on tax revenues. This episode represents the most comparable Peruvian case: a transfer of power from a left-leaning to a right-leaning administration carried out through a regular democratic process, without the political harassment, impeachment attempts, or violent repression seen in the Castillo–Boluarte episode. Since prior research shows that even routine presidential transitions can affect tax morale (Cullen et al., 2021), comparing our results to this episode highlights the distinct consequences of irregular ones. Moreover, Appendix B provides additional information on other types of municipal taxes, as well as business licenses.

3 Data

We use data from multiple sources covering August 2021–December 2023 for our main analyses, a window that begins with Castillo's inauguration and ends before subsequent political events could

[21] We do not examine evasion through fraudulent self-reports, as such information is difficult to obtain and, to our knowledge, is not centrally recorded.

contaminate our estimates. These data provide both our outcome measures and auxiliary variables used to test mechanisms and rule out competing explanations.[22]

Our main data source are administrative records of local level tax collection. In particular, data come from Peru's Integrated System of Financial Administration (SIAF, from its Spanish acronym). This platform is managed by the Ministry of Economy and Finance and records the revenues and expenditures of all levels of government. For municipalities, it provides standardized information on property tax collections and other local sources of revenue, making it the most comprehensive administrative record of fiscal activity at the local level.[23]

We requested and obtained access to district-level monthly tax revenue data spanning January 2015 to December 2023. Our main analyses focus on the period from August 2021 to December 2023, while data from 2015–2016 are used to benchmark a routine presidential transition. Revenues are classified into five broad categories, each further disaggregated into subcategories that specify the exact tax type. For example, we can distinguish whether property tax revenues stem from transactions or from ownership.

We focus on a subset of the largest categories: property taxes, production and consumption taxes, and other tax revenues. We include taxes on international trade and mandatory contributions only when working with the total aggregate. These are collected only in exceptionally rare instances and together represent just 0.2% of total revenues between August 2021 and December 2022, and 0.5% of all entries in our data. Estimating treatment effects for these categories is, therefore, either extremely imprecise or outright infeasible.

We aggregate our data so that each entry represents the amount of taxes of a particular type collected by a municipality in a given month.[24] Some district–month cells contain no information, and there is no documentation explaining why this occurs. We address this issue as follows. In our preferred approach, we assume that the missing districts collected zero taxes in those months. Since we apply a logarithmic transformation, these observations are dropped from the analysis. As a robustness check, we instead retain them using a $\ln(1+x)$ transformation and using a poisson QMLE. Our results are not qualitatively sensitive to this choice.

Moving on, we begin by describing our data. Table 1 shows how tax revenues were distributed in 2022 before the impeachment.

Table 1: Distribution of Tax Revenues by Type

Type of Tax	Share of Total Revenue
International Trade	0.08
Mandatory Contributions	0.13
Other Taxable Revenue	2.11
Production & Consumption	4.23
Property Tax	93.45

Note: The table reports the distribution of tax revenues across the five major tax categories for 2022, excluding the month of the event (December). Data are drawn from SIAF.

Property taxes account for the vast majority of local tax revenues in Peru, representing over 90% of total collections. All other tax categories contribute only a negligible share. For this reason, the present work strongly focuses on property taxes.

We augment our data on local level tax collection with election outcome data, which we use to

[22]For example, Dina Boluarte's mid-2023 absence for cosmetic surgery only became public in 2024, when it emerged that she had taken two weeks off without formally delegating her duties.

[23]A small share of entries (0.31%) are negative values. Although no official documentation explains their meaning, the official who prepared the dataset at the Ministry of Economics indicated that these values correspond to tax returns, often arising from canceled transactions. We include these entries in our data as they are.

[24]If, after aggregation, the total tax collected remains negative, we mechanically drop the entry when applying the logarithmic transformation.

construct a measure of treatment exposure. Infogob, a website maintained by the Peruvian government, provides election results dating back to 1931. However, only the most recent election (2021) includes results disaggregated at the subnational level.

As we outlined in the previous sections, we are interested in benchmarking our results with respect to a routine presidential transition. That is, we aim to highlight the specific effects of presidential impeachments. To this end, we compare our main results to a regular transition that closely resembles our case study in all relevant dimensions—except for the fact that no impeachment occurred. This placebo is the presidential transition from Ollanta Humala to Pedro Pablo Kuczynski in 2016.[25] Because Infogob does not provide subnational election results prior to 2021, we rely on data from the National Office of Electoral Processes (ONPE), which reports results at the electoral table level. These can be aggregated to the district level using standardized district codes.

Next, our paper seeks to unpack the mechanisms behind the link between partisan alignment and tax morale. To that end, we complement our data with the 2021–2024 rounds of the Peruvian National Household Survey (henceforth ENAHO, by its Spanish acronym). These data are well suited for this purpose, as they contain detailed information on living standards, attitudes toward the government, views on democracy, and experiences of racial discrimination. We also observe the individual's district of residence and the month of the survey, which allows us to map each respondent into the treatment or control group. Thus, the unit of observation in these analyses is an individual living in a district during a given month.

These surveys have been conducted continuously by the National Institute of Statistics and Informatics since 1997. Each round consists of a nationally representative repeated cross-section of approximately 35 thousand different households per year. These data have been widely used in the economic literature to study a wide range of topics, from labor markets (Jiménez and Rendon, 2025, 2023; Sviatschi, 2022; Ñopo, 2008) to attitudes and interactions with the state (Jiménez, 2023; Hunt and Laszlo, 2012; Hunt, 2007). Only household heads respond to the module relating to attitudes and interactions with the state.

We are also interested in ruling out several alternative stories, in particular, one based on sexist bias towards Dina Boluarte, Peru's first female president. Unfortunately, our main dataset ENAHO, does not contain any information regarding individuals' views about women in society as those typically used in the literature (e.g., Fortin (2005)). Thus, we approximate them later using several measures, one of which will be based on the incidence of intimate partner violence which we recover from the 2022 round of the Peruvian Demographic and Health Survey (DHS). Additionally, we examine the extent to which mechanical mobility restrictions imposed by the protests could explain our results. To this end, we rely on the Armed Conflict Location and Event Data (Raleigh et al., 2023). Further details on these auxiliary datasets are provided in Appendix A.

We provide a quantitative overview of our main data sources, SIAF and ENAHO, in Table 2. The table reports means for several key variables, along with descriptive difference-in-differences estimates. These naïve estimates are constructed by first computing before-and-after differences within each group, and then taking the difference between treatment and control groups.

We carry out this exercise for a selected subset of variables—specifically, our main outcomes related to tax revenues, government approval, as well as selected measures of trust in institutions and experiences of discrimination.[26] We also report a set of demographic characteristics to describe our groups.

We highlight several features of Table 2. The naïve estimates show no significant effect of the impeachment on tax collection. However, as we later show, these estimates mask substantial temporal heterogeneity: the dynamics of the treatment effect closely track the sequence of political events

[25] In Appendix B.1, we describe this transition in detail. To summarize briefly, it was the only recent transfer of power between a left-leaning and a right-leaning government.

[26] The full set of outcomes includes more than 30 variables. Including all of them in a single table would significantly reduce readability. Appendix C presents the full set of estimates, including baseline means for the control group and adjustments for multiple hypothesis testing.

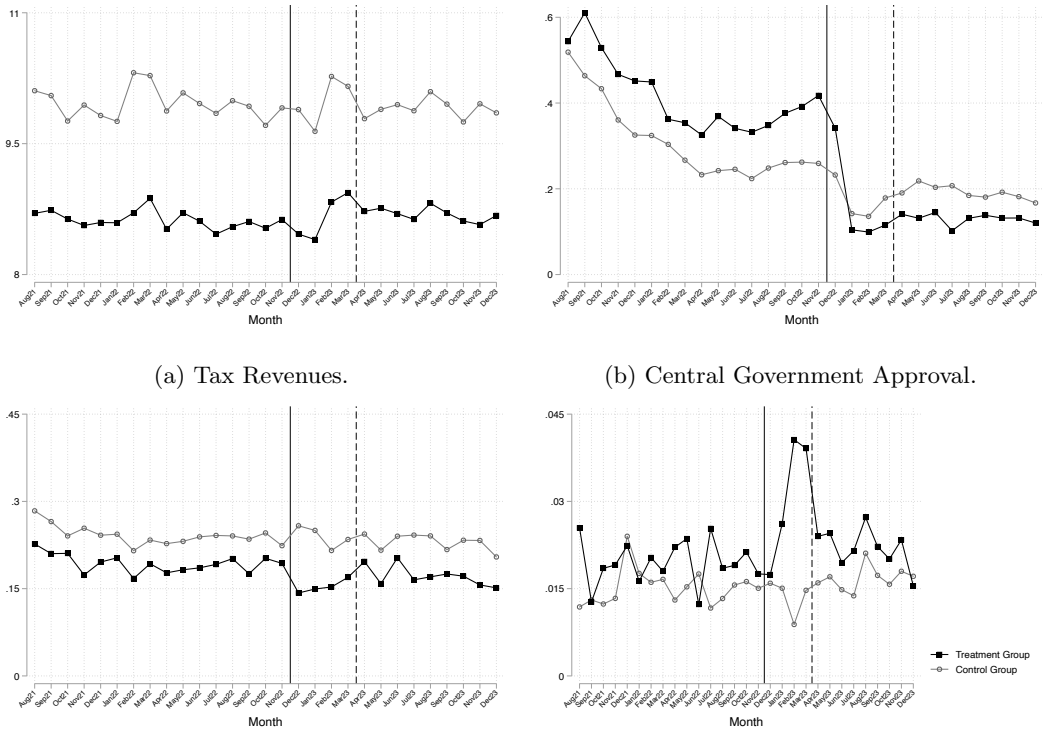
described above. The entire relative drop in tax revenues occurs at the height of protest activity and dissipates once the protests subside. We return to this discussion in Section 5.

Next, we observe a large decrease in central government approval. Which amounts to roughly 50% of the baseline control mean. This results does not spillover to deeper layers of the government. We also see large decreases in trust in the police and the armed forces, which are not echoed in trust in other institutions that played no role in the events we study. The naïve diff-in-diff coefficients for trust in the National Identity Records or the Catholic Church are not statistically significant at conventional levels. A similar pattern emerges with reported experiences of discrimination. We find sizable increases in discrimination based on skin color and region of origin, while discrimination on the basis of gender and sexual orientation experience little to no change. This suggests that the results we may find later on are specific to a irregular presidential transition characterized by violent and targeted repression.

Lastly, we examine the demographic characteristics of respondents. These do not change in any quantitatively meaningful way, suggesting that differences between treatment and control groups remained stable over time. This supports the validity of our research design.

To close this section and to complement the previous objects, we show the raw trends of selected outcomes for both groups in Figure 3.

Figure 3: Trends in Tax Revenues, Government Approval, Trust in the Police, and Discrimination by Skin Color by group: Castillo Supporters vs. Non-Supporters.



(a) Tax Revenues.

(b) Central Government Approval.

(c) Trust in the police.

(d) Discrimination by Skin Color.

Note: The figure displays ...

We find that the treatment and control groups followed similar trajectories before the impeachment, not only in their tax contributions but also in their views of government, trust in institutions, and experiences of discrimination. After the December 2022 impeachment, approval of the central

Table 2: Means of Selected Variables and descriptive Diff-in-Diff.

Variable	Castillo Supporters (Treatment Group)			Non-Supporters (Control Group)			Diff-in-Diff
	Before	After	Diff.	Before	After	Diff.	
a) Administrative Tax Data: SIAF							
Total Revenue	8.63	8.68	0.06	9.96	9.93	-0.03	0.08
	(2.46)	(2.50)	(0.04)	(2.80)	(2.89)	(0.05)	(0.06)
Property Taxes	8.60	8.66	0.06	9.93	9.90	-0.04	0.09
	(2.44)	(2.49)	(0.04)	(2.78)	(2.87)	(0.05)	(0.06)
Obs.	14,640	11,895		11,024	89,57		
b) Household Data: ENAHO							
Central Government Approval	40.91	13.92	-26.99	30.34	18.57	-11.78	-15.22
	(49.17)	(34.62)	(0.32)	(45.97)	(38.88)	(0.28)	(0.43)
Regional Government Approval	22.91	29.72	6.81	22.45	24.94	2.49	4.33
	(42.03)	(45.71)	(0.35)	(41.73)	(43.27)	(0.29)	(0.46)
Provincial Government Approval	25.29	34.89	9.60	24.14	28.93	4.79	4.81
	(43.47)	(47.66)	(0.36)	(42.79)	(45.34)	(0.30)	(0.47)
District Government Approval	29.27	41.57	12.30	26.34	34.49	8.16	4.14
	(45.50)	(49.28)	(0.36)	(44.05)	(47.54)	(0.30)	(0.47)
Trust in the Police	19.33	16.69	-2.65	24.11	23.33	-0.79	-1.86
	(39.49)	(37.29)	(0.27)	(42.78)	(42.29)	(0.27)	(0.39)
Trust in the Armed Forces	33.86	25.49	-8.36	42.14	38.24	-3.90	-4.46
	(47.32)	(43.58)	(0.33)	(49.38)	(48.60)	(0.31)	(0.46)
Trust in National Identity Records	50.43	48.09	-2.33	55.99	54.45	-1.55	-0.78
	(50.00)	(49.96)	(0.36)	(49.64)	(49.80)	(0.32)	(0.48)
Trust in the Catholic Church	45.41	42.14	-3.27	48.55	46.00	-2.55	-0.72
	(49.79)	(49.38)	(0.35)	(49.98)	(49.84)	(0.32)	(0.47)
Discrimination by Skin Color	1.95	2.47	0.52	1.51	1.58	0.07	0.45
	(13.83)	(15.53)	(0.10)	(12.19)	(12.47)	(0.08)	(0.12)
Discrimination by Origin	1.16	1.64	0.49	0.88	1.11	0.22	0.26
	(10.69)	(12.70)	(0.08)	(9.36)	(10.45)	(0.06)	(0.10)
Discrimination by Gender	0.64	0.40	-0.24	0.33	0.21	-0.12	-0.12
	(7.99)	(6.32)	(0.05)	(5.77)	(4.63)	(0.03)	(0.06)
Discrimination by Sexual Orientation	0.02	0.03	0.01	0.06	0.07	0.01	-0.00
	(1.45)	(1.71)	(0.01)	(2.49)	(2.69)	(0.02)	(0.02)
Mean Age	42.73	42.86	0.13	41.90	42.05	0.14	-0.02
	(19.63)	(19.68)	(0.13)	(19.26)	(19.28)	(0.11)	(0.17)
Males (%)	47.64	47.76	0.12	47.97	48.20	0.23	-0.11
	(49.94)	(49.95)	(0.33)	(49.96)	(49.97)	(0.29)	(0.44)
High School Graduates (%)	48.88	49.98	1.10	55.74	56.76	1.02	0.08
	(49.99)	(50.00)	(0.34)	(49.67)	(49.54)	(0.29)	(0.44)
Married (%)	27.77	26.82	-0.95	23.35	23.19	-0.16	-0.79
	(44.79)	(44.30)	(0.30)	(42.30)	(42.20)	(0.25)	(0.38)
Obs.	50,119	40,101		65,992	53,652		

Note: Observations collected before December 2022 are classified as belonging to the "Before" period. Standard deviations and standard errors are reported in parentheses. The standard errors for the first differences are obtained by regressing each variable on an indicator for the "After" period, separately for each group. The standard errors in the Difference-in-Differences (DiD) column come from a basic DiD regression without covariates—that is, they correspond to the coefficient on the interaction term $Post_t \times Castillo_d$ (see empirical strategy section). All standard errors in these naïve estimates are conventional. In panel (a), data on the log of total tax revenues and property taxes comes from administrative records of local level tax collection, SIAF. In panel (b) we use the full ENAHO sample.

government and self-perceived discrimination changed sharply among treated districts. These shifts were strongest during the protest period, and the decline in government approval persisted thereafter. Trust in the police also diverged: it decreased in the treatment group while slightly increased in the control group.

4 Empirical Strategy

4.1 Conceptual Framework

We study the political climate surrounding Castillo's election and subsequent removal. We refrain from making normative claims about these events, which involve unresolved legal disputes and inherently subjective moral or political judgments. This ambiguity is central to our identification strategy.

The events can be interpreted through two opposing narratives. On one side, many perceive Castillo as a legitimate representative of rural and Indigenous Peru who was ousted after sustained political harassment by his opponents. This group also views the new president as a distant political figure who responded to protests with violent repression. On the other side are those who believe Castillo was an unqualified and authoritarian figure whose actions justified his removal; in this view, Congress acted to protect democracy, and the removal was considered justified and legal.

Under the first narrative, Castillo's election signaled the inclusion of groups long excluded from political power. His removal, followed by a violent crackdown that disproportionately affected rural and Indigenous protesters (Amnesty International, 2023), is interpreted as an institutional breach and an identity threat. Boluarte's subsequent policy reversal reinforced the perception that central institutions no longer represent minority interests. As a result, trust in the state declined, perceptions of discrimination increased, and discontent extended into other forms of political behavior.

These political shifts have fiscal consequences. The literature on tax morale highlights intrinsic motivations for compliance (Luttmer and Singhal, 2014; Cabra-Acela, 2023) and shows that trust in government and legal institutions is positively associated with taxpaying behavior (Scholz and Lubell, 1998; Torgler, 2003). It further suggests that negative perceptions of government increase evasion (Webley, 1991), while political attitudes and perceived representation shape compliance decisions (Feld and Frey, 2002; Giaccobasso et al., 2022; Cullen et al., 2021; Ajzenman et al., 2024). Property taxes offer a particularly suitable setting to study these mechanisms: they are locally administered, weakly enforced, flexible in timing, and largely under the taxpayer's control.

This framework yields testable implications that we bring to the data. We examine whether the impeachment is associated with lower approval of the central government; whether contemporaneous declines in trust in institutions and increases in perceived discrimination emerge at the protest peak; whether fiscal reciprocity weakens, reflected in reduced property-tax compliance while more rigid obligations remain stable; and whether these effects are substantially larger than those observed around routine political transitions.

4.2 Impeachments as a treatment

In this section, we explain how impeachments can be studied within a treatment-effect framework and elaborate on how we operationalize this idea in our setting.

Our identification strategy leverages polarization to define a treatment group, consisting of units that supported Castillo, and a control group of units that did not, within a difference-in-differences framework.[27] Depending on the specification, these units correspond either to municipalities or to individuals. We favor this approach over alternatives such as a close-election regression discontinuity design for two main reasons. First, our interest lies specifically in understanding how staunch Castillo supporters react to the events surrounding the impeachment vis-a-vis his detractors, rather than in comparing groups with nearly identical preferences. Second, the impeachment constitutes a national shock; thus, comparing how groups with nearly identical political views react to an identical shock would strip away meaningful variation in exposure to the event.

[27] This rationale is rooted in the literature, see for example Ajzenman et al. (2023).

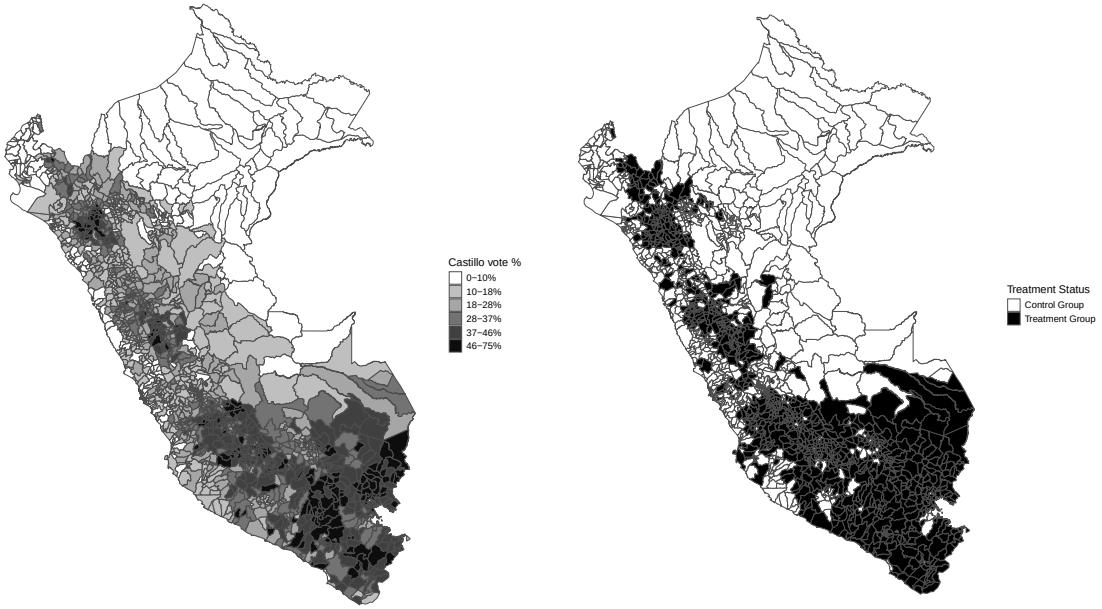
Our data approximate an ideal setting, as both outcome and political preference measures are observed at the same level. Specifically, we combine district-level data on tax collection with the most precise measure of support for Castillo: election results at the district level. Of course, some of our analyses will also be at the individual level. Clearly, classifying any individual respondent as a supporter or non-supporter of Pedro Castillo is unfeasible due to the anonymity of voting.[28] Therefore, we will use district-level results from the first round of the Peruvian presidential election as a proxy for individual-level voting behavior, as it is our most granular measure of political preferences.

We consider the results of the first round of the presidential election a more accurate measure of candidate support than those of the second round. Second-round outcomes are influenced not only by voter preferences for a given candidate but also by aversion to the opponent. In other words, first-round results primarily capture support for Castillo, whereas second-round results reflect both support for Castillo and rejection of Fujimori.

With that, we assign districts to the treatment group if Pedro Castillo received the highest vote share among all candidates in the first round of the 2021 presidential election. Districts where another candidate obtained the highest vote share are assigned to the control group. Individuals are assigned to each group based on their district of residence. This binary classification allows us to compare outcomes between areas that supported Castillo most strongly and those that did not.[29]

In Figure 4, we present district-level maps of Peru displaying the Pedro Castillo's performance in the 2021 presidential elections.

Figure 4: Spatial Distribution of Pedro Castillo's Vote Share and Discretization into Treatment Assignment



(a) Castillo's vote share

(b) Treatment assignment

Note: This map shows the results of the first round of the 2021 presidential election in Peru. Panel (a) shows Castillo's vote share across districts, binned according to the Jenks optimization method. In panel (b), districts where Pedro Castillo received the highest vote share are marked in black (treatment group), while districts where he did not win are marked in white (control group).

Both panels show that support for Castillo was concentrated in southern Peru, a region with

[28] There are also no alternative surveys that record individual-level voting behavior and living standards.

[29] We will however, test the robustness of our results to this choice in several ways.

traditionally left-leaning political preferences. It was also prevalent along the Andes Mountain Range, which runs through the center of the country. In contrast, support was much lower in the northern and central coastal regions, as well as in the Amazon, areas that tend to lean right and where Fujimori-aligned candidates have historically performed strongly.

Panel (a) quantifies the variation in Castillo's support that we exploit. On the coast (western Peru), his vote share was notably low, rarely exceeding 10%. In contrast, in the South it was seldom below 20% and surpassed 50% in a sizable number of districts. Recall that this was a multiparty election with more than a dozen candidates, so these figures are exceptionally large. Panel (b) shows how we slice the country into two groups based on Castillo's vote share, that is, it shows our treatment and control groups.

Figure C.2 in Appendix also highlights the polarization by plotting vote-share distributions in Castillo-supporting and non-supporting districts. The distributions exhibit minimal overlap and have strikingly different means. Castillo's average vote share is three times higher in the districts we label as supporters compared to non-supporting districts: 36% vs. 12%.

4.3 Identification Strategy

4.3.1 Dynamic Difference-in-Differences

Our research design exploits the geographic dispersion of Castillo's supporters in a difference-in-differences setting. More specifically, we estimate the following dynamic difference-in-differences equation via ordinary least squares:

$$y_{dt} = \sum_{j \neq \text{Nov 2022}}^{\text{Dec 2023}} \delta_j \, Castillo_d \times \theta_j + \gamma_d + \theta_t + \zeta_{dt}, \tag{1}$$

where y_{dt} denotes a tax-related outcome (e.g., log total taxes, log property taxes) for district d in month t. $Castillo_d$ is a dummy variable set to one in districts where Castillo received the highest vote share in the first round of the 2021 presidential election. Finally, γ_d and θ_t are district and month-year fixed effects, respectively. For the analyses using individual-level data from ENAHO, each observation corresponds to an individual. In those, we include a vector of standard demographic controls for gender, age, marital status, and education level.

Because treatment is assigned at the district level, we cluster standard errors accordingly to account for within-district correlation in the error term over time. We also set November 2022 (the final pre-impeachment month) as the baseline event time. Consequently, each coefficient δ_j measures the treated–control outcome difference for that month relative to November 2022.

The δ_j coefficients for periods prior to December 2022 provide a test of pre-trends in the outcome variables. The absence of statistically significant pre-trends supports the parallel trends assumption underlying our identification strategy. A notable feature of our design is the strong parallel pre-treatment trends observed between treatment and control groups across a wide range of outcomes.

4.3.2 Canonical 2×2 Difference-in-Differences Estimates

By relying on the parallel trends assumption, which we partially test using the dynamic specification, we estimate a canonical 2×2 difference-in-differences regression to summarize the treatment effect with a single coefficient. Equation (2) presents this specification:

$$y_{dt} = \beta \, Castillo_d \times Post_t + \gamma_d + \theta_t + \upsilon_{dt}, \tag{2}$$

where $Post_t$ is a dummy variable equal to one for observations collected after Dina Boluarte assumed office (December 2022). In this specification, β captures the average treatment effect of Castillo's removal over the post-treatment period. As before, standard errors are clustered at the district level. Owing to the fact that the estimation of equation 1 suggests that most treatment effects are concentrated in the first quarter of 2023, when protest activity was highest, we restrict the post-treatment period to that window in most cases when estimating equation 2.

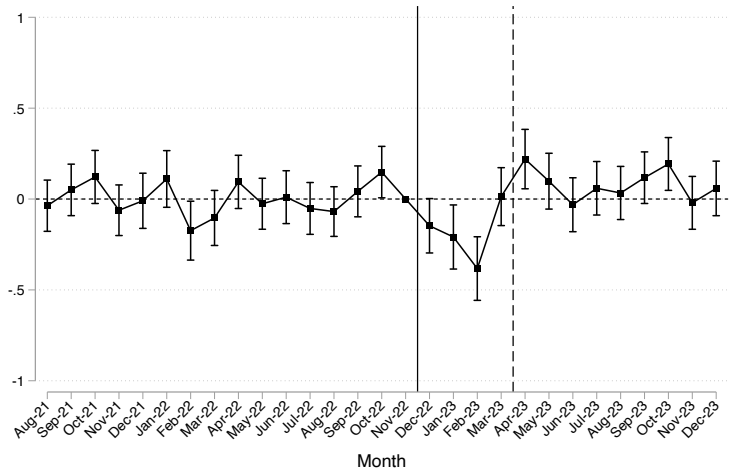
Among the outcomes we study, two families—institutional trust, and self-perceived discrimination—contain a relatively large number of variables. To account for the increased likelihood of false positives within these blocks, we apply the Holm (1979) step-down procedure to adjust p-values. Holm's method strongly controls the familywise error rate under arbitrary dependence across outcomes, making it appropriate given the likely correlation within each family. Hence, in Appendix C, we report both conventional p-values and the corresponding q-values obtained through Holm's adjustment. We apply this correction separately within each block.

5 Results

5.1 Main Results

We begin by reporting estimates of equation (1) taking the log of district level tax revenues as the outcome.

Figure 5: Effects of Impeachments on Tax Revenues. Dynamic Specification.



Note: The figure displays the δ coefficients from equation 1, along with their 90% confidence intervals. The coefficient for the month immediately preceding treatment is normalized to zero. The solid vertical line marks the timing of the impeachment, while the dashed line indicates the end of the associated protests. The outcome is the logarithm of monthly tax revenues. The data come from SIAF.

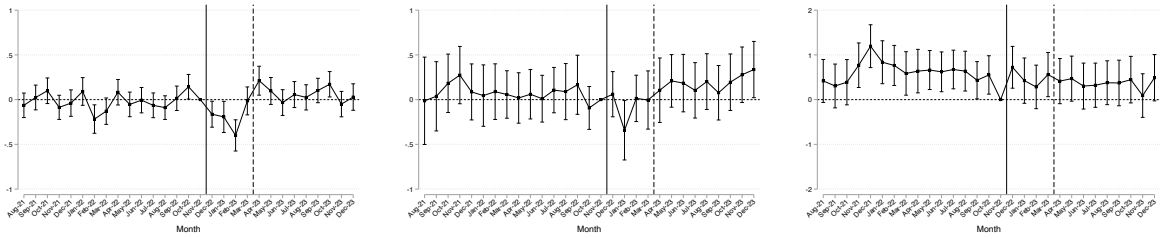
There are several noteworthy features in Figure 5. Most importantly, it reveals a large but temporary decline in tax collection in treatment areas relative to control areas. The timing of these results is also informative. Before the impeachment, there were no significant differences in tax revenues between groups, which reinforces the credibility of our quasi-experimental design by suggesting that both groups followed similar trends prior to the impeachment.

Immediately after Castillo's removal, tax contributions in the treatment group drop sharply relative to the control group, and the gap persists through March 2023. As discussed above, January and February account for the bulk of property-tax payments, which provides part of the explanation for

the concentration of the decline in those months.[30] However, seasonal variation alone cannot account for the magnitude of the drop: while a modest seasonal uptick is visible in the same months of the previous year, it is far smaller than the pronounced shortfall that aligns with the tail end of the protests demanding Castillo's reinstatement.

Further, following the hypothesis that property taxes account for most of the observed effect, our data allow us to decompose total tax revenues into property taxes, production and consumption taxes, and other taxable revenues. Hence, in Figure 6, we estimate equation (1) for each tax category separately.

Figure 6: Effects of Impeachments on Tax Revenues. Dynamic Specification By Type of Tax.



(a) Property. (b) Production and Consumption. (c) Other Taxable Revenue.

Note: The figure displays the δ coefficients from Equation 1, along with their 90% confidence intervals. The coefficient for the month immediately preceding treatment is normalized to zero. We also report the p-value from a joint significance test of the displayed pre-treatment δ coefficients. The solid vertical line marks the timing of the impeachment, while the dashed line indicates the end of the associated protests. Each panel shows the effects of the impeachment on the logarithm of district-level monthly tax revenues by type, as described in the corresponding caption. The data come from SIAF.

The results show that the drop in total tax revenue is driven almost entirely by a contraction in property taxes. We interpret this finding as a first piece of evidence suggesting a reciprocity-based explanation, where the impeachment triggered reduced tax compliance. As explained in Section 2, compliance with property taxes is generally low, and these taxes are notoriously easy to evade or defer. For this reason, their study has gained traction in recent years as a way to examine tax morale. We will provide supporting evidence on this point in Sections 6 and 7.

To complement these results, we provide estimates from equation 2, which quantitatively summarize our treatment effects. Motivated by the finding that the tax revenue effects are short-lived and concentrated during the protests, we focus on a short post-period window, such that the data used to compute these coefficients spans the period from August 2021 to March 2023. We will proceed identically for further results derived from equation 2.

The results in Figure 2x2 echo those presented in Figures 5 and 6. Tax collection in treatment, relative to control areas, drops by 16.3% ($=100 \times \left(e^{-0.178} - 1\right)\%$). This drop is entirely driven by property taxes.

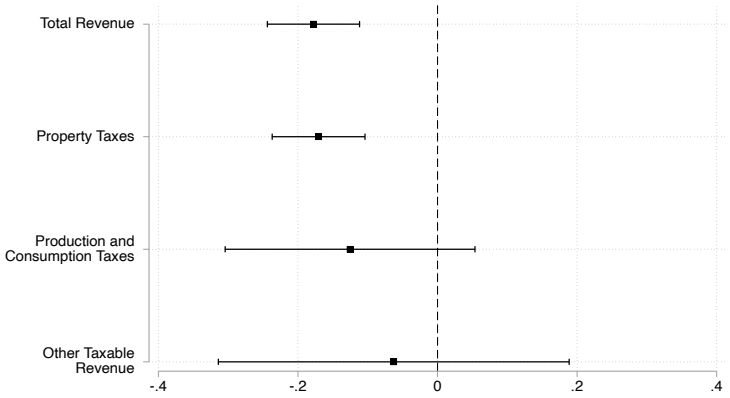
To understand the importance of this effect, we provide a back-of-the-envelope calculation that relates its size to total yearly tax revenue in Peru. A 13% decline in a single quarter translates into a 3.25% reduction in annual revenue for treated districts. Since these districts accounted for 17% all tax revenue in 2022, our estimates correspond to an aggregate yearly decline in tax revenue on the order of 0.55%.

5.2 Comparison with a Regular Presidential Transition

We argue that the nature of the transition explains the observed effect on tax collection. Our conceptual framework implies that the irregular character of this presidential transition had particularly

[30] This implies that, although we can attribute the decline to the irregular transition, we cannot determine whether its timing is driven mechanically by the tax payment schedule or by the protest period. Neither interpretation contradicts our findings or the conceptual framework.

Figure 7: Effects of Impeachments on Tax Revenues. 2×2 Specification.



Note: The figure displays the β coefficients from Equation 2, along with their 90% confidence intervals. These are canonical difference-in-differences estimates of the treatment effects using data spanning August 2021 to December 2023. The outcomes are the logarithm of total tax revenue and its components. The data come from SIAF.

detrimental effects on tax morale. Therefore, a transition with similar political characteristics but conducted under regular circumstances should not produce comparable effects. To illustrate this point, we replicate our main quasi-experiment using the most recent left-to-right presidential transfer that occurred under routine conditions. Specifically, we examine the 2016 handover from Ollanta Humala to Pedro Pablo Kuczynski to test for similar impacts on tax collection. Appendix B provides additional context: this was a regular transition from a moderately left- to right-wing government, and support for Humala overlapped substantially with Castillo's. This setting allows us to approximate how our treatment group would respond to a standard presidential transition. Figure 8 presents the results.

Following the handover from Ollanta Humala to Pedro Pablo Kuczynski, we find no abnormal differences in tax revenues between pro-Humala districts and others. This result reinforces the central point of our paper: irregular presidential transitions generate effects that are orders of magnitude larger than those observed under routine transfers of power. In our setting, regular transitions have no statistically significant impact on tax revenues.

5.3 The Role of Protest Activity

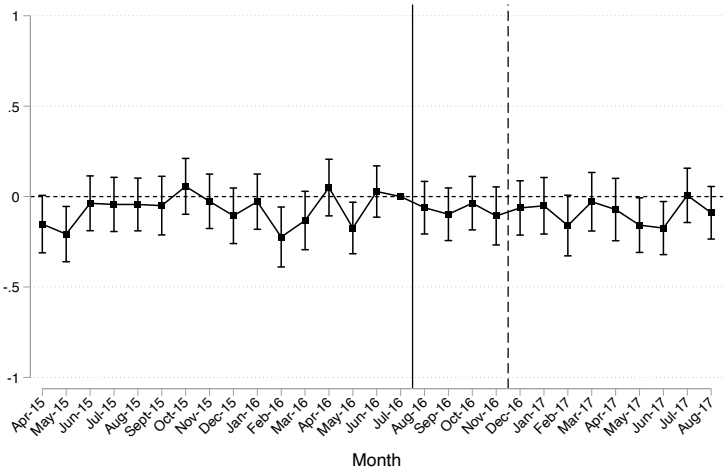
While the evidence above highlights the unusually large effects of irregular presidential transitions, the timing leaves an open question: what role does protest repression play in our results? Specifically, is protest-related violence part of the irregular transition bundle that weakens citizens' intrinsic motivation to reciprocate toward the state and amplifies resentment over perceived loss of representation? Or is the relationship more mechanical, for example if violent events restrict mobility and simply prevent citizens from reaching municipal offices to make payments?

We disentangle these channels by examining tax responses in areas with low protest activity. Specifically, we estimate equation 2, restricting the post-treatment period to the protest window and sequentially excluding districts with high protest intensity. Using ACLED data, we identify districts that experienced impeachment-related protests involving fatalities, as well as those that hosted particularly large demonstrations, and exclude each group in turn. Figure 9 reports the corresponding results.[31]

The results are difficult to reconcile with a purely mechanical mobility channel. Such an explanation cannot account for the persistence of effects in areas with no casualties or with low protest turnout. Instead, the evidence aligns more closely with a tax-morale interpretation and, potentially, a social-multiplier effect: citizens' willingness to comply depends not only on their own interactions with the

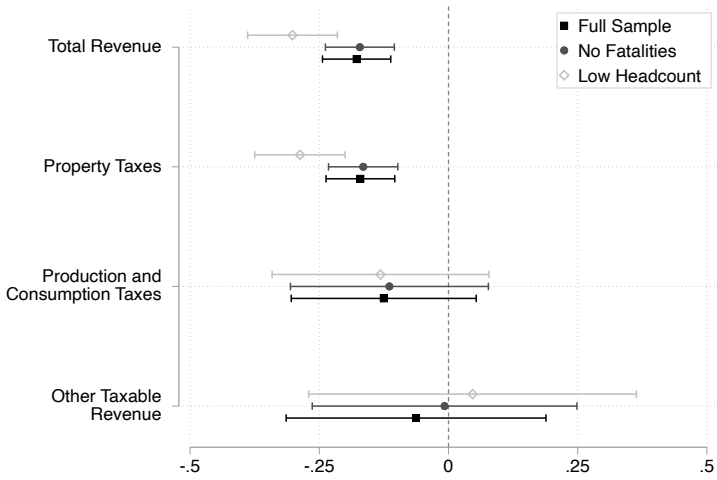
[31] The procedure used to identify and exclude these districts is described in Appendix A.6.

Figure 8: Effects of Regular Presidential Transitions on Tax Revenues. Dynamic Specification.



Note: The figure displays the δ coefficients from equation 1, along with their 90% confidence intervals estimated for the 2016 presidential transition. The coefficient for the month immediately preceding this regular transfer of power is normalized to zero. We also report the p-value from a joint significance test of the pre-treatment δ coefficients. The solid vertical line denotes the transition date; the dashed line indicates the first quarter afterward, included to mirror our main results. The outcome variable is the logarithm of monthly tax revenues. The data come from SIAF.

Figure 9: Effects of Impeachments on Tax Revenues. 2×2 Specifications Removing Areas with High Protest Activity.



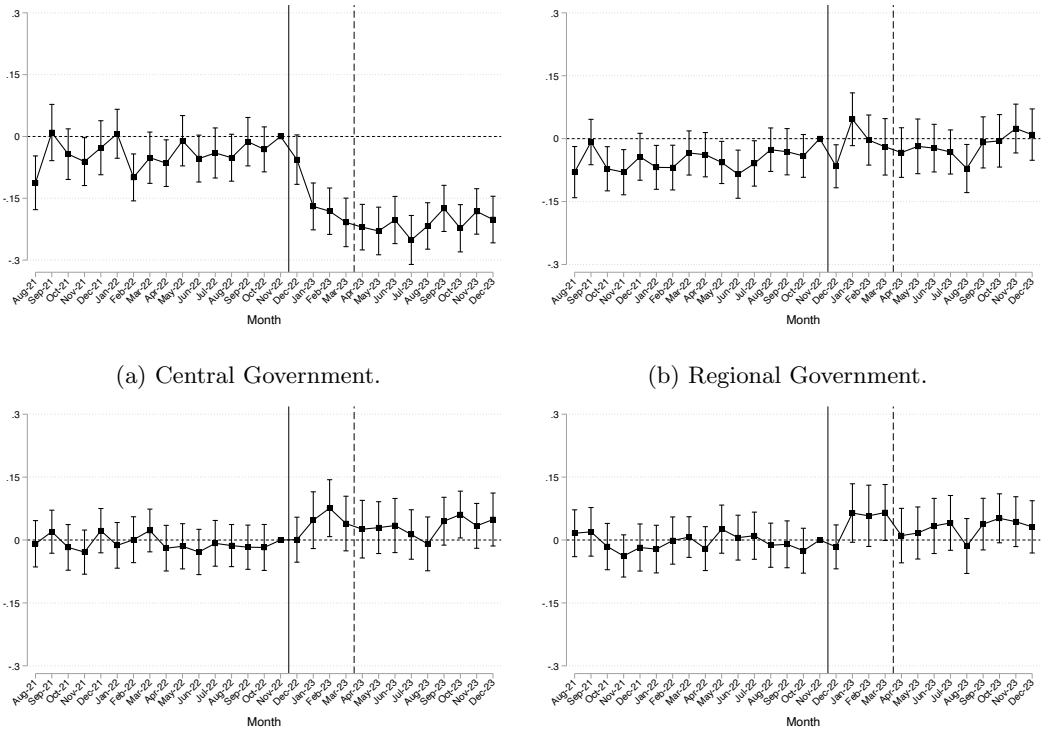
Note: The figure displays the β coefficients from Equation 2, along with their 90% confidence intervals. These are canonical difference-in-differences estimates of the treatment effects using data spanning August 2021 to December 2023. The outcomes are the logarithm of total tax revenue and its components. Black squares report the baseline results using the full sample, gray circles exclude areas with casualties, and light gray diamonds restrict to areas with low headcount. Outcome data come from SIAF and protest activity from ACLED.

state but also on how fairly they perceive the state to treat others. Supporting evidence for this mechanism in the Peruvian context is provided by Del Carpio (2013) and Jiménez (2023).

5.4 Mechanisms: Government Approval, Institutional Trust, and Discrimination

We now unpack the mechanism behind the tax collection effect. Our conceptual framework emphasizes that Castillo's removal created a breach between his followers and central government institutions. We examine this channel by estimating equation (1) with outcomes that indicate approval of different levels of government.[32]

Figure 10: Effects of Impeachments on Government Approval. Dynamic Specification.



(a) Central Government.

(b) Regional Government.

(c) Provincial Government.

(d) District Government.

Note: The figure displays the δ coefficients from Equation 1, along with their 90% confidence intervals. The coefficient for the month immediately preceding treatment is normalized to zero. We also report the p-value from a joint significance test of the displayed pre-treatment δ coefficients. The solid vertical line marks the timing of the impeachment, while the dashed line indicates the end of the associated protests. The outcomes are dummy variables indicating approval of different government layers. Data comes from ENAHO and is at the individual level.

Figure 10 displays the results. There are several noteworthy features in this first set of results. Pre-treatment trends were, on average, parallel not only for presidential approval but also for most measures of subnational approval. Although a few leads in the regional panel are statistically significant, the overall pattern is flat, which supports the credibility of our quasi-experimental design and suggests that both tax contributions and views toward multiple layers of government evolved similarly prior to the impeachment.

Furthermore, Figure 10 shows a large and persistent decline in presidential approval after the impeachment. This drop extends beyond the protest period and remains more than 15 percentage points below the pre-treatment level.

A further key result is that the impeachment did not produce significant shifts in approval of subnational governments. This serves as a placebo test: if individuals correctly attribute responsibility for national events to the relevant authorities, perceptions of subnational officials—who played no role

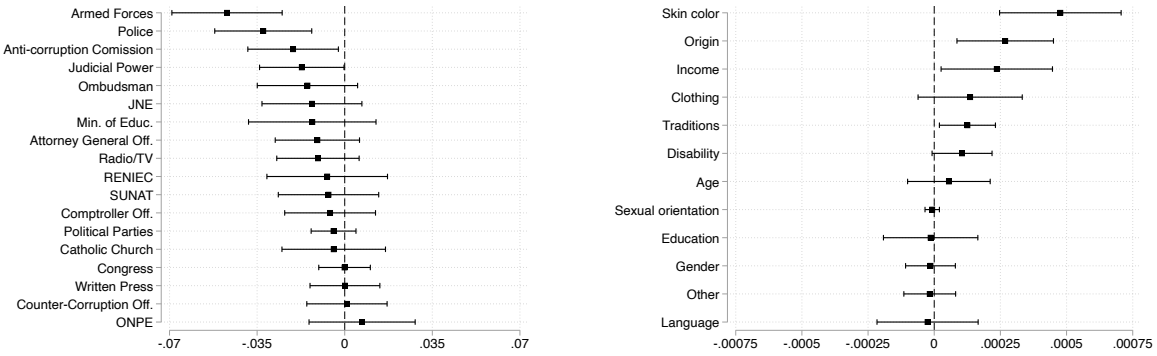
[32] For clarity, "central government" refers to the presidency. Administratively, Peru is organized into regions, provinces, and districts, which are roughly analogous to U.S. states, counties, and municipalities.

in the removal of Pedro Castillo—should not change. The confinement of the treatment effect to the authority that was replaced points to presidential disapproval as the primary driver of the link between partisan alignment and tax collection, while also ruling out broader shifts in attitudes toward the state that are unrelated to the impeachment.

We now turn to perceptions of discrimination and institutional legitimacy. The events surrounding this irregular transition constitute a rupture with the state that extends beyond the presidency to institutions directly implicated in the irregularity of the process. Furthermore, given the disproportionate exposure to violence among rural and Indigenous communities, the protests—although not the primary mechanism driving our main results—likely amplified underlying declines in trust and heightened perceptions of discrimination.

To examine these dynamics, we assess whether the impeachment eroded citizens' trust in institutions involved in the transition, such as the police. In addition, given the targeted nature of repression, we test whether it increased perceived discrimination across multiple dimensions. Figure 11 reports short-term estimates of equation 2 for the full set of outcomes related to institutional trust and experiences of discrimination. We focus on the short run to maintain comparability with the timing of the tax results.

Figure 11: Effects of Impeachments on Institutional Trust and Discrimination. 2×2 Specification.



(a) Institutional Trust

(b) Discrimination

Note: The figures display the β coefficients from equation 2, along with their 90% confidence intervals. These are canonical difference-in-differences estimates of the treatment effects using data spanning August 2021 to December 2023. The outcomes are dummy variables indicating, respectively, (a) trust in a large set of government and civil institutions and (b) reported experiences of discrimination based on various attributes. Data come from ENAHO.

This figure serves two purposes. First, it quantifies our short-term treatment effects. Trust in the police and the armed forces decreased, while reported discrimination based on origin and skin color increased.

Secondly, Figure 11 evaluates the validity of our proposed mechanism by examining placebo dimensions of trust and discrimination. We find no meaningful changes in trust toward institutions unrelated to the impeachment, such as the Department of Education or the National Registry of Identification, nor in discrimination based on non-politicized characteristics such as gender or sexual orientation. The evidence indicates that the impeachment specifically increased distrust in the armed forces and heightened perceptions of racial exclusion.

There are two plausible channels linking the irregular transition to the rise in reported discrimination. First, the increase could stem from disproportionate interactions with security forces during the protests. Second, because Castillo was perceived as the legitimate representative of historically marginalized groups, his removal may have mechanically intensified self-perceived discrimination by signaling a loss of political representation. We offer suggestive evidence in support of the first channel. Figure C.5 examines the reported source, or setting, of discriminatory incidents (e.g., schools, workplaces, police encounters). For each setting, we estimate a linear regression of the form $Y_{idt} = \beta_0 + \beta_1 \text{Post}_t + \varepsilon_{idt}$, where Y_{idt} is a dummy equal to one if individual i in district d reported that

setting as the context in which discrimination occurred. The regression is estimated on the subsample of treated individuals only, so that β_1 captures within-group changes in reporting behavior. Consistent with our hypothesis, the rise in race-based discrimination is concentrated in interactions with the police.[33]

For the second channel, we study heterogeneous effects of the impeachment on presidential approval across identity dimensions. Specifically, Table 3 reports estimates of equation (2) allowing for heterogeneity by observed identity and reference group.

Panel (a) focuses on minority racial and socioeconomic groups, including individuals who identify as Quechua, Aymara, or other Indigenous backgrounds; residents of rural areas; agricultural workers; and, as a placebo group, individuals who hold savings accounts. The first three subgroups test whether those most likely to have been the intended beneficiaries of Castillo's political message exhibit stronger backlash against the government. The inclusion of savings account holders serves as a placebo, as this group is not directly tied to Castillo's base nor especially targeted.

Consistent with expectations, discontent is markedly higher among Indigenous individuals, rural residents, and agricultural workers, relative to non-Indigenous individuals, urban residents, and non-agricultural workers.

The survey also asks respondents to identify the group with which they feel most closely connected, which we refer to as their reference group. Respondents choose among several options, including their local community (region, province, or district), their racial group (unspecified), their Indigenous community, or their religious community.

We construct a dummy for each category and estimate equation (2), allowing for heterogeneous effects along these margins. Individuals who report a strong attachment to their Indigenous community exhibit significantly higher disapproval of the incoming government following the impeachment. In contrast, those who identify primarily with their local, racial, or religious communities do not display similar patterns. This is perhaps unsurprising, as the latter categories may encompass a wide range of individuals, including non-Indigenous and more affluent respondents—such as white individuals who strongly identify with their race or locality. In contrast, self-identification with an Indigenous community is much more specific and thus more directly tied to the political and social dynamics surrounding the impeachment.

In summary, the decline in tax contributions following Castillo's impeachment reflects the exceptional nature of an irregular transition rather than routine partisan turnover or temporary mobility constraints. We find no comparable effects during the orderly Humala–Kuczynski handover, and tax revenues also fall in districts without major protests or fatalities. The mechanism is instead rooted in weakened tax morale: the impeachment triggered a sharp and persistent drop in presidential approval, eroded trust in the police and armed forces, and heightened perceptions of racial discrimination—especially among Indigenous and rural groups disproportionately exposed to repression.

6 Robustness checks

We begin by probing the robustness of our results to data cleaning assumptions. Our raw dataset is an unbalanced panel of monthly district-level tax revenues, which includes two problematic cases: (i) missing district-month cells when no taxes were collected, and (ii) negative values when tax returns exceeded collections. Because our main outcome is the log of raw revenues, both types of observations drop out of the analysis. Our first robustness check therefore examines whether our results are sensitive to including these data.

In Figure 12, we address this issue in two ways. First, we provide estimates using the $\ln(1 + x)$

[33]This analysis is descriptive and, given low baseline frequencies, the resulting estimates should be interpreted with caution.

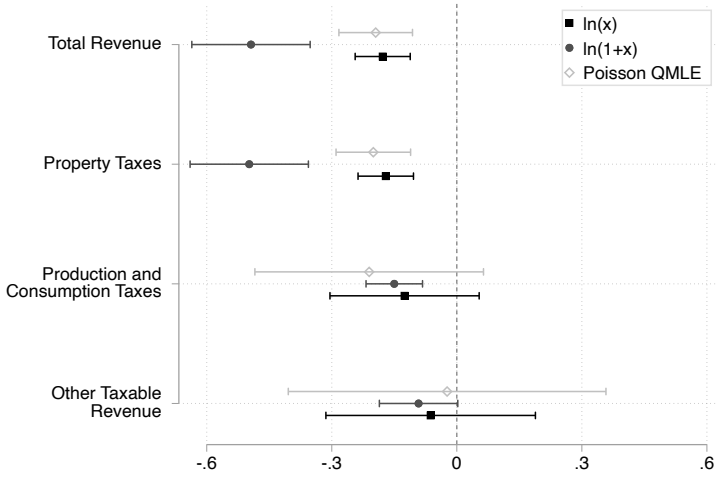
Table 3: Effects of Impeachments on Government Approval. Heterogeneity by Observed Racial Identity and Reference Group

Heterogeneity/ Measure	(1)	(2)	(3)	(4)
a) Observed Identity	Minority Race	Rural	Agricultural Worker	Has a Savings Account
Treatment Effect	-0.052***	-0.082***	-0.091***	-0.131***
	(0.017)	(0.018)	(0.016)	(0.015)
Interaction with Identity Measure	-0.129***	-0.089***	-0.074***	0.036***
	(0.016)	(0.021)	(0.016)	(0.011)
Obs.	112,399	112,484	112,484	112,484
	(5)	(6)	(7)	(8)
b) Reference Group	Locality	Ethnicity or Race	Indigenous Community	Religious Community
Treatment Effect	-0.113***	-0.117***	-0.107***	-0.121***
	(0.017)	(0.015)	(0.016)	(0.015)
Interaction with Reference Group	-0.004	0.032	-0.042**	0.036*
	(0.014)	(0.051)	(0.019)	(0.020)
Obs.	112,475	112,475	112,475	112,475

Note: The table reports estimates from equation (2), including an interaction between the double-difference treatment variable and a dummy indicating an individual's racial identity (panel (a)) or reference group (panel b). We also include the un-interacted dummy variables as controls. These are canonical difference-in-differences estimates of the treatment effects using data spanning August 2021 to December 2023. The columns in Panel (a) examine heterogeneity by observed characteristics. In Column (1), individuals are classified as minorities if they self-identify as being of Quechua, Aymara, or other Indigenous descent. Column (2) focuses on residents of rural areas, and Column (3) on agricultural workers. Column (4) presents a placebo test, analyzing heterogeneous effects among individuals who hold savings accounts. Panel (b) explores heterogeneity by reference group. The ENAHO survey asks respondents to identify the group they feel most closely connected to. Accordingly, Columns (5) through (8) report heterogeneous effects among individuals who identify most strongly with their locality, race, Indigenous community, and religious community, respectively. Cluster-robust standard errors in parentheses. Significance:*** $p \leq 0.01$, ** $p \leq 0.05$ and * $p \leq 0.1$.

transformation to retain observations with zeros in the sample. Second, following Chen and Roth (2024), we recognize that this transformation has undesirable properties, such as the lack of scale invariance. We therefore complement these results with those obtained from a Poisson QMLE. The fact that our results do not change qualitatively is reassuring. In both cases we set negative values to zero before applying any transformation.

Figure 12: Effects of Impeachments on Tax Revenues. Robustness to $ln(1+x)$ and Poisson QML Estimation.

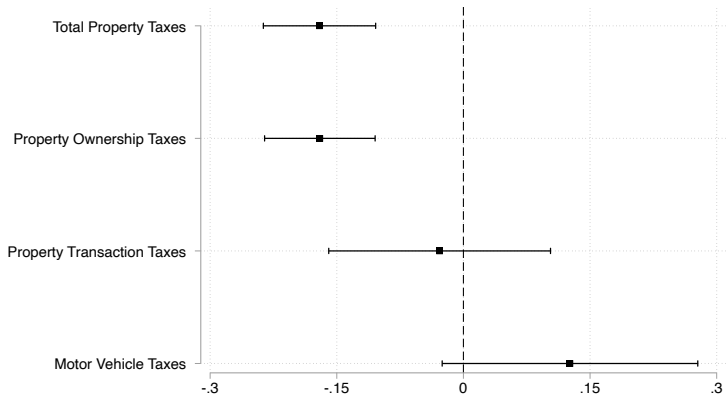


Note: The figure displays the β coefficients from Equation 2, along with their 90% confidence intervals. These are canonical difference-in-differences estimates of the treatment effects using data spanning August 2021 to December 2023. The outcomes are the logarithm of total tax revenue and its components. Black squares report the baseline, gray circles include areas with zero tax revenues using the $ln(1+x)$ transformation, and light gray diamonds do the same but applying a Poisson quasi-maximum likelihood estimation. Outcome data come from SIAF.

Moreover, in our main results we showed that the bulk of the impeachment effects on tax con-

tributions is concentrated in property taxes. Importantly, our data allow us to further break down property tax revenues into components linked to property ownership, property transactions, and taxes on motor vehicles. This decomposition is useful for assessing robustness: if the estimated effect were driven primarily by transaction taxes, one could argue that our findings simply reflect a decline in housing transaction activity unrelated to the impeachment and instead caused by broader housing market conditions. Figure 13 rules out this possibility. The decline in property tax revenues is concentrated in the component directly linked to homeownership, rejecting an alternative explanation based on coinciding exogenous shocks to the housing market.

Figure 13: Effects of Impeachments on Tax Revenues. 2×2 Specification by Sub-type of Property Tax.



Note: The figure displays the β coefficients from Equation 2, along with their 90% confidence intervals. These are canonical difference-in-differences estimates of the treatment effects using data spanning August 2021 to December 2023. The outcomes are the logarithm of total property tax revenue and its components. The data come from SIAF.

We then turn our attention to assessing the robustness of our findings to reasonable alterations of our identification strategy in equation 2. In Figure 14, we avoid the discretization of treatment assignment by replacing our treatment dummy with a continuous measure of Pedro Castillo's vote share in the 2021 presidential elections at the district level.[34] We present results for tax revenues, government approval, institutional trust, and experiences of discrimination. Naturally, the magnitude of estimated effects changes: here the coefficients capture the impact of a one–percentage-point increase in Castillo's vote share, whereas in our main analysis they represent the difference between districts with relatively low and high levels of support—implying a much larger treatment dosage. With that caveat in mind, the results from this exercise are in line with our main claims. The impeachment reduced tax revenues, lowered central government approval, and eroded trust in the armed forces, while simultaneously increasing race-based discrimination.

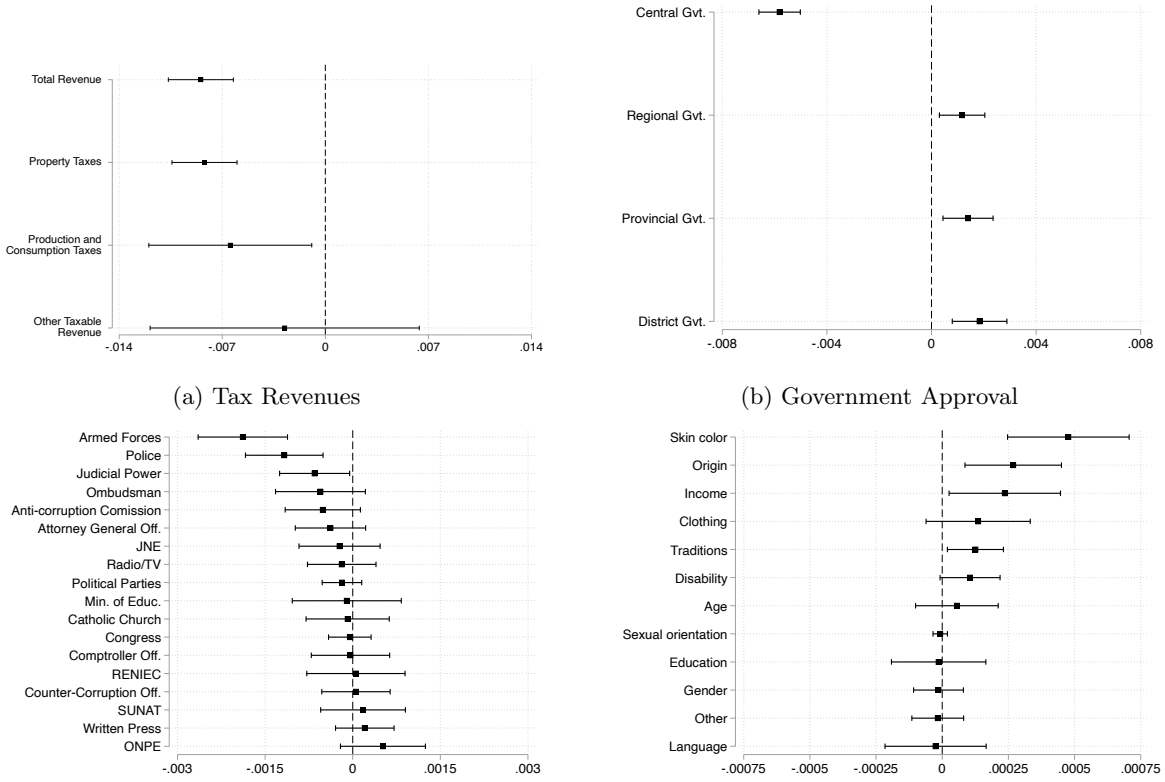
We extend our robustness checks on equation 2 in Figure 15. To relax the parallel trends assumption, we allow each province—the second-smallest administrative unit—to follow its own linear time trend. Although our research design is strong, as treatment and control groups exhibit pre-treatment parallel trends across a wide range of outcomes, it remains good practice to account for potential heterogeneity in time trajectories across provinces.

The goal of this specification is to net out the potential influence of time-varying unobservable differences between treated and control groups from our estimated treatment effects. For instance, provinces with a higher share of rural households might have been experiencing a secular decline in institutional trust that would have persisted even in the absence of the impeachment. By allowing each province to follow its own linear trajectory, we absorb such underlying trends.

Our next set of robustness checks focuses on ruling out competing hypotheses. Throughout the

[34]The estimating equation takes the form $y_{dt} = \beta\, CastilloVS_d \times Post_t + \gamma_d + \theta_t + \upsilon_{dt}$. Where $CastilloVS_d$ indicates the voting share for Pedro Castillo in the 2021 presidential elections. All other variables inherit their meaning from equation 2.

Figure 14: Effects of Impeachments. 2×2 Specification with a Continuous Treatment.



(a) Tax Revenues

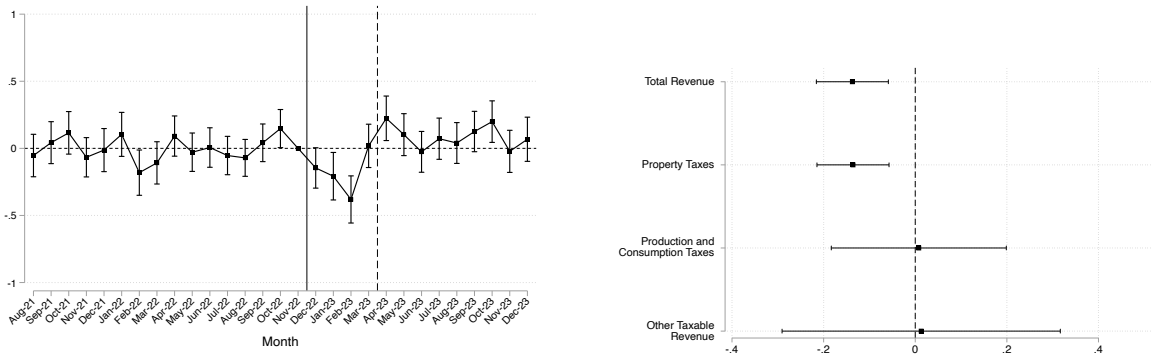
(b) Government Approval

(c) Institutional Trust

(d) Discrimination

Note: The figures display the β coefficients from a continuous-treatment version of equation 2, along with their 90% confidence intervals. These are canonical difference-in-differences estimates of the treatment effects using data spanning August 2021 to December 2023. The outcomes are: (a) the log of tax revenues; (b) dummies for government approval; (c) indicators of trust in a broad set of government and civil institutions; and (d) reported experiences of discrimination by various attributes. Data for panel (a) come from SIAF; data for panels (b)–(d) come from ENAHO.

Figure 15: Effects of Regular Presidential Transitions on Tax Revenues with Heterogeneous Linear Trends by Province. Dynamic and 2×2 Specification.



(a) Dynamic Specification

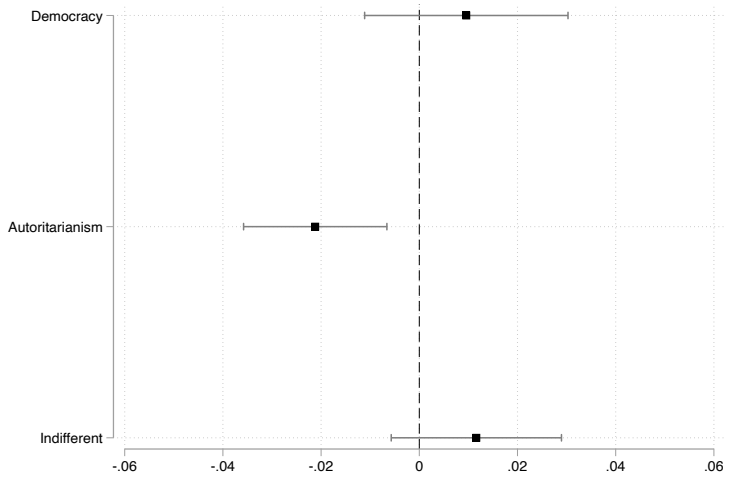
(b) 2×2 Specification

Note: In panel (a) the figure displays the δ coefficients from equation 1, along with their 90% confidence intervals. The coefficient for the month immediately preceding treatment is normalized to zero. The solid vertical line marks the timing of the impeachment, while the dashed line indicates the end of the associated protests. Panel (b) reports their 2×2 counterpart, using data spanning August 2021 to December 2023. The outcome is the logarithm of monthly tax revenues. Both specifications allow each province to follow a heterogeneous linear trend in time. The data come from SIAF.

paper, we have already taken steps in this direction by embedding placebo tests into our main analyses wherever possible. For example, we conduct placebo experiments on the approval of institutions unrelated to the impeachment and examine discrimination along dimensions unlikely to be affected by it. In all cases, the evidence supports an impeachment-based interpretation over alternative explanations rooted in generalized or unrelated discontent triggered by unobserved factors.

Still, it is crucial to examine this argument more closely and rule out alternative, more concrete explanations. We begin by addressing the possibility that our results reflect a shift in political preferences. Prior to his impeachment, Castillo attempted a self-coup. It is therefore reasonable to consider the possibility that his supporters came to view this attempt as a desirable course of action and, correspondingly, saw the incoming president as a return to a form of democratic governance they no longer supported. In the ENAHO survey, respondents are asked about their preferred form of government: whether they always prefer democratic governments, believe authoritarianism is sometimes necessary, are indifferent, or do not know.

Figure 16: Effects of Impeachments on Views Towards Democracy



Note: The figure displays the β coefficients from equation 2, along with their 90% confidence intervals. These are canonical difference-in-differences estimates of the treatment effects using data spanning August 2021 to December 2023. The outcomes are dummy variables indicating respondents' preferred government system. Data comes from ENAHO.

In Figure 16, we estimate equation (2) using this outcomes and find no support for this alternative explanation. Our findings suggest that, if anything, the treatment group becomes less likely to favor authoritarian governments. Therefore, we argue against an explanation based on declining support for democracy: Castillo's supporters are unlikely to see Dina Boluarte as an undesirable return to democratic rule.

We also consider the possibility that our results are driven by sexist bias toward Peru's first female president. Peru ranks relatively low on several dimensions of gender parity and has been characterized as a relatively sexist society. For instance, it ranks 117^{th} out of 146 countries in terms of the gender gap in health and survival (World Economic Forum, 2024). However, it ranks significantly higher—33^{rd}—in political empowerment, placing it above countries such as Austria and the United States. Notably, prominent female political figures have held high-ranking positions across the political spectrum. Keiko Fujimori, for example, remains one of the most influential political figures in the country, and women serve consistently in key roles ranging from Vice President to Mayor of Lima.

Of course, a more formal test of this possibility is warranted. Table 4 presents such a test. Specifically, we construct four proxies to identify potentially more sexist segments of the population and estimate heterogeneous treatment effects based on these measures. In doing so, we assess whether the overall treatment effect is driven primarily by individuals or areas more likely to exhibit sexist attitudes. As discussed in the data section, we lack direct measures of individual views on gender roles,

so we rely on indirect approximations. These include: (i) residency in districts with above-median gender gaps in employment; (ii) residency in districts with above-median gender wage gaps; and (iii) residency in districts with above-median incidence of intimate partner violence. The first two measures are derived from ENAHO, while the third is constructed using data from Peru's Demographic and Health Survey (DHS).[35] These proxies are measured during the baseline period, 2022.[36]

Table 4: Effects of Impeachments on Central Government Approval. Heterogeneity by Potential Sexism.

Coefficient/Sexist Measure	(1)	(2)	(3)
Treatment Effect	-0.120***	-0.149***	-0.096***
	(0.020)	(0.020)	(0.022)
Interaction with Sexist Dummy	0.003	0.060**	-0.019
	(0.025)	(0.024)	(0.027)
Obs.	110,943	110,943	96,443

Note: The table reports estimates from equation 2, and including an interaction between the double-difference treatment variable and a dummy indicating whether an individual belongs to a group characterized as potentially more sexist. We use data spanning August 2021 to December 2023. The definition of "more sexist" varies across columns. In column (1), we define men as the more sexist group. In column (2), we classify individuals as such if they reside in districts with above-median gender gaps in employment. Column (3) uses districts with above-median gender wage gaps, and column (4) uses districts with above-median incidence of intimate partner violence. All data come from ENAHO, except for intimate partner violence, which is sourced from the DHS. Cluster-robust standard errors in parentheses. Significance:*** $p \leq 0.01$, ** $p \leq 0.05$ and * $p \leq 0.1$.

The conclusions from this exercise are straightforward. The first row of results reports treatment effects for less sexist population segments, while the second row captures the additional effect among those identified as potentially more sexist. Strikingly, even the less sexist groups display substantial discontent toward the incoming government. If anything, the more sexist populations appear *less* likely to disapprove of the new president. This seemingly counterintuitive pattern may reflect the fact that Dina Boluarte's administration signaled a sharp ideological shift to the right. Prior research has documented a positive association between sexist attitudes and support for far-right movements (Anduiza and Rico, 2024).

Next, we rule out the possibility that our results are driven by concomitant changes in the satisfaction with government-provided services. A sudden change in the head of government could plausibly disrupt public service delivery, and our estimated treatment effects might then reflect temporary managerial disarray rather than genuine animosity toward the new president.

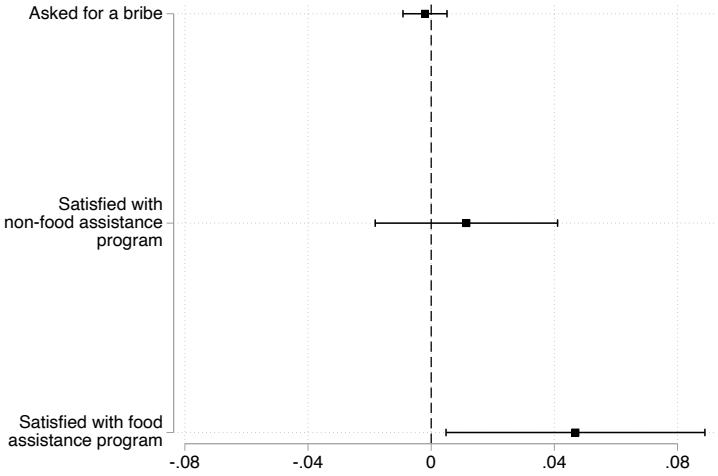
In Figure 17, we address this concern by presenting estimates of the incidence of bribery solicitations, as well as satisfaction with food and non-food assistance programs. The survey asks respondents whether they or any immediate family member were recently (within the past 12 months) forced, encouraged, or asked by a public official to provide a bribe, illegal tip, or other form of gift. It also asks beneficiaries of food and non-food government programs about their satisfaction with those services. We find no evidence of deterioration in any of these outcomes, suggesting that our results are unlikely to be driven by managerial disarray.

Lastly, we address a major potential confounder: differential macroeconomic shocks across treatment and control areas. Since our difference-in-differences design absorbs economy-wide shocks through time fixed effects, our concern is not a general downturn but rather a localized decline in economic

[35]Note that although both surveys are nationally representative, they do not necessarily include respondents from all districts. While there is substantial geographic overlap, we lose some observations when merging the two datasets at the district level.

[36]For ENAHO-based indicators, we exclude December to avoid contamination from post-treatment periods. For DHS data, this adjustment is not possible due to the lack of monthly identifiers.

Figure 17: Effects of Impeachments on Satisfaction with Public Services.



Note: The figure displays the β coefficients from equation 2, along with their 90% confidence intervals. These are canonical difference-in-differences estimates of the treatment effects using data spanning August 2021 to December 2023. The outcomes are binary indicators capturing respondents' experiences with public servants and their satisfaction with government programs. Specifically, they include dummies for whether respondents were victims of corruption solicitations, as well as their satisfaction with non-food and food assistance programs. Data comes from ENAHO.

activity affecting treatment areas more severely. This could potentially explain some findings, such as reduced tax compliance or increased discontent. Thus, we test if there were any coincidental changes in economics conditions that differentially affected the treatment and control groups. Figure 18 reports treatment effects on labor income and per capita household expenditure. We find no evidence of significant differential effects.

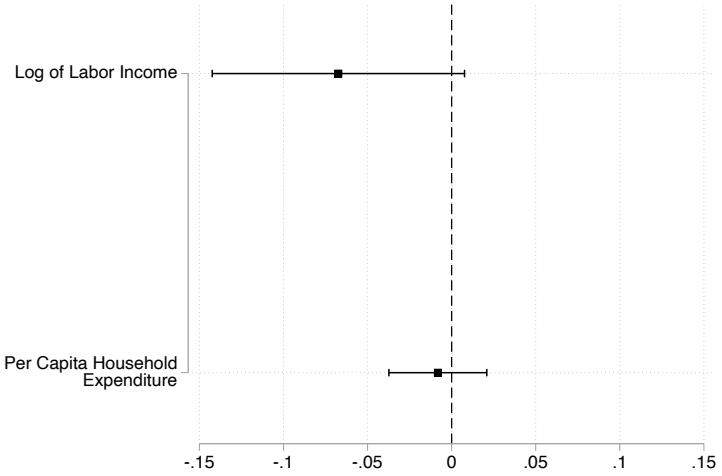
An alternative hypothesis based on the misattribution of responsibility for economic downturns would need to account for several inconsistencies. First, it would have to explain why individuals selectively direct blame toward institutions involved in the impeachment, while leaving views of other, more proximate institutions, such as sub-national governments, with whom they interact more frequently, largely unaffected. More critically, it would also need to reconcile how such a hypothesized macroeconomic shock could substantially influence political attitudes and engagement with the state, while leaving core measures of economic well-being—such as income and expenditure—largely unchanged.

7 Discussion

In this paper, we provide evidence on the effects of irregular presidential transitions on tax morale. Using a difference-in-differences design that compares supporters of the ousted government to non-supporters before and after the event, we show that impeachments cause a sharp short-term decline in local tax revenues. In particular, total revenues in the treatment group fell by about 16% in the quarter following the impeachment. Back-of-the-envelope calculations suggest that this corresponds to roughly a 0.5% reduction in annual municipal tax collection.

We show that this effect is driven by the nature of the irregular transition. Pedro Castillo's removal represented the ousting of a perceived representative of Indigenous and rural minorities, disrupting these groups' relationship with the state. The protests that followed across the country, met with heavy repression that resulted in hundreds of injuries and dozens of deaths, most of them among Indigenous communities, further deepened this divide. Consistent with this context, our first accompanying result is a substantial and persistent decline in government approval (51% of the pre-impeachment mean). In addition, we document a short-term drop in trust in the armed forces and the police (11.2 to

Figure 18: Effects of Impeachments on Labor Income and Expenditure



Note: The figure displays the β coefficients from equation 2, along with their 90% confidence intervals. These are canonical difference-in-differences estimates of the treatment effects using data spanning August 2021 to December 2023. The outcomes are the log of labor income, which is set to zero for the not employed; and per capita household expenditure. Data comes from ENAHO.

13.5% of the pre-impeachment mean), along with a sharp increase in reported experiences of racial discrimination (88.5% of the pre-impeachment mean). Notably, the latter effects revert to baseline levels once the protests subside, whereas the decline in presidential approval persists.

We interpret the evidence through a framework in which the irregular presidential transition created an institutional breach that disrupted the relationship between citizens and the state, particularly among groups represented by the impeached president. The sequence of removal, subsequent repression of protests, and policy reversal reduced trust in central institutions, heightened perceptions of discrimination, and deepened political discontent. Because tax morale depends on reciprocity toward the state, these shifts weaken compliance where taxpayers retain discretion. Property taxes provide precisely this margin, as they are locally administered, weakly enforced, and flexible in timing.

Although protest repression was the main source of violence and could mechanically explain part of the observed effects, our evidence shows that this is not the case. The effects remain present even in areas with limited protest activity, and for some outcomes, they persist well beyond the protest period. This pattern supports a mechanism of political disenfranchisement combined with social multiplier dynamics, through which collective perceptions of unfair treatment and institutional rupture reinforce individual responses. Finally, the absence of comparable effects during regular transitions underscores the distinctive consequenaturences of irregular presidential removals.

Our results are notably robust. We present a wide range of evidence supporting the validity of our identification strategy. Pre-treatment trends between groups are parallel across dozens of outcomes and remain stable across an equally large set of placebo outcomes, providing strong support for the parallel trends assumption. Furthermore, we assess the robustness of our approach by relaxing the binary treatment definition and allowing for a continuous treatment intensity. This avoids arbitrary discretization and confirms that our findings do not hinge on specific threshold choices. We also allow different geographic units to follow their own heterogeneous time trends, relaxing the parallel trends assumption, and our results remain robust.

Moreover, we rule out several plausible alternative hypotheses. The results are unlikely to reflect sexist bias toward the incoming female president, shifts in satisfaction with public service provision, changes in corruption, or broader macroeconomic conditions. Each hypothesis is empirically inconsistent with particular pieces of evidence, making it an implausible driver of our findings. This strengthens the case that impeachment is the most likely underlying mechanism.

While some of our findings are context-specific—such as those related to racial hostility or tax avoidance in a diverse country with limited state capacity—political partisanship in general aligns with demographic traits. Similar patterns may emerge elsewhere, though along different dimensions, such as region, religion, age, or income. An example of this is the clear age-based polarization observed in the Brexit vote in the UK. Similar dynamics have also been documented in the United States, where racial and educational divides strongly predict partisan alignment, and in the Indian subcontinent, where religious identity plays a central role in political polarization.

Our findings should also be of interest to the international academic and policy communities. As noted in the introduction, several countries have recently experienced impeachments or serious attempts. We draw lessons that may apply more broadly. First, the details of the transition matter. Impeachments are inherently politicized and tense events that often lead to unrest and public discontent. Our results highlight the critical importance of peaceful conflict resolution. Large segments of the population may feel aggrieved, and damage control through nonviolent means should be a policy priority. This is not only a normative imperative for any democratic state but also a fiscal one, given the potential costs to public finances.

We conclude by reflecting on the broader relevance of our findings, both in the local context and in terms of external validity. Regardless of one's personal views on Castillo, we have offered a comprehensive account of the consequences of his ousting. Supporters of Castillo may naturally interpret our results as confirming the harm of his removal. But detractors, too, should find the findings concerning. They reveal a deeply polarized political environment, where polarization affects not only attitudes but also public finances via short-term liquidity shocks. Even if one reasonably believes that Castillo deserved impeachment, our results show that the process was not without cost. In this sense, they offer a quantitative glimpse into the potential price of protecting democracy. Whatever one's stance, one conclusion stands out: investing in nation-building should now be a priority.

References

Acemoglu, D., Naidu, S., Restrepo, P. and Robinson, J. A. (2015), Democracy, redistribution, and inequality, *in* 'Handbook of income distribution', Vol. 2, Elsevier, pp. 1885–1966.

Acemoglu, D., Naidu, S., Restrepo, P. and Robinson, J. A. (2019), 'Democracy does cause growth', *Journal of political economy* **127**(1), 47–100.

Ajzenman, N., Cavalcanti, T. and Da Mata, D. (2023), 'More than words: Leaders' speech and risky behavior during a pandemic', *American Economic Journal: Economic Policy* **15**(3), 351–371.

Ajzenman, N., Cruces, G., Perez-Truglia, R., Tortarolo, D. and Vazquez-Bare, G. (2024), From flat to fair? the effects of a progressive tax reform, Technical report, National Bureau of Economic Research.

Amnesty International (2023), 'Lethal racism: Extrajudicial executions and unlawful use of force by peru's security forces', Report AMR46/6761/2023, Amnesty International. Accessed: 2024-04-10.
URL: *https://www.amnesty.org/en/documents/amr46/6761/2023/en/*

Anduiza, E. and Rico, G. (2024), 'Sexism and the far-right vote: The individual dynamics of gender backlash', *American Journal of Political Science* **68**(2), 478–493.

Ang, D., Bencsik, P., Bruhn, J. and Derenoncourt, E. (2021), 'Police violence reduces civilian cooperation and engagement with law enforcement'.

Artiles, M., Kleine-Rueschkamp, L. and León-Ciliotta, G. (2021), 'Accountability, political capture, and selection into politics: Evidence from peruvian municipalities', *Review of Economics and Statistics* **103**(2), 397–411.

Asensio, R. (2021), El provinciano redentor. crónica de una elección no anunciada, *in* 'El profe: Cómo Pedro Castillo se convirtió en presidente del Perú y qué pasará a continuación', Instituto de Estudios Peruanos.

BBC News (2021), 'Peru election: Keiko fujimori's double-edged legacy'. Accessed: 2025-05-12.
URL: *https://www.bbc.com/news/world-latin-america-57341541*

BBC News Mundo (2021), 'Pedro castillo y keiko fujimori: 3 claves que explican lo que está pasando en perú tras la segunda vuelta de las elecciones'. Accessed: 2025-04-10.
URL: *https://www.bbc.com/mundo/noticias-america-latina-57423108*

Bermeo, N. (2016), 'On democratic backsliding', *Journal of democracy* **27**(1), 5–19.

Cabra-Acela, P. A. (2023), 'Rewarding good taxpayers: an effective mechanism?', *International Tax and Public Finance* **30**(6), 1688–1717.

Cabral, M. and Hoxby, C. (2012), The hated property tax: Salience, tax rates, and tax revolts, Working Paper 18514, National Bureau of Economic Research.
URL: *http://www.nber.org/papers/w18514*

Camacho, G. and Sosa-Villagarcia, P. (2021), Una democracia asediada por su élite, *in* 'El profe: Cómo Pedro Castillo se convirtió en presidente del Perú y qué pasará a continuación', Instituto de Estudios Peruanos.

Chen, J. and Roth, J. (2024), 'Logs with zeros? some problems and solutions', *The Quarterly Journal of Economics* **139**(2), 891–936.

CNN Español (2022), 'Pedro castillo: cuántas veces enfrentó una moción de vacancia y por qué'. Accessed: 2025-04-10.
URL: *https://cnnespanol.cnn.com/2022/12/07/pedro-castillo-veces-enfrenta-mocion-vacancia-orix*

Cohen, M. J. (2018), 'Protesting via the null ballot: An assessment of the decision to cast an invalid vote in latin america', *Political Behavior* **40**, 395–414.

Cullen, J. B., Turner, N. and Washington, E. (2021), 'Political alignment, attitudes toward government, and tax evasion', *American Economic Journal: Economic Policy* **13**(3), 135–166.

Del Carpio, L. (2013), 'Are the neighbors cheating? evidence from a social norm experiment on property taxes in peru'.

Diario Correo (2021), 'Yonhy lescano: "me ratifico en el voto nulo como acto de protesta"'. Accessed: 2025-05-16.
URL: *https://diariocorreo.pe/politica/yonhy-lescano-me-ratifico-en-el-voto-nulo-como-acto-de-protesta-en-la-segunda-vuelta-elecciones-generales-de-peru-de-2021-nndc-noticia/*

El Popular (2021), 'Carlos bruce hizo comentario racista contra pedro castillo: "parece que la abundancia de oxígeno en la costa le afectó"'. Accessed: 2025-04-10.
URL: *https://elpopular.pe/actualidad/2021/04/29/carlos-bruce-hizo-comentario-racista-pedro-castillo-parece-abundante-oxigeno-costa-le-afecto-foto-61145*

Feld, L. P. and Frey, B. S. (2002), 'Trust breeds trust: How taxpayers are treated', *Economics of governance* **3**(2), 87–99.

Fortin, N. M. (2005), 'Gender role attitudes and the labour-market outcomes of women across oecd countries', *oxford review of Economic Policy* **21**(3), 416–438.

Fujiwara, T. (2015), 'Voting technology, political responsiveness, and infant health: Evidence from brazil', *Econometrica* **83**(2), 423–464.

Fujiwara, T., Meng, K. and Vogl, T. (2016), 'Habit formation in voting: Evidence from rainy elections', *American Economic Journal: Applied Economics* **8**(4), 160–188.

Giaccobasso, M., Nathan, B. C., Perez-Truglia, R. and Zentner, A. (2022), Where do my tax dollars go? tax morale effects of perceived government spending, Technical report, National Bureau of Economic Research.

Glaeser, E. L., Sacerdote, B. I. and Scheinkman, J. A. (2003), 'The social multiplier', *Journal of the European Economic Association* **1**(2-3), 345–353.

González, N. and Moscoso, M. (2021), Al maestro con cariño (y cautela), *in* 'El profe: Cómo Pedro Castillo se convirtió en presidente del Perú y qué pasará a continuación', Instituto de Estudios Peruanos.

Grompone, R. and Jimenez, O. P. (2021), Pedro castillo, una identidad reconocida en múltiples trayectorias, *in* 'El profe: Cómo Pedro Castillo se convirtió en presidente del Perú y qué pasará a continuación', Instituto de Estudios Peruanos.

Hellmeier, S., Cole, R., Grahn, S., Kolvani, P., Lachapelle, J., Lührmann, A., Maerz, S. F., Pillai, S. and Lindberg, S. I. (2021), 'State of the world 2020: autocratization turns viral', *Democratization* **28**(6), 1053–1074.

Holm, S. (1979), 'A simple sequentially rejective multiple test procedure', *Scandinavian journal of statistics* pp. 65–70.

Hunt, J. (2007), 'How corruption hits people when they are down', *Journal of Development Economics* **84**(2), 574–589.

Hunt, J. and Laszlo, S. (2012), 'Is bribery really regressive? bribery's costs, benefits, and mechanisms', *World Development* **40**(2), 355–372.

Infobae (2022), 'Pedro castillo anuncia toque de queda ante cierre del congreso de la república'. Accessed: 2024-04-10.
URL: *https://www.infobae.com/america/peru/2022/12/07/pedro-castillo-anuncia-toque-de-queda-ante-cierre-del-congreso-de-la-republica/*

Jiménez, B. (2023), 'The political economy of the minimum wage', *Labour Economics* **85**, 102463.

Jiménez, B. and Rendon, S. (2023), 'Does employment protection unprotect workers? the labor market effects of job reinstatements in peru', *Labour Economics* **80**, 102286.

Jiménez, B. and Rendon, S. (2025), 'Labor market effects of bounds on domestic outsourcing', *Journal of Development Economics* **173**, 103406.

La República (2021*a*), 'Cnn presenta flash electoral sin la foto de pedro castillo'. Accessed: 2025-04-10.
URL: *https://larepublica.pe/elecciones/2021/04/12/elecciones-2021-cnn-presenta-flah-electoral-sin-la-foto-de-pedro-castillo-atmp*

La República (2021*b*), 'Keiko fujimori busca anular más de 200.000 votos a nivel nacional'. Accessed: 2025-04-10.
URL: *https://larepublica.pe/elecciones/2021/06/10/elecciones-2021-keiko-fujimori-busca-anular-mas-de-200000-votos-a-nivel-nacional-pltc*

León-Ciliotta, G., Zejcirovic, D. and Fernandez, F. (2025), 'Policymaking, trust, and the demand for public services: Evidence from a mass sterilization campaign', *American Economic Journal: Economic Policy* **17**(1), 181–215.

Luttmer, E. F. P. and Singhal, M. (2014), 'Tax morale', *Journal of Economic Perspectives* **28**(4), 149–68.
URL: *https://www.aeaweb.org/articles?id=10.1257/jep.28.4.149*

Nathan, B., Perez-Truglia, R. and Zentner, A. (2025), 'My taxes are too darn high: Why do households protest their taxes?', *American Economic Journal: Economic Policy* **17**(1), 273–310.
URL: *https://www.aeaweb.org/articles?id=10.1257/pol.20220768*

Ñopo, H. (2008), 'Matching as a tool to decompose wage gaps', *The review of economics and statistics* **90**(2), 290–299.

O Salto (2021), 'Castillo asume el poder en perú con promesas de cambio y escaso margen de actuación'.
URL: *https://osalto.gal/america-latina/castillo-asume-poder-peru-promesas-cambio-escaso-margen-actuacion*

Ojo Público (2021), 'Abogados de grandes estudios aportaron a la estrategia del fraude'. Accessed: 2025-04-10.
URL: *https://ojo-publico.com/politica/abogados-grandes-estudios-aportaron-la-estrategia-del-fraude*

Pajuelo, R. (2021), Nuevos demonios y viejos redentores: Una elección en tres vueltas, *in* 'El profe: Cómo Pedro Castillo se convirtió en presidente del Perú y qué pasará a continuación', Instituto de Estudios Peruanos.

Peyton, B., Bajjalieh, J., Martin, M., Alahi, S., Fadell, N. and Jeralds, M. (2025), 'Cline center coup d'État project dataset'.
URL: *https://doi.org/10.13012/B2IDB-9651987_V8*

Raleigh, C., Kishi, R. and Linke, A. (2023), 'Political instability patterns are obscured by conflict dataset scope conditions, sources, and coding choices', *Humanities and Social Sciences Communications* **10**(1), 74.

Redacción La Mula (2021), 'Vargas llosa: "los peruanos de las ciudades están más informados que el resto"'. Accessed: 2025-04-10.
URL: *https://redaccion.lamula.pe/2021/06/14/vargas-llosa-los-peruanos-de-las-ciudades-estan-mas-informados-que-el-resto-video/jorgepaucar*

Rendon, S. (2020), Sterilization policy with incomplete information: Peru 1995-2000, Technical report, IZA Discussion Papers.

Repucci, S. (2020), 'The freedom house survey for 2019: The leaderless struggle for democracy', *Journal of Democracy* **31**(2), 137–151.

Sangnier, M. and Zylberberg, Y. (2017), 'Protests and trust in the state: Evidence from african countries', *Journal of Public Economics* **152**, 55–67.

Scholz, J. T. and Lubell, M. (1998), 'Trust and taxpaying: Testing the heuristic approach to collective action', *American journal of political science* pp. 398–417.

Servicio de Administración Tributaria de Lima (2024), 'Sat de lima rematará 30 inmuebles por deudas tributarias'. Accessed: 2025-09-11.
URL: *https://www.sat.gob.pe/WebSiteV9/Noticias/aid/1193*

Silva Mercado, M. A. (2024), 'Factores psicosociales asociados al voto inválido de peruanos durante las elecciones presidenciales del 2021'.

Sviatschi, M. M. (2022), 'Making a narco: Childhood exposure to illegal labor markets and criminal life paths', *Econometrica* **90**(4), 1835–1878.

Swissinfo.ch (2021), 'En último debate, fujimori promete mucho gasto y castillo apela a honestidad'. Accessed: 2025-04-10.
URL: *https://www.swissinfo.ch/spa/en-%C3%BAltimo-debate-fujimori-promete-mucho-gasto-y-castillo-apela-a-honestidad/46663818*

Torgler, B. (2003), 'Tax morale, rule-governed behaviour and trust', *Constitutional Political Economy* **14**(2), 119–140.

V-Dem Institute (2025), 'Democracy report 2025: 25 years of autocratization – democray trumped?'.
URL: *https://www.v-dem.net/documents/60/V-dem-dr__2025_lowres.pdf*

Webley, P. (1991), *Tax evasion: An experimental approach*, Cambridge University Press.

World Economic Forum (2024), 'Global gender gap report 2024'.
URL: *https://www3.weforum.org/docs/WEF_GGGR_2024.pdf*